The Proto-Elamite Settlement and Its Neighbors

Tepe Yahya Period IVC

Benjamin Mutin
C. C. Lamberg-Karlovsky
General Editor and Project Director

The site of Tepe Yahya in southeastern Iran is famous, among other important aspects, for the Proto-Elamite complex dated to around 3000 BC (Period IVC). The material culture of Period IVC is not exclusively limited to its Proto-Elamite component, but is also characterized by the presence of elements from other Middle-Asian cultural ceramic traditions. In addition to a synthesis of the Proto-Elamite period and the material assemblage at Tepe Yahya, *The Proto-Elamite Settlement and Its Neighbors* provides an updated review and comprehensive discussion of the Proto-Elamite sphere, its relations to Mesopotamia, and its eastern Middle Asian neighbors. This innovative book illustrates that the "multi-cultural" situation at Tepe Yahya Period IVC was present across many sites in Middle Asia and that, in addition to the Proto-Elamite sphere and the cities of Mesopotamia, Middle Asia around 3000 BC was incorporated within an interactive "multi-players" network of polities.

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Large cover image: View of the site of Tepe Yahya.
Photo credit: C. C. Lamberg-Karlovsky.

Small cover images:
Far left: Glyptic impression from Tepe Yahya.
Center left: Motif design from ceramic from Tepe Yahya (reconstruction).
Center right: Profile of ceramic from Tepe Yahya (reconstruction).
Far right: Ceramic fragment from Tepe Yahya.
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3.43, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°7 After Lamberg-Karlovsky and Potts 2001:fig. 3.7I.
3.43, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°9 After Lamberg-Karlovsky 1970:fig. 31B.
3.43, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.

3.43, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°16 After Lamberg-Karlovsky and Beale 1986:fig. 4.39e.
3.43, n°17 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°18 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°19 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°20 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°21 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.43, n°22 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.44, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.44, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.44, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.44, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.44, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.44, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.44, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.45 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.46 B. Mutin.
3.47, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.47, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.47, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.48, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.48, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.48, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.48, n°4 After Lamberg-Karlovsky 1970:fig. 31D.
3.48, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.49, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.49, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.50 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.51 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.52, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.52, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.52, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.52, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.52, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.52, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.52, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.52, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.53, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.

3.53, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°3 After Lamberg-Karlovsky and Potts 2001:fig. 2.15D.
3.53, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°8 After Lamberg-Karlovsky and Potts 2001:fig. 3.10C.
3.53, n°9 After Lamberg-Karlovsky and Potts 2001:fig. 3.10B.
3.53, n°10 After Potts 1980:fig. 38:7.
3.53, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°16 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.53, n°17 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.54 B. Mutin.
3.55, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°9 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°10 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°11 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.55, n°12 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.56, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 3.7C.
3.56, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 2.22E.
3.56, n°6 After Lamberg-Karlovsky and Potts 2001:fig. 1.27G.
3.56, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°9 After Lamberg-Karlovsky and Potts 2001:fig. 3.9C.
3.56, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.

3.56, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°16 After Lamberg-Karlovsky 1970:fig. 29F.
3.56, n°17 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°18 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°19 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.56, n°20 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.57 B. Mutin.
3.58, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.58, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.58, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.58, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.58, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.59, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.59, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 2.12E.
3.59, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.59, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.59, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 1.18A.
3.59, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.60, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.60, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.60, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.60, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.61, n°1 After Lamberg-Karlovsky 1970:fig. 31F.
3.61, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.61, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.61, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.61, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.61, n°6 After Potts 1980:fig. 38D1.
3.62 B. Mutin.
3.63, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.63, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.63, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.63, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.63, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.64, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.64, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.64, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.64, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.64, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.

3.64, n°6 After Lamberg-Karlovsky and Potts 2001:fig. 2.12A.
3.64, n°7 After Lamberg-Karlovsky and Potts 2001:fig. 1.44A.
3.64, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.64, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.64, n°10 After Lamberg-Karlovsky and Potts 2001:fig. 1.18 E.
3.64, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.64, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.65 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.66 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.67, n°1 After Potts 1980:fig. 35C2.
3.67, n°2 After Potts 1980:fig. 35C1.
3.67, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.67, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.67, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 1.36F.
3.68 Collection of the PMAE, Harvard University, drawing and photograph by B. Mutin.
3.69 B. Mutin.
3.70 Collection of the PMAE, Harvard University, photographs by B. Mutin.
3.71, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 2.12B.
3.71, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.71, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.71, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.71, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.72, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.72, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.72, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.73, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.73, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.73, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.73, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.74, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.74, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.74, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.74, n°4 After Lamberg-Karlovsky and Potts 2001:fig. 2.9.
3.75, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.

3.75, n°9 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°10 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.75, n°11 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.76 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.77, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 2.19C.
3.77, n°3 After Lamberg-Karlovsky and Potts 2001:fig. 1.13E.
3.77, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°6 After Lamberg-Karlovsky and Potts 2001:fig. 1.34B.
3.77, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°10 After Lamberg-Karlovsky and Potts 2001:fig. 2.14E.
3.77, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°16 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°17 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°18 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°19 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°20 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°21 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°22 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°23 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°24 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.77, n°25 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 1.55E.
3.78, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°8 After Lamberg-Karlovsky and Potts 2001:fig. 2.17G.
3.78, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.

3.78, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°15 After Lamberg-Karlovsky and Potts 2001:fig. 2.26G.
3.78, n°16 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°17 After Lamberg-Karlovsky and Potts 2001:fig. 2.4F.
3.78, n°18 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.78, n°19 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 2.4A.
3.79, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°7 After Lamberg-Karlovsky and Potts 2001:fig. 1.54B.
3.79, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.79, n°11 After Lamberg-Karlovsky and Potts 2001:fig. 1.27A.
3.79, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.80, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.

3.81, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.81, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.82 B. Mutin.
3.83, n°1 After Dyson and Remsen 1989:fig. 27c.
3.83, n°2 After Dyson and Remsen 1989:fig. 16.
3.83, n°3 After Amiet and Tosi 1978:fig. 3.
3.83, n°4 After Amiet and Tosi 1978:fig. 3.
3.84, n°1 After Lamberg-Karlovsky 1970:fig. 31L.
3.84, n°2 After Lamberg-Karlovsky 1970:fig. 31K.
3.84, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.85 After Lamberg-Karlovsky and Potts 2001:fig. 3.13F.
3.86 After Lamberg-Karlovsky 1970:pl. 34.
3.87, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.87, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.87, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.87, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.87, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.87, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.87, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.87, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.87, n°9 After Lamberg-Karlovsky and Potts 2001:fig. 1.19G.
3.87, n°10 After Lamberg-Karlovsky and Potts 2001:fig. 1.6C.
3.87, n°11 After Lamberg-Karlovsky and Potts 2001:fig. 1.36B.
3.87, n°12 After Lamberg-Karlovsky and Potts 2001:fig. 1.55D.
3.87, n°13 After Lamberg-Karlovsky and Potts 2001:fig. 1.22C.
3.87, n°14 After Lamberg-Karlovsky and Potts 2001:fig. 1.39B.
3.87, n°15 After Lamberg-Karlovsky and Potts 2001:fig. 1.46B.
3.87, n°16 After Lamberg-Karlovsky and Potts 2001:fig. 1.13A.
3.87, n°17 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 1.36C.
3.88, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°8 After Lamberg-Karlovsky and Potts 2001:fig. 1.22A.
3.88, n°9 After Lamberg-Karlovsky and Potts 2001:fig. 1.46G.
3.88, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°11 After Lamberg-Karlovsky and Potts 2001:fig. 1.46C.

3.88, n°12 After Lamberg-Karlovsky and Potts 2001:fig. 1.34F.
3.88, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°16 After Lamberg-Karlovsky and Potts 2001:fig. 1.34A.
3.88, n°17 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°18 After Lamberg-Karlovsky and Potts 2001:fig. 1.22B.
3.88, n°19 After Lamberg-Karlovsky and Potts 2001:fig. 1.6A.
3.88, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 1.56H.
3.88, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°7 After Lamberg-Karlovsky and Potts 2001:fig. 1.6E.
3.88, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°12 After Lamberg-Karlovsky and Potts 2001:fig. 1.6D.
3.88, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°16 After Lamberg-Karlovsky and Potts 2001:fig. 1.56G.
3.88, n°17 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°18 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°19 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°20 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°21 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°22 After Lamberg-Karlovsky and Potts 2001:fig. 1.27E.
3.88, n°23 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°24 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°25 After Lamberg-Karlovsky and Potts 2001:fig. 1.49A.
3.88, n°26 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.88, n°27 After Lamberg-Karlovsky and Potts 2001:fig. 1.19A.
3.90 L Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.90 R After Lamberg-Karlovsky and Potts 2001:fig. 1.36D.
3.91, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.91, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.91, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.91, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.

3.91 photographs:Collection of the PMAE, Harvard University, by B. Mutin.
3.92, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.92, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.92, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.92, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.92, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.92, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.92, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.92, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.92, n°9 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.93, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 1.58A.
3.93, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 1.58C.
3.94, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.94, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.94, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.94, n°4, Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.94, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.95 Collection of the PMAE, Harvard University, drawing and photograph by B. Mutin.
3.96, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.96, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.97 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.98, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.98, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.99, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°9 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°10 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.99, n°11 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.

3.100, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°9 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°10 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°11 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°12 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°13 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°14 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°15 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.100, n°16 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.101, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 4.29C.
3.101, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 3.10K.
3.101, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.101, n°4 After Lamberg-Karlovsky and Potts 2001:fig. 1.13G.
3.101, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 3.10J.
3.101, n°6 After Lamberg-Karlovsky and Potts 2001:fig. 4.28C.
3.101, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.101, n°8 After Lamberg-Karlovsky and Potts 2001:fig. 4.28F.
3.101, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.101, n°10 After Lamberg-Karlovsky and Potts 2001:fig. 1.18D.
3.102, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 7.7A.
3.102, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 7.7C.
3.102, n°3 After Lamberg-Karlovsky and Potts 2001:fig. 7.7B.
3.102, n°4 After Lamberg-Karlovsky and Potts 2001:fig. 5.2C
3.102, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.102, n°6 After Lamberg-Karlovsky 1972:fig. 2D.
3.102, n°7 After Lamberg-Karlovsky 1972:fig. 3B.
3.103, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 6.5C.
3.103, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 1.13I.
3.103, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.103, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.103, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 6.5A.
3.103, n°6 After Lamberg-Karlovsky and Potts 2001:fig. 4.28B.
3.103, n°7 After Lamberg-Karlovsky and Potts 2001:fig. 4.28A.
3.103, n°8 After Lamberg-Karlovsky and Potts 2001:fig. 7.1A.
3.104 Collection of the PMAE, Harvard University, photographs by B. Mutin.
3.105 L After Lamberg-Karlovsky 1972:fig. 3K.
3.105 R After Lamberg-Karlovsky and Tosi 1973:fig. 107.
3.106, n°1 After Piperno and Salvatori 2007:fig. 683.
3.106, n°2 After Salvatori and Vidale 1997:fig. 186:12.
3.106, n°3 After Salvatori and Vidale 1997:fig. 186:13.
3.106, n°4 After Salvatori and Vidale 1997:fig. 186:10.

3.106, n°5 After Madjidzadeh 2008:fig. 24.
3.107 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.108 After Lamberg-Karlovsky 1972:fig. 3E.
3.109, n°1 After Piperno and Salvatori 2007:fig. 624.
3.109, n°2 After Piperno and Salvatori 2007:fig. 569.
3.109, n°3 After Piperno and Salvatori 2007:fig. 675.
3.109, n°4 After Piperno and Salvatori 2007:fig. 569.
3.109, n°5 After Piperno and Salvatori 2007:fig. 34.
3.109, n°6 After Salvatori and Vidale 1997:fig. 191:9.
3.109, n°7 After Salvatori and Vidale 1997:fig. 188:2.
3.109, n°8 After Salvatori and Vidale 1997:fig. 187:5.
3.109, n°9 After Salvatori and Vidale 1997:fig. 187:7
3.109, n°10 After Salvatori and Vidale 1997:fig. 187:9.
3.110, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.110, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.110, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.110, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.110, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.110, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.110, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.111, n°1 After Lamberg-Karlovsky and Potts 2001, fig. 1.5.
3.111, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.111, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin
3.112, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.112, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.112, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.112, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.112, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.112, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.112, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.112, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.113, n°1 After Madjidzadeh 2008:fig. 22.
3.113, n°2 After Madjidzadeh 2008:fig. 22.
3.113, n°3 After Madjidzadeh 2008:fig. 22.
3.113, n°4 After Madjidzadeh 2008:fig. 27.
3.114, n°1 After Lamberg-Karlovsky 1971:fig. 3H.
3.114, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 3.9J.
3.115, n°1 After Lamberg-Karlovsky 1971:fig. 3C.
3.115, n°2 After Lamberg-Karlovsky 1971:fig. 3O.
3.115, n°3 After Lamberg-Karlovsky 1971:fig. 3A.
3.115, n°4 After De Cardi 1970:fig. 18:22.

3.115, n°5 After De Cardi 1970:fig. 21:101.
3.115, n°6 After De Cardi 1970:fig. 21:107.
3.115, n°7 After De Cardi 1970:fig. 21:108.
3.115, n°8 After De Cardi 1970:fig. 18:35.
3.115, n°9 After De Cardi 1970:fig. 24:209.
3.115, n°10 After De Cardi 1970:fig. 24:212.
3.116, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 7.7D.
3.116, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.116, n°3 After Lamberg-Karlovsky 1972:fig. 3C.
3.116, n°4 After Madjidzadeh 2008:fig. 24.
3.116, n°5 After Madjidzadeh 2008:fig. 24.
3.116, n°6 After De Cardi 1970:fig. 25:258.
3.116, n°7 After De Cardi 1970:fig. 38:361.
3.116, n°8 After De Cardi 1970:fig. 38:363.
3.116, n°9 After De Cardi 1970:fig. 38:362.
3.116, n°10 After Didier 2007:fig. 63.
3.116, n°11 After Didier 2007:fig. 95.
3.116, n°12 After Didier 2007:fig. 63 and 95.
3.116, n°13 After Piperno and Salvatori 2007:fig. 379.
3.116, n°14 After Tosi 1969:fig. 33e.
3.116, n°15 After Tosi 1969:fig. 33b.
3.117, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.117, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.117, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
3.118, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
3.118, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 2.12C.
3.118, n°3 After Lamberg-Karlovsky and Potts 2001:fig. 2.15A.
3.119, n°1 After Lamberg-Karlovsky 1972:fig. 3F.
3.119, n°2 After Piperno and Salvatori 2007:fig. 115.
3.119, n°3 After Didier 2007:fig. 122.
3.119, n°4 After Didier 2007:fig. 121.
3.119, n°5 After Salvatori and Vidale 1997:fig. 189.
3.120 B. Mutin.
4.1, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.1, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.1, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.1, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.1, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.1, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.1, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.2, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.

4.2, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.2, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.2, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.2, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.2, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.2, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.2, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.2, n°9 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.3, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 2.7.
4.3, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°3 After Lamberg-Karlovsky and Potts 2001, fig. 2.16.
4.3, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°6 After Lamberg-Karlovsky and Potts 2001, fig. 1.25.
4.3, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°11, Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°16 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°17 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°18 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.3, n°19 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.4 B. Mutin.
4.5, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.5, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.5, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.5, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.5, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.5, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.5, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.6, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.6, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.6, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.6, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.6, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.6, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.

4.6, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.7 B. Mutin.
4.8, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.8, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.8, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.8, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.8, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.8, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.8, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.8, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.9, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.9, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.9, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.9, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.9, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.10, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 3.25.
4.10, n°3 After Lamberg-Karlovsky and Potts 2001:fig. 3.27.
4.10, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°12 After Lamberg-Karlovsky and Potts 2001:fig. 3.28.
4.10, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°15 After Lamberg-Karlovsky and Potts 2001:fig. 3.24.
4.10, n°16 After Lamberg-Karlovsky and Potts 2001:fig. 1.30.
4.10, n°17 After Lamberg-Karlovsky and Potts 2001:fig. 1.30.
4.10, n°18 After Lamberg-Karlovsky and Potts 2001:fig. 1.30.
4.10, n°19 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.10, n°20 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.11 B. Mutin.
4.12 B. Mutin.
4.13, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.13, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.13, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.13, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.

4.13, n°5 After Lamberg-Karlovsky and Potts 2001:fig. 1.31.
4.13, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.13, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.13, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.14, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.14, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.14, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.14,n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.14, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.15 B. Mutin.
4.16, n°1 After Piperno 1973:fig. 1j.
4.16, n°2 After Piperno 1973:fig. 1k.
4.16, n°3 After Piperno 1973:fig. 2o.
4.16, n°4 After Piperno 1973:fig. 4d.
4.16, n°5 After Piperno 1973:fig. 4e.
4.16, n°6 After Piperno 1973:fig. 2p.
4.16, n°7 After Piperno 1973:fig. 5l.
4.17, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.17, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.17, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.17, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.17, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.17, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.18, n°1 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°2 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°3 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°4 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°5 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°6 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°7 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°8 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°9 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°10 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°11 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°12 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°13 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°14 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.18, n°15 Collection of the PMAE, Harvard University, drawing by B. Mutin.
4.19, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.19, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.19, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.

4.19, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.19, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.19, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.19, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.19, n°8 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.19, n°9 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.20, n°1 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.20, n°2 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.20, n°3 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.20, n°4 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.20, n°5 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.20, n°6 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.20, n°7 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.21 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.22 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.23 Collection of the PMAE, Harvard University, photograph by B. Mutin.
4.24 B. Mutin.
4.25, n°1 After Lamberg-Karlovsky and Potts 2001:fig. 2.8.
4.25, n°2 After Lamberg-Karlovsky and Potts 2001:fig. 1.33.
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Foreword

The study of the materials recovered from Tepe Yahya has been published in dozens of articles and five monographs (Lamberg-Karlovsky 1970; Lamberg-Karlovsky and Beale 1986; Damerow and Englund 1989; Lamberg-Karlovsky and Potts 2001; and, Lamberg-Karlovsky and Magee 2004). In this monograph, we return to a more deliberate review of Period IVC, the Proto-Elamite Period at Tepe Yahya. Prior study of Period IVC was undertaken by Daniel Potts in a volume considering the entirety of the third millennium. His participation in the excavations at Tepe Yahya in 1973 led to the writing of his undergraduate thesis (A.B.), his doctoral dissertation (1980), and, finally, the published monograph detailing the third millennium in 2001. The later volume was what many may regard, within the archaeological context of publication, a 'final' report on the third millennium at Yahya. It becomes obvious, however, that a 'final' report is always a careful selection from the full corpus recovered – frequently a carefully undertaken selection to support specific issues and interpretations – and restricted by the information and interpretations available at the time of publication.

The present treatment of Period IVC examines 100% of the collections of that period stored in the Peabody Museum, including a review of the entire photographic archive, all relevant field notes and stratigraphic sections, and a thorough review of the published literature detailing materials recovered from Period IVC. It is the most comprehensive study of the materials from Yahya IVC, particularly with reference to its ceramic corpus, chronological concerns, and stratigraphic issues. As will become readily apparent, Ben Mutin's wide-ranging familiarity with the ceramics of Pakistan, Baluchistan, and Central Asia brings an entirely new perspective to the study of the Yahya corpus. Prior studies never looked to the east, and minimally to the north, for parallels in the Yahya material inventory. Ben brings forth evidence of a significant cultural interaction with Pakistan, and Baluchistan, and, in doing so, offers new chronological and cultural insight as to the nature of that interaction which was unavailable in earlier studies. Ben's wide-ranging archaeological fieldwork has brought him into close contact with widely distant, but interconnected archaeological worlds: in Pakistan, he undertook archaeological surveys in the Kech-Makran area; in Baluchistan he excavated the site of Shah-Tump; in Iran, he participated in the excavations of Shahr-I Sokhta; in Tajikistan, he participated in the excavations of Sarazm; and, in Oman, he excavated at Ras al-Jinz. His direct experience in archaeological surveys and excavations in distant places Ben in an ideal position to examine the broad ceramic parallels that he discusses in this monograph.

This study revisits older issues of chronology, problems pertaining to periodization, the nature and extent of cultural interactions, while publishing the most comprehensive collection of materials recovered from the Proto-Elamite community at Tepe Yahya. It will be noted that new resolutions are suggested for older problems regarding the chronology and the periodization of Yahya IVC. New resolutions and hypotheses are derived from the availability of new information attained from new excavations and significantly by Ben's comprehensive re-study of the archives and materials recovered from Tepe Yahya. Like our earlier 'final' reports we hope that this 'final' report will be superceded in time by yet another report documenting our ever-increasing knowledge, of an ever-increasing cultural interaction, that brought distant communities from Anatolia to the Indus and from Central Asia to Arabia into first contact in the late fourth and early third millennium.

Lastly, I must acknowledge my thanks, pleasure, and high regard for the learning experience I shared with Ben in the production of this volume. The volume revisits old debates, offers new perspectives, and, importantly, puts forth a new body of information that enriches our understanding of the Proto-Elamite community and its extensive interaction with both near and distant neighbors.

Finally, I wish to acknowledge all those who directed the excavations of Yahya IVC. All share a degree of co-authorship of this, and other texts, pertaining to Yahya IVC: Martha Prickett, Phil Kohl, Dan Potts, and Tom Beale. We are all grateful to Ben for enriching our understanding of what we dug up over 35 years ago.

- C. C. Lamberg-Karlovsky

References

Damerow, Peter, and Robert K. Englund

1989 *The Proto-Elamite Texts from Tepe Yahya*. American School of Prehistoric Research, Bulletin 39, Peabody Museum, Harvard University, Cambridge, Mass.

Lamberg-Karlovsky, C. C.

1970 Excavations at Tepe Yahya, Iran 1967-1969. Progress Report 1. American School of Prehistoric Research, Bulletin 27, Peabody Museum, Harvard University, Cambridge, Mass.

Lamberg-Karlovsky, C. C., and Thomas W. Beale

1986 Excavations at Tepe Yahya, Iran 1967-1975: The Early Periods. American School of Prehistoric Research, Bulletin 38, Peabody Museum, Harvard University, Cambridge, Mass.

Lamberg-Karlovsky, C. C., and Peter Magee

2004 Excavations at Tepe Yahya 1967-75 The Iron Age Settlement. American School of Prehistoric Research, Bulletin 46. Peabody Museum, Harvard University, Cambridge, Mass.

Lamberg-Karlovsky, C. C., and D. T. Potts

2001 Excavations at Tepe Yahya, Iran 1967-1975 The Third Millennium American School of Prehistoric Research, Bulletin 45, Peabody Museum, Harvard University, Cambridge Mass.

Potts, D. T.

1973 The Late Fourth Millennium Universe of a Highland Community in Iran: Problems of Proto-Elam and Jemdet Nasr Mesopotamia. A.B. Thesis, Department of Anthropology, Harvard University, Cambridge, Mass.

1980 Tradition and Transformation: Tepe Yahya and the Iranian Plateau during the Third Millennium B.C. Ph.D. dissertation, Department of Anthropology, Harvard University.

Acknowledgments

This publication aims to provide an updated presentation of Tepe Yahya Period IVC and a broader discussion of Middle Asia around 3000 BC. Such an attempt is not the result of an individual effort but that of a long list of archaeologists who have contributed to the topic of Chalcolithic and Bronze Age period in Middle Asia. I was not yet born when Tepe Yahya was being excavated and I would like to pay tribute to the team who worked at the site and in Kerman at that time, including C. C. Lamberg-Karlovsky, Thomas Beale, Dennis Heskel, Philip Kohl, Richard Meadow, Daniel Potts, Martha Prickett, and Elizabeth Stone. Without their work, this book would not exist and, most importantly, a significant piece of the archaeology of Middle Asia would still be unknown at present. Daniel Potts provided a substantial contribution to the understanding of Tepe Yahya Periods IVC and IVB in a 2001 publication (*Excavations at Tepe Yahya, Iran 1967-1975. The Third Millennium.* American School of Prehistoric Research Bulletin 45). His work as well as the papers by Philip Kohl, Holly Pittman, and C. C. Lamberg-Karlovsky from the same publication were valuable resources in the writing of this book.

The present contribution would not have been possible without the support of C. C. (Karl) Lamberg-Karlovsky. Karl provided me an exciting opportunity to work on the topic of Tepe Yahya Period IVC as well as full access related to the archaeological and archival collection. Karl reviewed and commented on the first draft of the present publication and spent much time discussing Tepe Yahya, anthropology, and history with me. Many thanks!

I am indebted to Richard Meadow for making my appointment at Harvard University possible and for his precious advice regarding the topic of the book.

The study of the Tepe Yahya archaeological collection was made possible thanks to Patricia Capone, Susan Haskell, and the staff of the Peabody Museum of Archaeology and Ethnology, Harvard University. They were generous with their time and efforts during my long-term research in the Museum collection.

The publication project was generously funded by grants from the Shelby White and Leon Levy Program for Archaeological Publications and the American School of Prehistoric Research, Harvard University.

Maurizio Tosi of the University of Bologna allowed me to study the collection from Shahr-i Sokhta Period I in the summer 2011 in Italy. I am grateful to him for offering that opportunity which greatly helped me understand an additional set of cultural dynamics on the Southeastern Iranian Plateau and the Indo-Iranian Borderlands. I also thank him for allowing me to use material from this site in the present book.

I would like to acknowledge Roland Besenval at CNRS for allowing me to illustrate materials from the French Archaeological Expedition in Makran (Pakistan).

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I am also appreciative to Wren Fournier, of Harvard University for her help editing the book.

Finally, this book would not have come through without the continued support of my wife, Sandra Dong.

Preface

This essay is based on the study of artifacts recovered from Tepe Yahya, an archaeological site located in southeastern Iran in the southern half of the Kerman province (Figure 0.1). The artifacts are ceramics and small finds found in the Proto-Elamite occupation of the site: Period IVC (Phases IVC2–IVB6). The Proto-Elamite is a cultural "phenomenon," also defined as a "period," a "horizon," a "world," and a "civilization" that concerned essentially the western half of Iran, with elements on the Southeastern Iranian Plateau, in the late fourth and the early third millennia BC. The Proto-Elamite settlements share similarities in the layouts of their buildings and their material assemblages, including, as an important element of the definition of the Proto-Elamite phenomenon, a new administrative tool kit that includes a writing system on clay tablets, the earliest one found so far in Iran, and cylinder seals. Although the definition of the Proto-Elamite remains incomplete, available data tends to indicate that this phenomenon reflects an important influence, control, or domination by some people over a large part of Iran in the period around 3000 BC.

Tepe Yahya is located in the Soghun Valley. It was discovered in 1967 by the team of Harvard University directed by C. C. Lamberg-Karlovsky (see Lamberg-Karlovsky and Beale 1986:1–10; Lamberg-Karlovsky 2001a:xix–xli; Magee 2004:introduction; Damerow and Englund 1989:v–xiv). The excavations and surveys conducted by this team at Tepe Yahya and in southeastern Iran from 1967 to 1975 have filled an important lack of data for the archaeology of the Southeastern Iranian Plateau, not only with regard to the Proto-Elamite period, but for a chronological sequence that encompasses the sixth millennium BC (Period VII at Tepe Yahya) to the beginning of our era (Period I). These works have offered much information about the human communities that were settled in southeastern Iran, from a time that corresponds to the earliest farming villages in the Neolithic period to the Parthian and Sasanian empires. Tepe Yahya remains one of the very few sites that have enabled reconstructing proto- and early History of southeastern Iran while greatly complementing our understanding of Middle Asia as a whole. It is also the only site in southeastern Iran where a Proto-Elamite settlement was found and excavated.

In the late 1960s and 1970s, while Tepe Yahya was being excavated, other archaeological fieldworks were also being conducted in other regions of Middle Asia and the Persian Gulf. Among the significant sites of southeastern Iran that were investigated at that time is Shahr-i Sokhta in Seistan province. This site was found first by Sir M. A. Stein (1928), visited by W. A. Fairservis (1961) and studied again from 1967 to 1978 by M. Tosi and his team (Tosi 1983; Salvatori and Tosi 2005). Previously, in 1964 and 1966, J. Caldwell (1967, 1968) excavated the site of Tal-i Iblis located in the Bardsir Plain in Kerman province, while in 1966 B. De Cardi (1970) conducted soundings at the site of Tepe Bampur in the Bampur Valley in the Iranian Balochistan province. Both these two sites were also previously discovered by Sir M. A. Stein (1937). The Chalcolithic and Bronze Age periods of southern Afghanistan began to be more documented as well at the time thanks to the expeditions conducted by J.-M. Casal (1961) at Mundigak, L. Dupree (1963) at Deh Morasi Ghundai, J. Shaffer (1971, 1978) at Said Qala Tepe, and G. Dales (1972) in Afghan Seistan. In Pakistan, B. De Cardi (1965, 1983) conducted excavations at the sites of Anjira and Siah Damb and surveys in eastern Balochistan; J.-M. Casal (1964) excavated the site of Amri in the province of Sind, while important discoveries were

made by J.-F. Jarrige and his team at Mehrgarh, Nausharo, and Pirak in the Kachi Plain (Balochistan) in the seventies and eighties (C. Jarrige et al. 1995; Jarrige et al. 1979). Several additional works were conducted in Pakistan such as those by G. Dales in southern Pakistani Balochistan at Balakot, Sutkagen-Dor, and Sotka Koh (Dales 1962a, 1962b, 1974; Dales and Lipo 1992). These projects on the Southeastern Iranian Plateau and in the Indo-Iranian Borderlands followed the tracks paved before by several influential scholars such as Sir M. A. Stein (1928, 1931, 1937), S. Piggott (1950), and W. A. Fairservis (1956, 1959, 1961). More was also being known about the ancient communities of the Persian Gulf starting essentially in the seventies and in the eighties (see Tosi 1986). Since then, numerous expeditions have provided our knowledge of ancient Middle Asia with a lot of new data while new approaches and methods have been developed and employed. Yet, the field-work conducted from the late sixties and seventies radically changed our vision of this area in ancient times; it has established new research agendas and approaches that still constitute fundamentals of Middle-Eastern archaeology nowadays. This observation applies to the excavations and studies conducted on Period IVC at Tepe Yahya.

Broadly speaking, the occupations of Tepe Yahya Period IV chronologically encompass the end of the Chalcolithic period and the Proto-Elamite phenomenon in Iran in the late fourth and the early third millennia BC (Period IVC) as well as the later major urban civilizations that emerged during the third and the early second millennia BC (Periods IVB-IVA) in Pakistan and northwestern India (Indus Civilization and Kulli Culture), in Iran (Elamite dynasties), in Central Asia (Oxus Civilization or Bactria-Margiana Archaeological Complex), and in Mesopotamia (Early Dynastic, Akkadian Empire, Ur III Dynasty, and Isin-Larsa Dynasties). These areas and the related cultural dynamics, and the economic and political developments that characterized Middle Asia, from around the mid-third millennium BC are frequently termed the Middle Asian Interaction Sphere (MAIS) (Possehl 2002, 2007). Many aspects of Tepe Yahya Period IV, particularly Periods IVC and IVB, were presented and discussed in several publications (see Lamberg-Karlovsky, Potts, Kohl, Prickett, and Damerow and Englund in the references). A detailed description and presentation of the archaeological contexts and related artifacts were brought together and published by D. T. Potts (Lamberg-Karlovsky and Potts 2001:1-193). This recent monograph contained a contribution by P. Kohl (2001:209-230) concerning the production of chlorite and that of H. Pittman (2001:231-268) on the glyptic art of Period IV. Syntheses and conclusions concerning the results of those studies in the broader chronological and cultural context of southwestern Asia, from the late fourth to the third millennia BC, were also discussed. Among other considerations, an important issue - the dating of Period IVB - was discussed again aided with new radiocarbon determinations (Potts 2001:195-207; Lamberg-Karlovsky 2001a: 269-280; Kohl 2001). Obviously, many publications related to Tepe Yahya and its status in the archaeological context of the MAIS (a term that can be used also to discuss the periods anterior to the mid-third millennium BC) have been provided, so that one may wonder why we revisit the occupations and materials excavated at this site. More specifically why revisit Period IVC and some of the related categories of ceramic productions and small finds?

It is perhaps necessary to indicate first several reasons and circumstances that led me to look closer at the collection of Tepe Yahya Period IVC. If anything, at a minimum this would give the reader more keys to evaluate and review the approach envisaged here. First, after completing my Ph.D.

dissertation in December 2007 in Paris, which was dedicated to the fourth and early third millennia BC occupations and ceramic productions from Kech-Makran in southwestern Pakistan (Mutin 2007), it seemed particularly relevant to look more closely at the assemblages dating to these millennia recovered "immediately" to the west in southeastern Iran. One of the objectives was to look in detail at published ceramics that appeared to be similar to the products defined recently in Kech-Makran, and to look at unpublished assemblages that had the potential to include comparative materials. In sum, the starting point was to get more information about the geographical distribution of some ceramic types and, more generally speaking, about cultural relationships on the Southeastern Iranian Plateau during the Chalcolithic and Early Bronze Age periods. In January 2009, I had the great chance to obtain an affiliation as a post-doctoral fellow at Harvard University and to benefit from the supervision of Prof. C. C. Lamberg-Karlovsky and Dr. R. Meadow during my stay. The program envisaged at Harvard included the study of the collection held by the Peabody Museum of Archaeology and Ethnology (PMAE hereafter) related to the Chalcolithic and Early Bronze Age periods of Pakistan and southeastern Iran. The program began with the study of materials collected by Sir M.A. Stein in southeastern Iran (Stein 1937; Lamberg-Karlovsky and Schmandt-Besserat 1977; Mutin 2013). The ceramics from Tepe Yahya were obviously among the assemblages that I wished to look at during my stay at Harvard. One of the reasons for this was that some ceramics closely similar to certain products found more than 550 km to the southeast in Kech-Makran were observed within the published materials of Periods IVC–IVB (Potts 2001:fig. 1.12). Tepe Yahya finally became a prominent part of the program envisaged at Harvard thanks to the impetus of C. C. Lamberg-Karlovsky who suggested to me not only to look at the ceramics, but also to publish the small finds dating to Period IVC. This was made possible thanks to Karl's support, the kind authorization of the PMAE to visit and study the collections, and the generosity of the Shelby White–Leon Levy Program for Archaeological Publications and the American School of Prehistoric Research which supported my work and stay in Cambridge.

The publication project slightly changed as the work progressed. D. T. Potts concluded the publication of Tepe Yahya "The Third Millennium" by writing that the materials from Periods IVC and IVB at Tepe Yahya tell us numerous stories (Potts 2001:206). In other words, these materials give us evidence for numerous local, regional, interregional, and long-range dynamics with various cultural, political, and economic implications. Our approach was primarily conceived to complete one of the stories of Tepe Yahya: that of the ceramic relations between southeastern Iran and southwestern Pakistan in the late fourth and the early third millennia BC. However, it rapidly became evident that any attempt to understand the context of the southwestern Pakistani-related ceramics found at Tepe Yahya required one to consider at least several other major cultural dynamics observed at this site in the mid-late fourth and third millennia BC. The significant Banesh/Proto-Elamite component well-attested in Period IVC that connects Tepe Yahya to western Iran and the Proto-Elamite phenomenon, for example, can hardly be ignored in discussions about Tepe Yahya Period IVC. At the same time, it appeared that the dating and cultural definition of some deposits and several categories of materials related to other cultural dynamics observed at Tepe Yahya Periods IVC–IVB were still controversial. Important discussions regard the dates of Period IVB (Phases IVB5–IVB1), of its transition with Period IVC, and of Phases IVC1–IVB6 placed between Phases IVC2 and IVB5. Another issue is the definition of the *local* material culture of Period IVC which had not been approached in detail. Thus,

in addition to other problems discussed below, our primary approach, focused only on relationships toward the east (southwestern Pakistan), seemed pretty limited and somewhat frustrating. This led us to include other categories of ceramic products that were selected for their significance in chronology and cultural relationships in Period IVC. Meanwhile, it also became necessary to consider several aspects of Period IVB, with regard to its transition with Period IVC. Also, while previous publications gave details concerning the ceramics in their archaeological contexts, I wished to provide more information (forms and decorations) about the ceramic production assigned to Period IVC, as well as about the small finds related to Period IVC. D. T. Potts's Ph.D. dissertation (1980) offered a valuable typology of the ceramics of Tepe Yahya Period IV which is unfortunately unpublished. Furthermore, the approach envisaged here is different and is considered as a complement to the work done before. Additionally, thirty-two years after Potts' Ph.D. dissertation and the subsequent publication of Tepe Yahya "The Third Millennium" (2001), I believe that recent excavations, comparative materials, and publications will help supplement the definition and interpretation of some types of materials recovered from this site.

Dealing with Tepe Yahya IVC and including more aspects of this period in our study, inevitably led to several critical archaeological research questions that concern not only this site but also the reconstruction of Middle Asian and the Persian Gulf interaction in the fourth and third millennia BC. The deposits assigned to Period IVC at Tepe Yahya are well-known for the numerous objects related to the Proto-Elamite phenomenon such as certain types of ceramics, inscribed tablets, and glyptic art. Yet, several aspects of the Proto-Elamite still remain unclear and largely discussed, starting with its name and definition. Period IVB at Tepe Yahya is famous for the production of chlorite artifacts and the long-distance connections exhibited by the "Intercultural Style" attested at Tarut Island in the Persian Gulf and in Mesopotamia. Recent discoveries in the Halil Rud Valley indicate that Tepe Yahya in Period IVB was connected to a previously unknown civilization with impressive remains. While the dating of Period IVB is discussed, there is a debate regarding the location of Marhashi, believed to be the Mesopotamian geographical term for this area of southeastern Iran or for an area located in Central Asia (see Steinkeller 1982; Francfort and Tremblay 2010). The dates proposed for the beginning of Period IVB, situated around the middle or the end of the third millennium BC and still the topic of disagreements (see below), have an impact on the reconstruction of the archaeological polities and interregional relationships in Middle Asia during the third millennium BC, a time when, as indicated above, major civilizations and dynasties emerged from the Indus to Mesopotamia. In Iran this period is that of the kingdoms of Elam, Awan, Shimashki, and Marhashi as referred to in Mesopotamian texts of the second half of the third millennium BC. Because of its location and material culture, Tepe Yahya remains a critical site to answer questions of eastern and western developments and their relationships, as well as more specific regional problems concerning the Southeastern Iranian Plateau during the mid-late fourth and third millennia BC. Any attempt to approach Period IVC demands effort to delineate a larger picture of this period, within the context of Mesopotamia, the Iranian Plateau, the Indo-Iranian Borderlands, Central Asia, and the Persian Gulf. This requires us to provide descriptions and discussions about areas and sites located west, east, south, and north of Tepe Yahya.

Beginning with evidence from Tepe Yahya, an attempt is made in the present publication to discuss the topic of the Proto-Elamite "Civilization" in combination with the contemporary cultures of

the above areas, in other words, to connect in the same essay "traditionally" distinguished "worlds". As a result, in addition to conclusions provided about Tepe Yahya in Period IVC and its place in the broader context of the Southeastern Iranian Plateau, an attempt is made to delineate the main archaeological entities of southern Middle Asia and to discuss aspects of their relationships. What these entities represented politically in the late fourth into the early third millennia BC remains an open question but it is hoped that this attempt contributes to a general understanding of this time-period while providing a background of the interaction that characterized Middle Asia during the third millennium BC.

The book is organized in eight chapters. The first chapter details the setting of Tepe Yahya and Proto-Elamite times in Middle Asia, with a brief summary of the previous periods as well as current questions related to the approach followed here. The second chapter provides an account of the archaeological contexts of Tepe Yahya in Periods IVC and IVB. The third and fourth chapters are dedicated to the description of the ceramics and small finds. The fifth chapter is a synthesis of the works done by C. C. Lamberg-Karlovsky, H. Pittman, P. Damerow, and R. K. Englund (1989) on the tablets and glyptic art recovered from Tepe Yahya. The sixth chapter is a recap and discussion that concern the available radiocarbon dates from Tepe Yahya in Periods IVC and IVB. The seventh chapter discusses the distribution on the Southeastern Iranian Plateau in the late fourth and early third millennia BC of the main ceramic types found at Tepe Yahya in Period IVC. It is followed by conclusions and interpretations, which are provided in the eighth chapter.

1 Geographical and Chrono-cultural Contexts, Problematic, and Approach

1.1 Geographical and environmental setting

Tepe Yahya is located in the southwestern corner of the Soghun Valley, immediately north of the modern town of Baqan (Figure 1.1). The site is a mound measuring 187 m in diameter and 19.8 m in height. It is associated with a 1 km wide surrounding scatter of pottery sherds (Lamberg-Karlovsky and Beale 1986:11). The geographical and paleoenvironmental setting of the Soghun Plain were provided by R. Meadow (1986:21-38); a few elements are reviewed below.

The Soghun Valley measures a little bit more than 12 km from north to south and almost 7.5 km from west to east to the maximum (Figure 1.2). Its altitude is on average about 1,560 to 1,515 m above the sea level from north to south. The valley appears as a quite isolated flat area surrounded by mountains topping at more than 2,000 and 3,000 m high to the north, east, south, and northwest. The valley is, however, opened in its southwestern corner and is connected to the Daulatabad Plain located at 20 to 25 km to the west, through a west-east pass whose altitude gradually declines from east to west. The altitude of the Daulatabad Plain is below 1,100 m. Another pass (that cuts through the modern Abshouieh village) is located approximately 4 to 5 km east of the eastern edge of the Soghun Valley and 11 to 13 km distant from Tepe Yahya, beyond a narrow north-south chain of mountains with an altitude of 1,600 to 1,800 m. This pass descends from the north at an altitude of ca. 1,800 m at the same latitude as the northern edge of the Soghun Valley. It is about 1,500 m high at the same latitude as Tepe Yahya. It then goes southeastward through mountains and reaches a large plain located less than 45 km from Tepe Yahya at an altitude of about 650 m. From this point, the plain stretches to the east over almost 30 km and is then connected to the north-south Halil Rud Valley through another pass that goes to the northeast (Figure 1.1). The two sites of Konar Sandal (A and B), located in the Halil Rud Valley, south of the city of Jiroft, are about 45 km apart from this plain and 90 km, as the crow flies, distant from Tepe Yahya. The Halil Rud ends to the southeast in the Bampur Basin, around 70 km away from the Konar Sandal sites. Tepe Yahya is about 470 km away from Tal-i Malyan in Fars; more than 900 km from Susa in Khuzistan; more than 770 km from Tepe Arisman in Isfahan; around 900 km from Tepe Hissar in Semnan; around 500 km from Shahr-i Sokhta in Seistan; around 650 km from Miri Qalat in Pakistani Kech-Makran; and, around 130 km from the Straits of Hormuz in the Persian Gulf (Figure 0.1).

R. Meadow noted that the climate of the Soghun Valley is semiarid, with ca. 250 mm in annual rainfall and temperatures probably situated between 35° to 18°C in July and 13° to -1°C in January. The pollen and macrobotanical remains from Period IVC contexts at Tepe Yahya indicate presence of gramineae (grass, goat-face grass, domesticated barley, and domesticated wheat), leguminosae (milk vetch), polygonaceae (knotweed), *prunus* (almond), ulmaceae (hackberry), and *vitis* (grape) (Meadow 1986:Table 3.2). R. Meadow (1986:30) underscores the "proliferation of wheats" in Period IVC, including several forms. The faunal remains of this period include a majority of domesticated animals. They are sheep, goats, cattle (*bos*), and dogs. Goats comprise about 75% of the bone counts; sheep are represented by about 20%; and cattle represent about 5%. The wild fauna includes brown or black bear, fox, mongoose, lion, tortoise, and several species of birds (Meadow 1986:fig. 3.3, Table 3.4).

1.2 Chrono-cultural context of Tepe Yahya Period IVC

Seven main chronological periods were defined at Tepe Yahya, on the basis of the excavations conducted at this site and additional work in the Daulatabad Plain (Table 1.1). The occupation of Tepe Yahya commenced in the six millennium BC Neolithic period (Period VII). It continued into the Chalcolithic period in the fifth and early fourth millennia BC (Periods VI and V), in the Bronze Age from the late fourth into the second millennia BC (Period IV), and then during the first millennium BC Iron Age and Achaemenian/Hellenistic periods (Periods III–II). It ended with the Partho-Sasanian period around the beginning of our era (Period I) (Lamberg-Karlovsky and Beale 1986:11–12).

In detail, the chronology of Period IV, the Bronze Age period, is still partly debated, and the chronological brackets proposed for this period range from the second half of the fourth and the early third millennia BC to the end of the third and the early-mid second millennia BC. Period IV was originally divided into three main sub-periods: Periods IVC, IVB, and IVA[1] (Lamberg-Karlovsky 1970). Period IVC includes two phases, Phases IVC2 and IVC1, and Period IVB was divided into six phases, Phases IVB6 to IVB1 (Lamberg-Karlovsky 1989; Lamberg-Karlovsky and Potts 2001). As detailed below, the dating of Phases IVC1 and IVB6 remains a controversial topic. It was clearly demonstrated that Phase IVC2 corresponds to a Proto-Elamite settlement dated to around 3000 BC. On the other hand, the definition of Phase IVC1 changed, while the dating of this phase and that of the following Phase IVB6 are still the topic of ongoing discussion. There is even a disagreement concerning the existence of Phase IVB6, a phase that was added by D. T. Potts to the chronological sequence long after the excavations. In summary, while there are elements that may indicate that Phases IVC1 and IVB6 as defined by D. T. Potts (2001) belong to a period posterior to the Proto-Elamite period, and even situated within the mid-late third millennium BC according to him, there is evidence that indicates that the Proto-Elamite occupation at Tepe Yahya expands upon those phases. In spite of this controversy which is discussed again in the present publication, and in order not to create more confusion, Period IVC is used here, as it was originally designed, to designate the Proto-Elamite occupation(s) of Tepe Yahya.

1.2.1 The predecessors in southeastern Iran

1.2.1.1 Tepe Yahya

The freshest date proposed for Tepe Yahya Period IVC, the Proto-Elamite settlement, is 3100–2800 BC (Lamberg-Karlovsky 2001a:270). Period IVC followed a chronological hiatus that occurred in the sequence of Tepe Yahya after the Chalcolithic Periods VI and V, which are situated within the second half of the fifth and the first half of the fourth millennia BC (Table 1.2). The remains of Period VA, which is the sub-period immediately prior to the hiatus, mostly consist of a series of surfaces interpreted as an open courtyard, a kiln probably used to fire pottery, and small constructions (Lamberg-Karlovsky and Beale 1986:150–152). Period VA is characterized by a fine, painted ceramic named Black-on-red ware; a chaff-tempered ceramic production; and a red burnished type of vessel named Lapui ware. Black-on-red ware has relationships to the preceding Black-on-buff ware, which appeared in Period VC and then became common mostly in Period VB. Black-on-buff ware was then progressively replaced by Black-on-red ware during Period VA. In addition to Tepe Yahya, Black-on-red ware was found in the Daulatabad Plain, 20 to 25 km west of the Soghun Valley; near the coast of the Persian Gulf to the south; and up to

Chah Husaini, at approximately 370 km to the southeast in the Bampur Valley. It is also reported from central-northern Kerman at Tal-i Iblis (Iblis Painted ware in Period II) and Shahdad (surface), ca. 160 km north and 245 km northeast of Tepe Yahya, respectively (Caldwell, 1968:179; Salvatori and Vidale 1982; Lamberg-Karlovsky and Beale 1986:85-86, 266; Hakemi 1997:pl. Xa-3d; Prickett 1986a). No evidence for Black-on-red ware has been found beyond this large area measuring ca. 160,000 km². This ceramic thus appears to be rooted, in its distribution and cultural affiliation, mostly in Kerman and the Bampur Valley. Besides the relationship between Black-on-buff ware and Black-on-red ware, the continuation of the local ceramic tradition into Period VA at Tepe Yahya is illustrated by chaff-tempered coarse ware. The chaff-tempered types of ceramics found in Period VA were indeed already produced from Period VI, and vegetal-tempered vessels in general were present at Tepe Yahya since the Neolithic Period VII (Lamberg-Karlovsky and Beale 1986:43). As for Lapui ware, it is well-attested from Period VC to Period VA (and present in small quantiites in Period VI). It was also found at Tal-i Iblis in Periods I and II where it is named Bardsir Red slipped ware (or Bardsir Red Filmed) (Lamberg-Karlovsky and Beale 1986:43, 86; Caldwell 1967:173, 176; 1968:179). Lapui ware indicates clear relationships to south-western Iran, more specifically to Fars province and Susa (Period I) in Khuzistan. It is attested in Fars from the early fourth or the very late fifth millennia BC, after the fifth millennium BC Bakun period and before the Banesh period which encompassed the second half of the fourth and the early third millennia BC (Sumner 2003:51-52). Transitional material between this ware and the following assemblage of the Banesh/Proto-Elamite period is identified from around 3500 BC.2 In Kerman, it is suggested that Lapui ware appeared and disappeared first. Recent recalibration of radiocarbon dates from Tepe Yahya Period VA provides a date situated around 3700/3600 for the end of this period and Lapui ware in this area (Mutin 2013).3 In any case, one can note that, contrary to Black-on-red ware, which is mostly found in southeastern Iran, Lapui ware is not observed east of Kerman. On the other hand, this ware is indicative of cultural relationships between Kerman and western Iran well before that the Proto-Elamite phenomenon emerged in, and connected, both those two areas. Additional relationships between Fars and Kerman before the Proto-Elamite period are illustrated by the similarities between the early Black-on-buff ware Tepe Yahya and the Bakun black-on-buff ware from Fars, by the few Ubaid-related sherds found in Tepe Yahya in Period VI[4] in the fifth millennium BC, and by the parallels between the vegetal-tempered wares from Tepe Yahya and Fars in the Neolithic period (Lamberg-Karlovsky and Beale 1986:39, 86-89, 265-266).

The pottery from Period VA indicates that Tepe Yahya was integrated at a minimum within two larger southern Iranian ceramic polities: Lapui ware and Black-on-red ware. Other finds show that, contrary to the previous periods, Period VA (and Period VB) illustrates larger imports of raw materials (copper and turquoise), new ones from Oman (limestone)[5] and Afghanistan (lapis lazuli), and a new technology for the production of copper objects shared across the Iranian Plateau (Lamberg-Karlovsky and Beale 1986:266-267). C. C. Lamberg-Karlovsky (Lamberg-Karlovsky and Beale 1986:263) noted concerning Period VA: "(...) the appearance in VB and VA (particularly in VA) of a greater variety of artifacts and of larger numbers of labor-intensive products (...) and technology intensive ornaments (...) implies a generally higher level of material wealth and prosperity and a greater accumulation of objects that might be considered 'status' items or portable forms of wealth. (...) there would have been a need and a rationale for instituting the larger-scale, centralized, local production of such items apparent by Period VA."

1.2.1.2 Tal-i Iblis

At Tal-i Iblis, Black-on-red ware (Iblis Painted ware) and Lapui ware (Bardsir Red slipped ware) of Period II (equivalent to Tepe Yahya Period VA) indicate that this site was integrated within the same two ceramic polities as Tepe Yahya was. Most of the information regarding Period II at Tal-i Iblis comes from the pottery and metallurgy. When he described this site and this period J. Caldwell introduced a discussion about the concept of town and city. He also pointed out the metallurgical copper activities whose remains indicate that the production exceeded the local needs (Caldwell 1967:33–36).

Important chronological information lacking at Tepe Yahya was observed at Tal-i Iblis. Indeed, the ceramic assemblage of Tal-i Iblis in Period II is followed by Dashkar ware and Aliabad ware in Periods III and IV. The equivalents of Lapui ware and Black-on-red ware were no longer produced in Periods III–IV, while Uruk/Proto-Elamite ceramics appeared in Periods IV to VI, with Uruk material found from Period IV and Proto-Elamite material probably associated with Period VI (see hereafter).[6] As seen below, after Lapui ware and Black-on-red ware of Period VA, Dashkar ware and Aliabad ware have not, or very rarely for the latter, been attested at Tepe Yahya, while Proto-Elamite materials appeared in the following Period IVC. Thus, the episode represented by Dashkar ware and Aliabad ware and related deposits at Tal-i Iblis likely correspond to the chronological hiatus between Periods VA and IVC at Tepe Yahya. It seems that Uruk-related materials first appear in Kerman during this hiatus. The Dashkar-Aliabad period is unfortunately poorly known; it is mostly documented by a distinctive type of ceramic, while very few archaeological contexts have been excavated (elements of this period at Tal-i Iblis and Mahtoutabad are discussed below). Surveyed data indicates that the ceramic characteristic of this period, especially Aliabad ware, better demarcated than Dashkar ware, is reported from many sites in Kerman, including sites located in the Bardsir Plain and the Daulatabad Plain, while it is also attested in the Halil Rud Valley (at Mahtoutabad). This ware is best documented in Kerman, yet evidence for it, or material with similar aspects is also present in Iranian Balochistan extending to southwestern Pakistan in Kech-Makran, more than 550 km apart from the Halil Rud Valley (see Chapter 7). Thus, while Aliabad ware is substantial in Kerman, this ware seems to represent a larger cultural phenomenon than its presence in this province, spread over the Southeastern Iranian Plateau, in a chronological context following Tepe Yahya Period VA but before the Proto-Elamite occupation of Period IVC. Survey data from Kerman indicates that this period was marked by a drop in population, visible in the number of sites and area occupied both in the Daulatabad Plain and the Soghun Valley. The settlements appear smaller than before and the sites less permanent. These traits have been interpreted as indicative of the "development of, or reversion to, a more nomadic lifestyle." (Lamberg-Karlovsky and Beale 1986:267). Aliabad ware has not been observed west of Kerman. However, the Uruk-related materials identified at Tal-i Iblis and Mahtoutabad illustrate connections to the western half of Iran (at Susa II, Tepe Sialk III and in Fars) and Mesopotamia, during the Aliabad-related period (according to Tal-i Iblis), or immediately after this period (as seen at Mahtoutabad), but before the Proto-Elamite period.

1.2.2 The Proto-Elamite Entity

The archaeological story of the Proto-Elamite began in Khuzistan in the late nineteenth and early twentieth centuries, when many clay tablets bearing incised ideographic signs were found at Susa. The tablets were termed Proto-Elamite by V. Scheil (1905, 1923) "as they were believed to pre-date, and indeed pre-

cipitate, an indigenous Elamite writing system, coding a language then hypothetically termed Anshanite. (...) Although no Elamite writing system has been found, and although today the same name is given to the language of later cuneiform texts, proto-Elamite, for want a better term, has remained the conventional name for the earliest indigenous Iranian texts." (Dahl 2009:24). The context of most of the Proto-Elamite tablets found more than a century ago is lost, but similar tablets were discovered during recent excavations conducted at Susa, at the Acropole I and the Ville Royale I, in the late 1960s and 1970s (Le Brun 1971, 1978; Carter 1978, 1979). The Proto-Elamite tablets of Acropole I are assigned to Susa Period III in the chronological sequence of the site and are dated to the late fourth and the early third millennia BC (see below). At the Acropole I, starting with Level 16, they replaced the bullae and numerical tablets of the Uruk-related Susa Period II found in Levels 18–17 and were recovered up to Level 14B (Le Brun 1978:181, 183, 190). These tablets, the signs inscribed on them and the iconography represented by cylinder-seal impressions on many of them appear different from the numerical tablets found at Susa in the previous Period II. These earlier Uruk IV (Late Uruk) and those of Uruk III type (Jemdet-Nasr) Proto-cuneiform tablets identified on southern Mesopotamia sites date to the mid to late fourth millennium BC. The tablets reported from the Jemdet-Nasr period (Uruk III) in Mesopotamia are of a distinct character, but both the Proto-Elamite and the Uruk III tablets appear to have roots in the previous Late Uruk (Uruk IV) early writing system. The distribution of the Mesopotamian Uruk III style lays outside of that of the Proto-Elamite style; it has been identified in southern and central Mesopotamia from Uruk to Khafadjeh including Jemdet-Nasr and Tell Uqair (see Woods 2010:35–37), while the latter is located in Iran.

In addition to a change observed in the later Proto-Elamite tablets of Susa, the ceramic assemblage from Level 16 to 14B illustrates modifications to the Uruk-related ceramics of Susa Period II. This break in the sequence of Susa, Acropole I suggests an important switch in cultural influence at Susa and Khuzistan from "Mesopotamian" in the Uruk-related Susa Period II to "Iranian" in the Proto-Elamite Susa Period III (in the late fourth millennium BC). Indeed, in spite of important links to Mesopotamia and the Uruk period, the analysis of increasing evidence found in Iran allows for defining the Proto-Elamite as a mostly "Iranian" cultural phenomenon, not limited to a writing system, with defined boundaries, chronology, material culture, administration (writing and sealing systems, with important improvements toward decipherment of the texts), settlement organization, social structure, economy, burial practices, iconography, and cultural interaction. Although important improvements are made in the study and understanding of the Proto-Elamite, many questions remain regarding the above aspects as well as the origin of this phenomenon and its relationship to the previous Uruk. The term "Proto-Elamite" and its relationship to the mid-third millennium Elamite language (written using cuneiform signs) and Linear Elamite signs of the late third millennium BC as argued by certain scholars is contested (see Potts 1999:71–79; Damerow and Englund 1989; Englund 1998a; Dahl 2009). According to D. T. Potts, there is no reason to continue to use the term Proto-Elamite to label the tablets found at Susa in Period III and those of the same type recovered at several sites on the Iranian Plateau. As stressed by him, Elam "may be mentioned as early as 3000 BC in the so-called Archaic texts from Uruk in southern Mesopotamia," but "it is not attested unambiguously in the historical record until the middle of the third millennium BC when it appears, in the Sumerian King List [Enmebaragesi], as an adversary of the Sumerian city-state of Kish" (Potts 1999:85).[7] He proposes naming the tablets as "Susa III texts" (Potts 1999:71, 74). While tak-

ing this into account, for the purpose of the present essay, the term Proto-Elamite is maintained here. Any attempt to offer another terminology would require an exhaustive justification, which is not the purpose of the present publication. Secondly, it is still a convenient cultural concept to approach similar artifacts, not limited to the tablets, found over considerable distances. In addition, one can argue that Proto-Elamite tablets were not found only at Susa and that the term "Susa III texts" gives the erroneous impression that this cultural phenomenon (and its origin) is confined to a specific site and region.

Many aspects of the Proto-Elamite remain elusive so that it is often defined as a "phenomenon," "horizon," "period," even "civilization" which makes clear the importance of this phenomenon to certain authors (see Sumner 2003; Petrie 2013a). On the other hand, other scholars envisage it as an archaeological construction disconnected from any archaeological reality. In spite of several uncertainties, a picture of the Proto-Elamite culture may be sketched thanks to the aggregate of new discoveries made since the first Proto-Elamite tablets were found at Susa. At a minimum, one can note a degree of consistency in the distribution of several similar aspects of material culture and architecture in the western half of Iran and Kerman around 3000 BC.

1.2.2.1 Geographical expanse of the Proto-Elamite

As the material inventory of the Proto-Elamite has become better characterized and documented, attributes of it are found over a wide crescent that stretches from the Semnan province to southeastern Iran and southwestern Pakistan, including Tehran, Isfahan, Khuzistan, and Fars provinces. This crescent covers more than 1,600 km from northwest to southeast and ca. 500 to 700 km from southwest to northeast (Figure 1.3). Nevertheless, the characteristic features defined as Proto-Elamite reported from this large area are not always the same in each region. The "core" of the Proto-Elamite entity or sphere of similarities, as known today, appears essentially restricted to areas of the western half of Iran and Kerman. This is especially so if one considers primarily the distribution of ceramics, tablets, seals and sealings, and the location of the principal Proto-Elamite buildings known or documented. The main Proto-Elamite occupations are known from Susa and Tal-i Ghazir in Khuzistan, Tal-i Malyan in Fars, Tepe Sialk and Tepe Arisman in Isfahan, and Tepe Yahya in Kerman. At Tepe Ozbaki a Proto-Elamite tablet and beveled-rim bowls were identified (Madjidzadeh 2001) and at Tepe Sofalin over a hundred Proto-Elamite tablets were recently recovered (Dahl *et al.* 2013; Hessari 2011; Lamberg-Karlovsky, pers. comm.), which extends the Proto-Elamite distribution to the regions south of the Caspian Sea. In addition, Proto-Elamite settlements are reported from the Izeh Plain in Khuzistan, the Mamasani district and the Kur River Basin in Fars, and Tal-i Iblis in Kerman (see below). As discussed below, Godin Tepe in Kermanshah is considered a Late Uruk occupation. The tablets found at this site do not seem to be Proto-Elamite, but seemingly more related to Uruk Proto-cuneiform, while the date of some deposits and certain elements of the material culture and architecture may suggest that it was occupied during Proto-Elamite times. Evidence for the Proto-Elamite is rarer east of Kerman and may not be considered Proto-Elamite settlements. As detailed below, the Proto-Elamite is represented by a tablet's fragment and glyptic at Shahr-i Sokhta (Period I) in Seistan and five beveled-rim bowl fragments at Miri Qalat (Late Period IIIa) in southwestern Pakistan (Kech-Makran). Furthermore, the cultural contexts of those finds, as seen from the ceramic assemblages from both Seistan and Kech-Makran, are totally different from that of the Proto-Elamite sites. Additionally, Tepe Hissar in Semnan provided several objects similar to those reported from Proto-

Elamite settlements, including Susa, Tepe Sialk, Tepe Arisman, and Tepe Yahya (see Dyson 1987; Voigt and Dyson 1992:171; Helwing 2006). However, as discussed below, this site is closer in material culture and more connected to sites located farther to the east. To the west, Mesopotamia forms part of a separate cultural sphere, although aspects of the Proto-Elamite are shared with Mesopotamian sites (such as lugged jars, beveled-rim bowls, low-sided trays, some types of glyptic, copper objects traded from Tepe Arisman to northern Mesopotamia, and others). Bearing in mind the problem of the dating of the Late Uruk sites vis-à-vis the Proto-Elamite period (discussed below), the current scenario is that, while the Late Uruk sites on the Euphrates were abandoned, two distinct cultures developed in Mesopotamia starting with the late fourth millennium BC: the Ninevite 5 culture developed on the Tigris River in northern Mesopotamia, while southern Mesopotamia was embedded within the Jemdet-Nasr culture (Schwartz 1985, 1987; Matthews 1992a; see Pittman 1994).

1.2.2.2 Chronology

Overall, the occupations and material inventory regarded as Proto-Elamite are dated to the second half of the fourth to the early third millennia BC. Their date ranges from ca. 3300 BC to no later than ca. 2600 BC, if one follows the chronology of the Middle and Late Banesh periods in Fars (Sumner 2003; Alden 1982a:613). J. Alden placed its end at 2800 BC (Alden 1982a:613). F. Vallat envisages the end before 2600 BC and places the beginning at 3100 BC (Vallat 2003:90), while D. T. Potts proposed ca. 3100–2900 BC for the date of the tablets (Potts 1999:75). A date for the beginning of the Proto-Elamite situated between 3300 BC and 3100 BC agrees with the radiocarbon determinations and stratigraphic sequence established recently at Tepe Arisman in the Isfahan province (Helwing 2011a:219) and at the sites excavated in the Mamasani district in Fars (Potts and Roustaei 2006:68–70, 124). As for the end, a date placed in the early third millennium BC is also in agreement with the sequence from Tepe Arisman. This site includes several Proto-Elamite phases dated to the late fourth millennium BC. An additional phase thought to be stratigraphically later than the fourth millennium BC (Area C, phase 3, burial pottery) lacks an absolute date (Helwing 2011a:219). A dating for the Proto-Elamite period situated within a chronological bracket centered on 3000 BC and of approximately four centuries seems corroborated by the sequences and radiocarbon determinations of several settlements as those excavated at Tepe Hissar (Semnan province), Shahr-i Sokhta (Seistan province) and Miri Qalat (Kech-Makran, Pakistan). In Mesopotamian terms, these dates imply that the Proto-Elamite was contemporary with the Jemdet-Nasr (starting around 3100 BC or around 3200 according to R. J. Matthews; Matthews 1992b:196) and the Early Dynastic I periods, as well as the Late Uruk Period. Indeed, if one follows H. Nissen (1987:613), "a date of 3300/3200 BC for the Late Uruk period is generally accepted", while recent reappraisal and recalibration of radiocarbon determinations from Uruk sites and contemporary occupations by H. T. Wright and E. S. A. Rupley (2001) provided ca. 3800–3100 BC for the chronological bracket of Middle and Late Uruk periods. An important issue that needs resolution is the existence of a large plateau in the calibration curve for the period between 3300–2900 cal. BC (Dahl *et al.* 2013; Helwing 2011a:219; Petrie 2013b). This directly affects the critical dating of, and the transition between, the Late Uruk, Jemdet-Nasr, and Proto-Elamite periods.

Attempts have been made to refine the internal chronology of the Proto-Elamite period. One was offered by R. Dittman (1986b:346, Table 1) on the basis of data from Susa, Acropole I. His chronology

includes three main sub-periods (Proto-Elamite 1, 2a, and 2b), with the last one (2b) situated in the early third millennium BC and an additional later one, Proto-Elamite 3. H. Pittman's analysis of the glazed steatite style of seals and seal impressions tends to agree with R. Dittman's chronology (Pittman 1994:217-218). In detail, R. Dittman and H. Pittman consider Acropole I Levels 16-15B and Levels 15A-14B as two architecturally and ceramically separate units (Pittman 1994:89-90). The former includes Levels 16 and 15B in Proto-Elamite Period 1; Levels 15A and 14B in Proto-Elamite Period 2a; and Levels 14A and 13 in Proto-Elamite Period 2b (Dittman 1986b:346, Table 1). R. H. Dyson (1987:648-650; Voigt 1987:fig. 2) followed and adapted R. Dittman's chronology. He suggests the possibility of a hiatus between Level 17A (the last level of Susa Period II) and Level 16 at Susa, Acropole I. This hiatus was suggested by A. Le Brun, termed Level "17X" and thought to have been a time in which the Proto-Elamite writing developed as well as the types of ceramic and glyptic observed in Level 16. R. H. Dyson's chronological reconstruction is as follows: 1) Susa "17X" corresponds to the so-called Proto-Elamite Transitional period dated to between 3350 and 3140 cal. BC on the basis of radiocarbon dates from Godin Tepe; 2) Susa, Acropole I Levels 16-14B (Susa IIIA) is included in the Proto-Elamite 1, with dates from 3310 to 2910 cal. BC on the basis of radiocarbon determinations from Tepe Hissar, Tal-i Malyan and Godin Tepe; and 3) Susa, Acropole I Levels 14A-13 (Susa IIIB) corresponds to the Proto-Elamite 2 and is dated between 3040 and 2620 cal. BC on the basis of radiocarbon dates from Tepe Hissar, Tal-i Malyan, Tepe Yahya, and Shahr-i Sokhta.

The Proto-Elamite Transitional period includes the occupations of Godin Tepe Periods VI/V; Tepe Sialk Period IV.1; Tepe Hissar Middle Period II; and the hypothetical Susa "17X." Proto-Elamite 1 includes the end of Godin Tepe Periods VI/V; Tepe Sialk Period IV.2; Tepe Hissar Late Period II; Susa Period IIIA; and Tal-i Malyan Middle Banesh period. Proto-Elamite 2 includes Tepe Hissar Early Period III; Susa Period IIIB; Tal-i Malyan Late Banesh period; and Shahr-i Sokhta Period I (Phases 10-8). Tepe Yahya Period IVC is divided between Phase IVC2 assigned to Proto-Elamite 1 and Phase IVC1 assigned to Proto-Elamite 2 (Dyson 1987:650). Also, using R. H. Dyson's chronology, B. Helwing included Tepe Arisman's Area C phases 6-4 and slag heap D in Proto-Elamite Transitional; Area C erosion phase, secondary workshops and slag heap A in Proto-Elamite 1; and Area C phase 3 (graves) and slag heap E in Proto-Elamite 2 (Helwing 2006:Table 1). However, as noted by J. Dahl *et al.* (2013), it is important to recognize that R. Dittman's internal chronology of the Proto-Elamite period, and therefore that of R. H. Dyson, as were other chronological proposals (such as that of Carter 1984; see Dyson 1987:649), may be questioned as they were built upon a selective database.

Overall, there is a general agreement that prior to the contexts containing Proto-Elamite tablets (before Susa, Acropole I Level 16 and Middle Banesh period in Fars), there was a period in Iran defined as either, 1) Late Uruk-related, or 2) Early Proto-Elamite (as termed at Tal-i Ghazir:Voigt and Dyson 1992:130) or Transitional Proto-Elamite (as suggested by R. H. Dyson 1987:648-650.) horizon which was identified at Godin Tepe V/VI, Tepe Sialk IV.1, Tal-i Ghazir, and Tepe Hissar Middle Period II. This horizon is either connected to Susa Uruk-related Period II (Level 17) (Voigt and Dyson 1992:133), or/and to the hypothetical Susa, Acropole I Level "17X" (Dyson 1987:650; Voigt 1987:fig. 2). The corresponding occupations at Godin Tepe and Tepe Sialk, included in the Transitional Proto-Elamite by R. H. Dyson, are envisaged as the very end of the Uruk period as defined by G. Algaze (2005:111, fig. 46D). As this terminology illustrates, a difficulty arises when it comes to defining the Uruk in Iran and

the beginning of, or the period immediately prior to, the Proto-Elamite. Uruk materials are reported over the western half of Iran, from the southeastern area of the Caspian Sea (Tepe Ghabrestan: Madjidzadeh 1981) to Kerman in southeastern Iran (Tal-i Iblis and Mahtoutabad) (see Algaze 2005:63–72, fig. 35). In several cases, it is not clear whether Uruk-like evidence is connected to the beginning, the middle, or the end of the Uruk period, or to the transition with the Proto-Elamite period. Early Uruk levels were apparently in Khuzistan (Voigt 1987:628). A date situated toward the middle of the fourth millennium BC for the earliest Uruk materials found at Tepe Sialk and Tepe Arisman (Sialk Period III6–7) and in Fars for the Terminal Lapui, and Initial and Early Banesh phases (Alden 1979; Sumner 1986), overlapping with Susa Period II and Middle-Late Uruk periods, seems consistent and generally accepted (Voigt 1987:628, fig. 2; Voigt and Dyson 1992:140–41; Boroffka and Parzinger 2011; Alden 2013; see Algaze 2005:65). Chogha Mish in Khuzistan is also thought to have been occupied during the Late Uruk period and not in the Proto-Elamite period (Delougaz and Kantor 1996:101–102; Alden 1982a:618). Uruk-related evidence present at Tal-i blis in Kerman from Period IV is probably also related to this horizon (Voigt 1987:628, fig. 2; Voigt and Dyson 1992:146; Boroffka and Parzinger 2011:140), while that of Tal-i Iblis Periods V-VI is thought to be more specifically connected to the Late Uruk period (Boroffka and Parzinger 2011:141), although elements of Period VI may belong to the Proto-Elamite period as well (this is discussed below).

Beyond those general chronological considerations, the situation is more complicated in detail. The break noticed in the stratigraphy and several aspects of the material culture between Uruk-related Level 17 and Proto-Elamite Level 16 at Susa, Acropole I (see Voigt and Dyson 1992:133) cannot be refuted. In addition to the overlapping absolute dates obtained for Late Uruk and certain Proto-Elamite settlements, and the existence of a plateau in the calibration curve, which is perhaps responsible for this, the situation is further complicated by the fact that there are connections between the Uruk and Proto-Elamite material cultures. In other words, whether the beginning of the Proto-Elamite followed or was partly contemporary with the end of the Uruk, the material culture of the former has clear connections to that of the latter. This is illustrated by certain types of ceramics such as beveled-rim bowls, low-sided trays, lugged-jars, and spouted vessels. Beveled-rim bowls were a major component of the Uruk-related assemblages, and, although it is thought that their quantities decreased after the Uruk, they are attested during the Jemdet-Nasr period in Mesopotamia and in Proto-Elamite occupations. Low-sided trays are absent from the Uruk-related Susa II but present in the Proto-Elamite Susa III. They are also present in the deposits defined as Late Uruk-related of Godin Tepe (Level V), at Tepe Sialk (Period III.7), and at Uruk-related sites in Mesopotamia (see Algaze 2005:figs 26–27). The incised lugged-jars of the Uruk period cannot be strictly equated to the slipped and painted so-called Jemdet-Nasr jars (and to the Proto-Elamite ones), but the similarities that are observed between thesese jars (Proto-Elamite, Jemdet-Nasr, and Uruk) discussed in Chapter 3 can hardly be dismissed. One may also recall that the Proto-Elamite building complex at Tepe Yahya was laid out using architectural standards comparable to those identified at Habuba Kabira in Syria in the Late Uruk period (Beale and Carter 1983). H. Pittman compared the layout of Proto-Elamite Susa, Acropole I Levels 16–15B to that of the building found at Godin Tepe Period V which is considered to be Uruk-related (see below) and to Room 2 of Building Level III at Tal-i Malyan (Pittman 1994:90 note 51). Furthermore, "many of the features of the administrative system typical of the proto-Elamite period were first found in Level 17" at Susa, Acropole I, a level defined as Uruk-related (Pittman

1994:85). In addition, it is generally thought that the Proto-Elamite writing system developed after the earliest Proto-cuneiform texts of Mesopotamia, in a period contemporary with the post-Uruk Jemdet-Nasr period.[8] Yet, R. K. Englund (2004:123–24, 139–40) has noted several correspondences between the Proto-Elamite and Proto-cuneiform writing, not in the later Uruk III (Jemdet-Nasr) phase, but already in the initial Uruk IV (Late Uruk) phase. J. Dahl notes that the Proto-Elamite writing system developed "rapidly" or "slightly" after the Mesopotamian Proto-cuneiform (Dahl 2002:1 note 1; Dahl 2005a:1).

Whether or not the Proto-Elamite was partially contemporary with the end of the Uruk, many aspects indicate a close, albeit not exclusive, relationship between the two phenomena. While the Late Uruk and the beginning of the Proto-Elamite appear somewhat "permeable," both chronologically and culturally, a chronological consensus is marked by the presence of the Proto-Elamite tablets. Within a bracket of ca. 400/500 years defining the Proto-Elamite period, J. Dahl *et al.* (2013) argue that the development and evolution of the Proto-Elamite writing system, as well as the deposits where they have been found, existed within a short span of a few decades rather than within a protracted period. The radiocarbon determinations from Tal-i Malyan Middle Banesh contexts (Sumner 2003:Table 13), which represent the most documented and reliable ones, situate the "tablets' episode" between 3300 and 3000 BC or 2900 BC (see also Dahl 2009:24, 26). Using R. H. Dyson's chronological terms, this would correspond to Proto-Elamite 1 (including the tablets from Tal-i Malyan, Susa IIIA, Tepe Sialk IV.2, and Tepe Yahya IVC – the building complex) and elements assigned to Proto-Elamite 2 (including the tablets from Susa IIIB – Ville Royale I and Shahr-i Sokhta I). Refinement of the chronology will perhaps be augmented thanks to the study of the tablets. Indeed, J. Dahl (2005b:116–117, fig. 23) already distinguished certain variations in the treatment of the signs, with "early" and "late" peculiarities.

The Proto-Elamite tablets came to an end mostly around 3000 BC or in the very beginning of the third millennium BC, but materials that developed in the Proto-Elamite period endured into the early third millennium BC (see Voigt and Dyson 1992:133–34, 141–42). As indicated above, the end of the Proto-Elamite period is currently situated around 2800 BC and probably coincided with the end of Susa IIIB and the Late Banesh in Fars. In Fars, it has long been thought that an important chronological hiatus followed the Proto-Elamite period, a hiatus that lasted late into the third millennium BC (ca. 2200 BC) until the Kaftari period. However, a recent reappraisal of the chronological sequence and materials found at Tal-i Malyan suggests continuity between the Late Banesh ceramics and the early Kaftari vessels known at the end of the third millennium BC. In other words, this suggests that Tal-i Malyan and the Kur River Basin continued to be occupied throughout the third millennium BC (Miller and Sumner 2004; Alden *et al.* 2005; see also Petrie *et al.* 2005). This time-period encompasses Susa IIIB to IVA and Godin Tepe Period III6-5 and includes the first half of the third millennium BC. There is no occupation posterior to the last Proto-Elamite phase of Tepe Arisman. At Tepe Yahya, as indicated before, there is a disagreement regarding the end of the Proto-Elamite period and its transition with the following Period IVB. This is discussed below.

1.2.2.3 Settlement organization

An aspect that appears characteristic of the Proto-Elamite period is an apparent drop in occupations in several areas of the geographical expanse considered. Perhaps, with more research, the number of Proto-Elamite sites will be augmented in the future.[9] At present, several of the main Proto-Elamite sites are iso-

lated in their regions and are characterized by a lack of settlements in their vicinity. This is noted in Khuzistan, in Susiana, when Susa was a Proto-Elamite occupation (Alden 1982a:617-618; H. T. Wright 1987:145), although a contrary case may exist in the Izeh Plain, located ca. 160 km southeast of Susa (Alden 1982a:619-620; see below). In Fars, when Tal-i Malyan became a city of 40/50 ha in the Middle Banesh period, there was apparently no settlement up to 10 km from this site, and only a few villages have been identified in the Kur River Basin. The same pattern is observed in the Late Banesh period, when the site was enclosed within a wall (Alden 2013). B. Helwing also emphasizes this regarding Tepe Sialk and Tepe Arisman, which are located approximately 50 km apart from each other and are the only sites of their respective regions during the Proto-Elamite period (Helwing 2013; Danti 2006). Tepe Yahya in Kerman appears as an isolated Proto-Elamite settlement after the Aliabad period (Lamberg-Karlovsky 1989:viii-ix). Although, one may expect more discoveries related to the Proto-Elamite in the Halil Rud Valley, located ca. 90 km to the east, and from Tal-i Iblis, located more than 160 km to the north. Nevertheless, in some areas like the Sialk-Arisman area and the Malyan region, the Proto-Elamite occupations appear as isolated centers, taken as a whole, the example of southwestern Iran indicates a certain consistency in the Proto-Elamite settlement pattern. Between Susa and Tal-i Malyan, Proto-Elamite vestiges are in the Izeh Plain in Khuzistan, ca. 160 km southeast of Susa; at Tal-i Ghazir, ca. 140 km southeast of Susa and ca. 70 km southwest of the Izeh Plain; in the Mamasani region, ca. 230 km southeast of Tal-i Ghazir; and Tal-i Malyan, ca. 90 km east of the Mamasani region, with some sites having the potential of being important settlements. It, thus, appears that besides the important cores of the Proto-Elamite known so far, with more investigation, one may expect a denser Proto-Elamite occupation of the territory.

Several of the Proto-Elamite settlements demonstrate aspects that have led to define them as urban centers. It is evident at Tepe Arisman. In Area C, domestic houses are densely settled within regular lots along an alleyway, limited by "narrow alleys or drainage channels" and accompanied by "sanitary installations and gutters" (Chegini *et al.* 2011:63; Helwing 2013). B. Helwing also noticed similar aspects between the Proto-Elamite occupation of Tepe Arisman and those of Tal-i Malyan and Tepe Yahya IVC2, including standardized mudbricks and layout (Helwing 2006:39) while H. Pittman compared the layout of Susa, Acropole I Levels 16-15B to Godin Tepe Period V and Room 2 (Building Level III) at Tal-i Malyan (Pittman 1994:90 note 51). The Proto-Elamite building complex of Tepe Yahya was excavated over ca. 500 m², and architectural structures identified on other areas of the mound may indicate that the site was covered by similar constructions in this period (Lamberg-Karlovsky 2001a:270). As seen hereafter, although the exposure of the Proto-Elamite occupation at Tepe Yahya is relatively limited, its map indicates a rigorous architectural layout, including the systematic use of the same measure unit in the layout of the rooms of the building complex, standardized mudbricks, and the installation of a drainage system. D. T. Potts compared Rooms 1, 5, and 6 at Tepe Yahya IVC to Rooms 903, 876, and 892 of Susa, Acropole I Level 18 (Potts 2001:10; Le Brun and Vallat 1978:fig. 2). In Fars, Tal-i Malyan starting with the Middle Banesh period has often been considered a city. It supposedly sheltered 4,000 to 16,000 individuals and increased to 40/50 ha in this period. The excavations conducted at Tal-i Malyan provided the remains of monumental and elaborate architectures in Operation ABC which is interpreted as an elite area including subsistence and craft production as well as administrative activities. Remains of a "domestic and craft production center" were found in Operation TUV (Sumner 2003:2-3, 112-17;

Nicholas 1990). The site was enclosed within a ca. 5 km long wall in the Late Banesh period, dated to the early third millennium BC (Sumner 1985). In contrast, Susa appears as a relatively small settlement thought to have diminished in size at the beginning of Period III, being 11 ha in Early Susa III (Alden 1982a:617-618), but probably extended on the Ville Royale I in late Period III (Steve and Gasche 1990:27).

One may consider that important and distinctive changes toward urbanism occurred in the Proto-Elamite period in several areas of Iran in their settlement pattern and organization. One should, however, not forget the previous Uruk period and the example of Chogha Mish, located in Khuzistan, which is considered to be a city in the Uruk period and later abandoned (see below). With the exception of Tal-i Malyan, although the Proto-Elamite settlements illustrate "urban-like" layouts and features, their sizes are not imposing and certainly not of the same scale as the city-states of Mesopotamia in the Uruk period. The Proto-Elamite settlements are defined as towns or villages according to R. C. Henrickson (1997). As discussed below, W. Sumner (1986) and J. Alden (2013) demonstrated that at the Kur River Basin in Fars settlements were included within a complex system involving the presence and movements of mobile pastoralist nomads. J. Alden (2013) notes that Tal-i Malyan in Middle Banesh period consisted of a "structure of neighboring but separate occupations," with evidence for fortifications enclosing each of the excavated areas. In the Late Banesh period, the wall that enclosed the site enclosed the Middle Banesh occupations as well as a large unoccupied area of ca. 100 ha. Based on this, it is suggested that this area "served as protected space for nomadic groups and their herds to gather and camp during the spring or autumn".

1.2.2.4 Material culture

Since the late nineteenth and early twentieth centuries' discoveries at Susa, Proto-Elamite tablets and fragments of tablets have been recovered in Iran far beyond this site at eight sites in total such as at Tal-i Malyan in Fars, Tepe Sialk in Isfahan, Tepe Ozbaki in Qazvin, Tepe Yahya in Kerman, and Shahr-i Sokhta in Seistan (see Dahl *et al.* 2013 for an updated analysis and synthesis of the tablets, including their location). In addition to the tablets, the definition of the Proto-Elamite has been supplemented by other categories of objects such as a distinct type of ceramic assemblage, certain categories of which have relationships to the Uruk and Mesopotamia. The ceramic assemblage includes, as most popular markers, beveled-rim bowls, low-sided trays, spouted vessels, and painted jars often termed "Jemdet-Nasr"-related as well as some other categories of plain, painted, and slipped ceramics. Materials related to this assemblage are reported from areas south of the Caspian Sea to Kerman, including Khuzistan and Fars in the west. This ceramic assemblage is today best represented by the aggregate of vessels recovered from Tepe Arisman, Tepe Sialk, Tal-i Malyan, Tal-i Ghazir, Susa, and Tepe Yahya. Although parallels are observed between Proto-Elamite sites, local/regional differences are noted in the forms, quantities, and styles of vessels represented. Local manufacture of ceramics is demonstrated in Fars, in the Kur River Basin, where J. Alden reports the presence of considerable fabrication of chaff-tempered ware (goblets and trays) at Tal-e Qarib in the Early Banesh period (Alden 2013, 1979:105, 1982b:91-99). He suggests that chaff-tempered material was probably produced at Tal-i Malyan in the Middle Banesh period (Alden 2013). W. Sumner tends to agree with this proposal, while suggesting that Tal-e Qarib remained a production center of chaff-tempered vessels in the Middle Banesh period. He also mentions other villages

involved in the production of grit-tempered vessels (Sumner 2003:115). Local manufacture of ceramics is also demonstrated at Tepe Arisman, where tempering materials identified in the ceramics compare with raw materials observed in the vicinity of the site (Helwing 2011a:214). There is, however, no evidence for pottery production on the site such as is evident with the pottery kilns identified in the earlier Sialk III-related period (see Boroffka *et al.* 2011). Aside from local/regional production center(s) and distribution networks, specific ceramic types also circulated from one region to another. This is demonstrated by recent Instrumental Neutron Activation Analysis (INAA hereafter) conducted on ceramics from Tal-i Malyan dated to the Late Banesh period. Analysis has shown that the ceramics came from the area of Tal-i Ghazir or its surrounding. Tal-i Ghazir is situated ca. 370 km apart from Tal-i Malyan (Alden 2013).

Production of metal objects is particularly well-attested at Tepe Arisman where workshops and evidence for copper furnace smelting were identified[10] (Helwing 2006:40–41). At Tal-i Malyan, W. Sumner mentions evidence for copper metallurgy at ABC and TUV Operations. He also indicates that the copper used at this site probably came from the deposits located near Tepe Arisman and Tepe Sialk in the Isfahan province (Sumner 2003:114). The Proto-Elamite metal objects include copper axes, pins, spirals, blades, and bracelets, silver and gold ornaments as well as lead items, with similar objects recovered from sites in Isfahan, Khuzistan, Fars, and Kerman provinces (Helwing 2006:40–43; Helwing 2011b; Sumner 2003:114; Le Brun 1971:fig. 67). B. Helwing notes that "the technique of combining silver with other materials such as stone [as observed at Tepe Arisman], gold or shell is also attested on other Proto-Elamite sites, for example at Sialk and Susa (...)" (Helwing 2006:42). Copper spirals similar to those reported from Tepe Arisman are present in a distinctive cultural context at Tepe Hissar (Helwing, *op. cit.*). B. Helwing notes that copper objects produced on a large scale at Tepe Arisman were likely traded to sites located in the Hamrin Basin and northern Mesopotamia (Helwing 2011d:529–531). The production of objects in silver and gold as well as stone is well-illustrated by statuary traditionally defined as Proto-Elamite art (see below). Production of stone and plaster vessels, in the Early Banesh period and probably in the Middle Banesh period, is attested in Fars, with evidence of manufacture, or redistribution, at Tal-e Qarib (Sumner 2003:111, 115). Tal-i Malyan in the Middle Banesh period informs us of the production of a variety of objects and tools using local, regional, and more distant sources: from Afghanistan came lapis-lazuli, obsidian from Anatolia and Caucasia, and shells from the Persian Gulf. The presence of those materials at this site implies that they traversed non-Proto-Elamite areas (Turkey and Afghanistan) and were likely carried to the site via the Proto-Elamite networks located to the west (Khuzistan), the north (Isfahan), and the east (Kerman). In addition to these materials, objects, fragments, and/or wastes of turquoise, carnelian, agate, jasper, steatite, flint, and bitumen, were found at Tal-i Malyan (see Sumner 2003:114–15). The glyptic art reported from Proto-Elamite sites (see below) further demonstrates the use of steatite, heated and glazed, for the fabrication of cylinder-seals (Pittman 1994). Beads in steatite (?) are also reported from Tepe Arisman (Helwing 2011b:274, fig. 54).

In sum, the Proto-Elamite settlements illustrate a technological context of increasing resource procurement and production, including the development of pyrotechnologies, with resources derived from both local and regional proveniences as well as of long-distance origin. Evidence from Fars and Isfahan tend to indicate that the manufacture and distribution of several categories of objects took place at (a) local production center(s) and were distributed along regional distribution networks, while evidence

from Tepe Arisman indicates extraregional distribution networks. The search for raw materials encompassed several regions of the Proto-Elamite sphere (such as the copper from Isfahan province manufactured at Tal-i Malyan as suggested by W. Sumner) and extended to territories located far distant. One should nevertheless moderate the importance of long-distance exchange. The materials considered as "exotic" are in some cases relatively few (such as at Tepe Yahya IVC).

There is a consistency in the material culture recovered from sites in Fars, Khuzistan, and Isfahan provinces (including ceramic production, metal objects, and other categories discussed below) in the Proto-Elamite period. Nevertheless, one should note again that there are differences between the Proto-Elamite material inventories of these sites. Tepe Yahya Period IVC contains clear Proto-Elamite features, but it also incorporates materials related to other cultural spheres (Lamberg-Karlovsky 2001a:270). East of Tepe Yahya, the Proto-Elamite tablet fragment and glyptic at Shahr-i Sokhta in Seistan and five beveled-rim bowl fragments at Miri Qalat in southwestern Pakistan are associated with distinctive ceramics. The same situation is noted at Tepe Hissar in Semnan. To the west, in spite of cultural differences, there are important parallels (such as glyptic elements and types of ceramics) between Mesopotamia in the Late Uruk and Jemdet-Nasr periods and the Proto-Elamite sphere.

1.2.2.5 Administrative tools: The tablets and seals

The Proto-Elamite tablets are not fully deciphered so their meaning remains only partially known. The current corpus consists of more than 1,600 tablets recovered from eight sites: Susa and Tal-i Ghazir in Khuzistan, Tal-i Malyan in Fars, Tepe Sialk in Isfahan, Tepe Ozbaki in Qazvin, Tepe Sofalin in Tehran, Tepe Yahya in Kerman, and Shahr-i Sokhta in Seistan (see Dahl *et al.* 2013). This distribution covers a large part of Iran, however, the tablets are not found in every region and their number varies from one site to another. For instance, while more than 1,500 tablets have been estimated for the corpus from Susa (see below), 27 were found at Tepe Yahya, 32 at Tal-i Malyan and one fragment at Shahr-i Sokhta.

The tablets are made of unbaked clay and bear incised numerical and ideographic signs. There is no agreement as to whether the texts reflect a specific language. P. Damerow (2006) notes that, in this stage of proto-writing, the tablets have "weak connections to oral language." Whereas, according to R. K. Englund (2004:127), "the texts are (...) more likely to contain language-based syntactical information than the very cursory notations in Proto-cuneiform documents. Statistical analysis of text transliterations should point toward meaningful sign combinations of a fixed sign sequence which could reflect speech," and (2004:140-141) "given later linguistic evidence, it is likely that an indigenous, Elamite-speaking population was living there in the latter half of the fourth millennium." (see also Dahl 2005b:120). In any case, the presence of Proto-Elamite tablets on numerous sites indicates that the Proto-Elamite writing system was understood by people settled over a thousand of kilometers.

The relationship between the Proto-Elamite texts and the Mesopotamian Proto-cuneiform has been clearly demonstrated while the two types are believed to have "common ancestry" (Dahl 2005b:85). As indicated above, relationships to the Mesopotamian Uruk IV Proto-cuneiform can be demonstrated in the initial stages of development of the Proto-Elamite writing (R. K. Englund 2004:123-24, 139-40). There is general agreement that the Proto-Elamite script developed slightly after the Proto-cuneiform (Dahl 2002:1 note 1; Dahl 2005a:1). The Proto-Elamite texts, nevertheless, exhibit important differences (see Damerow and Englund 1989; see Potts 1999:71-79; Englund 2004; Dahl 2005a).

Current knowledge indicates that the tablets served to record quantities and transactions of agricultural products (grain and rations), animals (sheep and goats), their by-products (such as dairy products, oil, beer, bread, and wool/textiles?), and objects such as tools, stone objects, and containers related to houses, individuals, and/or institutions.[11] The texts also mention slaves or laborers and plowed or sowed lands (see Damerow and Englund 1989; Englund 1998a, 2004; Dahl 2005b, 2009). With the exception of the sign interpreted as "sheep" or "animal" (sign M346: see Damerow and Englund 1989:53-55; see Dahl 2005b:Appendix B) and the one interpreted as "household" (sign M157:see Dahl 2005b:Appendix B), J. Dahl (2002:3) reports that the most common signs are "signs of either grain products, containers, or persons." He further writes (Dahl 2005a:14): "It is my working hypothesis, in agreement with the suggestions of Meriggi and others (...) that hidden in the extensive proto-Elamite repertoire of signs, mainly consisting of pictograms, is a small group of signs used only to write proper nouns—personal and professional designations, toponyms and so on." Most interestingly, the author suggests that the signs traditionally related to owners or households may represent lineages, while the infixes may represent personal names (Dahl 2005a:11; 2005b). Important differences are noted between the quantities deciphered on the tablets, with, for example, indications of local small scale activities at Tepe Yahya and Tal-i Malyan (Damerow and Englund 1989:62; Sumner 2003:116) and the much larger scale records of animals and grain measures from Susa comparable to the Proto-cuneiform texts of Mesopotamia (Damerow and Englund 1989:63, note 171).

The administrative tool kit of the Proto-Elamites includes cylinder-seals used on the tablets, door stoppers, jars, and other types of containers (baskets and bags) (Pittman 2001:234) to control access to stored and shipped goods. The seals and seal impressions found on the Proto-Elamite sites include a distinctive Proto-Elamite style (Pittman 1994:61-64), while the glazing of steatite seals and wheelcut manufacture were shared on Mesopotamian and Iranian sites (Pittman 1994:42, 65-66, 241, 248-249). In the eastern fringe of the Proto-Elamite geographical expanse, a single seal from Tepe Hissar is similar to those found at Susa, Godin Tepe, Tal-i Malyan, and Tepe Yahya IVC (Dyson 1987:657-658) while comparable glyptic was recovered from Shahr-i Sokhta (Amiet and Tosi 1978).

1.2.2.6 Images and iconography

Sharing an administrative role in the control of goods and transactions, the glyptic representations also express symbolic/mythological scenes of unknown religious/political content. Representations attested on Proto-Elamite sites are found in Mesopotamia in the west to Shahr-i Sokhta in the east (see Amiet 1980; Pittman 1994, 2001; Parpola 2011). The Proto-Elamite glyptic contains rare representations of humans. More typically scenes consist of animals, including lions, bulls, goats, and imaginary winged-animals, within natural contexts (stylized representations of mounds and plants) and associated with signs. H. Pittman (1994:figs 28-29) compares these signs to the Proto-Elamite writing. P. Amiet (1980:41-42) identifies scenes including animals imitating humans farming, on boats, and holding objects and tools, etc.; some humorous scenes as pointed out by D. Hansen (1970:14). In certain scenes there is a prevalence of lions supporting what seems to represent the earth (mound and vegetation) and of bulls (seated and on friezes), and scenes of bulls and lions in opposition (Amiet 1980:pls. 37-38). One image from Susa (Amiet 1980:pl. 38, n°585; Figure 1.4) depicts a bull dominating two lions placed alongside a lion dominating two bulls. E. Porada suggested that bulls and lions represent "balance of

power," while P. Amiet proposed that they represent the "personification of cosmic forces" (see Hansen 1970:12–13; Amiet 1980:109; Porada 1950:225). What the animals represent cannot be determined, yet a Proto-Elamite sign of individual, house, or institution accompanies the lion on this image. This sign, the so-called "hairy triangle," appears to represent "a leading institution or possibly kin group" (Englund 1998a), as first noted by C. C. Lamberg-Karlovsky (1986), or, as noted above, lineage, while the infix may represent a personal name (Dahl 2005a:11; 2005b). If the lineage-related interpretation of this sign proves to be correct, its association with the lion may indicate a more human/dynastic-related meaning.

The meaning of the representations of bulls, lions, goats, sheep *et al.* on the seals and sealing impressions remains obscure, but an additional series of objects, often categorized as Proto-Elamite art, tend to corroborate aspects of Proto-Elamite imagery such as observed on seal impressions. This should, however, be taken with reservation because the provenience of these objects is not known. This series includes a silver figurine depicting a bull, kneeling in a human worshiper attitude and holding a spouted-vessel (Hansen 1970). This figurine further illustrates the importance of animals imitating humans in Proto-Elamite art as well as the importance of libation. As indicated by D. Hansen, this sculpture is reminiscent of stone figurines found at Susa in contexts assigned by L. Le Breton to the Jemdet-Nasr period (Susa Period III), which represent female worshipers, a male worshiper holding a jar, and animals including monkeys and a bear(?) drinking (Hansen 1970:8–9).[12]

1.2.2.7 Funerary practices

Little is known of the burial practices in the Proto-Elamite sphere. In the last Proto-Elamite phase at Tepe Arisman (Area C, phase 3), several children and one adult were buried in jars (see Chegini *et al.* 2011). The burial of children in jars is also attested at Tal-i Malyan TUV Operation (Alden 1982a:616) and Tepe Sialk (Ghirshman 1935:236; 1938:59–61).

1.2.2.8 Animal and vegetal production

In the Kur River Basin, Early Banesh villages based their subsistence on agricultural production and animal husbandry, while pastoral nomadism is also abundantly evident (Sumner 2003:110). The faunal remains from Tal-i Malyan (ABC and TUV Operations), of the Middle Banesh period, are dominated by sheep and goat. Cattle and domestic ass were found in low quantities and gazelle (at ABC) and pigs (at TUV) are also noted. Wheat and barley were cultivated as indicated by carbonized seeds (Sumner 2003:113). Records from Tepe Arisman indicate that the great majority of faunal remains recovered from the Proto-Elamite occupation consists of domesticated sheep/goat exploited for meat, milk, and possibly wool. Cattle are present in very low quantities and also exploited for meat and perhaps milk, while domesticated ass, certainly used for transport, are also present. In addition, domestic dog and several wild species of animals, including wild hermione, were identified in very small numbers (Benecke 2011). At Tepe Yahya Period IVC, sheep and goat represent 95%, while the rest of the faunal remains consist of cattle, domestic dog, and wild animals, i.e. bear (Meadow 1986:fig. 3.3, Table 3.4). Barley and wheat were cultivated and a proliferation of wheats is observed in this period (Meadow 1986:Table 3.2, 30).

The importance of husbandry, especially sheep/goat, on Proto-Elamite settlements is illustrated by the tablets. J. Dahl, on the basis of tablets from Susa, notes (Dahl 2005b:119): "(...) it is not surprising to

find that the people of Iran herded sheep and goats even in the proto-Elamite period. What is surprising (...) is the degree of control exercised by the central administration in keeping detailed records of this activity. (...) The Susa bookkeeping procedures are surprisingly sophisticated, suggesting an extensive administrative apparatus. The static nature of the deliveries in the two production records is suggestive of a highly developed administrative system of requirements. Systems with fixed delivery or production rates often operate based on delivery norms, resembling a planned economy of sorts." This remark agrees well with W. Sumner's and J. Alden's opinion (2013) that envisions pastoral nomadism as a fundamental component of the economic structure of Tal-i Malyan in the Proto-Elamite period.

1.2.2.9 Structure

Given the ca. 400 years duration of the Proto-Elamite period it is not possible to characterize all settlements as contemporaneous. Distinctive Proto-Elamite phases are defined at some sites, while in other cases they are regarded as contemporaneous. In spite of the uncertainties concerning chronological relationships of Proto-Elamite deposits, it is apparent that some areas, located in the western half of Iran and in Kerman, shared similar cultural traits. The ceramic assemblages indicate at a minimum that, in addition to the style, certain technological aspects and activities were shared over a large area. The tools of administrative control, the tablets, glyptic art, and specific ceramic types, imply the spread of new forms of political structures, social organization, and perhaps a language across Iran. According to P. Amiet and M. Tosi, the tablets and the seals "appeared as complementary devices for registration and control in the transactions and redistribution of goods and services at the end of the fourth millennium B.C. At this time they must have been regarded as a handy means for a safer administration of economical output by all the emerging state societies." (Amiet and Tosi 1978:24).

The Proto-Elamite evidence indicates an administration of both a local and a regional collective system with strong supraregional ties. Administration of local/regional collective system is exemplified by architectural works,[13] in the production of subsistence resources (plants and animals, as well as their by-products) and the organization of gangs of laborers or slaves recorded in the tablets, as well as the production and distribution of objects and tools of metal, stone and ceramic. At the local/regional level, W. Sumner (1985:160) noted that the "Proto-Elamite civilization in Fars did not have the differentiated hierarchical administrative structure of an archaic state. Rather, the political structure was that of a chiefdom ruled by a tribal khan whose power base lay with a large pastoral nomadic population." The structure had, however, to coordinate a relatively complex society including part-time specialists in the production and distribution of agriculture and objects (see Sumner 2003:116). Regarding the supraregional level, different hypotheses were proposed. As synthesized by C. C. Lamberg-Karlovsky (2001a:271), the Proto-Elamite is envisaged as 1) a system with a center located at one site, Susa or Malyan; 2) a system including "a series of regionally-based centers" such as Susa, Malyan, Shahdad, and Shahr-i Sokhta; and, 3) as the sum of "numerous, loosely structured, decentralized, tribal configurations." Whether the homeland and/or "capital" of the Proto-Elamites, if there was one, was located at Susa or at Tal-i Malyan, or at both sites, remains under discussion. In some scenarios, following the model proposed by G. Algaze (2005) for the Uruk expansion, some sites, such as Tepe Yahya, Godin Tepe, and Tepe Sialk in the Late Uruk period, are considered colonies settled by people who came from Susa or the Iranian highlands (see Sumner 2003:113; Lamberg-Karlovsky 1996:112–113; Alden 1982a:621). The social

structure of the Proto-Elamites remains difficult to ascertain, and with the increasing evidence for Proto-Elamite settlements the traditional two cores, Susa and Tal-i Malyan, are being supplemented by a series of significant recent discoveries.

Shared aspects of material culture attested within the Proto-Elamite settlements imply forms of communication that may reflect linguistic, religious, and ethnic ties (Alden 1982a:613). Although linguistic uniformity cannot be proven, it is noted that the texts may "contain language-based syntactical information" (Englund 2004:127) and "it is likely that an indigenous, Elamite-speaking population was living there [in Iran] in the latter half of the fourth millennium." (Englund 2004:140–41). J. Dahl (2005b:120) notes that "it is unlikely that the [writing] system encoded much if any linguistic information" in the early texts of Susa, but that "it is possible that later texts (...) may hold some speech coding." As indicated above, ethnic ties, more specifically lineage ties, tend to find a solid argument in the recent studies of the texts, in particular in J. Dahl's proposal that sees the signs traditionally related to owners or households as representations of lineages while infixes may represent personal names (Dahl 2005a:11). J. Dahl (2005b:82) also notes that: "The use of some of the same signs, or sign-groups for 'owners' (...) throughout the region [i.e. the Proto-Elamite sphere] suggests a more intricate geo-political system than a superficial take-over of a Susa invention by local elites." J. Dahl (2005a:11) proposes that this "could explain why the same 'owner/household' signs would be found on tablets from different sites and of different ages." J. Alden (2013) convincingly demonstrates the importance of the role of pastoral nomadism in Fars in the Proto-Elamite period and envisions that "the Kur River Basin and Susiana regions were inhabited by members of a single extended cultural community with a subsistence economy based on full-time seasonally transhumant nomadic pastoralism". If one add W. Sumner's (1985:160) hypothesis of a local khan in Fars to J. Dahl's and J. Alden's proposals, one may tentatively suggest that the structure of the Proto-Elamite entity was composed of, or rather governed by, a tribal kin-based diaspora. Other questions need to be clarified, such as the origin of the Proto-Elamite (and its relation to the Uruk) and the motives and mechanisms of its development and spread.

Although the Proto-Elamite appears as an Iranian phenomenon its strong ties to the Uruk and Jemdet-Nasr in Mesopotamia cannot be ruled out. The fact that several aspects of the Proto-Elamite are observed in the Uruk indicates a rather protracted developmental process and a relatively continuous transition between the Uruk and the Proto-Elamite. Such a transition would include a phase absent at Susa (Acropole I Level "17X"). Additionally, an Uruk presence is attested in the provinces where the Proto-Elamite later developed (Khuzistan, Fars, Isfahan, and Kerman). If one wants to find the roots of the Proto-Elamite, the component provided by the preceding Uruk-related occupations of the Iranian Plateau cannot be ignored. The motives for the development of the Proto-Elamite phenomenon and its spread has led to several hypotheses including state expansion, trade, the direct control of resources, and the search of agricultural lands, or a combination of any of the above. All of the above models suggest movements of populations. Economic relationships with Mesopotamia are suggested for Susa which is thought to be a "port-of-trade" given the large quantities of animals and/or their by-products reported on the tablets (Alden 1982a:624). Economic relationships with Mesopotamia are suggested at Tepe Arisman where the production of copper objects is thought to have been exported to the Hamrin Basin and northern Mesopotamia. East of the Proto-Elamite sphere, as indicated above, Proto-Elamite evidence appears in distinct cultural assemblages at Tepe Hissar, Shahr-i Sokhta and Miri Qalat. Economic fac-

tors – the search for access to resources and trade – may be favored in the case of the Proto-Elamite "presence" at Shahr-i Sokhta which is located en route to the minerals of Afghanistan and Tajikistan and considered as a "gateway to Turkmenia, Bactria and beyond" (pers. comm.; Alden 1982a:621), but with a minimal "impact on the material culture of the site" (Alden 1982a:621). A minimum impact of the Proto-Elamite is also observed in the material cultural of Tepe Hissar. Southeast of Kerman, the only Proto-Elamite evidence consists of beveled-rim bowls at Miri Qalat.

J. Alden noted (1982a:628) when discussing trade, politics and the relationships between Mesopotamia and Iran in the Proto-Elamite times: "(...) questions about the social, religious, and ethnic relationships between highlands and lowlands remain. The range and importance of these shared interests is clearly suggested by Sumerian epic literature and these commonalities must be considered in complete models of societal evolution along with the political and economic patterns (...)." These remarks can be extended to the rest of the Iranian Plateau and suggest that besides the tablets, the material culture related to the Proto-Elamite illustrates various functions, separate spheres of activities, and separate spheres of diffusion. The Proto-Elamite features are not equally distributed within this large area. Tablets were found at a limited number of sites (eight). While some sites bear considerable Proto-Elamite evidence, in another extreme it is attested by a limited number of items such as the beveled-rim bowl fragments found at Miri Qalat in southwestern Pakistan, the tablet fragment and glyptic from Shahr-i Sokhta, and the Proto-Elamite-related objects at Tepe Hissar. It is not always clear whether the spread of Proto-Elamite features resulted from imports, migrations, colonization, or a combination of all of them. If evidence such as that reported from Tepe Arisman agrees well with a model based on trade, alongside possible motives, the diffusion of the Proto-Elamite culture may have resulted from multiple processes, including imitation/adoption, the emulation of Proto-Elamite culture by their neighbors, through matrimonial exchanges, political alliances, warfare, and others.

In sum, one may envision the Proto-Elamite as a sphere: 1) of shared material culture with strong links, albeit differences, to Late Uruk and Jemdet-Nasr in Mesopotamia. The Uruk-related evidence found in Kerman, Isfahan, Fars, and Khuzistan indicates that these links were not entirely new in these regions; 2) with several main concentrations of sites (Fars, Khuzistan, Isfahan, and Kerman) organized upon local and regional systems and distinct extraregional connections, while maintaining long-distance ties within the Proto-Elamite sphere. The problem is in determining to what extent, and by whom, these interregional and extraregional connections (such as the copper objects exchanged between Tepe Arisman and north Mesopotamia) were centralized, integrated, and beneficial for a larger system that would include the totality of the Proto-Elamite phenomenon.

1.2.3 Main Proto-Elamite sites and evidence

This section presents materials of the main Proto-Elamite sites as well as certain occupations considered Uruk-related.

1.2.3.1 Khuzistan

Susa (Susiana)

Susa owns the great majority of Proto-Elamite texts known so far, with approximately 1,450 tablets and fragments (Damerow and Englund 1989:2), or 1,557 according to Dahl *et al.* (2013). Unfortunately, lit-

tle information regarding the context of most of them, excavated in the late nineteenth and early twentieth centuries, was recorded. Susa was re-excavated in the late 1960s and 1970s on the Acropole I and Ville Royale I. At Acropole I, tablets with Proto-Elamite signs appeared in Level 16 and were found until Level 14B. Level 16 marks the beginning of Period III, the Proto-Elamite period, and follows the previous Level 17 assigned to Period II, a period when Susa was under the cultural influence of the southern Mesopotamian Uruk culture (Le Brun 1971:fig. 58; 1978:190-192). Period II is considered by D. T. Potts (1999:52-69) contemporary to Early, Middle, and Late Uruk in Mesopotamia, although G. Algaze (2005:13-18) notes a time lag between the emergence of the Uruk at Susa (in the Middle Uruk) and its beginning in Mesopotamia. A. Le Brun identifies major changes in ceramics between Levels 17 and 16 of Acropole I (Le Brun 1978:183, 190). The shapes and decorations found in Level 17 disappear, while new types of vessels including new fabrics appear in Level 16. The beveled-rim bowls, tall goblets, jars, bottles, and lugged jars characteristic of the Uruk period in Mesopotamia and Susa Period II are no longer attested in Level 16. Beveled-rim bowls appeared at Susa in Level 22 and are present throughout Levels 21 to 17 (Le Brun 1978:183, 190). On the other hand, vegetal-tempered low-sided trays and flat-rim bowls make their appearance in Level 16. The break in terms of material culture between Level 16 and the previous occupations at Acropole I is corroborated by traces of levelling prior to the construction of Level 16 (Le Brun 1978; Vallat 1986:338; Dyson 1987:648). Nevertheless, "many of the features of the administrative system typical of the proto-Elamite period were first found in Level 17" (Pittman 1994:85), such as the glazed steatite glyptic style, although the Proto-Elamite script and the classic glyptic style are absent in this level (Pittman 1994:81-86). As indicated above, an intermediate phase between Levels 17 and 16 (Level "17X") which is thought to correspond to the development of certain Proto-Elamite features (including Proto-Elamite writing) has been proposed. This phase is absent from the sequence of the Acropole I, but, according to R. H. Dyson who included it within the Proto-Elamite Transitional phase (Dyson 1987:650), it may be represented at Godin Tepe, Tepe Sialk and Tepe Hissar (Dyson 1987; see also Algaze 2005:57). After this hypothetical phase, the ceramic materials and the architectures of Level 16 to 14B tend to indicate a continuous occupation forming Period IIIA (Le Brun 1978:190, 192), while a break is observed between Levels 14B and 14A which is included in Period IIIB. H. Pittman and R. Dittman considered Levels 16 and 15B and Levels 15A and 14B as two architectural and ceramic units (Pittman 1994:89-90). R. Dittman (1986b:346) proposed including Levels 16 and 15B in Proto-Elamite Period 1, Levels 15A and 14B in Proto-Elamite Period 2a, and Levels 14A and 13 in Proto-Elamite Period 2b. H. Pittman found the layout of Levels 16-15B similar to that of the building found at Godin Tepe Period V (see below) and to Room 2 of Building Level III at Tal-i Malyan (Pittman 1994:90 note 51).

The sequence of Period III and the Proto-Elamite sequence of Acropole I is complemented at Ville Royale I, where the earliest levels (18-13) have been assigned to Susa Periods IIIB-C (?) (Carter 1978:202). E. Carter equated Ville Royale Levels 18-17 to Acropole I Levels 14B-13 (Carter 1980:12), while R. Dittman dates them to Acropole I Levels 15B-14A (Dittman 1986a:173-175). The ceramic assemblage of these levels of Ville Royale I is characterized by a buff ware with a red or red-brown wash or slip. The forms include bowls, basins, and jars; and the decorations and specific attributes are finger-impressed plastic bands, incised rims, nose-lug, handles, and rare painted decorations. Beveled-rim bowls are common in Levels 18-16. A single Proto-Elamite tablet was found in Level 18 (Carter

1980:67). Most of these ceramics continued into Period IIIC. The difference between Period IIIC and the previous periods is that some types of ceramics appear to be more frequent in Levels 15-13 (Carter 1978:205). E. Carter paralleled the ceramics from Ville Royale I Levels 18-16 to assemblages from Acropole I Levels 14B-13; Nippur, Inanna XII-X; and Uruk, Early Dynastic, and those of Level 18 to the Banesh assemblage at Tal-i Malyan and to that of Tepe Yahya Periods IVC-IVB. In her opinion, this dates Susa Period IIIB-C to ca. 3000-2700 BC (Carter 1979:452-453). The following Period IV, excavated in Levels 12-7, includes one phase, Phase IVA, characterized by painted buff ceramics (that replace the washed or slipped materials), plain carinated bowls, and jars and pots with finger-impressed bands. The IVA assemblage has parallels at Godin Tepe Period III. The painted buff ware diminished in the later phase, while parallels for the assemblage point toward Mesopotamia in the late Early Dynastic III to the Akkadian periods. The chronological bracket proposed for Period IV is ca. 2600-2200 BC (Carter 1978:207-209; Carter 1979:452-453).

The settlement of Susa is believed to have diminished in size at the beginning of Period III. Susa covered 25 ha in the Uruk-related Period II (Wright and Johnson 1985:27) and 11 ha in the Proto-Elamite early Susa III (Alden 1982a:617-618), and extended on the Ville Royale I in late Period III (Steve and Gasche 1990:27). At Acropole I, Level 16 consists of one house with massive architecture excavated over more than 50 m². It was settled on a terrace paved with bricks. Its orientation is different from that of Level 17 and includes three phases (Le Brun 1978:fig. 35, 179, 183). At Ville Royale I, the maps of the best preserved Period III levels (Levels 18-13) are those of Levels 18 and 14. The phases of Level 18, excavated over 180 m², provided two buildings and kilns, while those of Level 14 correspond to a building and a kiln complex. The architectures of Levels 18 to 13 have about the same orientation (Carter 1978:fig. 39, 197-198). The vestiges of Period III unearthed at Susa are not as impressive as those found at Tal-i Malyan, a city roughly of the same time. The tablets of Susa indicate that the quantities of animals and grain dealt with account of materials, chiefly sheep/goat, numbered in the thousands. The quantities mentioned on these tablets are of the same scale as those of the Mesopotamian cities (Damerow and Englund 1989:63 note 171; see Potts 1999:83) and far exceed the numbers recorded at Tal-i Malyan and Tepe Yahya.

It has been estimated that 31 sites were occupied in Susiana during the Proto-Elamite times, out of which half were entirely new settlements. Nonetheless, only three sites, including Susa, have provided clear diagnostics and can be surely assigned to the Proto-Elamite period. It, thus, appears that in Period III, Susa diminished in size, while population dropped in the Susiana Plain (Alden 1982a:617-618).

Izeh Plain

Some 160 km southeast of Susa, the Izeh Plain appears as a dense region of Iran in the Proto-Elamite period (12 sites), including a site as large as Susa. This, however, may result from the fact that occupations that were not necessarily contemporaneous were counted together. As the Izeh Plain seems to have been abandoned in the Late Uruk period, population growth in Proto-Elamite times was interpreted as the result of immigration (Alden 1982a:619-620).

Chogha Mish

East of Susa, significant architectural remains dated to the Uruk period were excavated at Chogha Mish (Delougaz and Kantor 1996). The occupation has been interpreted as a town, with a lower and an upper

one, including public constructions ("temples" and platforms), private houses, and narrow streets or lanes (Delougaz and Kantor 1996:27–35). The finds from Chogha Mish include huge quantities of ceramics (beveled-rim bowls, low-sided trays, jars, and others), numerical tablets and bullae. The Iranian parallels identified for this occupation point toward Susa, particularly Level 17 of Acropole I. Chogha Mish is thought to have been occupied during the Late Uruk period and not during the Proto-Elamite period (Algaze 2005:13; Delougaz and Kantor 1996:101–102; Alden 1982a:618). One can, however, note that, among the ceramic parallels for this site, certain (not the majority) point to Fars in the Banesh period and Tepe Yahya IVC (Delougaz and Kantor 1996:Tables 1–8; low-sided trays and beveled-rim bowls, and, as discussed in Chapter 3, some decorated jars from Tepe Yahya also have some forms of analogies with some jars from Chogha Mish).

Tal-i Ghazir (Ram Hormuz Plain)

Approximately 65 km southwest of the Izeh plain and 145 km southeast of Susa, in the Ram Hormuz Plain, is the Proto-Elamite occupation of Tal-i Ghazir (Whitcomb 1971; Alden 1982a:616). The main mound of Tal-i Ghazir was occupied from the Ubaid/Bakun period to the Late Uruk and Proto-Elamite periods. The Proto-Elamite period of Tal-i Ghazir, as defined by D. S. Whitcomb, was excavated over 75 m^2 in the Stake Trench and 225 m^2 in the Step Trench, as well as in previous trenches dug by D. E. McCown (Trenches 1 and 2) (Whitcomb 1971:11–13; see also Alizadeh 2006:48–49). It is traditionally thought that the deposits of the Step Trench corresponded to an "Early Proto-Elamite"/Uruk period, contemporary with Susa Period II, while the Stake Trench 10 rooms belonged to the Proto-Elamite period, contemporary with Susa Period III (Voigt and Dyson 1992:130–32). The most impressive discovery for this period is a building complex in Stake Trench that includes a storeroom containing polychrome jars (Whitcomb 1971:18–19). The fragment of one tablet with numerical signs was found in Trench 1. Unfortunately, the fragment is small and it is unclear whether this tablet bore ideographic signs on the missing part (Whitcomb 1971:31, 37, pl. IX A). The most characteristic ceramics of the Proto-Elamite occupation are plain red-slipped and white painted red-slipped vessels. The forms include four-lugged jars, goblets, carinated bowls, and tall jars. Spouted vessels were also found at Tal-i Ghazir and D. S. Whitcomb notes that beveled-rim bowls were more common in the levels prior to the Proto-Elamite occupation. He also mentions low-sided trays (Whitcomb 1971:23–31, 54–55). The material culture from Tal-i Ghazir was compared to that of Susa Bd (Middle-Late Uruk in Susa Period II) and more specifically to Susa Cb-Cc (Susa Period III) and to Uruk Eanna VI (Whitcomb 1971:17). D. S. Whitcomb noted that the "earlier levels at Ghazir show more numerous shared traits with the Uruk material" and that "the pottery of the Proto-Elamite period at Ghazir seems based on a continuity of Early and Middle Uruk forms" (Whitcomb 1971:39). He also observed parallels and differences between the Proto-Elamite material from Tal-i Ghazir and the ceramic assemblage found at the site of Jemdet-Nasr. This led him to suggest that Jemdet-Nasr was later but that it perhaps overlapped with the Proto-Elamite occupation at Tal-i Ghazir (Whitcomb 1971:42). He estimated the duration of this occupation at two hundred years and dated it to between 3200 and 3000 BC (Whitcomb 1971:43–44). Other important parallels mentioned by him connect the site in the Proto-Elamite period to Tepe Sialk IV, Godin Tepe V, and Kerman (Whitcomb 1971:46–47). Several parallels for the architecture from Tal-i Ghazir also are noted at Tal-i Malyan in Fars (Alden 1982a:616) while recent INAA has demonstrated that ceramics found at Tal-i

Malyan in Fars, ca. 370 km to the southeast, came from the area of Tal-i Ghazir or its surrounds (Alden 2013).

1.2.3.2 Fars

The Proto-Elamite in Fars is included within the Banesh period. This period roughly encompasses the mid-late fourth and the early third millennia BC and follows a period of occupation characterized by Lapui ware in the first half of the fourth millennium BC. As indicated above, Lapui ware was found at Tepe Yahya and Tal-i Iblis. It is possible that this ware emerged first in Kerman before its spread to Fars. Lapui ware disappears in Kerman with the appearance of Aliabad ware, around the second quarter to the middle of the fourth millennium BC. Lapui ware has parallels at Susa in Period I and is no longer attested in the Uruk-related Period II. On the other hand, Lapui ware coexisted in Fars with Uruk-related ceramics at the end of the Lapui period, around the mid-fourth millennium BC. It remains difficult to address aspects related to the political, economic and social organization of the Lapui bearers of the first half of the fourth millennium BC (see Alden 2013). It is thought that the Lapui period corresponded to a time of small village-based settlement in the Kur River Basin, marked by a drop in sedentary population throughout the period. This has been interpreted as a shift toward mobile pastoralism (Sumner 1986; 2003:109-110; see Potts 1999:51-52).

Tal-i Malyan and the Kur River Basin

The Banesh period is situated between ca. 3400 and no later than 2600 BC (Sumner 2003:52, 57). J. Alden (1979) defined two first phases, Initial and Early Banesh, equivalent to W. Sumner's (1986) Early Banesh (which also includes J. Alden's Terminal Lapui phase) and dated both phases to from 3400 to 3200 BC (Alden 1982a:620). The Initial phase corresponds to the arrival of new people in the Kur River Basin. The previous Lapui ware and new types of ceramics were both used in this initial phase. J. Alden also identifies a ware bearing both Lapui and Banesh attributes, which he considers transitional between the two periods (Alden 1982a:620; Alden 1979:152-153; 2003:196-198; Potts and Roustaei 2006:9). The Early Banesh phase consists of 36 sites in the Kur River Basin. This phase shows evidence for centralized production and the distribution of ceramics and stone and plaster vessels (from Tal-i Qarib) (Alden 1982a:620; Sumner 2003:110-111). In addition to sedentary farming-based villages, it is suggested that nomadic populations occupied the region at the time. In W. Sumner's opinion, evidence for centralized distribution of craft products implies a certain degree of economic interdependence and requires the region to be politically integrated. Also, a sustaining political structure would have been necessary if nomadic and sedentary populations shared the same territory (Sumner 2003:112). Initial and Early Banesh phases already incorporate types of ceramics characteristic of the following Middle Banesh/Proto-Elamite-related phase (such as beveled-rim bowls, but there are no low-sided trays), while the earliest Proto-Elamite tablets appeared only in the Middle Banesh phase, dated to between ca. 3300 BC (Sumner 2003:52) or 3200 BC (Alden 1982a:620) and 2900 BC. The Early and Late Middle Banesh phases are identified at Tal-i Malyan and 27 sites in the Kur River Basin. The Middle Banesh phase corresponds to a time of population growth in the Kur River Basin. Tal-i Malyan was founded in the Early Middle Banesh and becomes a large urban center spreading over 45 ha. in the Late Middle Banesh. Three main hypotheses were offered to explain this urbanization: local growth, sedentarization of

nomadic populations, and immigration from outside into the basin at Tal-i Malyan, or a combination of the three hypotheses (see Sumner 2003:112–113; Alden 1982a:620). Those who favor immigration correlate a decrease in the population at Susa and in Susiana with a parallel increase at Tal-i Malyan and in Fars considering that Susa and Susiana are the origin of the population that migrated into Fars during the Banesh period. Susiana is also often considered the origin of the entire Proto-Elamite diffusion (see Alden 1982a:620; Lamberg-Karlovsky and Beale 1986:197). However, this view is not accepted by everyone. W. Sumner disputed this hypothesis, viewing Tal-i Malyan as the center and cultural origin of the Proto-Elamites (Sumner 2003:113).

Most of the Banesh remains from Fars were recovered from Tal-i Malyan in Operations ABC and TUV. They were excavated over less than 2,000 m². They include buildings containing domestic occupations and evidence for craft activities; a warehouse; and a more elaborate building with monumental architecture (Sumner 2003:116; Nicholas 1990; see Potts 1999:81; Potts and Roustaei 2006:9). The assemblage includes 32 Proto-Elamite tablets as well as seals and sealing impressions found in Late Middle Banesh contexts and similar to those from Susa, Acropole I Levels 16–14 (Period III) (Alden 1982a:620; Potts 1999:81; Sumner 2003:115–116). The tablets were found at ABC Operation Building Level III, and at TUV Operation. The ceramic assemblage is composed of a coarse straw-tempered buff production and a grit-tempered production. The first group includes beveled-rim bowls, low-sided trays, tall goblets, and flaring bowls with pierced bases, as well as rarer forms such as spouted vessels. The grit-tempered group includes several categories of open bowls including carinated ones and closed shapes ranging from small-necked pots to large storage jars. Nose lugs and open and closed spouts are common on these shapes. These ceramics are sometimes slipped and painted maroon, brown, or black above the carinations on bowls and above the shoulders on pots and jars. In addition, other rare types of vessels, such as mica-tempered and burnished red plates, huge painted storage jars, and fine relief-decorated barrel-shaped vessels were recovered only from Tal-i Malyan (Sumner 2003:44–50; 2010). The carinated painted jars found in the Banesh assemblage, and beyond in the Proto-Elamite assemblages of the Iranian Plateau, are often termed Jemdet-Nasr-like (see below). The Early Banesh ceramic assemblage has stylistic parallels in Susa II, Acropole I Level 17. Parallels for the following Early and Late Middle Banesh phases are still in Susa II, Acropole I Level 17, but strong ones are in Susa IIIA-B, Acropole I Levels 16–13 and in Ville Royale I Levels 18–13 (Sumner 2003:50, 53; 2010). As seen below, similar ceramic types are at Tepe Arisman in Isfahan province. Evidence for the Middle Banesh phase from Tal-i Malyan was summarized by W. Sumner (2003:116) as follows: "Malyan was a small city inhabited by craftsmen, many of whom may have been part-time farmers or herdsmen. The storage and distribution of agricultural products, raw materials, and craft products was controlled and recorded using seals and Proto-Elamite tablets. Trade and craft production may have occurred in either household or more formal institutional contexts, possibly both, and the administrative control mentioned above would have been in the hands of representatives of kin based units or institutions organized on other principles, temples for example. Production involved materials imported from both distant and regional sources and products were probably distributed (marketed?) at Malyan and Qarib."

The Late Banesh period started around 2900 BC and ended before 2600 BC. According to J. Alden (1982a:620), the size of Tal-i Malyan and the population of the Kur River Basin decreased. It is, however, at that time that a large, ca. 5 km long enclosing wall was constructed (Sumner 2003:117; Potts

1999:81; Sumner 1985). This period is characterized by vegetal-tempered ceramics similar to those of the Middle Banesh phase with increasing numbers of grit-tempered carinated bowls and pots with painted decoration over a white wash. Counterparts for the Late Banesh assemblage are at Susa IIIA-C (Ville Royale I Levels 18-13 and Acropole I Levels 15-13) and IVA (Ville Royale I Levels 12-9), however the styles of the ceramics are mostly limited to the region of the Kur River Basin (Sumner 2003:53; Alden 1982a:620).

Mamasani region

Deposits of Initial to Late Banesh phases have been recovered from the Mamasani district at Tol-e Nurabab and Tol-e Spid (Potts and Roustaei 2006:72, 95). These sites lay respectively some 85 km and 95 km west and northwest of Tal-i Malyan. Parallels for the Banesh materials from the Mamasani region are at Susa in Periods II and III as well as in the Kur River Basin. However, the excavators noted several differences envisaged as local particularities. As observed in the Kur River Basin, beveled-rim bowl appears early in the sequence, while a transitional phase between Lapui and Banesh periods was defined. Radiocarbon determinations from Tol-e Spid confirm that the transitional Lapui/Banesh phase dates to the mid-fourth millennium BC, while levels assigned on the same horizon as (Middle) Banesh period and Susa Period III (Proto-Elamite) provide dates situated in the last third of the fourth millennium BC (Potts and Roustaei 2006:124–125). The same chronological brackets are obtained from Tol-e Nurabad and are supported by material comparisons (Potts and Roustaei 2006:68–70). Research in the Mamasani region also provides additional radiocarbon dates for the Late Banesh phase (Tol-e Nurabad), between 2900 and 2600 BC (Potts and Roustaei 2006:70). In addition to Tol-e Nurabab and Tol-e Spid, eight other sites bearing Banesh material were identified in the Mamasani district (Potts and Roustaei 2006:105, 175-176).

1.2.3.3 Kermanshah

Godin Tepe is located in Kermanshah province, ca. 260 km north of Susa. The occupations that relate to the chronological bracket considered here are those of Periods V and IV. Godin V is characterized by an impressive oval architectural complex built on the top of the main mound and a lower settlement, whih was formerly assigned to Period VI and is now considered as contemporary with the oval building. The periodization of Godin Tepe in the fourth millennium BC has changed several times. The most recent one is provided by Rothman and Badler 2011. As indicated by V. Badler (2002:79), the areas excavated at Godin Tepe are relatively small compared to the size of the site. The oval complex uncovered over 550 m² and the exposure of the domestic occupations in the lower settlement recovered about 190 m² of settlement.

From Period VI Godin Tepe (see Badler 2002:79, 81-83) gives evidence for relations with the Uruk sphere, although the assemblage of this period is mostly characterized by Tepe Sialk III pottery (Helwing 2011a:216; Boroffka and Parzinger 2011:137-138). The beveled-rim bowls (5), other Uruk types of pottery, and tokens found in Period VI relate mostly to the Middle Uruk period in Mesopotamia. Uruk connections increased throughout Early Period V and reached their apex in Middle Period V, which corresponds to the construction of the oval complex. Tablets, seals and sealings, and pottery of Late Uruk type were recovered from this complex, which probably had an administrative function. The rest of the assem-

blage at Godin Tepe is of a local tradition (related to Tepe Sialk III: Helwing 2011a:216) present in Periods VI and V. In Early Period V, several diagnostic vessels appeared such as low-sided trays and unfinished string cut bases, while beveled-rim bowls increased in quantities. V. Badler has linked them to the beginning of the Late Uruk period in Mesopotamia (Badler 2002:82). These ceramics have parallels in the Banesh period in Fars, at Susa II and III, and Tepe Yahya IVC. In Middle Period V, the oval building complex was constructed. The material assemblage found indicates stronger connections to the Late Uruk period, not only in regard to ceramics, but also in the tablets, cylinder sealings, and objects in metal and stone. The types of ceramics previously mentioned continue, while new types appear such as lugged and spouted jars. J. Alden notes that the tablets found in the oval complex are mostly numerical, while only one of them bears a sign that could be either Proto-Elamite or Proto-Sumerian (Alden 1982a:615; Weiss and Young 1975:8; see Damerow and Englund 1989:2, note 8). G. Algaze (2005:57) links the tablets from Godin Tepe to the so-called Level "17X" at Susa, Acropole I. This would connect them to a time between Susa Periods II and III and thus before the appearance of the Proto-Elamite tablets at Susa. Radiocarbon dates from Godin Tepe would place this period around 3350 BC. In Late Period V, the last occupations of the oval complex, important architectural changes were made, while craft activities and wine production were added to the administrative function of the area. A lugged jar from this part of Period V, painted red over a cream slip applied on the shoulder, differs from the types of Middle Period V (Badler 2002:83). This type of ceramic is consistent with materials found at Tepe Yahya IVC. An important change in Late Period V is the appearance of pottery with connections to assemblages of a Transcaucasian origin, referred to as the Kura-Araxes culture. Kura-Araxes pottery became the main component of Period IV. Late Period V is radiocarbon dated to 3100–2900 BC and agrees with the dates previously expressed by T. C. Young who dated Period V to between 3400 and 2900 BC (Young 1969:8). New radiocarbon determinations for Godin Tepe Period V range from 3490 to 3050 BC (Wright and Rupley 2001:94 ff).

The scenario envisaged for Godin Tepe Period V is that of an Uruk-related population settling at this site and coexisting with the local population. Administrative tools were found only in the oval complex, and the excavators suggest that the incomers were merchant-traders from Susa (Weiss and Young 1975:2–3; Alden 1982a:615). Additionally, it is proposed that the oval complex served as "a fort with food rations and weapons (sling balls) being distributed (...) to village recruits queued up in the courtyard" (Badler 2002:83). It is further proposed that the local and foreign populations coexisted in peaceful terms as indicated by the architectural structures which likely required the use of local labor for their construction and include both local practices and outside innovation (such as a drainage system). Godin Tepe appears as the only site bearing Period V materials in the region appeared (Alden 1982a:615; Young 1975:192).

1.2.3.4 Qazvin and Tehran

Tepe Ozbaki is located in the Qazvin province, approximately 280 km northeast of Godin Tepe and 85 km northwest of Tehran. This site provided beveled-rim bowls and a Proto-Elamite tablet that was uncovered from a large platform (Madjidzadeh 2001:144–145, fig. 6). Approximately 50 km southeast of Tepe Ozbaki, Proto-Elamite ceramics, glyptic and over a hundred tablets were found at Tepe Sofalin (Dahl *et al.* 2013; Hessari 2011).

1.2.3.5 Isfahan

Tepe Sialk

The Proto-Elamite vestiges at Tepe Sialk were found in the so-called "Couche 2" and assigned to Sialk Period IV. The layers immediately underlying Period IV and on the top of Period III ("Couche 1") were burnt and contained burials. This fact and the radical change in the material culture observed between Couche 1 and 2 led the excavator to suggest that Tepe Sialk was invaded by people from Susa (Ghirshman 1935; 1938:58, 66, 84). However, since then, this interpretation has been refuted (see Potts 1999; Caldwell 1968:182). Period IV (Couche 2) includes an architectural complex containing new types of ceramics in grey and red wares that were sometimes painted, spouted beakers, nose-lug jars, beveled-rim bowls, low-sided trays, and polychrome vessels. From Period IV a tablet with Proto-Elamite scripts and cylinder-seals (Ghirshman 1935:235-237, fig. 7) were recovered that are readily paralleled at Susa, Tal-i Ghazir, and Godin Tepe in Uruk/Proto-Elamite contexts (see Whitcomb 1971:46; Alden 1982a:615-616). J. Alden (1982a:616) notes that the architectural complex was located on the highest part of the mound as observed at Godin Tepe. He also compares the architecture from this period to that of Susa, Tal-i Malyan, and Godin Tepe and considers the infant burials in jars recovered from Tepe Sialk (Ghirshman 1935:236; Ghirshman 1938:59-61) similar to examples from Tal-i Malyan (Alden 1982a:616). Tepe Sialk Period III6-7 is chronologically connected to the Uruk period, while Period IV is assigned to R. H. Dyson's Proto-Elamite Transitional and Proto-Elamite phases.

Tepe Arisman

Tepe Arisman is located approximately 50 km of Tepe Sialk. The recently conducted excavations of this site provide valuable information regarding the chronology and cultural developments on the western Central Iranian Plateau. The main occupation of Tepe Arisman can be paralleled to that of Tepe Sialk III and IV. The Sialk III occupation dates to the mid-fourth millennium BC. It includes a pottery workshop, a domestic quarter, and metal workshops. This occupation was followed by domestic areas and a workshop with considerable evidence for the production of copper in the late fourth millennium BC. These remains date to Sialk IV (Helwing 2005; Vatandoust *et al.* 2011). The ceramic assemblage has parallels at Tepe Sialk Period IV/1, Susa in the Late Uruk and Proto-Elamite periods, Tal-i Ghazir, Tal-i Malyan in Early and Middle Banesh phases, and Tepe Yahya IVC (Helwing 2005:175-176; Helwing 2011a). No tablets were reported from Tepe Arisman, however two seals indicate connections with Sialk IV and the Proto-Elamite and Jemdet-Nasr periods (Helwing 2011b:274-276). It is suggested that, in the late fourth millennium BC, the extensive copper production of Tepe Arisman was part of a broader trade or exchange network directed toward Mesopotamia. The radiocarbon dates provided for the Sialk IV deposits from Tepe Arisman (Area C, Phases 7-4) are situated between 3300-3100 BC (Helwing 2011a:219). There is, however, a later phase (Phase 3), which corresponds to jar-burials and for which no radiocarbon determinations are available (Helwing 2011a:219). This phase was, however, probably not much later than the late fourth millennium BC, as it is noted that these "burials (...) were interred at a time not very distant from the final usage phases, 4A1 and 4A2," of the settlement (Chegini *et al.* 2011:44).

1.2.3.6 Semnan

Period II at Tepe Hissar is dated to the late fourth millennium BC (3365-3030 cal. BC) (Voigt and Dyson 1992:173-174; Dyson 2009; see also Dyson 1987:655), contemporary with the period of interest here. Hissar Period II followed a gap succeeding Period I, which started in the fifth millennium and ended in the early fourth millennium. Hissar Period II has buttressed buildings (Dyson and Remsen 1989:84-89, figs 9, 12) and is defined as a "prosperous trading town filled with craftsmen smelting copper and working exotic materials ((...) lapis lazuli, carnelian, turquoise, alabaster, etc.)" (Dyson 1987:655). The material assemblage includes a single tablet with inscribed signs and nine blank tablets (Tosi and Bulgarelli 1989:38, 40, figs 6, 8) while additional tablets[14] were reported from recent excavations (Dyson 2009). The single tablet published is, however, not Proto-Elamite (Damerow and Englund 1989:2 note 8). Seals and seal impressions were recovered, with one having decorations similar to examples found at Susa, Godin Tepe, Tal-i Malyan, and Tepe Yahya IVC (Dyson 1987:657-658). Local burnished grey ceramics dominate the ceramic assemblage in this period and are associated with plain grey and painted vessels. One of the most extraordinary shapes is represented by burnished bowls on high conical pedestal stands (Dyson and Remsen 1989:figs 1, 3, 16, 27, 30-34; Dyson 2009). Contemporary burnished grey ceramics are also found at Shah Tepe, Yarim Tepe, and Tureng Tepe (see Cleuziou 1986; Arne 1945). Copper objects from Hissar II include ornaments, luxury items, tools and weapons, while lead, silver and gold objects were also first produced (Dyson 2009). Tepe Hissar in Period II has parallels with Proto-Elamite sites, but appears more connected to the sites of the Gorgan Plain and manifests an important trade relation with Turkmenistan (Thornton 2009:100; Helwing 2006:44-46).

1.2.3.7 Kerman

Tal-i Iblis

In Kerman, at Tal-i Iblis, Lapui ware and Black-on-red ware of Period II were followed by Dashkar ware and Aliabad ware in Periods III-IV dated to the first half of the fourth millennium BC. Uruk/Proto-Elamite ceramics appear in Periods IV to VI. Remains of Period III include a gypsum furnace, while those of Period IV consist of a dumping area and badly-preserved architecture. Evidence for metal work is not evident in Period III, but is well-attested again in Period IV. Period III marked a break from Period II. Dashkar ware from Period III differs from Period II material and shows continuity with Period IV and the related Aliabad ware (Caldwell 1967:36-37, 177, 180, 182, 184). It is from Period IV that beveled-rim bowls, flower pots, and shoulder spouts are first reported. J. Caldwell relates these ceramic types to the Middle Uruk in Mesopotamia and Protoliterate levels at Chogha Mish. J. Caldwell also notes the first appearance of flat trays in Period IV (Caldwell 1967:184). The following Period V is not known from excavation and was defined on the basis of a type of ceramic, Mashiz ware, which has similarities to the previous Aliabad ware, while Aliabad ware continues into Period V. Period V represents the largest occupation of Tal-i Iblis (Caldwell 1967:37, 188). Period VI is known from the top of a 5 x 5 m excavation conducted off the mound. The ceramic assemblage found in this sounding includes Iblis Period I materials at the bottom (Level 8); Aliabad/Iblis IV pottery in Levels 6 to 4; 38 beveled-rim bowls and one sherd that J. Caldwell paralleled to Sialk IV in Levels 4-3; and 61 beveled-rim bowl sherds, four trough spouts and materials connected to Sialk IV in Level 1. In another area, the so-called "Standing brick ruin," a fragment of nose-lug jar, Aliabad ware and two beveled-rim bowl fragments were recovered.

J. Caldwell connected these materials to Sialk IV and Late Uruk and Jemdet-Nasr periods in Mesopotamia (Caldwell 1967:38-39, 188, 197-199, figs 40, 42, 45; Caldwell 1968:179-180, 182). He suggested that Period IV dates from 3600 BC to 3000 BC. Radiocarbon dates from Period III and an early Period IV context, of 3792 +/- 60 BC and 3643 +/- 59 BC, respectively, are consistent with the cultural parallels and the date of the emergence of Uruk-related components at Tal-i Iblis and in Iran in general such as at Tepe Sialk and Tepe Arisman. Although the distinction between, and the presence of, Uruk-related and Proto-Elamite materials cannot be precisely located in the sequence established at Tal-i Iblis, at least two ceramic types associated with Period VI illustrated by J. Caldwell (1967:fig. 40 no. 3-4) allow us to link this period to the Proto-Elamite period and to suggest that it was certainly not later than the early third millennium BC. Another radiocarbon date from Period IV at Tal-i Iblis does not seem coherent with this; it is 2869 +/- 57 BC (see Caldwell 1967:36; 1968:179-180). S. M. S. Sajjadi later situated Aliabad (Iblis IV), Mashiz (Iblis V), and Najefarabad (Iblis VI) periods respectively between 3600-3400 BC, 3400-3200 BC, and 3200-2800 BC (Sajjadi 1987:fig. 12).

Mahtoutabad

A sequence partially comparable has recently been observed at Mahtoutabad, a site located in the Halil Rud Valley some 90 km east of Tepe Yahya (Cortesi *et al.* 2008:8-9; Vidale and Desset 2013). In Mahtoutabad Period II, several layers without architectural remains have provided Aliabad ware. This period is dated by the excavators to the mid-fourth millennium BC. Above these remains Period III contained material defined as Late Uruk and connected to Khuzistan and Mesopotamia. They include hundreds of beveled-rim bowls, flower pots, and nose-lug jars. Mahtoutabad Period III is dated to the late fourth millennium BC (Vidale 2011:9). Thus, contrary to what was observed at Tal-i Iblis, Uruk-related materials seem to have appeared after Aliabad ware at Mahtoutabad.

Tepe Yahya

The episode represented by Dashkar ware and Aliabad ware and related deposits identified at Tal-i Iblis (Periods III-V) correspond to a chronological hiatus between Periods VA and IVC at Tepe Yahya. The early appearance of Uruk-related materials in Kerman, attested at Tal-i Iblis and Mahtoutabad, is to be included within this hiatus. This gap is explained by the fact that Dashkar ware and Aliabad ware are all absent at Tepe Yahya. Aliabad ware makes it appearance at Tepe Yahya in the presence of only two sherds related to this ware collected in contexts between Period VA and the architectural complex of Period IVC (see Lamberg-Karlovsky and Potts 2001:198).

Tepe Yahya Period IVC rests between 3100 BC and 2800 BC and the architectural complex assigned to this period is thought to have lasted no more than 150 years according to C. C. Lamberg-Karlovsky (2001a:270; Potts 2001:195-198). The occupation of Period IVC at Tepe Yahya will be presented later in detail. In summary, it consists of a large mudbrick building and concomitant constructions excavated over 500 m². The occupation included several rooms with preserved floors, two storerooms, and several other structures, including kiln structures and remains of a draining system. Twenty-seven tablets, two seals, and 43 glyptic images preserved as impressions on locking devices or on the tablets were recovered. The assemblage includes a variety of Proto-Elamite ceramics such as beveled-rim bowls, low-sided trays, and slipped painted nose-lug jars. It also includes a group of vessels that correspond to a

local/regional Kerman-related tradition, a series of sherds connected to a tradition of the Southeastern Iranian Plateau termed here the Western Balochistan Ceramic Complex, and burnished vessels that can be compared to ceramics from northern Iran and Shahr-i Sokhta.

Other sites in Kerman

Besides Tepe Yahya, Tal-i Iblis, and Mahtoutabab, other evidence for Uruk/Proto-Elamite presence is at Tepe Langar, a site located ca. 30 km southeast of the city of Kerman (Lamberg-Karlovsky 1968:167); and on a site near the coast of the Persian Gulf, south of the Kerman province (M. Prickett 1986a, 1986b; see Chapter 7).

1.2.3.8 Seistan

A Proto-Elamite presence in Seistan is recorded at Shahr-i Sokhta. It consists of a tablet, about 20 sealings, and a few seals found in the earliest occupation identified at the site, in Period I, Phase 10. Shahr-i Sokhta became an urban center during the following Periods II-III in the third millennium BC. This site extends over about 2.5 km from north to south and more than 800 m from east to west. Phase 10 and Period I (that includes Phases 10 to 8) were not extensively excavated and the size of the site in Period I was far from that attested in the later third millennium BC (Salvatori and Tosi 2005:fig. 12). The Proto-Elamite materials discovered at the site have long represented the single easternmost remains of Proto-Elamite presence or influence (Amiet and Tosi 1978; Biscione *et al.* 1977; Amiet 1983). The tablets and glyptic are readily compared to those of Susa, Acropole I Levels 16-13. A radiocarbon determination of 3222+/- 95 BC situates the Proto-Elamite objects recovered in Phase 10 to the last quarter of the fourth millennium BC (Amiet and Tosi 1978:10). This date was further corroborated by a recent reappraisal of the chronology of the site (Salvatori and Tosi 2005:284, 289 fig. 12).

On the other hand, none of the ceramics that characterize the Proto-Elamite assemblages identified further west have been found at Shahr-i Sokhta. The assemblage of Shahr-i Sokhta Period I is mostly composed of ceramic types that relate to south Turkmenian productions (Geoksyur, Namazga III); types that have parallels to Quetta ware in northern Pakistani Balochistan; a small group of sherds (originally compared to Nal ware) that have parallels at Tepe Yahya IVC and in southern Pakistan (Amiet and Tosi 1978:21-23); and types that are connected to Kech-Makran (Late Period IIIa), the Bampur Valley, and Tepe Yahya IVC termed here the Western Balochistan Ceramic Complex. This ceramic complex is well-attested in burials excavated at Shahr-i Sokhta (see below). In addition, some Burnished ceramics were found at the site (Period I, Phase 10:Amiet and Tosi 1978:22, fig. 3) that find parallels at Tepe Yahya and in the Gorgan Plain.

1.2.3.9 Pakistani Kech-Makran: Miri Qalat

Five beveled-rim bowl fragments were recovered from the site of Miri Qalat in the Kech-Valley (southwestern Pakistan) (Besenval 1997a, 1997b; 2005:5). The context of these sherds is unfortunately unclear, because they come from levels that were partially washed away. A series of ceramics found in the same levels - the Western Balochistan Ceramic Complex - connect these levels to Tepe Yahya in Period IVC and Shahr-i Sokhta in Period I. These levels, defined as Kech-Makran Late Period IIIa, are consistent with a date placed in the late fourth millennium BC (see Chapter 6). With the exception of

the small group of beveled-rim bowls, the ceramics of Kech-Makran have nothing to do with the ceramic production characteristic of western Iran. The majority of them reflect a specific ceramic tradition and cultural complex, while other ceramic types show connections to eastern Pakistani Balochistan (Besenval 2005:5-6; Mutin 2007, 2013; see below).

1.2.3.10 Other evidence

In addition to the sites indicated above, which are the main ones that allow chronological and cultural discussion, J. Alden (1982a:617) reports Proto-Elamite/Uruk evidence in northern Iran at Cheshme Ali, Tepe Ghabrestan, and Deshawar; in Luristan (surveys of the Mahidasht, Hulilan and Tarhan/Rumishan/Kuh-i Dasht Plains); in Fars in the Khana Mirza Plain and at Mung, a site visited by Sir M.A. Stein; and perhaps in the Bushire province. In a more recent paper, D. T. Potts (2009) reports beveled-rim bowls at more than a hundred sites in Iran. However, they could be either Uruk-related or Proto-Elamite-related.

1.2.4 The Southeastern Iranian Plateau and the Indo-Iranian Borderlands

Tepe Yahya, Shahr-i Sokhta and Miri Qalat in Proto-Elamite times were part of several distinctive cultural dynamics that traversed the Southeastern Iranian Plateau and the Indo-Iranian Borderlands. These dynamics, well-illustrated by ceramic styles and their distribution, are mostly outside of the Proto-Elamite sphere. C. C. Lamberg-Karlovsky noted that the ceramics "of local indigenous type" found at Tepe Yahya IVC represented over 85% (Lamberg-Karlovsky 1977:37; 2001a:270). In addition to the Proto-Elamite ceramic inventory, the assemblage from Tepe Yahya Period IVC is characterized by a series of ceramics that represent: 1) a Kerman-related tradition termed here Southeastern Iranian Plateau (SEIP hereafter) Groups B–D; 2) a Western Balochistan Ceramic Complex (SEIP Group A) similar to materials found in the Bampur Valley, Kech-Makran (Late Period IIIa), and at Shahr-i Sokhta Period I; 3) and a group represented by Burnished ceramics with connections to northern Iran and Shahr-i Sokhta Period I. These materials represent only a portion of the traditions that existed and were shared over long distances on the Southeastern Iranian Plateau and in the Indo-Iranian Borderlands during the mid-late fourth and the early third millennia BC. Turkmen-related ceramic types as well as other styles from Pakistan and Afghanistan inform us of the complex connectivity, with relations to the west, east, north and south, that characterized these areas at the time.

1.2.4.1 Kech-Makran

The Western Balochistan Ceramic Complex is characterized by very fine, painted, grey, red and buff ceramics, whose origin can be traced to Kech-Makran (southwestern Pakistan) and in Iranian Balochistan. Excavations conducted at Miri Qalat and Shahi-Tump in the Kech Valley revealed an original fine, painted ceramic tradition, termed Miri ware, in the Kech-Makran Period II dated to the first half of the fourth millennium BC and continuing with changes into the mid-fourth millennium BC Period IIIa (Shahi-Tump ware). Period IIIa is also named the Shahi-Tump Cemetery Culture. It was essentially defined on the basis of burials and their deposits excavated at Shahi-Tump and Miri Qalat (see Besenval 1997a, 1997b, 2005). Two phases of Period IIIa, Early and Late, are distinguished. The early phase of Period IIIa appears to be chronologically connected to Tal-i Iblis Period IV (Aliabad ware), while the later phase of Period IIIa seems contemporary with the Proto-Elamite period in Iran and Tepe Yahya IVC

(Besenval 1997a, 1997b, 2005; Mutin 2007, 2012a, 2013).

Kech-Makran Early Period IIIa

The main component of the funerary assemblage of Early Period IIIa is composed of a very fine, painted ceramic production, termed Shahi-Tump ware, associated with vessels reminiscent of Aliabad ware. Aliabad ware, well-documented in Kerman, with evidence from also Kech-Makran and Iranian Balochistan, indicates that this type of production (or related styles) was shared over a large area from Kerman in the west to Kech-Makran in the east. On the other hand, the very fine, painted Shahi-Tump ware of Early Period IIIa seems restricted to Kech-Makran and Iranian Balochistan in the west, where related sherds have been identified in the Bampur Valley (Mutin 2013). The funerary deposits of Early Period IIIa from Kech-Makran provide also a few ceramics that can be connected to traditions distributed in eastern Pakistani Balochistan such as Togau ware found at Mehrgarh late Period III and Anjira Period III (see below). These parallels together with radiocarbon determinations from Kech-Makran (Besenval 1997b:35, note 50) indicate a chronological bracket beginning in the mid-fourth millennium BC. This dating is further corroborated by analogies between Aliabad ware and Kechi-Beg ware, a type of ceramic that appeared in eastern Pakistani Balochistan by the mid-fourth millennium BC and attested at Mehrgarh from Period IV (see below). The parallel between Aliabad ware and Kechi-Beg ware is demonstrated by similar shapes (conical goblets) and the use of polychrome decoration. Although these two ceramic types have separate styles, they show that it was roughly at the same time, from the mid-fourth millennium BC, that distinctive polychrome decorations developed on the Southeastern Iranian Plateau and in the Indo-Iranian Borderlands (Mutin 2007, 2012a, 2013).

The rest of the material culture of Early Period IIIa, as shown in the burials of Miri Qalat and Shahi-Tump, includes copper objects and ornaments made of shell (bangles and beads), steatite, carnelian, citrine, lapis-lazuli, and gold (beads). The copper objects, among which are an impressive and unique weight decorated with shells and some compartmented "seals" or disks, illustrate a sophisticated metallurgical technology (Besenval 2005; Mille *et al.* 2004). The funerary items also indicate relationships and/or displacements to the coast (shells), located ca. 90 km to the south, and probable distant connections to the north (semi-precious stones and copper). The very long-distance relationship between the coast (and perhaps Kech-Makran which has, so far, provided the only evidence for production of shell object on the coast of Pakistan) and Sarazm in Tajikistan, evidenced by the presence of shell bangles in the tomb of the "Lady of Sarazm" at the latter, deserves to be mentioned (Besenval and Isakov 1989; Besenval 2005:4–6).

Kech-Makran Late Period IIIa: Western Balochistan Ceramic Complex

At Miri Qalat, the burials of Early Period IIIa were recovered in Trench IX Levels VII and VI (Level VIII is dated to Period II; see Besenval 1997a, 1997b, 2005). Materials from Levels V to III share certain aspects with the very fine, painted production found in the underlying burials. Different motifs and shapes however differentiate them from the older vessels. The funerary ceramics from Miri Qalat Trench IX Levels VII–VI have clear connections with the funerary assemblage unearthed by R. Besenval and his team at Shahi-Tump in Trench II. The vessels from the upper Levels V to III are, on the other hand, mostly connected to the burial deposits excavated by Sir M. A. Stein in the southeastern part of Shahi-Tump

(in Trench I), and to rare sherds found in the uppermost layers at the top of the site (in Trench II). One of the main markers of Miri Qalat Trench IX Levels V-III that compare to Sir M. A. Stein's ceramics from Shahi-Tump is the swastika-like or S-shaped motif painted on the inside surface of bowls. This type of decoration is observed at Shahr-i Sokhta Period I and Tepe Yahya Period IVC. At these sites, it is associated with vessels with other types of forms and decorations but made in the same ware, a ware which we propose to name Western Balochistan Ceramic Complex. This complex is posterior to Iblis Period IV and the Aliabad phenomenon. As noted above, Tepe Yahya IVC is more recent than the Aliabad horizon in southeastern Iran. Additionally, while the Early Period IIIa burials from Miri Qalat, Trench IX Levels VII–VI and those from Shahi-Tump Trench II contain vessels related to Aliabad ware from Tal-i Iblis Period IV, these vessels do not seem to be present in the overlying levels in Trench IX of Miri Qalat and do not seem to be associated with ceramics with swastika-like motif in the burials from Shahi-Tump.[15] The ceramic inventory of Kech-Makran in Late Period IIIa also includes beveled-rim bowl fragments. They were recovered from Miri Qalat Trench IX in architectural Levels V and III. Besides these and the painted materials of the Western Balochistan Ceramic Complex, large quantities of ceramics related to styles characteristic of eastern Pakistani Balochistan (Togau C–D) are also reported from Miri Qalat Trench IX, especially from Level VI (see below). As noted above, materials stylistically connected to eastern Pakistani Balochistan are also attested in the burials of Early Period IIIa at Shahi-Tump and Miri Qalat, yet it is only with later occupations that the quantities of such materials greatly increased. The later ceramics point to products attested from the mid-late fourth millennium BC in eastern Pakistani Balochistan. Radiocarbon dating from Miri Qalat Trench IX Levels VI, V, and III places these levels in the second half and toward the end of the fourth and the beginning of the third millennia BC (Besenval 2005:6; Besenval 1997b:35 note 50; see Chapter 6).

Beyond the Kech Valley, materials of Late Period IIIa type were collected on the surface of several sites in Kech-Makran. It is likely that the very fine, painted ceramic production was characteristic of this phase produced in this region, in particular in the Dasht Plain where misfired sherds were found and evidence for production centers during the following Period IIIb is known. Vessels comparable to types of the Western Balochistan Ceramic Complex attested in Kech-Makran Late Period IIIa were identified in the Bampur Valley and reported as far as Shahr-i Sokhta Period I, more than 500 km to the north. Tepe Yahya IVC, situated at more than 650 km distant from the Kech-Valley, is one of the westernmost occupations bearing very fine, painted ceramics of the type observed in Kech-Makran Late Period IIIa. To the east, such product is not attested beyond the Kolwa Plain in southern Pakistan (see Chapter 7). In sum, this ceramic complex is mostly centered on the Iranian Seistan-Balochistan province and southwestern Pakistani Balochistan, corresponding to the western half of Balochistan.

It is important to recall here a few elements regarding the definition of the fine ceramics observed on the Southeastern Iranian Plateau at the beginning of the Bronze Age period and the relation of the Western Balochistan Ceramic Complex to this definition. A large portion of the fine, grey ware found in this area at the time was termed Emir grey ware. It is W. A. Fairservis (1961) who first used this name to label vessels found in Seistan that he described as "a rather handsome and delicate ware" (Fairservis 1961:86). Emir grey ware was then further detailed by R. P. Wright (1984, 1989) in typology and chemical composition. She demonstrated that Emir grey ware refers to fine ceramic products found essentially on the Southeastern Iranian Plateau. They are distinct from the fine, grey material, named Faiz

Mohammad ware[16] that is essentially found at the same time in eastern Pakistani Balochistan (from the Kalat area to the Zhob and Loralai Valleys). There is, however, a problem with the appellation "Emir grey ware". It seems both too limited and too vague. It is too limited in that it refers to ceramics found in the third millennium only and too vague in that it includes separate types of forms and decorations (including incised grey containers and painted bowls). Furthermore, vessels of the styles labeled Emir grey ware include materials in buff and red color. Additionally, recent work in Kech-Makran contributes more detail concerning the origin and chrono-stylistic variations of the grey, painted vessels of the Southeastern Iranian Plateau, not limited to the third millennium BC. As noted above, their origin is traced to Kech-Makran Period II and Iranian Balochistan in the fourth millennium BC. Their style evolved beginning with Early Period IIIa while additional changes in form, decoration and manufacture are observed in Late Period IIIa. The ceramic tradition then continued with changes throughout the first half of the third millennium BC, in the following Kech-Makran Periods IIIb and IIIc (from around 2800 BC), and disappeared during Period IV, a period characterized by a settlement related to the Indus Civilization at Miri Qalat (Besenval 2005:7; Mutin 2007, 2013; Didier and Mutin 2013; Didier 2007). In Kech-Makran terms, although the appellation Emir grey ware is sometimes used to name ceramics related to Late Period IIIa (see Sajjadi *et al.* 2003), it generally designates materials found in Kech-Makran from Period IIIb. The Western Balochistan Ceramic Complex defined here is not part of the Emir grey ware as traditionally defined. It however represents one of the chronologically-distinctive styles of the more general evolution of the fine, painted ceramics found on the Southeastern Iranian Plateau in the Chalcolithic and Bronze Age periods. This style is situated around 3000 BC and connects Tepe Yahya IVC, Shahr-i Sokhta I, and Kech-Makran in the Late Period IIIa.

Most of the information regarding the Western Balochistan Ceramic Complex comes from burial deposits. These were first excavated by Sir M. A. Stein at Shahi-Tump (Stein 1931:94, 98–99) while important quantities of this ceramic style were later recovered from graves at Shahr-i Sokhta (Sajjadi *et al.* 2003; Piperno and Salvatori 2007). Sir M. A. Stein (1931:94, 98–99) suggested that the ceramics found in the burials were made only for funerary practices. Today evidence from architectural contexts is attested in Kech-Makran (Mutin 2007), at Shahr-i Sokhta (Tosi 1969) and Tepe Yahya (Lamberg-Karlovsky and Tosi 1973:fig. 84; see below). Sites with Late Period IIIa pottery seem more numerous than in earlier periods in Kech-Makran and the distribution of this pottery on the Southeastern Iranian Plateau suggests that the Western Balochistan Ceramic Complex reflects a phenomenon of considerable importance. The quality of the products indicates that they were made by skilled potters. Data collected in the Dasht Plain in Makran shows that production centers dedicated to these vessels very likely existed in the area while production/distribution networks were clearly organized over long distances. Furthermore, the fact that people disposed of their dead with the same types of vessels, in particular bowls bearing the swastika-like motif, some 500 km apart at Shahr-i Sokhta and in Kech-Makran, implies that strong symbolic/religious ties developed on the Southeastern Iranian Plateau and throughout western Balochistan. The presence of Western Balochistan Ceramic Complex in the earliest architectural deposits and burials of Shahr-i Sokhta is noteworthy and suggests that the bearers of a tradition that originated in Kech-Makran and Iranian Balochistan in the south had something to do with the foundation of this site.

1.2.4.2 Eastern Pakistan

East of the Western Balochistan Ceramic Complex, from the mid-late fourth millennium BC, the areas located in Pakistan and southern Afghanistan were dominated by distinctive ceramic styles termed Kechi-Beg, Togau, Quetta, and Nal. These styles originated and were mostly distributed in these areas, while they make rare appearances in southeastern Iran.

Kechi-Beg and Togau wares

Kechi-Beg ceramics appear by the mid-fourth millennium BC at Mehrgarh (Kachi plain) from Period IV, ca. 3600 BC, according to the chronological sequence of that site (C. Jarrige *et al.* 1995:27). At the same time, Togau ware, another painted ceramic production which is attested in Mehrgarh Period III (style Togau A), evolved into new styles (Togau B-C defined by B. De Cardi 1965:128-134).[17] Excavations conducted at Mehrgarh demonstrate that the Kechi-Beg and Togau ceramics were rooted in the previous ceramic tradition of Period III (C. Jarrige *et al.* 1995:28, 31). Kechi-Beg and Togau B-C are attested at Lal Shah, Kiyani Damb, Hampada I and II, and Khanwah, in the vicinity of Mehrgarh (C. Jarrige *et al.* 1995:28). Sites in the Quetta region, approximately 100 km northwest of Mehrgarh, are more numerous in this period, which corresponds to Kili Ghul Mohammad Period IV and Damb Sadaat Period I (Fairservis 1956:335; 1971:138). W. A. Fairservis reports about twenty settlements bearing ceramics of the second half of the fourth millennium BC in the Quetta region as well as in Pishin, Bolan, and Chagai districts (Fairservis 1956:350-352). Farther to the north, connections are attested in the Zhob and Loralai Valleys, with vessels similar to, or variants of, Kechi-Beg ware (Jangal Painted and Rana Ghundai Red-on-Red Slip) found at Periano Ghundai, Sur Jangal (III), and Rana Ghundai (III) (Fairservis 1959:355-356 Table 4, 306, 365). Rehman Dheri in the Gomal Valley and Jalilpur in Pakistani Punjab were also settled at the same time, contemporary with the mid-late fourth millennium Mehrgarh Period V (Mughal 1972:117-124; Jarrige 1981:113), while Kechi-Beg ware is also attested at Mundigak in southern Afghanistan in Period I 4-5 (C. Jarrige *et al.* 1995:27). To the south, Kechi-Beg and Togau B-C (particularly Togau C) are reported on numerous sites including Siah Damb (Period II, i-ii) and Anjira (from Period III) in the Surab region (De Cardi 1965:102, 109-110; 1983:9) and Sohr Damb in the Khuzdar region. At Sohr Damb, Kechi-Beg and Togau C-D ceramics are attested in Period I burials, with Kechi-Beg ware continuing into Period II, while Nal ware makes its appearance in this period (Franke-Vogt 2005a:67, 70). Excavations conducted at Sohr Damb by U. Franke provide new radiocarbon dates placing Period II between 3100 and 2700 BC, while Period I is situated before 3200/3100 BC (Görsdorf and Franke-Vogt 2007:705; Görsdorf 2005:80). Togau C and ceramics that resemble Kechi-Beg ware were also recovered from the earliest levels of Amri (Period I), the oldest site known that was founded in the Indus Valley (Sind province), in association with local ceramic material (Casal 1964:27, 29, 58). In the Las Bela Plain, ceramics similar to those attested in the northern part of Pakistani Balochistan were reported from Adam Buthi, although the assemblage of this site is mostly composed of local ceramics (Franke-Vogt 2000). Farther south, on the coast, the earliest levels of Balakot (Period I) provided sherds of Togau ware (style C) as well as Nal polychrome ceramics (Dales 1979:250-251). U. Franke dates the foundation of Balakot (Period I) to around 3100/3000 BC (Franke-Vogt 2005c:101). Togau ware (in its style C) was a popular ceramic. It is reported from the Quetta region to the Las Bela Plain in the south and from the Indus Valley to the Iranian border, including the Rakhshan Valley, the

Panjgur Oasis (De Cardi 1983:42 fig. 5, 43; Stein 1931:pl. II Kar.b.1, Kar.1, pl. III Gar. 1), and Kech-Makran.[18] Kechi-Beg ware, or vessels with a comparable style, are also found in Kech-Makran in contexts dated to the mid-late fourth millennium BC (Period IIIa), where Western Balochistan Ceramic Complex material and beveled-rim bowl fragments were recovered (Besenval 1997a; Mutin 2007).

Distribution of ceramics in the second half of the fourth millennium BC suggests that Pakistani Balochistan was more densely occupied as does the presence of new settlements in eastern and southern Pakistan. These ceramics also indicate that the relationships within regions of Pakistan and with southern Afghanistan (Mundigak) were more extensive than during the first half of the fourth millennium BC. It is, however, important to recall that the distributions of these ceramic styles (and others) were not strictly homogeneous over these areas. Togau ware (style C-D) is widely attested in Pakistan, but it seems absent from Mundigak in southern Afghanistan. Local and regional particularities, especially in the south, as well as chronological variants of the main ceramic types are noted. In this regard, U. Franke (2008:654) notes that the typical hooks used to decorate Togau C-D vessels are replaced by strokes in southeastern Pakistani Balochistan. The same author also defined a "Southeastern Balochi Pottery Complex" to designate the southeastern ceramic assemblages of the mid-late fourth and early third millennia BC. This complex is best illustrated by the earliest levels of Amri and Balakot, which include ceramics that relate to the ceramic industries of northeastern Balochistan and southern Afghanistan (at Damb Sadaat II, Mundigak III.6-IV.1, Anjira III-IV, and Siah Damb II) and ceramics specific of the south (Franke-Vogt 2005c).

Besides the emergence of new types of ceramic products, such as Kechi-Beg and Togau ware, the second half of the fourth millennium BC in the Indo-Iranian Borderlands is marked by several changes in settlement organization. At Mehrgarh Period IV (area MR1), houses are grouped together in blocks connected by lanes. Storage jars appear and the large compartmented buildings characteristic of the previous periods disappear (C. Jarrige *et al.* 1995:28). Mehrgarh in Periods IV-V incorporated an important center of ceramic production, where Kechi-Beg and Togau wares were manufactured. Improvements are noticed in pottery technology, attested by the development of polychrome painted decorations and firing techniques (Quivron 1980:269, 274, 276; Jarrige 1990:160; C. Jarrige *et al.* 1995:19, 23, 31; R. P Wright 1995:665-666). In Period V (area MRC) a large pottery workshop including storerooms and a vast kiln was uncovered (C. Jarrige *et al.* 1995:30, 320-321, 374, 425), as were drainage systems (area MRK) dedicated to irrigation (C. Jarrige 1995:29-30, 461). Additionally, the first seals (in bone and clay) appear at Mehrgarh in Periods IV-V (Jarrige 1981:112, fig. 13; C. Jarrige *et al.* 1995:36).

Quetta and Nal wares

Changes that appeared in the mid-fourth millennium BC continued and amplified in the late fourth and the early third millennia BC. This period corresponds to Periods VI and VIIA-B (area MR1) at Mehrgarh, dated to ca. 3100-2700 BC, and Period II at Sohr Damb, placed in the same chronological bracket. The principal ceramic products of that time-period are termed Quetta, Nal, and the more recent Faiz Mohammad ware, all of the above types being reported from Mehrgarh (C. Jarrige *et al.* 1995:35) and numerous other settlements in Pakistan. Distribution of the ceramics continues to indicate an increase in density of occupation in Pakistan, beginning in the late fourth millennium BC (Fairservis 1956:359; Jarrige 1990:161). The ceramics also continue to show that regions of Pakistan were interconnected, as

well as with sites in southern Afghanistan. Additionally, relations are attested with Shahr-i Sokhta in Iran, from Period I (see below), and with Sarazm in Tajikistan, a site located more than a thousand of kilometers from Mehrgarh (Lyonnet 1996). J.-F. Jarrige considers that eastern Pakistani Balochistan was then, as before, a culturally unified region (C. Jarrige *et al.* 1995:31, 36), and this is corroborated by parallels observed between clay human figurines recovered from the Kachi Plain, and the Zhob and Loralai Valleys (C. Jarrige 1987). On the other hand, several authors pointed out certain discrepancies in the distribution of the material culture in Pakistan during that period and defined geographically separate ceramic traditions such as the "Zhob," "Quetta," "Nal," and "Amri" traditions (Piggott 1947, 1950; Fairservis 1956; Wheeler 1968:14; see Shaffer 1978:121-126). Although, today, the definition of these traditions needs reappraisal and does not seem to agree with the totality of the data, one should acknowledge that certain discrepancies indeed existed in the distribution of the main ceramic products of Pakistan in the late fourth and early third millennia BC. As indicated above, this is suggested by the differences in ceramic assemblages that led U. Franke to define the "Southeastern Balochi Pottery Complex." This is also shown by the painted ceramics named Quetta ware and Nal ware.

B. De Cardi considers Quetta ware as being mostly produced in the Quetta-Pishin area (De Cardi 1983:44-45, 44 fig. 6). This ceramic type is well-attested in this area, where it is reported from Kili Ghul Mohammad, Damb Sadaat (from Period II) and the surface of several other sites. Quetta ware also shares important similarities with ceramics from the Zhob, Loralai and Gomal Valleys (Gumla Period II) while it is found in the Chagai district. It is found also sporadically on sites located immediately north of Surab, where it is associated with a local variant bearing the same motifs (Kappoto ware) (Fairservis 1956:350-352; 1959; De Cardi 1983; Dani 1970) while U. Franke reports this ceramic style from Sohr Damb.[19] Quetta ware was also found at Shahr-i Sokhta and in southern Afghanistan at Mundigak, Deh Morasi Ghundai, and Said Qala Tepe (see below).

On the other hand, Nal ware, although found in the north, is better represented in the southern half of Pakistani Balochistan (De Cardi 1983:45). It was excavated at Sohr Damb(/Nal) in Period II contexts (Hargreaves 1929:35; Franke-Vogt 2005a:66, 70, 71 fig. 12a); Nindowari (Casal 1966:19; De Cardi 1983:40, 45; Jarrige *et al.* 2011b:83-84); Anjira (De Cardi 1965:103; 1983:31); Balakot in Period I (Dales 1979:250-251); and on the surface of several sites of the southern areas (De Cardi 1983). Examples of Nal ware, or ceramics with similarities to Nal ware, are also reported from Kech-Makran. This ceramic style is however not totally absent from the northern areas as examples of Nal ware are mentioned at Mehrgarh in Periods VI-VII (C. Jarrige *et al.* 1995:35; Franke 2008:661) and on several sites of Sarawan (De Cardi 1983:48-49 Table 3). Nal ware or related style is also attested in southern Afghanistan and at Shahr-i Sokhta and Tepe Yahya (see below). (It is important to point out that under the label "Nal polychrome", several distinct, albeit somewhat related styles of polychrome ceramics existed in the Indo-Iranian Borderlands (J. F. Jarrige, pers. comm.)

Compacted houses, settled in delimited blocks and characterized by an individual storage are still the characteristics of the settlement of Mehrgarh in the late fourth and early third millennia BC. Pottery production seems to increase and to be, as observed in the ethnographic records, on a scale almost similar to that attested today (C. Jarrige *et al.* 1995:30-31; Audouze and C. Jarrige 1979; C. Jarrige and Audouze 1980; Santoni 1989). At Sohr Damb, the settlement of Period II is larger than in Period I while new buildings are constructed. Habitations are small, contain storage jars and are grouped together (Franke-

Vogt 2005a:73). At Anjira, important reconstructions are observed in the settlement of Periods IV-V. This settlement, characterized by small houses, is more extensive and better organized than in the previous periods while the architectural structures are also better built (De Cardi 1965:100, 102-103).

With the exception of the stamp seals (or button seals) made of bone and terra-cotta from Mehrgarh Periods IV-V mentioned above, there is no evidence for administrative tool such as the tablets and cylinder-seals well-attested in Iran and Mesopotamia in the mid-late fourth millennium BC. No seal or seal impression is attested within the Western Balochistan Ceramic Complex (with the exception of Shahr-i Sokhta), although one may note that few architectural deposits related to this complex have been excavated. None is reported from Sohr Damb in Pakistan. Seals in bone are reported from Harappa in the same period (Ravi Phase), but it seems that it was starting with the later Kot Diji Phase (ca. 2800-2600 BC) that important changes occurred: soapstones and steatite replaced bone and clay, and these new seals were glazed (Kenoyer 2002: http://www.harappa.com/indus3/e1.htm).

Regarding representations, one can recall representations of fishes and humans on the Nal ware and the "Zhob" figurines found at Mehrgarh (from Periods VI-VII; C. Jarrige *et al* 1995:31; C. Jarrige 1987) and in northeastern Pakistani Balochistan. J. M. Kenoyer notes about the figurines that "The diversity of hair styles and ornaments on the figurines undoubtedly reflects the changing patterns of personal ornamentation by the peoples living at the site of Mehrgarh and may indicate increasing status differentiation and ethnic diversity" (Kenoyer 2002; see Fairservis 1956:224-26; 1959:361).

1.2.4.3 Seistan and southern Afghanistan

The inhabitants of Mundigak, a site located in the Kandahar area (southern Afghanistan), shared several of the ceramic styles identified in Pakistan in the first half of the fourth millennium BC (Meadow 1973; C. Jarrige *et al.* 1995:24; Casal 1961:98). From the mid-fourth millennium BC Kechi-Beg ware is present (Period I 4-5), Quetta ware and Nal polychrome ware appear in Period III, while the later Faiz Mohammad ware is evident in Period IV 1-2 (C. Jarrige *et al.* 1995:27, 33; Shaffer 1978:81; Casal 1961:99, 112-114, 129-153). In the same region, Quetta ware and Faiz Mohammad ware are reported from Deh Morasi Ghundai (Fairservis 1952:23; C. Jarrige *et al.* 1995:32), while Quetta, Faiz Mohammad, Kechi-Beg and Nal wares are also reported from Said Qala Tepe (Shaffer 1978:50-64, 84-85; 1971:figs 12-13, 19, 21-22, 29). In Periods I to III, Mundigak is considered a small agricultural village before it became an urban center from Period IV, including remains of fortications and a "palace" (Casal 1961:figs 22-23), during the first half of the third millennium BC.

Farther west, some of the above ceramic types were found at Shahr-i Sokhta Period I in Iranian Seistan, in addition to the Proto-Elamite materials, burnished grey ware, and materials related to the Western Balochistan Ceramic Complex. These types are Quetta ware (Period I, Phases 10-8); a few sherds that resemble Nal polychrome ware (Periods I-II, Phases 10-6); and Faiz Mohammad ware (Periods II-III) (Tosi 1969:325; Biscione 1974:134; 1984:69; Amiet and Tosi 1978:22-23; C. Jarrige *et al.* 1995:27, 32; R. Wright 1984:85-124). The foundation of Shahr-i Sokhta is dated to the last quarter of the fourth millennium BC (Salvatori and Tosi 2005:284, 289, fig. 12), and the sequence of this site confirms the partly overlapping succession of these ceramics and the more recent date of Faiz Mohammad ware vis-à-vis the others.

The ceramic assemblage of Shahr-i Sokhta Period I, while having analogies to Quetta ware, was at the

same time connected to ceramics of the Geoksyur Culture (Namazga III) located in the Tedzen Delta of southern Turkmenistan (Lamberg-Karlovsky and Tosi 1973:24-25; Tosi 1969:325; Amiet and Tosi 1978:21; Sarianidi 1983:185-186; Biscione 1984). These parallels led C. C. Lamberg-Karlovsky and M. Tosi to define a vast interaction sphere including Turkmen sites, Shahr-i Sokhta, Mundigak, and the Quetta Valley (Lamberg-Karlovsky and Tosi 1973:38, map 1). While the connections attested between southern Afghanistan and the Quetta region were conceived as a Quetta tradition, the parallels between Mundigak and Shahr-i Sokhta led to define the Helmand Civilization, centered on the Helmand Basin and perceived as a development of both fourth millennium BC cultures of Balochistan and Turkmenistan (Lamberg-Karlovsky and Tosi 1973:26; Biscione 1974:136-138; 1984:69; Shaffer 1992:459-461). It was also envisaged that Quetta ware found in Pakistan and Afghanistan was the result of influences and even invasions in these regions from southern Turkmenistan (Masson and Sarianidi 1969:12-14; De Cardi 1965:114-116; 1970:260; Fairservis 1967:12; Sarianidi 1983:189). Other parallels indicate additional similarities in material culture: clay figurines (C. Jarrige *et al.* 1995:31), metal objects, seals, and funerary practices (Sarianidi 1983:188-189).[20] A different view is expressed by J.-F. Jarrige who points out that, although they indeed share certain decorative styles and shapes, the Turkmen Geoksyur ceramic and Quetta ware were not produced by the same method (C. Jarrige *et al.* 1995:33). He also argues for the continuation of local ceramic traditions in Pakistani Balochistan, traditions that stretch back to the Neolithic period and to the fifth millennium BC (Jarrige 1981:113-114),[21] which would contradict the invasion hypothesis.

Regardless, the assemblage of Shahr-i Sokhta Period I indicates that this settlement attracted peoples with separate material culture, connected to spheres located to the east, north, west, and south at the beginning of its occupation. As noted by R. Biscione (1984), there are however also ceramics with no outside parallel, corresponding to the development of a local tradition. While many burials that can be assigned to Period I were uncovered, little is known about the architectural contexts of this period, excavated on a limited scale (Tosi 1969). The size of the settlement is, however, not the same as in the following Periods II and III when the site greatly extended (10 ha. to the maximum in Period I vs. over 100 ha. in Periods II-III; Salvatori and Tosi 2005:fig. 12). Contrary to the numerous sites of ca. 3000 BC mentioned in eastern Pakistani Balochistan, Shahr-i Sokhta appears as an isolated settlement in Seistan at that time.

1.2.5 Southern Turkmenistan and Sarazm

The late Namazga II and the beginning of Namazga III in southern Turkmenistan (along the Kopet Dag piedmont) are dated to the mid to late fourth millennium BC (3300 BC: Hiebert 2002:35). Thus, it falls within the chronological bracket considered here. While southern Turkmenistan shows relationships to Shahr-i Sokhta and to Mundigak and the Quetta Valley, it was impervious to the presence of the Proto-Elamite phenomenon.

Settlements of the mid to late fourth millennium BC in southern Turkmenistan include those uncovered at Kara-Depe, Gara, Namazga, Ilgynli, Altyn-Depe, Ulug-Depe, Geoksyur, Chong, Mullali, Gs 9, Khapuz-Depe, a settlement near Serakhs, Parkhai II (burials) on the Sumbar River, Anau North not far from Ashkabad, and surface scatters; and at least at five sites in Iranian Khorasan: Tepe Yam and Tepe Shirvan in the upper Atrek Valley, and Yarim-DG, DG 14, and DG 28 in the Darreh Gaz Plain (Kohl

1984:93–94; Hiebert 2002:35–36). Sites are lacking to the west until the Gorgan Plain, where the material culture indicates another cultural sphere. Cultural relationships in Namazga III are attested in northern Khorasan at Tepe Damghani in the area of Sabzevar (Francfort, pers. comm.) and at another site in the area of Nishapur (Hiebert 2002:36). There is no evidence for cultural connections south of northern Khorasan until Shahr-i Sokhta, ca. 700 km to the south.

P. Kohl notes that "the appearance of multi-roomed houses (...) [at Geoksyur 1, Chong, and Kara Depe in the Namazga III Period] is interpreted as a reflection of an important shift in social organization from the earlier Djeitun Period structured around nuclear families to a society structured around larger, extended, possibly kin-related units" (Kohl 1984:95). Fortications in the shape of circular towers and buttressed curtain walls are present at several sites in the Geoksyur region (see Hiebert 2002:36). Namazga III was also characterized at Geoksyur 1 by individual burials and collective burials in tholoi (Kohl 1984:96–98). In addition to changes in the internal organization of larger architectural units than were present in the previous period, the Namazga III Period is marked by an "increasing concentration of people in sites exceeding 9–10 ha in size. Important technological and economic advances were also achieved as it can be seen in the appearance of two partitioned ceramic kilns and possibly slow turning devices[22] and in the construction of irrigation canals" (Kohl 1984:102). The shift toward two-chambered kilns may indicate the development of industrial scale ceramic production (Hiebert 2002:35).

P. Kohl underscored differences between the ceramic assemblages of the Namazga III sites along the Kopet Dag (Kohl 1984:103): "In the west grey ware seems to be found in increasing proportions as one moves west from the Ashkhabad oasis. In the central piedmont (and probably the upper Atrek valley and Darreh Gaz Plain) Kara-Depe dark-on-light monochrome ware with frequent zoomorphic motives is characteristic, while in the eastern piedmont and lowland plains Geoksyur polychrome ware with geometric designs is found. Figurines from the two regions are also distinctive, and most burials at Kara-Depe were individual contracted internments, while the majority of burials from Geoksyur came from the collective tholoi." The Namazga III ceramics from Kara Depe include a majority of monochrome painted vases decorated with zoomorphic motifs, rare polychrome Geoksyur ceramics, and 5–10% of burnished grey ware. Burnished grey material is more frequent at this site than at those located to the east, but less frequent than at Ak-Depe to the west (Kohl 1984:99–100). West of Ak-Depe, burials found at Parkhai II contained burnished grey ceramics (Hiebert 2002:36).

As indicated above, beyond the main cluster of sites with Namazga III-type pottery identified in Turkmenistan and Iranian Khorasan, evidence is weaker to the west: the Gorgan Plain was then within another ceramic polity. Some 700 km northeast of the main southern Turkmenistan cluster of Namazga III sites, Sarazm, a site located in the Zeravshan Valley (Tajikistan), provided significant quantities of Turkmen-like ceramics. The settlement is today protected over 16 ha, but probably extends over at least 40 ha. It includes domestic houses and structures grouped together in blocks as well as monumental constructions. Elements indicate that the site began to be occupied in the first half of the fourth millennium BC, but the bulk of the occupation seems mostly situated between the mid to late fourth and the first half of the third millennia BC (see Besenval and Isakov 1989; Isakov 1991; Lyonnet 1996; Isakov *et al.* 1987). Sarazm was considered a colony established by people from the Kopet Dag area in the late Namazga II Period, although a local origin is also proposed for the ceramics from this site that led to this hypothesis (see Hiebert 2002:36; Lyonnet 1996:64–65; Isakov and Lyonnet 1998:44–45). As indicated above, large

amounts of ceramics connected to the traditions of the mid-late fourth and early third millennia BC observed in Afghanistan and Pakistan were also recovered from this site (Lyonnet 1996; Besenval and Isakov 1989). More research is necessary on this isolated late Chalcolithic-early Bronze Age site to define its chronology and material connections that point toward the south (Pakistan and Afghanistan), the west (Turkmenistan) as well as to the Aral Sea and the Eurasian Steppes (Lyonnet 1996). It is likely that the Zeravshan Valley with its richness in minerals had something to do with the foundation and occupation of Sarazm (Besenval and Isakov 1989:18).

1.3 Why revisit Tepe Yahya Period IVC materials?

Concerning the above discussion, several questions emerge. Some concern the site of Tepe Yahya, but others are obviously linked to broader considerations that concern the Proto-Elamite phenomenon and archaeology of the Southeastern Iranian Plateau in the fourth and third millennia BC. Tepe Yahya Period IVC remains a favorable candidate to provide numerous clues toward an understanding of the above.

1.3.1 Chronology

One of the primary considerations is the dating of the building complex of Period IVC and its relationships to the previous and succeeding occupations at Tepe Yahya. Different dates have been offered concerning Period IVC since the Proto-Elamite settlement was first excavated. These dates range from around 3400 to 2900 BC (Potts 2001:195). The most recent chronological bracket proposed situates the settlement between 3100 and 2800 BC, with an occupation that did not last more than 100 or 150 years (Lamberg-Karlovsky 2001a:270; 1989:vi).

When Tepe Yahya was being excavated, it was noted that numerous types of ceramics of Period V continued into Period IVC (Lamberg-Karlovsky 1972:95, 97; Lamberg-Karlovsky and Tosi 1973:32). T. W. Beale later wrote that Black-on-Smooth Buff ware, a type of ceramic that appeared in Period V, was also attested in contexts of Period IVC (Lamberg-Karlovsky and Beale 1986:82-84). Alternatively, it is suggested that there was a chronological hiatus between Period VA and the construction of the building complex of Period IVC (Lamberg-Karlovsky and Beale 1986:11). As noted above, this gap is based on evidence from Tal-i Iblis and surveys conducted in the Daulatabad Plain; it is contemporary to Aliabad ware and Dashkar are. However, J. Alden suggests that the Aliabad period and Tepe Yahya IVC were contemporaneous (Alden 1982a:616).

Period IVC was originally divided into two phases, Phases IVC2 and IVC1. The definition of these two phases has changed over time. C. C. Lamberg-Karlovsky (1989:vi-vii) has defined Phase IVC2 as the construction of the mudbrick building and earliest floors and surfaces, while Phase IVC1 corresponds to a series of later constructions and open areas added to the eastern side of the large building complex (Areas A, B, C, and D). However, when Periods IVC and IVB were published, D. T. Potts included C. C. Lamberg-Karlovsky's Phase IVC1 within Phase IVC2 (see Potts 2001:1-14), holding in reserve Phase IVC1 for deposits located at the top of the architectural complex which he considered as chronologically and culturally connected to Period IVB and dated to a much later date (see Potts 2001:55-61, and Chapter 2). The building complex of Period IVC (Potts's Phase IVC2) probably did not last more than 100/150 years. As stressed by C. C. Lamberg-Karlovsky, an important issue remains that it is virtually impossible to be sure of the dates for the initial settlement of Tepe Yahya IVC or its abandonment and of

their chronological relations to all occupations of Proto-Elamite nature (Lamberg-Karlovsky 2001a:270). While it is currently almost impossible to provide greater details about the date for the Proto-Elamite building complex of Tepe Yahya than that suggested recently (3100-2800 BC), one may discuss the placement of this settlement within the chronological bracket proposed for the Proto-Elamite period, ca. 400 years, and its chronological relations to the other Proto-Elamite settlements known today.

The end of Period IVC and its transition with Period IVB remain controversial topics. The dating of Period IVB was discussed at length in the monograph published in 2001 and remains a subject of disagreement. Period IVB was initially dated to the first half of the third millennium BC (Lamberg-Karlovsky 1971:87). Recent radiocarbon determinations based on eight samples from Phase IVB5 (six charcoals and two seeds) and one sample from Phase IVB2 (one charcoal) (Lamberg-Karlovsky 2001a:276 Table A.1) tend to situate Period IVB within the second half and toward the end of the third millennium BC. This corresponds to the Akkadian period and possibly to the post-Akkadian period in Mesopotamia (Kohl 2001:221). This recent dating of Period IVB agrees with P. Amiet's and D. T. Potts's (2001:200-201) proposal. D. T. Potts favors the hypothesis of a long gap of over 500 years between the end of Phase IVC2 and Phases IVC1-IVB1. He suggests that the chlorite workshops (found in Phases IVB4 to IVB1) date to the Akkadian and Ur III periods, and places Phase IVC1 around 2200 BC. He interprets Phases IVB6 to IVB1 as directly following Phase IVC1, with the end of Phase IVB1 situated around 2000 BC (2001:200-201). D. T. Potts wrote (2001:199): "In the absence of a more precise understanding of the comparative and absolute chronology of southeastern Iran in the third millennium, none of the ceramic indicators associated with Phases IVC1 and IVB6-1 can be taken as unequivocal evidence of occupation between about 2800 and 2500 BC." C. C. Lamberg-Karlovsky does not agree with this proposal; at a minimum, in his opinion, the question remains open (Lamberg-Karlovsky 2001a:271-276). He reassessed the comparative materials mentioned by D. T. Potts for some artifacts found at Tepe Yahya that led the latter (and P. Amiet before) to give a low date - the late third millennium BC - to this Period IVB. He also mentioned ceramic types found in Phase IVB6 that evidence continuation with the Proto-Elamite occupation. These materials are considered intrusive by D. T. Potts. C. C. Lamberg-Karlovsky, however, also acknowledges that "there is little continuity in the material culture within the subsequent settlements" (Lamberg-Karlovsky 1989:ix). The new radiocarbon dates tend to give two possible dates for Period IVB, around 2400 BC and around 2200 BC, while some ceramic parallels found in the Persian Gulf at Umm an-Nar could range between 2700 BC and 2200 BC (Lamberg-Karlovsky 2001a:275-276). Although Tepe Yahya Period IVB is not the main topic of the present essay, certain chronological aspects of this period, especially its beginning, are necessarily discussed here as well as those related to Phases IVC1 and IVB6.

1.3.2 Culture

When he concluded the "Third Millennium" book published in 2001, D. T. Potts wrote (2001:206): "Tepe Yahya certainly does have more than one 'story' to tell us." While Tepe Yahya in Period IVC is considered a Proto-Elamite settlement (a label that it deserves), the local, indigenous, material component of the occupation was continuously mentioned, and connections to the east, the Indo-Iranian Borderlands, were indicated (Lamberg-Karlovsky 1972:96-97; 1977:37; 1984:349; 2001a:270; Potts 2001:198). As detailed here, it is clear that Tepe Yahya in Period IVC was embedded not only within the

Proto-Elamite sphere, but also within spheres of relationships centered on the Southeastern Iranian Plateau, as well as one connected to northern Iran. With this publication, it is hoped to provide more detail concerning these cultural interactions at Tepe Yahya and on the Southeastern Iranian Plateau in Proto-Elamite times. Period IVB is only briefly discussed, but relationships of this period to the other major sites and polities of the Southeastern Iranian Plateau and the Persian Gulf will be evoked and compared to those observed in the Proto-Elamite period.

1.3.3 Materials

The ceramics and small finds of Tepe Yahya IVC were not fully published or illustrated. These two groups are here synthetized and the available data regarding the entire assemblage of Tepe Yahya Period IVC is published herein.

1.4 Approach

1.4.1 Framework

The analysis, presentation, and interpretation of the objects are conceived as a bottom-to-top approach. The description of the materials (definition of the groups and their quantities when available) is considered before analyzing their stratigraphic and spatial distributions (their context), and discussing their extraregional parallels.[23] The results of this three-level analysis are discussed with two main perspectives: spheres of activity and chrono-cultural spheres. The first includes a discussion of the functional aspects of the objects, their "role" within the settlement. The second perspective concerns the cultural traditions these objects relate to. On this basis, an attempt is made to reconstruct the dynamics occurring in the settlement of Period IVC using another three-level grid: their relation to proximate, regional, or extraregional activities and polities.

The approach used here is to follow and combine the following:

1) In a paper published in 1973, C. C. Lamberg-Karlovsky and M. Tosi used the concept of Interaction Sphere to describe the situation on the Southeastern Iranian Plateau in the fourth and third millennia BC, with a primary focus on Tepe Yahya and Shahr-i Sokhta. This concept, introduced to the archaeology of Middle Asia by J. Caldwell (1964), still appears useful, for it is neutral; it does not require models based on exploitative asymmetrical relationships, and it is equipped to include different types of relationships, on different levels, and not restricted to considerations of economic and political relations. "A study of interaction spheres requires one to examine the specific type and nature of the interaction as well as the extent of the geographical sphere confronted" (Lamberg-Karlovsky 2001a:278).
2) This last remark recalls D. T. Potts's concluding comment in quoting C. C. Lamberg-Karlovsky and M. Tosi's article (Potts 2001:206): "Above all, what should be retained from their sketches is the notion that the different fossil indicators used (...) probably reflect not a few, but many different planes of activity, or interaction spheres, in which the sites involved played some role." The same author already expressed this in 1980 when he discussed the notion of community in anthropological literature (Potts 1980:416-423) and quoted A. Macfarlane who defined community as an "activity' specific word" (Macfarlane 1977:13).
3) This publication is based on material culture, especially ceramics, and one is in agreement with

researchers who consider material culture as identity markers, including those who believe that technology represents ideologies (see Demoule 1994; Lemonnier 1993; R. P. Wright 2002). In the case of ceramics we believe that similar vessel types, especially those decorated, that were shared by distant populations implies that they understood the codes of meaning conveyed by the pots. Ceramics indicate additional types of relationships beyond their distribution and use as a commodity. They may reflect identities (see Barth 1969; Hardin 1970; Wobst 1977; Plog 1980; R. P. Wright 1984:354; and Méry 2000:62). This has certain limits, as exemplified by C. Kramer (1977, 1985) and by the ethnographic example of M. Dietler and I. Herbich (1994). These last authors have shown on the basis of an ethnographic investigation in Kenya that a ceramic style does not necessarily represent an identity marker beyond the context of its production. A pot can be distributed beyond ethnic boundaries, even between populations who do not speak the same language (Dietler and Herbich 1994:465, 468). While taking this into account, a concentration of similar artifacts in the same area has the potential to reflect strong relationships within this area while an analysis of the distribution of the ceramic styles narrows our research toward the definition of a group's boundaries and/or polities of interaction.

1.4.2 Archaeological contexts

As indicated above, the monograph published in 2001 indicates that several ceramic types found in D. T. Potts's Phase IVC2 (Lamberg-Karlovsky's Phases IVC2-IVC1) were also recovered from Phases IVC1 and IVB6. D. T. Potts considers them as intrusive in Phases IVC1-IVB6 and dates these phases to a much later date. C. C. Lamberg-Karlovsky does not totally agree with this interpretation. Starting with D. T. Potts's conception, it appears to us that to characterize the ceramic assemblage of Tepe Yahya Period IVC, a focus on D. T. Potts's Phase IVC2 contexts, is not sufficient. Indeed, whether or not the materials related to the Proto-Elamite period found in Phases IVC1-IVB6 were intrusive in these phases, they provide important information in terms of techniques, forms, and decorations which complement the definition of the productions found in Phase IVC2. Furthermore and significantly the analysis of the objects from the collection of the PMAE confirms that many of the ceramic types recovered from Phase IVC2 were in fact also present in Phases IVC1-IVB6 contexts. This led us to offer an interpretation differing from that of D. T. Potts regarding these phases.

The archaeological contexts primarily included in the present study are those related to Phases IVC2, IVC1, and IVB6. Nevertheless, in order to discuss the transition between Periods IVC and IVB, and because some of the ceramics from Period IVB were also found in Period IVC contexts, several contexts from Period IVB (from Phase IVB5 onward) are considered here. Information about the archaeological contexts of Tepe Yahya Periods IVC and IVB was mostly obtained from the description of the excavation units listed by phase provided by D. T. Potts in the monograph published in 2001 (Potts 2001:2, 56, 79, 108-109, 146, 162, and 180-182; Appendices A-E). However, he discarded a number of contexts that are not listed in that publication. Some of them contain important data and are worthy of mention. The contexts discarded by him and included here are termed in this essay "secondary contexts" and discussed separately. Discussion about them and about Periods IVC and IVB in general was complemented by data from Lamberg-Karlovsky and Beale 1986 and from the field reports that were generously made available to me by C. C. Lamberg-Karlovsky. The archaeological contexts of Phases IVC2-IVB5 are succinctly pre-

sented here in order to provide support for our interpretation. They were thoroughly presented by D. T. Potts before (2001). As detailed in Chapter 2, D. T. Potts's definitions of Phases IVC2-IVB6 is kept and used here, although our interpretation of these phases is not the same.

1.4.3 The ceramics

As noted above, the original position of materials found in Periods IVC and IVB contexts remains controversial. It has recently been suggested that the assemblages of these periods were mixed (Madjidzadeh 2008:95). The monograph published in 2001, in particular the synthetic plates provided by D. T. Potts (2001:figs 1.7-1.12, 1.14-1.17, 1.20-1.21, 1.23-1.24, 1.28, 1.35, 1.38, 1.43, 1.45), indicate that similar types of productions were recovered from Phases IVC2-1 and IVB6 contexts. These ceramics could indicate continuity between these phases if one would be sure that they were not intrusive from one or the other contexts (as suggested by D. T. Potts for some of them). While the styles of some of them clearly indicate, by comparisons, that they could not have existed at the same time and were, thus, truly intrusive, this is more complicated to ascertain for others, especially types that have no parallel or equivocal ones beyond Tepe Yahya. However, the diagnostic elements show that mixes happened between the assemblages of the two periods (see Chapter 3). Sixteen reconstructions made in the collection of the PMAE with sherds from Phases IVC2, IVC1, IVB6, and IVB5 contexts add a little more element to confirm this (Table 1.3). These reconstructions imply that important perturbations such as burrows split the materials into separate diachronic excavation units. Open areas such as Areas F and G (see Chapter 2) are also more prone to mixing during excavation (loose soil and collapsed materials) than contexts inside the building where floors and architectural structures were solid stratigraphic markers. As indicated by C. C. Lamberg-Karlovsky (pers. comm.), some pits were not identified until their excavation was in process, so that materials from upper deposits (the surfaces where the pits were dug and their fillings) were registered together with those from lower contexts (that the pits traversed).

Considering the mixing of Phases IVC2-IVB6, the primary goal of the ceramic analysis is to define "what goes with what," in other words, which types of productions were contemporaneous and characterize 1) Period IVC - the Proto-Elamite occupation and 2) Period IVB[24] which is best defined from Phase IVB5. Although the ceramic corpus discussed here is not the complete assemblage of Tepe Yahya Period IVC, one may consider that the main ceramic productions of the Proto-Elamite period are represented here and allow for discussion of important chronological and cultural aspects, not only regarding Tepe Yahya, but also other sites of Middle Asia.

1.4.3.1 Corpus

The corpus of the present study comes from both the collection held by the PMAE and available published sources. Materials presented in previous publications on Tepe Yahya are presented again as they represent the best diagnostics, while additional documentation is provided here.

Eight hundred and fifty ceramic fragments and vessels have been selected, individually numbered, described and recorded in a database. These are documented (drawn and photographed), among thousands of fragments observed in the collection and available sources. In addition to these 850 sherds, for comparison, ca. 600 fragments were also selected and documented from contexts assigned

to Period IVB (from Phase IVB5 onward). The Period IVB assemblage briefly discussed in this publication was defined upon this selection and elements published before.

The ceramic assemblage of Period IVC is defined on the basis of fragments found mostly in Phases IVC2 to IVB6 (644 sherds), a few sherds from other IVB contexts (13), and 193 fragments reported from "secondary contexts" (Table 1.4).[25] Six hundred and ninety-nine sherds represent the IVC ceramic assemblage, while 151 are materials found in Phases IVC2-IVB6 with stylistic relations to the previous and following periods. The majority of the fragments of ceramics reported here come from Trenches A, B, BW, CW, and C excavated in the southern part of the mound.

The quantities indicated here correspond to the number of sherds identified in the collection of the PMAE and available sources. This corpus should not be considered as an accurate sample of the Period IVC (and IVB) assemblage. The assemblage was split between Iran (Tehran Iran-Bastan Museum) and Harvard University in the 1970s, and it is not possible to know the exact number of sherds recovered from the contexts of Period IVC. Nevertheless, quantitatively, our corpus does not appear totally unrepresentative. A rough estimation of the assemblage from Period IVC may be obtained from T. W. Beale who mentioned that the beveled-rim bowls represented "less than 5% of the total ceramic assemblage from Period IVC" at the end of the 1973 field season (Beale 1978:300). This count does not take account of the ceramics from Trench A excavated in 1975. T. W. Beale numbered 153 beveled-rim bowl fragments in 1973 (139 sherds and 14 complete profiles). Although it is not clear what contexts he included in his counts and if he included material from the three phases defined by D. T. Potts considered here, this would mean that the IVC assemblage as defined by T. W. Beale in 1973 consisted of 3,060 sherds. The present corpus from Trench A contains 39 beveled-rim bowl sherds. Trench A represents approximately 20% of the total surface for Period IVC in the southern part of the mound, excavated in 1975. As seen before, Trench A comprises half of one of the rooms of the Period IVC mudbrick building, adjacent constructed areas, and open areas, while the rest of the mudbrick building and large open areas were in Trenches B, BW, C, and CW. A coarse estimate that considers the excavated volumes of soil and amount of sherds per excavated volume similar across the occupation of Period IVC would give 3,672 as a total maximum count of sherds for Period IVC, including Trench A. This is of course a very rough approximation. This estimate enables us to suggest that the assemblage was probably on the order of 3,000 to 5,000 sherds, perhaps more, but not in the proportions of sites like Chogha Mish. Thus, the 644 sherds selected from Phases IVC2-IVB6 (837 including fragments from "secondary contexts") might constitute 10 to 20% of the assemblage from Period IVC. The present corpus contains ca. 450 rims and fragments with complete profile defined as IVC ceramic assemblage, which, in comparison with the estimated total, seems to represent a reasonable Minimum Number of Vases.

On the other hand, it is likely that some groups of production are overrepresented, while others are underrepresented. Indeed, the only information regarding real counts of sherds was provided for beveled-rim bowls. Beveled-rim bowl fragments included in the present analysis represents15% of our corpus (Phases IVC2-IVB6 and "secondary context;" see Chapter 3), while this type of ceramic represented less than 5% of the IVC assemblage counted in the field in 1973. Qualitatively, while no exact count can be obtained, the present corpus appears to illustrate the variety of the ceramic assemblage of Period IVC. The ceramic fragments that were brought to Harvard University include all the main ceramic types published by the excavators and are supplemented here by new elements.

The selected materials are vessels and sherds with complete profile, rims, bases, and decorated and undecorated body fragments that provide important information in terms of traditions of production. The rims counts provide us with a coarse estimate of a Minimum Number of Vases found throughout the collection.

1.4.3.2 Analysis

The ceramic analysis follows the main principles of the concept of "chaîne opératoire"[26] which aims at reconstructing the different stages of fabrication of the vase, from the acquisition of the raw material (the clay), its preparation (cleaning, tempering, and kneading), the montage of the vase (including forming techniques and finishing processes), and its firing. An additional step, before or after the firing, is the decoration. This ceramic reconstruction is, however, incomplete as most of the documentation is based on ceramic fragments, offering information only on some of the above sequences. Supplementary information is, nevertheless, available in previous studies (Vandiver 1986; R. P. Wright 1984). The first step of the ceramic analysis was to differentiate the main groups of production and then the related categories of forms.

The fabric, macro-traces of fabrication, surface treatment of the vessels and firing are envisaged first, through macroscopic observations. Groups of production are distinguished on this basis, but in our analysis, formal and decorative aspects are favored over fabric's and manufacture's aspects in some cases when strong relationships are noticed in form and decoration between ceramics. With regard to the fabric, vegetal-tempered materials and mineral-tempered materials are distinguished. Mineral-tempered fabrics are provisionally classified here within four main groups according to the size and quantity of the inclusions: 1) very fine fabric: invisible or very small particles, none or rare particles; 2) fine fabric: maximum particles size ≤ 0.5 mm, several particles; 3) medium fabric: maximum particles size ≤ 1 mm, several to numerous particles; 4) coarse fabric: maximum particles size ≥ 1 mm, several to numerous particles.[27] An important sample of Periods IVC and IVB ceramics has been sent for Instrumental Neutron Activation Analysis, as part of a larger on-going project. The INAA is in progress and the results do not appear here. These analyses will give greater detail about 1) the compositions of the groups of productions discussed here; and, 2) whether they are local productions or related to distant "centers".

The classification of the form uses the main principles of morphometric and morphological approaches developed by H. Balfet (Balfet *et al.* 1983) and adopted in the study of ceramic assemblages from Oman by S. Méry (Méry 2000:59-61). The classification begins with a distinction between open and close forms, including various degrees of aperture (Table 1.5). The second criteria is the proportion (defined by the ratio MaxD/H) that differentiates flat vessels from deep ones. The size of the vessel is then considered. In order to simplify the description, functional names are used to refer to the categories defined on the basis of these factors. Rim and wall thicknesses are considered as well, as these measurements may express certain regularities in the production. Finally, these metric criteria are combined with information regarding morphology (Table 1.6). It is, however, important to note that much of the present corpus could not be described in such detail, as it is composed mostly of sherds.

Analysis of decoration considers different techniques including the color of the paint, slipping, incision, and appliqué; the position of the decoration on the vessels (inside, outside, on the rim, upper body, lower body, and on the base); the motifs (mostly geometric, animal, and vegetal); the compositions (inside

bottom-centered; friezes when the motifs, combined or not, are repeated in a horizontal row narrower than half the height of the vessel; panel when the motifs, combined or not, are repeated in a horizontal row wider than half the height of the vessel).

The contexts of the sherds are systematically detailed and placed on a map of the excavated areas in most cases, by phase and location, according to available contextual data assigned at the time of excavation and to available phases assigned later by D. T. Potts (2001). Stylistic comparisons are then sought in assemblages of archaeological sites in Middle Asia.

The sum of technological and typological traits observed on each sherd, their context and their parallels (when available) enable us to define several styles of production for Period IVC.[28] These styles are labeled according to occurrences within a wider geographical sphere of influence. The Period IVC assemblage includes: 1) The Proto-Elamite component: beveled-rim bowls, low-sided trays, carinated bowls, a plain bowl, pedestal-based goblets, spouted vessels, decorated jars, two sherds with inscribed Proto-Elamite signs (?), and a fragment with an incised animal decoration; 2) The Southeastern Iranian Plateau component (SEIP) including: a) Group A (Western Balochistan Ceramic Complex), a very fine, painted ware and possible imitations of Group A; b) Groups B1 to B6, a series of painted vessels; c) Group C, a polychrome production; d) Group D, a black-on-red-slipped ware. The Southeastern Iranian Plateau (SEIP) component Group A may be related to ceramics found in the Iranian Seistan-Balochistan province and Pakistani Kech-Makran. It is hypothesized that SEIP Groups B–D represent elements essentially found in Kerman. Reservations are expressed as to whether some of the vessels of SEIP Groups B–D belonged to the Proto-Elamite period (especially Group B6); 3) Burnished ware with connections to northern Iran; 4) "face pots;" 5) a Sialk III fragment (?); 6) one fragment that may be related to Nal ware and one to the site of Amri in Pakistan; 7) and Plain wares. Additionally, materials of Period V and of the Yahya V/IVC transitional Period defined beyond Tepe Yahya, as well as ceramics from Period IVB found in Phases IVC2–IVB6 contexts are briefly discussed.

1.4.4 Other types of materials

Small finds comprise objects that are not ceramic vessels, tablets, seals and sealing impressions. They are classified and presented here by their type of raw material. The corpus of small finds is listed by phase by D. T. Potts (2001:Appendices C, D, and E) and primarily includes here those found in Phases IVC2 to IVB6 contexts. D. T. Potts lists 288 objects from those phases. These objects were assigned a registration number consisting of a letter and/or a number (such as e1242 and z-251). An additional series of 48 elements of lithic industry assigned to Period IVC and five small finds from Trenches AN2 (SF 821 and 822), XBE (ad-0014), and XC (ad-0016 and ad-0017) are added here.[29] It is important to note that only a small portion of these objects have been observed by the present author. Their descriptions were aided by descriptions (material and dimensions) synthetized by D. T. Potts from cards completed in the course of the excavation, drawings and photographs, and specific analyses provided by specialists such as D. Heskel and C. C. Lamberg-Karlovsky (1980, 1986) regarding the metallurgy, M. Piperno (1973) regarding the lithic industry, and P. Kohl (2001) and C. C. Lamberg-Karlovsky (1988) concerning the chlorite corpus.

A recap of the tablets and glyptic art is also included in order to provide a complete synthesis of the material culture of Period IVC. The tablets and glyptic art were fully studied and published by P. Damerow and R. K. Englund (1989) and H. Pittman (2001).

As in the case of the ceramic fragments, the various categories of small finds, the tablets and glyptic art are positioned on maps of the excavated areas.

1.4.5 Settlement on the Southeastern Iranian Plateau

Analysis of the ceramics from Tepe Yahya Period IVC led us to look for comparative materials and their distribution on the Southeastern Iranian Plateau. This is presented here. For this, available sources are considered which include publications related to excavated and surveyed sites in this area, as well as on the basis of elements of the Sir M. A. Stein's collection from the Bampur Valley held by the PMAE and the collections from Shahr-i Sokhta held in Rome (Palazzio Brancaccio and IsIAO) and Bologna (Department of Archaeology), and data previously obtained from Kech-Makran (see Besenval in the references; Mutin 2007).

2 Archaeological Context of Period IVC: Recap and Discussion

It is not necessary to describe in detail the archaeological contexts related to Period IVC at Tepe Yahya. Descriptions were provided by D. T. Potts (2001:1-78) and C. C. Lamberg-Karlovsky (1970, 1971, 1972, 1989), while T. W. Beale and S. M. Carter (1983) offered a specific study of the architecture of the Proto-Elamite building complex. It is useful to make available in this volume a map and a section (Figures 2.1-2.2) showing the deposits of this period and to discuss both the main outline of occupation and the analyses conducted concerning the contexts.

Period IVC followed three earlier periods of occupation: Periods VII to V dated to from the sixth to the fourth millennia BC.[30] The main occupation that followed Period IVC is Phase IVB5 characterized by the "Persian Gulf Room," itself followed by successive, badly preserved, levels defined as Phases IVB4 to IVB2 (see Potts 2001:105-159). Phase IVB1 is situated above Phase IVB2 and represents a well preserved occupation characterized by two quadrangular rooms and a circular structure ("tholos") (see Potts 2001:161-177). While the remains of Periods VII to V were mostly excavated in Trenches C and D (and also in Trenches A, B, BW and CW for Periods VIA and VB), those of Periods IVC and IVB were uncovered essentially in Trenches A, B, and BW (to a lesser extent in Trenches C and CW). The succession of the main IVC-IVB occupations - the Proto-Elamite complex (Period IVC), the "Persian Gulf Room" complex (Phases IVB5), and the IVB1 complex - is well-illustrated in the north section of Trenches B-BW (Figure 2.1).[31] These three main architectural levels appear in this section within a two meter thick deposit. In this section several deposits located between the top of the architectural complex of Period IVC and the bottom of Phase IVB5 architecture can be distinguished. These deposits and other related features found throughout the exposed areas have been assigned by D. T. Potts to Phases IVC1 and IVB6. D. T. Potts identifies Phase IVC2 as corresponding to the occupation of the Proto-Elamite building complex, while Phases IVC1 and IVB6 postdate it. As indicated above, this definition is different from that of C. C. Lamberg-Karlovsky (1989) who sees little distinction between Phases IVC1 and IVB6.

2.1 The Proto-Elamite complex

The Proto-Elamite complex of Period IVC (Potts's Phase IVC2) was excavated in the southern part of the site in Trenches A, B, BW, C, and CW. It is assumed that other parts of the mound were also covered by similar constructions (Beale and Carter 1983:81). The remains of the Proto-Elamite settlement were unearthed over almost 500 square meters. The architecture and soils associated with this occupation were not preserved to more than 0.50 m high.[32] The complex of Period IVC consists of a large mudbrick building, surrounded by other constructions and open areas attached to its eastern, northern, and western sides (Figure 2.2).

The complex was constructed mostly directly upon an anterior construction - an imposing levelling - dated to Period VIA (Lamberg-Karlovsky and Beale 1986:132-139). Evidence for Period V occupation below the building complex of Period IVC consists of some structures with ceramics assigned to Periods VC-VA. In spite of the 0.50 to 1 meter thick deposits of Period VA located below

two walls of Period IVC illustrated on the east section of Trench B (Lamberg-Karlovsky and Beale 1986:145, fig. 6.25), the excavators noted that it is not known whether any construction of Period V existed in the area occupied later by the building complex of Period IVC, or whether it was removed when the complex was constructed (Potts 2001:1-2; see Lamberg-Karlovsky and Beale 1986:132-140, 148, 150-151). The absence of substantial structures and features beneath Period IVC suggests a gap separating this period from the earlier Period V.

Details about the layout and the construction of the building complex of Period IVC and comparisons to architectures found in Mesopotamia and southwestern Iran are described by T. W. Beale and S. M. Carter (1983) and D. T. Potts (2001:10-13). The complex is oriented in a north-south direction and measures at least 17 x 12.5 m. It was built without foundations and using standardized size mudbricks measuring 48 x 24 x 8 cm (Beale and Carter 1983:82). Stones were rarely used in construction. The layout of the complex follows accurate architectural principles based on a constant unit of measurement, the "Yahya Kuš," defined by T. W. Beale and S. M. Carter. One can distinguish the main mudbrick building from later additions which are: the structures and associated floors positioned to the east, the small partition wall of Rooms 3 and 4, and perhaps the buttressing located against its western façade (Beale and Carter 1983:87). The layout of these additional structures (C. C. Lamberg-Karlovsky's Phase IVC1) nevertheless agrees with that of the mudbrick building (Beale and Carter 1983:87) and, as indicated by C. C. Lamberg-Karlovsky, they were "slightly later" (Lamberg-Karlovsky 1989:vi). They were, thus, in use when the mudbrick building was occupied.

Six rooms (Room 1 and Rooms 3 to 7) and one corridor (Room 2) were excavated in the mudbrick building, in Trenches A, B, and BW. The two largest rooms are Rooms 1 and 5. Room 1's interior space measures 2.50 x 6.70 m or 2.50 x 8.12 m when combined with the corridor/Room 2. Room 5's northern portion was not excavated. The interior space of this room is 2.58 m wide; it might be up to 8.60 m long. Rooms 6, 3, and 4 are smaller; they measure 2.3 x 2.74 m, 0.85 x 2.14 m, and 0.90 x 2.16 m, respectively (Beale and Carter 1983:82). Room 7 is only known from its southwestern corner. Room 1 has two accesses to the exterior: one is through Areas C and D which are discussed below, while the other one is through the corridor/Room 2. Room 5's access was not found. It is likely located in the northern portion of this room in Trench AW (unexcavated). Rooms 3, 4, and 6 are located south of Rooms 1-2 and 5. They are disconnected from the rest of the building. Access to these rooms was made possible through a corridor that runs beyond the eastern balk of Trench B. The rooms of the mudbrick building contained several features: a fireplace and a mudbrick bench in Room 6 and a fireplace (in its southern part) and a step-down (in its northern part next to the entrance opened to Area D) in Room 1. Also, at least five successive superimposed well-constructed floors were found in Room 1. Rooms 3 and 4 are interpreted as storerooms (Potts 2001:10-11).

Immediately east of Rooms 1 and 2 are three areas delimited by compacted clay walls that flank the eastern side of the mudbrick building: Areas C, D, and E. As noted before, these areas are interpreted as later additions to the mudbrick building (Beale and Carter 1983:87; see Lamberg-Karlovsky 1989:vi). However, although these areas were apparently set up after the rooms of the mudbrick building, they likely functioned at the same time. Areas C and D allowed access to Room 1. Both these two areas provided remains of flooring. They were supplied with two fireplaces: one in Area C and one in Area D. The postholes identified in Area C probably represent the remains

of supports for vegetal roofing or walling. Area E, located south of Areas C and D and next to the corridor/Room 2 (the corridor that leads into Room 1), is characterized by a fireplace and a mudbrick and stone bench. North of Areas C-D and the Room 1 is Area B. It flanks the northern side of the mudbrick building and separates it from another construction to the north: an earth platform known only by its corner excavated in Trench A. Area B is delimited to the east by a fired ceramic drain that drained into a basin limed with stones and attached to the façade of the platform. Two floors, three fireplaces, a rock pile, and a large amount of ash and burning traces were found in Area B. Also, two pits were located in this area. They might be more recent, in particular Pit n°2 that was dug into one of the ovens and the ceramic drain. In its western portion, Area B might have given access to Room 5 and/or to other possible areas located in Trench AW (unexcavated). East of Areas B and C, beyond the ceramic drain, is a courtyard labeled Area A. It continues southward beyond the eastern balk of Trench A. Area A included several floors but rare architectural remains.

The western part of the building was excavated in Trenches BW, CW, and C. The spaces are designated as Areas F, G, and H. In this area, the mudbrick building (the south side of Room 7; the west side of Room 5; the west and south sides of Room 6; and the west side of the southern corridor that leads to Rooms 6, 3, and 4) is bordered by deposition of mudbricks and mudbrick fragments. This deposit was interpreted as a buttressing that probably served to reinforce or support the façade of the mudbrick building that was situated on the slope of the mound to the west. Nevertheless, D. T. Potts considers this deposit as not a buttressing and as not part of the original plan of the complex of Period IVC, and assigns it to the later Phase IVC1 (Potts 2001:55).[33] C. C. Lamberg-Karlovsky believes that the buttress was clearly resting on the same floor from which the building was constructed and positioned directly against the wall of the building. *Contra* D. T. Potts, this structure is considered by T. W. Beale and S. M. Carter a slightly later addition to the building. They also stressed that the width of the buttressing agrees with the architectural measurement standards employed in the layout of the building complex (Beale and Carter 1983:87). Furthermore, a ceramic drain of the same type as the one found in Area A (detailed hereafter) cuts through the western wall of Room 5 and continues into Area G. This drain is associated with the IVC building, and it cuts through the buttressing as well (see Potts 2001:13 and 54, fig. 1.60). Thus, in spite of some uncertainties, nothing seems to contradict that the structure that borders the western façade of the mudbrick building was contemporaneous with the complex and served as buttressing.

The western walls of the mudbrick building face an open space of 6 to 9 m wide (Areas F, G, and H) located between the buttressing and a series of mudbrick walls constructed on the western slope of the mound (Trench CW). The ceramic drain that cuts through Room 5 into Area G is considered as a continuation of the one in Areas A/B which disappears into the eastern balk of Trench AW (unexcavated) (Potts 2001:7). Other remains of a drainage system were recovered in Area H (Trench C) which also contained a "cooking" pit. These structures, as well as the architecture identified in Trench CW, belong to the same occupation as the building complex of Period IVC, although their direct relationship to the major IVC structures could not be detailed (Potts 2001:13-14). Another find that might have belonged to the occupation of Period IVC is the burial of a child. As indicated by T. W. Beale, it is not certain whether this burial was part of Phase VA.1 or Period IVC. It is sealed from above by a wall of Period IVC (Lamberg-Karlovsky and Beale 1986:151).

2.2 Phases IVC1 and IVB6

Period IVC is divided into two phases: Phases IVC2 and IVC1. The definitions of these phases have changed over time. Phase IVC1 is conceived by D. T. Potts as a phase of archaeological deposition posterior to the primary occupation of the building complex, i.e. Phase IVC2. Thus, Phase IVC1 is supposed to have existed after the abandonment of the complex and before Phase IVB6. According to him, Phase IVC1 includes: the fill deposits (secondary deposits) that lie above the floors to the tops of the walls of the mudbrick building, within and around it; the buttressing mentioned above; a series of unarticulated and irregular walls and structures found in Trenches BW and CW (context CW.71.7); and walls and layers found in Trench AN2 at the top of the mound (Potts 2001:55–56). This definition differs from that of C. C. Lamberg-Karlovsky, T. W. Beale, and S. M. Carter (see above). We will not dwell again on the description of Phase IVC1 and its related architectural and depositional features and the buttressing assigned to this phase by D. T. Potts. Besides this structure and the layers excavated in Trench AN2 to the north, the only architectural remains of Phase IVC1 are the walls unearthed in Trenches BW and CW (Potts 2001:57, fig. 2.1). According to D. T. Potts, the fill deposits of Phase IVC1 include soils related to the abandonment and to the natural filling of the mudbrick building, and trash thrown away by the people who occupied the area after the abandonment of the complex of Period IVC. Because of the eroded nature of the architecture and the nature of the fill, it is suggested that following Phase IVC2 the site was abandoned for a large amount of time before its reoccupation. As detailed before, according to D. T. Potts's analysis of the related objects, Phase IVC1 supposedly started two or even five centuries after the abandonment of the complex of Period IVC (Potts 2001:56, 199–203). C. C. Lamberg-Karlovsky, in turn, interprets Phase IVC1 as a period of transient occupation and the natural fill following the major abandonment of Phase IVC2. Contrary to D. T. Potts, the basic continuity of material remains supports a view of continuity of Phases IVC2 and IVC1.

Phase IVC1 is followed by Phase IVB6. Phase IVB6 was not observed in the field but defined later by D. T. Potts on the basis of sections, plans, and notes available in the field-seasons reports (Potts 2001:79–81). As stated by him, evidence for this phase is scarce. Indeed, the architecture of Phase IVB5 rests directly upon the building of Period IVC in the center of Trench B (Potts 2001:figs 3.5–3.6), but D. T. Potts could delineate a certain amount of deposits between the two occupations in other areas exposed. This is particularly obvious in the north section of Trenches B–BW, where the deposits between the mudbrick building of Period IVC and Phase IVB5 architecture measure up to approximately 0.50 m in thickness. Many contexts are assigned by D. T. Potts to Phase IVB6. In the north section of Trenches B–BW, the IVB6 contexts are: a series of floors, a fireplace, several layers of soil, surfaces, and a wall constructed upon a wall of Period IVC. Two other walls, a floor (Potts 2001:84, fig. 3.3), and a series of seven pits dug into the complex of Period IVC are assigned to this phase (Pits n°4–10).[34]

D. T. Potts's careful examination of the documentation allowed him to define a gap after the abandonment of the complex of Period IVC and before the construction of the complex of Phase IVB5, filled by two intermediate phases. Nevertheless, as stated by him: no plan of Phase IVB6 nor of Phase IVC1 could be reconstructed over all the areas exposed in Trenches A, B, BW, C, and CW; stratigraphic relationships between certain features associated with Phase IVB6 (especially the pits that may have been dug from levels located above, as also noted by T. W. Beale) could not be ascertained; and the relationship of this phase to the previous Phase IVC1 remains unclear. Thus, the archaeological contexts of both

Phases IVC1 and IVB6 remain ambiguous. Probably responsible for this are also the construction of Phase IVB5 and the concomitant destructions of the previous layers. D. T. Potts noted that Phases IVC1 and IVB6 look like squatter occupations, but, according to him, an effort of levelling took place starting with Phase IVB6 (Potts 2001:81). Another issue related to the definition of Phases IVC1-IVB6 is the nature of the material assemblage related to these phases. Indeed, Phases IVC1 and IVB6 are allegedly two to three or five to six centuries posterior to the complex of Period IVC (Potts 2001:199-203). Yet, as illustrated in Chapters 2 and 3 of D. T. Potts's monograph (2001), besides the objects that refer to Period IVB, numerous materials that obviously relate to the assemblage of Period IVC were recovered in archaeological contexts assigned to these phases. As detailed below, overall, the assemblages of these two phases are mixed; they include materials similar to those that characterize Period IVC and materials similar to those found from Phase IVB5. The materials of Period IVC-type found in these phases are considered intrusive (or redeposited) by D. T. Potts (2001:55-59, 81-82). However, as seen here, a relatively large amount of Period IVC sherds, including some with large sizes, were collected in these phases. This is underscored by C. C. Lamberg-Karlovsky as well (2001a:275). The interpretation of C. C. Lamberg-Karlovsky is distinctly different. He believes that the deposit which frames Phase IVC1 and Phase IVB6 represents a continuation of a transient settlement of the Proto-Elamite culture following the abandonment of the major structure (Phase IVC1), followed by an abandonment and subsequent transient settlement of Period IVB. The clear mixture of material is the resultant nature of the two materials from Phases IVC2 and IVB5 compressed within a half meter. To have contoured two distinctive periods positioned within half a meter, between two major levels of architecture, confounds the reading of the stratigraphy and associated material remains. Period IVC1 contains the ephemeral walls and a continuity of remains characteristic of Phase IVC2, while D. T. Potts's construction of Phase IVB6 contains a mixing of Phase IVC1 and the construction of Phase IVB5 major architecture (Lamberg-Karlovsky, pers. comm.). Keeping this in mind, the distinctions offered by D. T. Potts - Phases IVC2, IVC1, and IVB6 - are used here as a valuable guide to provide information about the vertical distribution of the materials throughout the sequence. Our interpretation of the context is, however, not the same.

2.3 Phases IVB5-IVB1

Phase IVB5 corresponds to the architectural complex that includes the famous "Persian Gulf Room" and additional contemporaneous architectural features (see Potts 2001:105-116). Phase IVB5 shows a radical change in the layout and construction in comparison with the building complex of Period IVC. Phases IVB4-IVB2 were defined on the basis of a few architectural remains (Potts 2001:figs 5.1, 5.8, 5.10-11). When one examines the north section of Trenches B-W, one may interpret these structures as reconstructions of Phase IVB5, while a radically different layout characterizes Phase IVB1 (Potts 2001:fig. 6.1).

3 The Ceramics

The assemblage of Phases IVC2-IVB6 includes four main ceramic components termed here Proto-Elamite (PE), Southeastern Iranian Plateau (SEIP), Burnished ware (BW), and Plain ware. There are additional ceramics which are: one sherd that can be compared to Nal ware; material from Amri (Pakistan); compared one ceramic fragment that might be connected to Tepe Sialk Period III; three fragments of "face pots" with possible relations to northern Iran; material related to Tepe Yahya Period V and Yahya VA-IVC Transitional Period; different types of ceramics connected to Period IVB (Phase IVB5 onward) found in Phases IVC2-IVB6. Within the limitations imposed by the size of our ceramic corpus, the four main ceramic components appear well-represented throughout the IVC2-IVB6 sequence, and there are many contexts in which they were found in association. Furthermore, they seem absent or very rare in Period V contexts and from Phase IVB5 onward, while parallels for some of these types provide coherent chronological brackets within the context defined as the Period IVC assemblage.

Proto-Elamite (PE), Southeastern Iranian Plateau (SEIP), and Burnished ware (BW) are represented here by 603 sherds (more than 70% of our corpus; Graph 3.1). Plain ware represents ca. 10%; Period IVB ceramics found in Phases IVC2-IVB6 represent ca. 15%; and the fragments that relate to Tepe Yahya Period V and the Yahya VA-IVC Transitional Period represent ca. 3%. The rest is represented by less than 1%. Period IVB ceramics are only briefly presented here and their description is complemented by an overview of some other ceramics of the assemblage of Period IVB.

3.1 Proto-Elamite ceramics

The Proto-Elamite ceramic inventory from Tepe Yahya includes nine groups of vessels: beveled-rim bowls, low-sided trays, carinated bowls, a plain bowl, pedestal-based goblets, spouted vessels and spouts, decorated jars, two sherds with possible Proto-Elamite signs (?), and one sherd with an incised animal decoration. Affinities to the Proto-Elamite sphere seem valid for the majority of them. There are, however, some sherds included in this section for which affiliation is more difficult to ascertain. This is especially the case for the carinated bowls, the plain bowl, and the pedestal-based goblets. There are also fragments discussed in the section dedicated to plain wares that may be connected to the Proto-Elamite assemblages as defined in the western half of Iran, but for which one would express even greater reservations.

In total, the Proto-Elamite ceramic component is discussed here on the basis of 257 sherds, with a majority of beveled-rim bowls (almost 50%), followed by decorated jars and low-sided trays (around 20% each). The other groups are represented by less than a dozen of fragments.

3.1.1 Beveled-rim bowls

Number of sherds: 128
Number of rims: 84
Number of complete profiles: 7
Contexts: mostly Phases IVC2-IVB6 and one in Phase IVB5
Ware: vegetal- and mineral-tempered
Color: buff, brown light-red, and pinkish

Forms: small- to medium-size shallow bowls-bowls and deep bowls-goblets
Comparisons: southern Anatolia, Mesopotamia, Iran and southwestern Pakistan

3.1.1.1 Quantity

One hundred and twenty-eight beveled-rim bowls were recorded in the collection including 84 rim fragments, 19 bases, 18 body fragments, and seven complete profiles (Table 3.1, Graph 3.2). T. W. Beale counted 139 sherds at the end of the field-season 1973, including 77 rims, 25 bases, and 37 body sherds, in addition to 14 bowls with complete or almost complete profiles. He also indicated that beveled-rim bowls represented "less than 5% of the total ceramic assemblage from Period IVC" (Beale 1978:300). As indicated before, this count does not include material excavated in 1975 in Trench A representing 39 sherds from the collection of the PMAE (including 30 rims and one complete profile). Thus, in addition to the total provided by T. W. Beale, beveled-rim bowls represented 192 sherds while it was noted in 1977 that beveled-rim bowls were less than 200 sherds in Period IVC (Lamberg-Karlovsky 1977:37). It is not possible to tell whether the rim fragments counted here included T. W. Beale's sherds used to estimate volumes (Beale 1978:300), but, based on available information, one can envisage that approximately a hundred beveled-rim bowl rims and complete profiles were recovered from the excavated areas at Tepe Yahya. This estimation includes probable reconstructions deduced from about 10 sherds (sherds Yahya 1275, 1276, 1277, 1278, 1279, 1280, 1296, 1299, 1300, and 1304).

3.1.1.2 Description

Beveled-rim bowls are characterized by a vegetal-tempered fabric, with vegetal inclusions often associated with mineral inclusions of fine to coarse sizes. The vegetal material is of different sizes, and as T. W. Beale noted (Beale 1978:300), some seeds were included in the paste. The outside surface of these vessels is uneven (including cavities), while the inside surface is usually smoother (wet-smoothed). The surfaces are mostly of buff, brown light-red and pinkish color (Figures 3.1-3.2). T. W. Beale (1978:300) noted that the cores are in most cases black or grey, but cores with buff to brown light-red/pinkish colors (similar to those of the surfaces) are also observed. The corpus from Tepe Yahya includes well-fired and more poorly fired material. Two hypotheses were formulated for the construction of this type of production; they were either handmade (Karlsbeck 1980; Chazan and Lehner 1990: 25) or molded (Balfet 1980:78; Miller 1981:128) including ground-molding and using a beveled-rim bowl as a mold (see Goulder 2010:352-353). Joint fabric analyses of some beveled-rim bowls and blank tablets from Tepe Yahya conducted by J. Blackman showed that they were made locally (Lamberg-Karlovsky, pers. comm.).

Beveled-rim bowls have conical open shapes. Overall, based on the complete profiles and estimations of the height of the most complete fragments, two main categories of forms can be distinguished at Tepe Yahya: forms that have the proportions of bowls and shallow bowls (Figure 3.3, n°1-16), and forms that correspond to deep bowls and goblets (Figure 3.3, n°17-25). The first category, Category 1, includes vessels with a ratio RimD/H comprised between 1.8 and 2.2 (a ceramic might even have a ratio RimD/H equal to 2.8), while the second category, Category 2, includes vessels with a ratio RimD/H roughly ranging from 1.2 to 1.5. The profiles of Categories 1 and 2 are characterized by beveled and pro-

truding rims. Most of the rims are slightly concave (guttered) which seems to be the result of the pressures applied by the potter's fingers along the center part of the rim while smoothing it (on a wet paste). However, flat and slightly convex rims are also observed. In addition, some rims are different from the "classic" beveled rims; they seem to have been flattened against the outside wall (Figure 3.3, n°3: Yahya 0230). The walls are often irregular. They are everted, concave (Figure 3.3, n°1-8) or convex (n°9-16) on vessels of Category 1, and usually everted and convex on vessels of Category 2. The bases are continuous and flat (n°26-33), with the exception of one sherd that has a convex base (n°20:Yahya 1274) and a particular one with a slightly concave and protruding base (n°25:Yahya 0262).

Beveled-rim bowls are small to medium size vessels. The rim diameters range from 12 to 20.5 cm (15.7 cm on average). The largest dimension (20.5 cm) comes from an unusual type of beveled-rim bowl (Yahya 0262). The rims are usually irregular, so that measurements taken on the rim fragments are not always absolutely certain. However, three main reliable clusters of rim diameters can be distinguished; 13 cm, 15 cm and 18 cm. These clusters have been measured on both the shallow and deep categories of ceramics. Heights could be measured only on a few vessels; they range from 9 to 12 cm, while the unusual larger ceramic mentioned above is 16 cm high. Based on the most complete fragments, the heights of some of the shallow bowls probably measure 6 to 8 cm. The base diameters are between 5.8 and 10 cm, but most of the measurements are between 6 and 8 cm and the average is 7.1 cm. Measurements of the thickness taken on the body range from 0.4 to 1.5 cm. The highest measures (1, 1.1, 1.2, and 1.5 cm) come from six vessels only, while most of the wall thicknesses are between 0.6 and 0.9 cm. The average is 0.8 cm. Wall thicknesses measured below the rim are between 0.4 and 1.1 cm, but most of the measurements range from 0.5 to 0.8 cm and the average is 0.7 cm. T. W. Beale estimated the volumes of 14 vases from Tepe Yahya. This analysis showed that a great variety of volumes existed (from 0.322 to 1.811 liters) and that there is no evidence for size standardization (Beale 1978:301-302). The material reported here indicate certain regular features, but, in detail, a variety in profiles and dimensions.

3.1.1.3 Context

Out of the 128 sherds of beveled-rim bowls discussed here, 78 sherds or over 60% of the total could be located in contexts assigned to specific chronological phases (Table 3.1, Graph 3.2). Thirty-five sherds come from Phase IVC2 contexts; 28 from Phase IVC1; 14 from Phase IVB6; and one from Phase IVB5. The majority of the complete profiles and rim fragments come from Phases IVC2 and IVC1. When considering the totality of the collection and all phases together, one can notice that only eleven sherds come from contexts located in the sector of the mudbrick building (Figure 3.4). They were in Rooms 1, 4-5, including seven from Phase IVC2, two from Phase IVC1, and two from Phase IVB6. The majority (80 sherds) was recovered west of the mudbrick building in Areas F-H (Trenches BW, BW/CW, CW, and C), with 18 sherds from Phase IVC2, 15 from Phase IVC1, 11 Phase IVB6, and the rest from "secondary contexts" (discussed below). 37 sherds were found in Areas A-E located east of the mudbrick building, with 16 assigned to Phase IVC2, nine from Phase IVC1, four from Phase IVB6, and the rest from Phase IVB5 (1) and "secondary contexts". Higher quantities of rim fragments and complete profiles were also in the areas located west and east of the mudbrick building. T. W. Beale noted that the highest concentrations came from contexts such as pits (Beale 1978:300); this is illustrated in Trench CW.

Almost 40% of beveled-rim bowl fragments come from "secondary contexts." They deserve discussion:

- Among the 50 sherds from "secondary contexts," 28 come from Trench CW, west of the mudbrick building. As stressed by T. W. Beale, this area was used as a dump into IVB times; a pit was dug into this area and it was also affected by a considerable erosion gully from above; while the construction of Period IVC in Trench CW extends directly upon deposits assigned to Period VIA. According to T. W. Beale, this explains the mixed nature of the assemblages of some of the contexts from Trench CW (Beale, report CW/BW/B 1973:24, 31 and 35). A concentration of beveled-rim bowls was noticed in context CW.73.T1.8 (Beale, report CW/BW/B 1973:35) and nine fragments from this context were recorded from the collection. According to T. W. Beale, although this context first appeared stratigraphically anterior to the complex of Period IVC, the layers located above probably did not seal the underlying contexts. This assemblage is mixed and includes material from Period IVB, and the area was interpreted as serving as a dump into IVB times. The initial context was assigned to Period IVC in the publication of the Early Periods at Tepe Yahya (Lamberg-Karlovsky and Beale 1986:333). Eleven beveled-rim bowl fragments were recovered from context CW.73.7. This context was considered similar to CW.73.T1.8 but located outside of the test trench 1 (Beale, report CW/BW/B 1973:39). T. W. Beale noted water-deposited silt and water-lain layers which he suggested ran from the building and drained into the underlying deposits. One sherd was recovered in context CW.71.T1.5 corresponding to a series of floors related to the complex of Period IVC (Beale, report CW/BW/B 1973:15-16). Seven other beveled-rim bowl fragments came from context CW.73.T1.Surface which designates an eroded wash at the surface of the mound (Beale, report CW/BW/B 1973:5). Overall, with the exception of the material from surface deposits which were probably from the complex of Period IVC, the majority of evidence tends to connect the beveled-rim bowls found in most of the "secondary contexts" of Trench CW to the complex of Period IVC.
- One fragment (Yahya 0963) comes from a context of Period VC in Trench C (context C.69.5). This context is located between the underlying rubble fill of Period VIA (C.69.1.9) and the posterior room of Period VB (C.69.1.2-3). Another beveled-rim bowl from Trench C (Yahya 0970) is from context C.68.T6.9.2. No information could be obtained regarding this context in particular, but context C.68.T6.9 was assigned to Phases VA.1-IVC (Lamberg-Karlovsky and Beale 1986: 330).
- Five sherds come from "secondary contexts" in Trench BW. One was listed in context BW.71.5. Two sherds are from contexts BW.71.7.4 and one from context BW.71.7.6. Sherds from these three contexts were mixed together when bagged and deemed contemporaneous to Period IVC but of different contexts. Another beveled-rim bowl sherd comes from context BW.71.9.1. This context appears also related to the complex of Period IVC (Stone, report BW/CW 1971:77-78).
- Two sherds were from context BW/CW.71.12. This context corresponds to the construction surface of the buttressing of the complex of Period IVC, above the rubble level of Period VIA (Stone, report BW-CW 1971:98 and 109).
- One sherd was recovered from context B-C Balk.71.29; no information could be obtained regarding this context
- One sherd was recovered from context B-BW.71.7. According to E. Stone (report BW 197137), this context seems to be related to the buttressing of the complex.

- Two sherds were located in context B.71.6 in Trench B. As reported by M. Prickett (report B 1971:47–51), this context was later divided into contexts B.71.6A and B.71.6B. The former is assigned by D. T. Potts to Phase IVC1 and the latter to Phase IVC2.
- Nine sherds were recovered from Trench A. The first was found in context A.75.T7.10.5. No detailed information could be obtained about this context, but context A.75.T7.10 was assigned to Phase IVB6. The other sherds come from contexts A.75.T8.12, A.75.T8.13, A.75.T8.14, and A.75.T8.15. Context A.75.T8.12 is a ca. 10 cm thick filling below the surface of Period IVC associated with the drain in the northern part of Trench A. It is, however, part of the occupation of Period IVC (Potts and Beale, report A 1975:43). On the other hand, surprisingly, contexts A.75.T8.13, A.75.T8.14, and A.75.T8.15 were first assigned to Period VI. T. W. Beale later assigned context A.75.T8.13 to Period VII (Lamberg-Karlovsky and Beale 1986:329). The bottom of A.75.T8.15 was more than a meter below the floor of Period IVC (Potts and Beale, report A 1975:43). The test trench 8 opened in Trench A is, however, too narrow to allow reliable stratigraphic observation (Lamberg-Karlovsky, pers. comm.).
- Finally, the sherd recovered from Phase IVB5 was found in a pit dug into the layers of Period IVC (context A.75.11.11: see Beale and Potts, report Trench A 1975:39–40). The fill from this pit may easily have been mixed with material from the complex of Period IVC.

In conclusion, it is suggested that the majority of "secondary contexts" in which beveled-rim bowl fragments were found were connected to the complex of Period IVC. On the other hand, the location of a dozen of them, especially those from Trench A, remains problematic, although, as indicated above, test trench 8 in Trench A, in which several sherds were found, is probably not the best reliable context. T. W. Beale considers the beveled-rim bowls recovered from "secondary contexts" in Trench CW intrusive from layers of Period IVC into previous deposits. He pointed out that, with the exception of these fragments, this type of ceramic was otherwise absent from Period VA and older contexts (Beale, report CW/BW/B 1973). He noted later (Beale 1978:301) that beveled-rim bowls probably do not appear at Tepe Yahya before Period IVC. He envisaged the sherds recovered in the uppermost level of Period VA as intrusive and does not agree that this type of ceramic appears in Period VA (Lamberg-Karlovsky and Tosi 1973:36–37). As discussed below, beveled-rim bowls made their appearance during the fourth millennium BC in other areas of Middle Asia and the Near East. They appear at Tal-i Iblis in northern Kerman in a phase older than Tepe Yahya IVC, but are not associated with any material contemporary with, or older than, Tepe Yahya Period VA. They are attested from the Aliabad period which is not represented at Tepe Yahya and which predates the Proto-Elamite period and follows Period VA. Overall, the majority of beveled-rim bowl fragments from Tepe Yahya come from Phases IVC2 to IVB6 contexts.

An attempt to analyze the distribution of the main categories of forms (shallow/deep, small/medium, with convex or concave walls, etc.) in D. T. Potts's Phases IVC2, IVC1 and IVB6, do not provide any significant result. In other words, the main variants of beveled-rim bowls identified at Tepe Yahya seem represented throughout the IVC2 to-IVB6 sequence. There is also no clear distinction between the material located in the mudbrick building and that recovered outside.

3.1.1.4 Comparisons

Beveled-rim bowls represent a well-known ceramic production found at numerous sites from the early fourth millennium to around 3000 BC from southern Anatolia to southwestern Pakistan, including

Mesopotamia and the Iranian Plateau. This type of vessel is, however, not attested in Khorasan and Seistan provinces in Iran, and in Azerbaijan in northwestern Iran. Beveled-rim bowls are characteristic of the Uruk and Banesh/Proto-Elamite chronologically-related contexts. A general chronological agreement suggests that these ceramics were common in the Middle and Late Uruk periods (ca. 3800–3100 BC) and disappeared gradually in Jemdet-Nasr times around the late fourth and the early third millennia BC (Matthews 1992a:6 and 17; Wright and Rupley 2001:93, 120; Goulder 2010: Table 1). It is thought that they were then replaced by coarse conical bowls both in Mesopotamia (Pollock 1990:60 and 68) and in Fars (Nicholas 1987:68). H. Nissen (1987:612 note 1) noted that beveled-rim bowls are found in the millions in the Late Uruk period, whereas only a few are noted in the Jemdet-Nasr period. In Fars, beveled-rim bowls appear by the mid-fourth millennium BC (Initial Banesh phase) and continue until the Late Banesh phase in the early third millennium BC (see Sumner 2003). At Susa, Acropole I, they are present in Levels 22 to 17 (Susa II-Uruk period) and disappear from Levels 16 (Susa III-Proto-Elamite period) (Le Brun 1978). They are, however, attested at Ville Royale I in Levels 18-16 that E. Carter paralleled to Acropole I Levels 14B–13 in the early third millennium BC (Carter 1979:452–453).

Numerous sites bearing beveled-rim bowls are reported from Mesopotamia, on the Middle-Euphrates and in southern Anatolia. D. T. Potts recently counted 107 sites with beveled-rim bowls in Iran and Pakistan (in Kech-Makran) (Potts 2009:15–17, Table 1). The contexts of these vessels vary; they are found in cemeteries (such as at Susa, Tello, and Eridu), temples (such as at Eridu, Tell Uqair, and Tell Brak), administrative buildings (such as at Godin Tepe and Susa), while commonly found in domestic contexts and ovens (Chazan and Lehner 1990:25, Table 1; Le Brun 1980:62). The quantities recovered from individual sites are highly variable. Mesopotamia and southwestern Iran provide the largest concentration of beveled-rim bowls. At Uruk-Warka K/L XII, 1,520 fragments (60–70% of the total sherds) were recovered during the 1965–1967 field seasons (Nissen 1970:136–137). Numerous beveled-rim bowls are reported from Eridu in an area next to the temple and in a kiln (Safar *et al.* 1981:75). Abundant beveled-rim bowls were recovered from another kiln at Ur (Woolley 1955) while 227 sherds were found in two pits at Abu Salabikh in Jemdet-Nasr-related contexts (Pollock 1990:59, Table 1). "Great quantities" are mentioned at Jemdet-Nasr where they indicate a Late Uruk occupation (Matthews 1990:36; 1992a:6). Farther north, a large number was found at Nineveh (see Beale 1978:304). In southwestern Iran, in Susiana, almost 250,000 sherds were recorded from pits at Chogha Mish (Delougaz and Kantor 1996:49). A. Le Brun noted that the ceramic assemblage from Susa, Acropole I Levels 22–17 (Susa II) was dominated by beveled-rim bowls (Le Brun 1971:177). Kilns containing beveled-rim bowls were also excavated at Abu Fanduweh (Johnson 1973:131). In Fars, at Tal-i Malyan, these ceramics represented 1m536 sherds in I. M. Nicholas's specific analysis of TUV Operation assemblage (Nicholas 1987:65, Table 2). On the other hand, they consist of only 2% in the ABC Operation (Sumner 2003:43). At Godin Tepe, they represent 50% of the assemblage from the administrative building and 20% of the assemblage from the Brick Kiln Cut (Weiss and Young 1975:6).

In sum, beveled-rim bowls are well-represented in Iran, but, while hundreds and thousands of sherds are mentioned in Mesopotamia, only the amounts from Susa, Chogha Mish and perhaps Tal-i Malyan can be compared to Mesopotamian quantities (Potts 2009:13), whereas counts are usually

expressed in terms of dozens or hundreds farther east. Nevertheless, as stressed by D. T. Potts (2009:5), the distribution of beveled-rim bowls was consistent throughout the Iranian Plateau, even if such ceramics have not been recovered in every single region. The quantities reported east of Mesopotamia and southwestern Iran are not negligible, although they are minor compared to the assemblage mentioned from Chogha Mish. Within Kerman, concentrations of beveled-rim bowls are reported from east of Tepe Yahya at Mahtoutabad (where over a hundred sherds are mentioned: Vidale, pers. comm.). Additional evidence from Tepe Langar (Lamberg-Karlovsky 1968:167) and Tal-i Iblis to the north indicate that beveled-rim bowls were not rare in Kerman. Evidence from Tal-i Iblis indicates that beveled-rim bowls appear earlier, in an Uruk context, than at Tepe Yahya. Indeed, the oldest beveled-rim bowls were noted at Tal-i Iblis in Period IV, associated with Aliabad ware, while the complex of Period IVC at Tepe Yahya lacked this type of ware.[35] Beyond Kerman, some 500–600 km to the east, at Miri Qalat in southwestern Pakistan, beveled-rim bowls are represented by five sherds found in a small trench (Trench IX) (Besenval 2005:5–6). In the intermediate area, in the Bampur Valley, materials are reported that may be assigned to the same chronological horizon as Tepe Yahya IVC (see Chapter 7), but no beveled-rim bowls have been recovered so far from this area.

As indicated by D. T. Potts (2009:12), several authors have distinguished shallow beveled-rim bowls from deeper ones, the former believed to be older than the latter (Beale 1978:292–293; Helwing 2005). Without a reexamination of radiocarbon dates from Mesopotamia, southern Anatolia and Iran, it is not possible to prove this, as both shallow and tall variants are observed in both older and more recent chronological contexts. The recent sequence from Tepe Arisman, however, tends to corroborate the chronological distinction: shallow beveled-rim bowls appear in deposits related to Tepe Sialk III and deeper ones in the later Proto-Elamite deposits (see references below). Generally speaking, while beveled-rim bowls are often conceived as standardized vessels, data from numerous sites indicate variation in the production of these ceramics in terms of both shape and size. Certain morphological features are regular and certain clusters of dimensions can be distinguished, but their standardization appears somewhat relative. The beveled-rim bowls from Tepe Yahya include two main categories of proportions (shallow and deep vessels) and three main classes of dimensions, as well as numerous variants that do not fit exactly within these types. This was pointed out at Jemdet-Nasr as well where R. J. Matthews noted that the 25 beveled-rim bowls recovered vary in shape and capacity (Matthews 1992a:6). Similarly as noted at Chogha Mish, in spite of certain regular dimensions various sizes are recorded (Delougaz and Kantor 1996:49–50, pl. 83 F–S).

Regarding the profiles, parallels for the shallow beveled-rim bowls from Tepe Yahya (Category 1) can be noted in Kerman at Tal-i Iblis Period IV (Caldwell 1967:143, fig. 26, 146, fig. 29); in Susiana at Chogha Mish in Proto-Literate (Late Uruk) levels (Delougaz and Kantor1996:49–50, pl. 83 F–S); at Susa, Acropole I Level 18 (Le Brun 1978:185, fig. 32, n°6); at Godin Tepe in Period V (Badler 2002:fig. 13); at Tepe Arisman in Tepe Sialk III occupation (Boroffka and Parzinger 2011:fig. 62); in southern Mesopotamia at Jemdet-Nasr in the Late Uruk period (Matthews 1992a:6–7, fig. 2, n°2); while they were absent or are not illustrated at Tal-i Malyan. In the ABC Operation of that site, the small size of the examples does not allow determining the angle and diameter of the vessels (Sumner 2003:46, fig. 22 i–n). Shallow bowls were recovered from southwestern Pakistan at Miri Qalat in Late Period IIIa (Besenval 1997a:fig. 18: 1/94/IX/62/5). Parallels for Tepe Yahya deep beveled-rim bowls (Category 2)

were found at Tal-i Iblis Period VI (Caldwell 1967:190, fig. 39); Tal-i Malyan (TUV Operation B.L. IIIA and B.L. II) (Nicholas 1990:pl. 13 k-l);[36] Chogha Mish (Delougaz and Kantor 1996:pl. 83 N); Susa, Acropole I Level 17 (Le Brun 1978:187, fig. 34,n°1); at Godin Tepe in Period V (Badler 2002:fig. 13); Tepe Arisman in the Proto-Elamite period (Helwing 2011a:fig. 35, n°201-203); and Jemdet-Nasr in the Late Uruk period (Matthews 1992a:6-7, fig. 2, n°1). One rim sherd from Miri Qalat Late Period IIIa was probably part of a deep bowl similar to the types observed at Tepe Yahya. Another deep beveled-rim bowl was recovered at Miri Qalat (Besenval 1997a: fig. 18:1/94/IX/59/1); its profile, nevertheless, is different from types observed at Tepe Yahya and elsewhere. In spite of these significant similarities, it should be noted that profiles such as the concave-walled vessels observed at Tepe Yahya do not seem common elsewhere.

T. W. Beale (1978) demonstrated that the volumes of the beveled-rim bowls from Khuzistan and Tepe Yahya were not standardized. However, generally speaking the majority of beveled-rim bowls found in the Middle-East fall within roughly the same bracket of dimensions. When available, these brackets usually agree with those recorded at Tepe Yahya. For instance, the dimensions of materials from Susiana indicated by G. A. Johnson are 14 to 19 cm in rim diameter and 6 to 15 cm in height, although smaller (10 cm) and larger (24 cm) rim diameters are also mentioned. The thicknesses of the walls are also comparable to those of the vessels from Tepe Yahya: they vary from 0.7 to 1.8 cm (Johnson 1973; Miller 1981:128). The material from Khuzistan studied in details by T. W. Beale includes rim diameters measuring 12 to 24 cm (Beale 1978:297). He later estimated the dimensions of the molds (which correspond to the dimensions of beveled-rim bowls taken from the outside surface) supposedly used to produce beveled-rim bowls. He noted apropos 31 bowls from Susa that the mold rim diameters range from 15 to 19 cm; heights from 5.8 to 7.9 cm; and mold base diameters from 6 to 9 cm (Beale 1978:300). Two main standard sizes were observed at Chogha Mish. The first one is 20 cm at the rim (and 8 cm in height), while the second one is around 14 cm. However, large shallow vessels (about 30 cm in rim diameter) and rare small size vessels (8-10 cm in rim diameter) are also noted (Delougaz and Kantor 1996: 49). In southern Mesopotamia, at Ur, a vase illustrated by D. T. Potts (2009:fig. 1) is 16-16.8 cm in rim diameter; 8.5-9.8 cm in height; and 7.7 cm in base diameter. At Abu Salabikh (Pollock 1990:61, fig. 4f), the beveled-rim bowl illustrated measures 16.5 to 17.5 cm at the rim; 10-10.5 cm in height; and 7.5 cm at the base. At Jemdet-Nasr, the two bowls of Late Uruk period illustrated by R. J. Matthews (1992a:figs. 1-2) have rim diameters and heights measuring approximately 17 and 15.5 cm, and 10 and 5.2 cm, respectively. As seen above, at Tepe Yahya the brackets of dimensions are: RimD = 12-18 (20.5 cm); H = (6-8) 9-12 cm (16); BaseD = 5.8-10 cm, although three main clusters of rim diameters (13, 15, and 18 cm) could be distinguished.

Generally speaking, it seems that one should not expect that the dimensions and morphological attributes of beveled-rim bowls be identical from one site to another throughout Iran and Mesopotamia. Nevertheless, comparable ranges of dimensions and profiles are observed over these large areas throughout the Uruk, Proto-Elamite and Jemdet-Nasr periods. Those from Tepe Yahya are within these ranges. An updated list of comparative materials provided by D. T. Potts (2009:Table 1) shows that beveled-rim bowls still appear most commonly in Mesopotamia and southwestern Iron and were of functional significance but less common on the Iranian Plateau, including Kerman, beginning in the Uruk period.

3.1.2 Low-sided trays

Number of sherds: 47
Number of rims: 3
Number of complete profiles: 39
Contexts: mostly Phases IVB6–IVC2, three in Phase IVB5
Ware: vegetal- and mineral-tempered
Color: buff, brown-light red, pinkish, and brown
Forms: trays
Comparisons: Mesopotamia and Iran

3.1.2.1 Quantity

Forty-seven sherds of low-sided trays were recorded in the collection of the PMAE. The corpus is composed of one complete tray, 38 sherds with complete profiles,[37] three rim fragments, four bases, and one body sherd (Table 3.2, Graph 3.3).

3.1.2.2 Description

Low-sided trays have a vegetal-tempered fabric including mineral particles of fine to coarse sizes (the size can be beyond 1 cm as shown by Yahya 0813; Figure 3.6). The vegetal temper includes different sizes and is more or less abundant depending on the trays. The fabric is in most cases porous and fragile and poorly fired as some of the beveled-rim bowls. There are, however, better-fired trays with more solid and denser fabrics. The surfaces are mostly buff and brown light-red, but pinkish and brown colors are also present (Figure 3.5). The majority of the cores are grey, but cores with the same color as that of the surface are also observed. The building technique of the low-sided trays from Tepe Yahya could not be reconstructed. Nevertheless, the tray Yahya 0813 (Figure 3.5, n°1; Figure 3.6) tends to indicate that the outer base circumference was made out of a piece of clay separate from the rest of the base; this is shown by a breakage along the circumference and several other fragments broken at this placement. The outer base of Yahya 0813 seems to have been arranged in a circular or ring shaped coil. Another breakage parallel to the outer ring may indicate that the whole base was made with coils either concentrical or assembled in a continuous spiral. This is however not clear: the opposite side of the tray shows that the clay was spread as a flat surface like dough for bread. The outside surface of the base of the trays from Tepe Yahya is usually rougher than the other parts of the vessels which are often smoothed on a wet paste and which show a thin film (a self-wash) that may result from this process. A single unusual fragment of a low-sided tray from Phase IVB6 has a black burnished inside surface (Yahya 0346; Figure 3.5, n°9). Additionally, several examples have smoke-blackened traces on the outside base (see Yahya 0813).

Low-sided trays have open and flat shapes characterized by short heights compared to their rim and base diameters. They are mostly oval or tear-drop forms. There are, however, examples of sub-rectangular (Yahya 0505 and 0533; Figure 3.5, n°5, 8) and round (Yahya 0937; Figure 3.5, n°4) shapes. Thus, it is not possible when measuring the rim diameter (or the base diameter) of a fragment to know exactly what part of the shape is measured. The complete tray found at Tepe Yahya (Yahya 0813) has the following dimensions: its length is 29.5 cm; its width is 23 cm to the maximum; and its height measures 3 cm

(Ratio RimD/H = 9.85). When taking into account all the rim diameters and heights measured on complete profiles, the ratios RimD/H range from 3.9 to 15. The lower ratio comes from a small vessel (Yahya 0505; Figure 3.7 n°1), while one unusual very flat tray has a ratio equal to 26.7 (Yahya 0662; Figure 3.7, n°33). However, most of the ratios are between 6.6 and 12 and the average is 9.2. Six categories of profiles are defined. The first category (Category 1; Figure 3.7) is represented by a single small quadrangular tray with everted wall and rim and a continuous base (Yahya 0505). The characteristic profile of the low-sided trays from Tepe Yahya includes everted rims; everted and convex walls in most cases; and projecting flat bases, although continuous bases are also present. This profile is represented by Categories 2 and 3. The rims are usually rounded, but sometimes flattened. They may be of the same thickness as that of the walls, thinner or more commonly slightly thicker. Categories 2 and 3 are distinguished on the basis of the orientation of the rims. The rims of Category 2 have the same orientation as that of the walls, whereas the rims of Category 3 are more everted than the walls (some rims are almost horizontal) and protrusive. One sherd of Category 2 has a more complex profile that includes an inflating inside wall (Yahya 0937; Figure 3.7, n°5). Variants of this category are also represented by trays with more everted walls and rims (Yahya 0320, 0321, and 0537). The fourth category (Category 4) includes shorter trays with more simple profiles and flattened rims (Yahya 0109, 0621, and 0672). Only two sherds with vertical walls and rims allowed distinguishing a fifth category (Category 5: Yahya 0345 and 0385). The sixth category corresponds to a single very flat tray (Category 6: Yahya 0662).

Low-sided trays are mostly large to very large vessels, but a few small and medium size vessels existed as well. As seen before, certain rim diameters inferior to 29.5 cm may correspond to the width of the trays, but several measurements appear reliable enough to indicate that small and medium size trays were also produced. Overall, the bracket for the rim diameters measured on low-sided trays from Tepe Yahya is 14 to 45 cm and the average is 32.1 cm. The measures below 25 cm (five sherds) and above 40 cm (three sherds) are, however, more rare. The base diameters have a range of dimensions comparable to that of the rim: from 10 to 42 cm. 10 cm corresponds to the base diameter of the single vessel of Category 1, while the other base diameters do not measure less than 17.6 cm. The bracket of the heights ranges from 1.5 cm to 5.8 cm. The lowest height (1.5 cm) comes from the very flat tray (Category 6: Yahya 0662), while the highest measurements (5.8 and 4.9 cm) come from an unusual single tray of Category 3 (Yahya 0783; Figure 3.7, n°27) and the burnished tray of Category 2 (Yahya 0346; Figure 3.7 n°14). Overall, the majority of heights are between 2.7 and 4.4 cm and the average is 3.6 cm. Thicknesses measured on the rims and on the walls appear quite similar: the average for the former is 1.4 cm, while it is 1.3 cm for the latter. Rim thicknesses are between 0.9 and 1.8 cm, but most of the measurements fall within 1 to 1.8 cm. Wall thicknesses range from 0.7 to 1.8 cm, but most of the values are between 1 and 1.7 cm.

3.1.2.3 Context

Eleven sherds of low-sided trays come from contexts assigned to Phase IVC2; 14 from Phase IVC1; seven from Phase IVB6; while three fragments come from Phase IVB5 (Table 3.2, Graph 3.3). The majority of the complete profiles and rim fragments come from Phase IVC1 followed by Phases IVC2 and IVB6. One may mention the complete tray (Yahya 0813) from Phase IVB6. When considering the

totality of the collection and all phases together, only six fragments were found within the mudbrick building. As with the beveled-rim bowls, most of the sherds were recovered east (in Areas A, C, and E) and west (in Areas F–H) of the mudbrick building (Figure 3.8). Furthermore, several low-sided trays were associated with beveled-rim bowls in the same contexts.

Twelve low-sided tray fragments (ca. 25% of the collection) come from contexts that were not assigned to Phases IVC2, IVC1, and IVB6 ("secondary contexts"), while three sherds are from Phase IVB5. They deserve discussion:

- Two sherds (Yahya 0109 and 0110) come from context B.71.6. As seen above and reported by M. Prickett (report B 1971:47–51), this context was later divided into contexts B.71.6A and B.71.6B, the former being later assigned by D. T. Potts to Phase IVC1 and the latter to Phase IVC2. Also, material from context B.71.6 was bagged with material from B.71.6A and B.71.6B. It was deemed in the field that these three contexts shared the same stratigraphic association (Lamberg-Karlovsky, pers. comm.).
- One low-sided tray (Yahya 0971) was recovered from Trench C in context C.68.T6.9.2, where a beveled-rim bowl was also found. No information could be obtained regarding this context.
- One sherd (Yahya 0224) comes from context CW.73.T1.Surface which, as seen before, corresponds to a surface deposit. In the same trench, another sherd (Yahya 0265) comes from context CW.73.7. As discussed above, this context may be connected to the complex of Period IVC.
- Two sherds were in context BW/CW.71.12 (Yahya 0676 and 0681). As seen before, this context corresponds to the construction surface of the buttressing of the complex of Period IVC, located above the rubble level of Period VIA (Stone, report BW-CW 1971:98 and 109).
- Four sherds were recovered from "secondary contexts" in Trench A. One was in context A.75.T8.13 (Yahya 0388), two in context A.75.T8.14 (Yahya 0384 and 0385), and one in context A.75.T8.15 (Yahya 0390). As discussed before, these contexts were assigned to older periods and the test trench 8 opened in Trench A is considered too narrow to allow reliable stratigraphic observation (Lamberg-Karlovsky, pers. comm.). Regardless, the low-sided tray fragments found in these contexts, together with the beveled-rim bowl sherds mentioned above, tend to confirm that these contexts were somehow connected to the Proto-Elamite period.
- Finally, one fragment found in Phase IVB5 (Yahya 0427) comes from context A.75.11.11 which corresponds to a pit located in the northwestern corner of Trench A. The beveled-rim bowl from Phase IVB5 mentioned before was found in the same context. The two other low-sided tray sherds from Phase IVB5 (Yahya 0042 and 0045) were recovered from open areas located east of the Persian Gulf Room.

In conclusion, half of the sherds from "secondary contexts" have a good chance to have been connected to the complex of Period IVC. Low-sided trays in some "secondary contexts" confirm the evidence provided by the beveled-rim bowls that these contexts were related to Period IVC. The distribution of these types in more recent occupations (from Phase IVB5) is not consistent with the dates of appearance and disappearance of low-sided trays in general (see below); they can be considered intrusive. Finally, this may be an artifact of our study and sample, but low-sided tray sherds from the collection seem proportionally more present in Phases IVB6 and IVC1 than beveled-rim bowls in these phases.

3.1.2.4 Comparisons

Low-sided trays have parallels in Mesopotamia and southwestern Iran. In Mesopotamia they are attested in Late Uruk occupations (see Algaze 2005) and Jemdet-Nasr levels at Jemdet-Nasr (Matthews 1992a:8, fig. 2, n°17), Nippur (Wilson 1986:fig. 5, n°11) and Abu Salabikh (Pollock 1990:59, Table 1, 65, fig. 5e).[38] At Susa, Acropole I, they are in Levels 16 to 14 (Susa Period III) (Le Brun 1978:190). At Godin Tepe, V. Badler (2002:82) notes that "Uruk type coarse straw tempered trays" appear for the first time in Early Period V (below the oval building). They then continued to exist at Godin Tepe in the following Middle Period V (Badler 2002:82). Two low-sided trays published by V. Badler appear to be of the same type as our Category 4 at Tepe Yahya (Badler 2002:fig. 11, A2 1187#1), while a third one seems closer to trays of Category 2 (Badler 2002:fig. 13, B1 479#212). Low-sided trays are attested in Fars from the Early to the Late Banesh phases. They are reported from surveys in the Kur River Basin (Alden 1979:215, fig. 33). They represent 17% of the straw tempered material and about 14.6% of the assemblage at Tal-i Malyan in the ABC Operation. They are quite common in Banesh Levels 2 and 3 (89 and 70 sherds, respectively), but they appear more numerous in Banesh Level 4 (276 sherds), while the quantities drop in Banesh Level 5 (30) (Sumner 2003:43-44, fig. 23). In the TUV Operation, low-sided trays represent 43-56% of the straw tempered assemblage (Nicholas 1990:pl. 13a-j, pl. 14c-d). One can notice at this site a tray with a shape very similar to that of the complete example from Tepe Yahya (Yahya 0813) (Nicholas 1990:pl. 33C). The base of the vessel from Tal-i Malyan has some breakages parallel to the rim that are quite alike those observed on the complete tray from Tepe Yahya. The sizes and profiles reported at Tal-i Malyan are coherent with those from Tepe Yahya. W. Sumner noted that trays could be up to 60 cm long at the ABC Operation (Sumner 2003:46). This is not observed at Tepe Yahya where the maximum diameters recorded are 45 cm. Nevertheless, the irregularity of the rims of this type of ceramic prevented us from measuring the diameter of a number of sherds, which may have included larger measurements. The heights recorded at Tal-i Malyan ABC are ca. 5 cm, which agrees with the heights measured at Tepe Yahya, although the trays from Tepe Yahya are on average a little bit shorter. Low-sided trays are attested at Tepe Arisman in both Sialk III-related and Proto-Elamite deposits, with profiles similar to those observed at Tepe Yahya (Boroffka and Parzinger 2011:fig. 61, n°571; Helwing 2011a:figs 12, 33, n°186, 34, 35, n°189-195). Low-sided trays are in Periods IV and VI at Tal-i Iblis (Caldwell 1967:141, fig. 24 and 193, fig. 42). Finally, one could also add beveled-rim bowls as parallels for low-sided trays. Indeed, the fabrics of these two types of ceramics are quite similar.

Overall, close parallels for low-sided trays from Tepe Yahya are attested throughout Iran and Mesopotamia in Late Uruk, Proto-Elamite and Jemdet-Nasr settlements. The geographically closest large amounts of solid equivalents are found in Fars. On the other hand, no parallel has been identified for the unusual burnished tray recovered from Phase IVB6 (Yahya 0346).

3.1.3 Carinated bowls

Six rim fragments of carinated vessels were recorded from the collection of the PMAE. In addition, three were published by D. T. Potts. Of the nine carinated bowl fragments, four were found in contexts of Phase IVC2 (Yahya 0337 and Yahya 1385 in Area A; Yahya 1130 in Area B; and Yahya 0319 in Area C); two from Phase IVC1 (Yahya 0131 in Room 6 and Yahya 1402 in Areas A-E); two from Phase IVB6 (Yahya 0596 and Yahya 0626 in Trench BW); and one while Trench B was being cleaned in 1971 (Yahya 0162).

The sherds reported and illustrated by D. T. Potts are not present in the PMAE collection. As for the rest (Figure 3.9), they consist of fine to medium mineral- and vegetal-tempered vessels. These ceramics have buff to brown light-red colors. They seem to have the proportions of shallow bowls, including three main categories of shapes. A series of three sherds (Yahya 1130, 0131, and 0337; Figure 3.10, n°1-3) have inward beveled and flatten rims. The rims are vertical or slightly everted. They are joined to the body by a carination. The walls are much everted. The rims of these two vessels are 0.4 and 0.6 cm thick, while the walls are 0.6 cm thick. Another series have rounded rims (Yahya 0319, 0596, and 0626; Figure 3.10, n°4, 8-9). Their profiles are similar to the previous ones, but their rims and walls are thicker, especially two with thickened rims and with rim and wall thicknesses equal to 1.2 and 1.1-1.2 cm, respectively (Yahya 0596 and 0626). These two sherds are also distinguishable because of their everted and slightly convex rims. The third category includes bowls with flat and slightly protruding lips (Figure 3.10, n°5-7). One (Yahya 0162) has a vertical rim and a marked carination that joins the rim to the body. The two other ones have much less pronounced carinations (Yahya 1385 and 1402); the carination is essentially visible on the inside surface.

Rim diameters of these bowls range from 20 to 30 cm, with the exception of one measuring 15 cm. Some of them are plain, while others are slipped or washed. One vase (Yahya 0626; Figure 3.9, n°3) has a white wash or paint on a red-slipped outside surface. The inside surface is slipped as well. Another one (Yahya 0596; Figure 3.9, n°5) is red-slipped on both surfaces, and a white wash is also hinted for Yahya 0337 (Figure 3.9, n°2).

Parallels for these carinated bowls are more complicated to ascertain than those for beveled-rim bowls and low-sided trays. One cannot be sure that they belong to the same group of production. Their shapes and the use of vegetal temper with mineral inclusions can be compared, yet their fabrics are not exactly similar. With some reservations, one can note parallels at Tal-i Malyan in the Banesh period, where comparable profiles and sizes are reported. At the ABC Operation carinated vases, some with slip, are the most popular of the mineral-tempered materials (Sumner 2003:48, fig. 24). On the other hand, no painted decorations such as those reported from that site were observed at Tepe Yahya. Carinated bowls are also found in the TUV Operation (Nicholas 1990:pl. 20 d, m; pl. 21 a-d, f-h) and at Susa, Acropole I Level 16 (Susa Period III) (Le Brun 1978: fig. 36 n°9),[39] while certain fragments recovered from the Proto-Elamite deposits at Tepe Arisman resemble the carinated examples from Tepe Yahya (Helwing 2011a:fig. 39, n°255-257). With more reservation, materials found at Jemdet-Nasr termed as "lids" can also be cited as parallels (Matthews 1992a:8 and fig. 2, n°13-14). R. J. Matthews (1992a:8 and fig. 2, n°13-14) notes that "the parallels suggest an exclusively Jemdet Nasr date for this form, which occurs in Inanna Sounding XIV-XII at Nippur (Hansen 1965:fig. 32; Wilson 1986:fig. 7, n°7 and 9), at Uruk in levels equivalent to Eanna Archaic III (Pongratz-Leisten 1988:n°273 and 339), in Protoliterate c-d levels at Khafajah (Delougaz 1952:pl. 169:C.041.500), and in association with polychrome pottery at Uqair (Lloyd and Safar 1943:pl. 26:4)." At Jemdet-Nasr, examples of both plain and painted bowls are present.

3.1.4 Plain bowl

A single complete bowl, Yahya 0008 (Figure 3.11), can be distinguished from the rest of the assemblage. It is made of a medium mineral- and vegetal-tempered white/buff ware. This vessel is a conical

bowl of small size; its rim diameter measures 12.5 cm and it is 5.6 cm in height. Traces of string cut are visible on its base, which indicates that one stage of its fabrication at a minimum was processed on a rotating device. The base has a hole. This vase was found in Phase IVC1, Room 5. It resembles, but is not exactly similar to, small bowls (vegetal-tempered with mineral inclusions in some of them) from Tal-i Malyan, TUV Operation (Nicholas 1990:pl. 15j–n).

3.1.5 Pedestal-based goblets

Another shape that may indicate relations to Fars and Mesopotamia is represented by pedestal-based goblets (Figures 3.12–3.13). Two of them were recorded from the collection of the PMAE (Yahya 0044 and 0585), whereas four come from D. T. Potts' (Yahya 1131) and C. C. Lamberg-Karlovsky and M. Tosi's (1973:figs. 104C, 114) publications; they were not observed in the collection. The sherd published by D. T. Potts comes from Phase IVC2, Area B (Yahya 1131), while one from the collection is from Phase IVB6 (Yahya 0044). The second sherd recorded from the collection comes from a context that was not assigned a phase and for which we have no information. The contexts of the sherds published in 1973 (Yahya 1390, 1391, and 1392) are labeled as Period IVC. Our sample is small and it is important to recall that C. C. Lamberg-Karlovsky noted that large quantities of such vessels were found at the site (Lamberg-Karlovsky and Tosi 1973:33) and remain in the collections in Tehran.

The two fragments from the collection of the PMAE (Yahya 0044 and 0585) have fine mineral-tempered fabrics. Their colors are buff to brownish-light-red. The bases of the six fragments are flat and projecting or continuous. Their diameters measure 2.5 to 5 cm. The walls are everted and straight; the upper part of some of the sherds was, however, perhaps constricted as observed at Tal-i Malyan (see below). String-cut marks are observed on the bases of the two fragments from the collection.

This small selection consists of small portions of bases so that it is not certain that these sherds were originally part of goblets. Parallels for pedestal-based goblets were mentioned in the Early Dynastic I and Jemdet-Nasr periods of Mesopotamia (Lamberg-Karlovsky and Tosi 1973:33). One may add that similar bases are at Tal-i Malyan in the Banesh period, at ABC Operation and TUV Operation, where two types – straight and constricted – are observed (Sumner 2003:44–46, fig. 22; Nicholas 1990:pl.22a–c, pl. 13u–bb). The fabric of the bases from this site is, however, vegetal-tempered. Some comparisons are at Susa, Acropole I Levels 16–14 (Susa Period III) (Le Brun 1971:fig. 60, n°1–4). String-cut marks on bases are also mentioned on mineral- and vegetal-tempered goblets (not pedestal-based) at Abu Salabikh (southern Mesopotamia) in the Jemdet-Nasr period (Pollock 1990:fig. 4).

3.1.6 Spouted vessels and spouts

This category includes one spouted vessel with a complete profile and eight spouts (Figures 3.14–3.15). Of the nine examples, five were founding Phase IVC2 in Room 1 (Yahya 1158 and 1164 with complete profile), Room 6 (Yahya 0809 and 0812), and Area A (Yahya 0362); three are from Phase IVB6 (Yahya 0135, 0359, and 0620); and one is from "secondary," perhaps Phase IVB6-related, context (Yahya 0196). This corpus is small, and, as noted by D. T. Potts, "spouted vessels were rare at Tepe Yahya" (Potts 2001:6).

The complete profile from Phase IVC2, Room 1 (Yahya 1164, not observed in the collection; Figure 3.14, n°1) is a shouldered pot of medium size (RimD = 20 cm) with a straight tubular spout, described as a fine mineral-tempered tan-buff ware. The rest consists of straight tubular spouts (Yahya

0620, 0359, 1158, 0812, and 0196) and trough spouts (Yahya 0809, 0135, and 0362). Yahya 1158 is a medium mineral-tempered brown ware with a dark brown slip; Yahya 0196 is a fine buff ware with a line painted black; Yahya 0809 is a fine tan ware with a red slip; Yahya 0135 is a medium mineral-tempered plain tan ware; Yahya 0362 is a fine plain brown light-red ware; Yahya 0359 is a fine buff ware with traces of red slip; Yahya 0620 is a fine buff ware; and Yahya 0812 is a mineral and vegetal-tempered buff ware.

In Mesopotamia, vessels with spouts are attested in chronological contexts ranging from the Uruk period and extending to the Early Dynastic period. Given that the corpus from Tepe Yahya includes mostly spouts without an associated form, parallels are quite difficult to determine. The single vessel with complete profile (Yahya 1164) has no clear parallel beyond Tepe Yahya. Nevertheless, one can note that spouted vessels have no antecedents in the previous periods of Tepe Yahya and that this ceramic type is, on the other hand, connected to areas located to the west. One can mention examples from Susa, Acropole I, especially in Levels 18-17 (Susa Period II) (Le Brun 1971:fig. 52; Le Brun 1978:fig. 32, n°12-13, 15; fig. 34, n°8, 11, 14) and apparently in Levels 16-14B (Le Brun 1971:fig. 62, n°3). The bent and straight conical spouts and the forms of the vessels from Susa Period II are, however, different from those from Tepe Yahya. Spouts are attested at Tal-i Ghazir in Fars (Whitcomb 1971:91, pl. VII). Types similar to those from Susa were present at Tal-i Ghazir (tubular bent and conical spouts), and straight tubular fragments roughly comparable to Tepe Yahya's examples are also illustrated. In addition, trough spouts are documented at that site, and one can note the presence of red- and red-brown-slipped material. One can also mention spouted vessels from Chogha Mish which include types similar to those found at Susa and Tal-i Ghazir (Delougaz and Kantor 1996:pls. 102-111). Tubular conical spouts are reported from Tal-i Malyan, TUV Operation (Nicholas 1990:pl. 15a, pl. 18d, pl. 19s), and one trough spout from this excavation appears quite analogous to Tepe Yahya's sherds (Nicholas 1990:pl. 23c). Tubular spouts were also recovered from the ABC Operation (Sumner 2003:fig. 22c-e). Godin Tepe assemblage contained spouted materials in Periods VI and V (Badler 2002:figs 8, 17). Tubular and trough spouts are reported from Tepe Arisman in Sialk III-related and Proto-Elamite periods (Boroffka and Parzinger 2011:fig. 43, n°354; fig. 51, n°474, 465-466; fig. 52, n°475-476; Helwing 2011a:fig. 22, n°90, 94-95; fig. 26, n°135-136). Tubular conical spouts were found at Jemdet-Nasr (Matthews 1992a:fig. 5-6). Spouted vessels from Jemdet-Nasr are of Late Uruk to Early Dynastic I dates (Matthews 1992a:11, 14). In Kerman, trough spouts were at Tal-i Iblis in Period VI (Caldwell 1967:fig. 40, n°1-2), and trough and tubular spouts have been reported recently from Mahtoutabad (Vidale, pers. comm.).

3.1.7 Decorated jars

Number of sherds: 53
Number of rims: 8
Contexts: mostly Phases IVC2-IVB6, two in Phase IVB5
Ware: fine to medium mineral-tempered, vegetal-tempered
Color: buff to brown light-red and dark pink
Forms: jars
Decoration: painting, slip, incision, and appliqué
Comparisons: Mesopotamia and Iran

3.1.7.1 Quantity

Fifty-three sherds of decorated jars were recorded. Most of the ceramics included in this group share visual features with materials frequently found in occupations in western Iran and Mesopotamia defined as Uruk- and Jemdet-Nasr-related. C. C. Lamberg-Karlovsky noted that decorated polychrome "Jemdet Nasr-like" ceramics in Period IVC were less than 150 sherds (Lamberg-Karlovsky 1977:37). The present corpus includes 1) fragments that may belong to the same vessel, although no firm reconstruction could be made. They were counted individually; and 2) several groups of sherds, each group clearly belonging to a single vessel and counted as one sherd. Overall, it is likely that the minimum number of jars in the present corpus is small. The styles represented are, nonetheless, remarkable. The majority of the corpus consists of 45 body fragments (Table 3.3, Graph 3.4). Eight rim portions including large parts of the body and two bases were recorded. The bases do not appear in the table below, because they likely belong to two vessels included in the rim fragments.

3.1.7.2 Description

The vessels described here share one or more of the following features: close shape; carination; neck; presence of slip/wash/paint; presence of black, red, white/yellow colors; cordoned impressed decoration; punctuated decoration; and ear/nose lug (Figures 3.16-3.26). The close shape and carination are fundamental features of these vessels, while the other features are combined on certain fragments or represented by only one of them on other sherds. As the decorations tend to be located on some parts of the ceramics more than on others (see below), it is very likely that some plain sherds were part of vessels with slip, paint, and/or cordoned impressed decoration. The fabric of the decorated jars also shows variety; most are mineral fine to medium-tempered, including ceramics with shiny particles and others with vegetal temper. The colors of the fabrics include buff to brown light-red, dark pink and red colors. The majority of this ceramic type share several aspects and have parallels with ceramics found in the Uruk and Proto-Elamite spheres.

The majority of these vessels are biconical necked-jars; this is evident in the best preserved vessels (such as Yahya 1170; Figure 3.16, n°1; Figure 3.18), certain reconstructions (Yahya 0102; Figure 3.17, n°1; Figure 3.20), and a number of carinated fragments (Figure 3.16, n°9-11; Figure 3.17, n°7-9). There are, nevertheless, several vessels for which this cannot be ascertained (such as Yahya 1154, 0949, and 0630, Figure 3.16, n°12-13; Figure 3.17, n°2). A jar with a very different profile (Yahya 0606) is discussed separately (Figures 3.25-3.26).

The rims are protruding, some being short ledge, (with the exception of one ceramic with a continuous everted rim: Yahya 0102; Figure 3.17, n°1) and connected to the body by a vertical neck. The upper part of the body is usually concave and inverted; it is joined to the lower, everted and concave, part by a carination. Certain fragments have a second carination located on the shoulder (Yahya 1201, 1207, and 1209; Figure 3.16, n°3-5). The base that seems to belong to this category of shape is flat according to one vase (Yahya 0102). Most of the decorated jars seem to have proportions of deep bowls or goblets (with estimated ratios MaxD/H = 1 to 1.30) of very large size (MaxD = from 32 to 38 cm and 58 cm). One jar is clearly of a smaller size (Yahya 0949: MaxD = 21 cm; Figure 3.16, n°12). The heights estimated from two individual items (Yahya 1170 and 0102) tend to indicate that these jars were 25 to 30 cm high, but taller jars existed as well (Yahya 1207; Figure 3.16, n°3). The necks are 1.5 to 2.6

cm in height, and 0.8 cm high for two shorter ones (Yahya 0949 and 1209; Figure 3.16, n°4, 12). Examples of narrow (NeckD/MaxD = 0.15: Yahya 1169; Figure 3.16, n°2) and wide (NeckD/MaxD = 0.30-0.35 and 0.45) necks are observed, with necks measuring 5.5, 10, 18, and 20 cm in diameter. The rims and walls are 0.6 to 0.8 cm and 0.4 to 1.7 cm thick, respectively.

One individual example (Yahya 0606: Figures 3.25-3.26) deserves discussion. This jar can be distinguished from those discussed above by: its large size (with a maximum diameter and a rim measuring 65 cm and 51 cm, respectively); its heavy everted rim; and its thickness (with 2.8 cm thick walls). The reconstruction illustrated for this jar is hypothetical (Figure 3.25); it might have been much taller. The base that seems to belong to this jar is flat. The decoration, with black paint on a white/yellowish slip, is quite comparable in technique to those of the rest of the decorated jars.

With the exception of one sherd that has no decoration, but that likely belongs to a decorated carinated jar, the decorations shown by these 53 fragments are: slip/wash/paint; black, red, and white/yellow colors; cordoned impressed decoration; punctuated decoration; incised decoration; and appliqué ear/nose lug. These features are combined on certain fragments, while other sherds show only one, or a combination of some, of them. With the exception of the slip, the decoration seems mostly restricted to the outside surface in the area between the rim and the point of carination. A distinction between slip, wash and paint is not always easy to make; the thickness of the coatings observed range from very thin and disseminated layers to thick. Starting with the simplest types of decoration, one can distinguish fragments with black (Yahya 0010), red (Yahya 1208; Figure 3.16, n°10-11), brown (Yahya 0762; Figure 3.19, n°9), or black, red, and white (Yahya 0736 and 0805; Figure 3.19, n°4-5) painted motifs on plain outside surfaces. The most numerous sherds are painted on a red or brown slip. The slip usually covers the outside surface, the rim and a part of the neck on the inside surface. Fragments with black painted motifs or bichrome black and brown painted decoration on a white-to-yellowish slip are also observed (Yahya 0606 and 0372; Figure 3.19, n°12; Figures 3.25-3.26) as well as the combination that includes black paint, red/brown slip, and a white-to-yellowish slip/paint (Yahya 0185, 0184, 0183, and 0371; Figure 3.17, n°4-5, 7-8; Figure 3.19, n°7-8). Whitish color appears on certain fragments as a disseminated wash. It is not clear in some cases whether the white/yellowish color is a wash or paint, or if it corresponds to the fabric color left in reserve (such as Yahya 0102 and 0033; Figure 19, n°6; Figure 20). Another arrangement consists of black paint, red-brown wash and a series of parallel grooved lines (Yahya 0315, 0426, in addition to Yahya 0182, with no groove, but which seem very close to Yahya 0315-0353-0426; Figure 3.19, n°1-3). The grooves are parallel to the rim and placed on the upper part of the body. They appear on some fragments to have been filled with white colored material.

These slip-and-paint combinations are in some cases further combined with cordoned and punctuated decorations and perforated ear- or nose-like lugs.[40] The lugs are added on the upper part of the body, sometimes on a carination or inflexion, by series of four placed at equal distance around the body. They measure 4 to 5.8 cm long. Their sides are flattened on their lower part. Some are thick (up to 2 cm) with an "ear"-like profile (Yahya 1170, 1207, 1209, 0617, 0949, and 1201), while others are thinner (up to 1 cm) with a "nose"-like profile (Yahya 1202 and 0627) (Figures 3.16, 3.18, 3.24). The lugs are pierced, with a perforation diameter of 0.5 cm. The cordons are usually located below the neck. When lugs are present, the cordons join them by their upper parts. The cordons are

either dot-impressed or striated, which produces a rope-like aspect. Punctuated decoration is observed at the same location as the cordons (Yahya 1209 and 0617) as well as on carinations (Yahya 1170) (Figure 3.16). It consists of a line of interspersed dots impressed on the surface.

As indicated above, appliqué and punctuated decoration can be combined with slip-and-paint decorations. They are also attested on plain vessels, such as Yahya 0949 which combines punctuated decoration and ear-lug (Figure 3.24, n°1); Yahya 1271 (Figure 3.16, n°8), a plain fragment with a nose-lug; and Yahya 1393 (Figure 3.16, n°7) with a cordon and an ear-lug.

More complicated combinations include:

- Brown-red slip, punctuated decoration, and ear-lug (Yahya 0617; Figure 3.24, n°2);
- Black paint, punctuated decoration, and ear-lug on a plain ware (Yahya 1209; Figure 3.16, n°4);
- Black paint, brown-red slip, and a nose-lug (Yahya 0627; Figure 3.16, n°9);
- Black paint, brown-red slip with a cordon, and a nose-lug (Yahya 1202; Figure 3.16, n°6) or an ear-lug (Yahya 1201; Figure 3.16, n°5);
- Black paint, brown-red slip, white wash, and a cordon (Yahya 1169; Figure 3.16, n°2);
- Black paint, brown-red slip, white wash, a cordon, a punctuated line, and an ear-lug (Yahya 1170; Figure 3.16, n°1);
- Black and plum paints, buff slip, a cordon, and an ear-lug (Yahya 1207; Figure 3.16, n°3).

According to the best preserved ceramics, the painted decorations consist of panels or friezes placed on the outside surface, either directly below the neck and the cordon (Yahya 1169), or lower on the body above the carination (Yahya 1170 and 1207). There are usually horizontal lines that delimit the main decoration. The painted decorations that could be observed include:

- Frieze filled alternatively with blank metops and metops filled with a diamond chessboard pattern (Yahya 1169);
- Frieze filled alternatively with blank metops and metops filled with solid black hourglasses flanked by series of four vertical lines (Yahya 1170);
- Frieze or panel filled with metops filled with solid black hourglasses (Yahya 0010; Figure 3.22);
- Frieze or panel filled alternatively with metops filled with a series of solid black hourglasses and metops with a motif made with ladders (Yahya 1207);
- Frieze or panel filled with metops filled with concentric triangles or hourglasses, flanked by vertical bands filled with vertical wavy lines (Yahya 1208; Figure 3.16, n°10);
- Decorations with parallel horizontal bands filled with yellow/white paint/slip or in reserve, bordered by black lines (such as Yahya 1154, 0371, 0033, 0188, and 0630; Figure 3.16, n°13; Figure 3.17, n°2, 6; Figure 3.19, n°6–7; and Figure 3.21);
- Ladder motif (one sherd perhaps similar to Yahya 1207);
- Frieze or panel filled with triangles (cross-hatched: Yahya 0769; Figure 3.19, n°11; or concentric);
- Cross-hatched motif or metop (Yahya 0762, 0563, and 0547; Figure 3.19, n°9–10; Figure 3.23);
- Decorations that include large patches of black color and parallel horizontal lines and bands in black and/or red color (such as Yahya 0805; Figure 3.19, n°4).

While several of these types of decoration have parallels on other Proto-Elamite settlements (see below), two ceramics from Tepe Yahya have unique decorations. The first one (Yahya 0102: Figure

3.17, n˚1; Figure 3.20) is decorated with a series of interspersed vertical rectangles on the upper body. The rectangles are designed in reserve or filled with yellowish paint on a red-brown slip. Their contours are painted black. The second ceramic (Yahya 0606: Figures 3.25–3.26) has a frieze painted black over a white/yellowish slip and filled alternatively with blank metops and metops with a checkerboard pattern made with triangles.

3.1.7.3 Context

Almost 80% of the sherds come from Phases IVC2 to IVB6 contexts; 10 fragments are from "secondary contexts;" and two are from Phase IVB5 (Table 3.3, Graph 3.4). In our corpus, sherds of decorated jars are more common in Phase IVC2; they are also well-represented in Phase IVB6.

Fragments of Phase IVC2 are located in Rooms 1, 4, and 5, and in Areas C and G (Figure 3.27). Three jars were found in Room 4: the well-preserved vessels Yahya 1169 and 1170 (Figure 3.16, n˚1–2; see Potts 2001:fig. 1.41) as well as a series of sherds that belong to another jar (Yahya 0736; Figure 3.19, n˚5). The function of Room 4 as a storage bin is indicated above. Yahya 1170 contained a pit of *Prunus* sp. and a copper disc (Lamberg-Karlovsky 1984:349). In Room 5 the distinctive Yahya 0102 was recovered. It is probable that the sherd Yahya 0033 found in the same room belonged to this jar (Figure 3.17, n˚1, 3). In Room 1 was found the large fragment of Yahya 1154 (Figure 3.17, n˚2) and a series of sherds representing three other jars (Yahya 0184, 0289, 0371, 0372, 0805; Figures 3.17, 3.19). The sherds excavated outside of the mudbrick building were recovered from Areas C and G. Area C contained two sherds representing two different jars (Yahya 0315 and 0185; Figures 3.19, n˚2 and 3.17, n˚4); one of them (Yahya 0315) has grooves and can be connected to Yahya 0186-0353-0426 of Phase IVB6 (see below). Area G in Phase IVC2 provided Yahya 0949 (Figure 3.24, n˚1) and a series of less diagnostic fragments (Yahya 0081, 0668, 0740, and 0745).

In Phase IVC1, there are the diagnostic fragments of jars Yahya 1201 (with an ear-lug) and Yahya 1202 (with a nose-lug) in Areas A–E (Figure 3.16, n˚5–6), and Yahya 0010 in Room 5 (Figure 3.22). A series of carinated and painted sherds were recovered from Areas F–G (Yahya 0718, 0719, 0705, 0741, 0771).

From Phase IVB6 a series of fragments were reported from Trench A in an area located above Areas A–E of Phase IVC2 (Yahya 0186, 0353, and 0426; Figure 3.19, n˚1). These sherds likely belonged to a unique jar with grooves. It is also probable that they were part of the same jar as Yahya 0315 (with grooves) located in the same area, in Phase IVC2, Area C. From Phase IVB6 comes the very large portion of a jar with ear-lug, cordon, paint, and slip: Yahya 1207 (Figure 3.16, n˚3). It was found in an area located above Room 1 of Phase IVC2. An interesting series of sherds from Trench BW represent at a minimum three different characteristic jars (Yahya 0617, 1208, 1209, 0627, and 0628; Figure 3.16, n˚4, 9–10). In the same trench were found Yahya 0630 and the unique large Yahya 0606 (Figures 3.21, 3.25–3.26). The base connected to the latter in the reconstruction illustrated was found in Trench BW as well, but in a context assigned to Phase IVC1.

In addition to two sherds from Phase IVB5 (Yahya 0429 and 1241), there are ten sherds recovered from contexts that could not be related to those indicated above. One (Yahya 0182) found in Trench B soundly resembles the jar represented by Yahya 0186-0315-0353-0426 from Trench A in Phases IVC2 and IVC1 (Figures 3.17, n˚7 and 3.19, n˚1–3). The context of another sherd (Yahya 0188) in the same trench could not be detailed. No detail could be obtained about the contexts of sherds recovered from

Trench BW (Yahya 0183, 0514, and 0563) as well as some from Trenches BW/CW (Yahya 0762 and 0769) and CW (Yahya 0210). The materials associated with one found in context BW.69.T5.7 (Yahya 1271) is mostly of a Period IVB date (see Potts 2001:179-193; fig. 7.9D).

3.1.7.4 Comparisons

Several of the ceramics and fragments described above (such as Yahya 1170, 1169, 1207, 1209, 1201, 1202, and 1208) were previously referred to as of Jemdet-Nasr-type (Lamberg-Karlovsky 1972:95) and Jemdet-Nasr-style pottery (Potts 2001:196-197, Table 8.1, fig. 1.40). A large portion of the material of this type recovered from Tepe Yahya do indeed share several traits with materials found in Mesopotamia in the Jemdet-Nasr culture (an in the Uruk inventory) as well as to "related" vessels on the Iranian Plateau. However, for the majority of them, the best parallels are found in Iran, while the corpus of Tepe Yahya includes jars with original traits.

Mesopotamia

Overall, the jars described above can be compared to two categories of jars from the site of Jemdet-Nasr: the ledge-rim and the lugged jars published by R. J. Matthews (1992a:figs 3-4; Figure 3.28). These ceramics were assigned to the Late Uruk and Jemdet-Nasr periods (Matthews 1992a:17). With regard to the lugs, the "ear"-shaped profiles from Tepe Yahya are observed at Jemdet-Nasr, but the "nose"-shaped profiles are absent from the published corpus of that site. The profiles of the lugged jars from both Tepe Yahya and Jemdet-Nasr are roughly similar and characterized in both cases by one carination placed at mid-height of the vessel. The carination positioned on the upper part of the body observed on some lugged jars from Jemdet-Nasr is, nonetheless, not systematic on the materials from Tepe Yahya (it is observed on two sherds: Yahya 1201 and 1209; Figure 3.16, n°4-5). The corpus from Tepe Yahya includes smoother profiles; the carinations appear more angular at the Mesopotamian site than at Tepe Yahya. Also, the rims and necks of the lugged jars from these two sites are not exactly the same. The jars from Tepe Yahya have high necks associated with short ledge rims or a short neck with an everted rim and a rounded lip. The lugged jars from Jemdet-Nasr have a short neck. Their rims are ledge or everted, with thickened and flattened lips. The high neck and ledge-rims observed at Tepe Yahya can, conversely, be paralleled to the ledge-rim jars without lug from Jemdet-Nasr, although the ledges are shorter at Tepe Yahya and the profiles of these vessels are different. The sizes reported from Tepe Yahya appear bigger than those measured on the lugged jars from Jemdet-Nasr, but they agree with those of the ledge-rim jars from this site (with the exception of Yahya 1207 which is larger). The use of a reddish slip and black paint at Tepe Yahya can also be compared to the red painted cover and black decoration of the ledge-rim jars from Jemdet-Nasr (Matthews 1992a:fig. 3:3-5 and 7-10; Figure 3.28, n°5-7). Red color covering the outside surface is also observed on lugged jars from Jemdet-Nasr (Matthews 1992a:fig. 4:1; Figure 3.28, n°1). However, it is, in this case, not associated with a black painted decoration, and the decorations of these ceramics are generally monochrome (Matthews 1992a:8). The position of the painted decoration is the same at Tepe Yahya and Jemdet-Nasr. In terms of composition, one vessel from Tepe Yahya (Yahya 1170; Figure 3.16, n°1) with metops flanked by two series of vertical lines can be compared to one example from Jemdet-Nasr (Matthews 1992a:fig. 4:3; Figure 3.28, n°3). However, the motif used at Tepe Yahya to fill the metop (hourglass) is different from that from Jemdet-Nasr (cross-hatched metop). In spite of one sherd from Tepe Yahya

that clearly shows a cross-hatched metop (Yahya 0547; Figure 3.23) and perhaps other ones (but this is not clear), overall, the decorations that could be identified at Tepe Yahya do not seem to have exact parallels at Jemdet-Nasr. In addition, the punctuated ridges and lines observed at Tepe Yahya are not mentioned on the lugged jars and ledge-rim jars from Jemdet-Nasr. It is only on miniatures versions of these vessels (Matthews 1992a:14, fig. 8:2–4; Figure 3.28, n°8–9) that rows of incisions, somewhat, comparable to those from Tepe Yahya are observed. In sum, the western-related jars from Tepe Yahya indicate analogies to three different types of materials from Jemdet-Nasr, not limited to the lugged jars found at this site. These parallels concern important morphological and decorative aspects, but the combinations and layouts of these aspects at Tepe Yahya do not have exact parallels at Jemdet-Nasr.

The same can be said about the jars of Jemdet-Nasr period studied by S. Pollock (1990) from two pits at Abu Salabikh (Figure 3.28, n°10–11). On the one hand, there are analogies with the materials from Tepe Yahya. Certain rims from this site have parallels with the short ledge-rims from Tepe Yahya (Pollock 1990:fig. 7) and S. Pollock (1990:65, fig. 8) mentions painted decoration "(including polychrome, red wash and monochrome), horizontal grooving, and reserve slip. In addition, there are sherds with incision (...), 'groove-and-slash', impressed applied strips, and various punctuate designs." The author also notes "a few examples of lugs." On the other hand, the profiles and compositions of the decorations of the vessels are different from the material from Tepe Yahya.

R. J. Matthews (1992a) pointed out parallels between the material he studied from Jemdet-Nasr and that of the Diyala region. Again, it is possible to find several shared traits between the jars from Tepe Yahya and those recovered from the Diyala region in the Protoliterate and Early Dynastic I periods. The use of colored slips, polychrome painted decorations, and the presence of lugs, carination, and punctuated ridges (see Delougaz 1952) can be compared. However, as indicated before regarding the jars from Jemdet-Nasr and Abu Salabikh, the styles observed at Tepe Yahya have distinct traits.

In sum, it appears that, in spite of several analogies, the "Jemdet-Nasr-related" jars from Tepe Yahya do not exactly resemble those found in the Mesopotamian heartland. R. J. Matthews studied in detail the material from Jemdet-Nasr excavated in the 1920s and noted that "(...) the 1920s Jemdet Nasr pottery corpus shows most affinities with other southern Mesopotamian assemblages – Uruk, Ur, Nippur, Fara, Uqair – with evidence of contacts to the north and north-east at Khafajah and the Hamrin sites. Outside of this area it is not possible to identify pottery traits characteristic of the Jemdet Nasr period. (...) The pottery from Jemdet Nasr indicates that the Jemdet Nasr period holds good for southern Mesopotamia and some neighboring regions, but is not a term that can be assumed to apply in other areas, even where previously strong contacts with southern Mesopotamia are attested in the Late Uruk period. Each region, each site, has to be judged on its own evidence" (Matthews 1992a:17). The same author also questioned the use of the term "Jemdet-Nasr" to name certain materials from Susa, Acropole I.

Susa

Turning to Khuzistan, the decorated jars from Tepe Yahya have certain parallels at Susa, Acropole I Levels 17 and 15 to 14B (Figure 3.29). These contexts include both Susa Periods II and III. The comparable material from Level 17 includes plain ledge-rim jars, with ear-lugs positioned below the neck (Le Brun 1971:fig. 50:1 and fig. 53:1). One of the published vessels is plain and has a cordon that connects the lugs. Incised jars found in the same level have certain parallels with material from

Tepe Yahya (Le Brun 1971:fig. 51:1-6, 9-11; Figure 3.29, n°3). These vessels have a carination on the body and nose-lugs. The rims are ledge with a high neck or simply everted. The lips are thinned or square. The decoration of these jars is incised and limited to the upper part of the body, either directly on the surface, or on a cream or brown-to-reddish slip or wash. Examples of incised lugged jars with an incised ridge above the lugs were also present in Level 17 (Le Brun 1971:187 and fig. 51:11) as well as red-slipped lugged jars without incised decoration (Le Brun 1971:fig. 53:2-3). One carinated jar from this level (Le Brun 1971:53:4; Figure 3.29, n°2) with a red slip, a nose-lug, punctuated ridge and bichrome black and white painted decoration on the body is, because of these attributes, quite close to fragments from Tepe Yahya (Yahya 1170 and 1207). Its profile is less angular than the incised versions mentioned above, which is also observed at Tepe Yahya. Similar decoration with black and white painted bands and lines on a red wash is observed on sherds from Tepe Yahya. A. Le Brun (1978) published comparable types of jars from Level 18. These include plain and red-slipped lugged jars (Le Brun 1978:fig. 32; Figure 3.29, n°1). One should add that lugs are reported from other types of forms from Level 17 (Le Brun 1971:fig. 50:3-4) and from alabaster vessels that appear as miniature copies of the ceramics. There is also in this level material with a punctuated cordon but no lug (Le Brun 1971:fig. 50:7). A few lugged jars with incised decoration or with incised cordon were recovered from a pottery kiln excavated at the Apadana (Miroschedji 1976:18 tab. 1, 21, fig. 8:4-6, and pl. III:2-3 and 5). These materials appear somewhat similar to those from Level 17 at Acropole I, but the lugs of these ceramics are different, and these vessels were related to contexts anterior to Level 17 (Levels 22-18) (Miroschedji 1976:23). In sum, the jars from Tepe Yahya share similarities with vases from Susa, Acropole I Level 17, but the specific incised decorations that seem common at Susa do not have parallel at Tepe Yahya (with the exception of the parallel grooves).

The ceramic material from Acropole I Level 16 is different from that of previous contexts and marks the beginning of Susa Period III (Le Brun 1971:192). The incised lugged jars are no longer attested and painted decorations rarely appear in these contexts. No parallel for the decorated jars from Tepe Yahya are noted in this context. On the other hand, there are fragments of jars from the following Levels 15B and 14B that remind one of those found at Tepe Yahya (Le Brun 1971:200 and fig. 64:7-8; Figure 3.29, n°4). One has a pierced lug and is painted black (Le Brun 1971:fig. 64:7). The second one has pierced lugs connected by a punctuated ridge and a carination on the body (Le Brun 1971:fig. 64:8). This vessel is painted brown-red on a cream slip. The decorations of these ceramics are, however, different from those of the jars from Tepe Yahya.

Chogha Mish

Overall, the same types of jars as those discussed just above from Susa were recovered within the abundant ceramic assemblage of Protoliterate period from Chogha Mish (Delougaz and Kantor 1996:pl. 112-123).

Godin Tepe

Parallels for the decorated jars from Tepe Yahya Period IVC are at Godin Tepe in Middle and Late Period V. Four-lugged jars appear at this site in Middle Period V. This period is dated by ^{14}C to around 3350 BC (Badler 2002:82). Examples published by V. Badler include red-slipped ceramics. One is decorated with an incised cordon located on the carination of the shoulder (Badler 2002:fig.

9:B0158#1; Figure 3.30, n°1). Its profile is angular and resembles examples from Jemdet-Nasr. The second one has a cordon that is impressed (Badler 2002: fig. 9:B0158#10; Figure 3.30, n°2). Contrary to the first one, this jar is painted on the body. Its smoother profile and decoration resemble examples from Tepe Yahya more than those from Mesopotamia. The types of lugs of these jars are attested both at Tepe Yahya and in Mesopotamia. The corpus from Godin Tepe Middle Period V also includes plain lugged jars decorated with impressed cordons between the lugs (Badler 2002:fig. 11:A21187#41 and fig. 12:A0144#47/48; Figure 3.30, n°4-5). This decoration is observed on another jar without lugs (Badler 2002:fig. 12:A0171#16; Figure 3.30, n°3). The lugs on one of them are reminiscent of examples from Tepe Yahya. Lugged jars are also attested at Godin Tepe in Late Period V which is dated by ^{14}C to 3100-2900 BC (Badler 2002:82). V. Badler pointed out a jar that is painted red on a cream slip (Badler 2002:83 and fig. 17:A01 67#1; Figure 3.30, n°6). This jar has also an impressed cordon between the lugs. Another vessel has a cream slip and an impressed cordon, although the main decoration is incised. This is the only example of incised four-lugged jar identified at Godin Tepe (Badler 2002:86 and fig. 17:Gd73-401 A1 1151; Figure 3.30, n°7).

V. Badler who studied the material from Godin Tepe notes that the corpus of this site includes four-lugged jars with strong affinities to the Uruk heartland of southern Iraq and to Iran. According to her, some of these jars were probably imported from Late Uruk sites, while a majority of ceramics shows marked differences such as the red-slipped and cream-slipped examples. V. Badler also underscores the continuity of the previous local tradition of this site (fabric, manufacture, slip and decoration), and interprets the jars with distinct characteristics as imitations of the Uruk-type materials made by local potters (Badler 2002:86). Although no exact parallel can be found at Godin Tepe for the jars from Tepe Yahya, it seems that the materials from Tepe Yahya find more parallels in certain attributes (types of lugs, profile, slipping, and impressed cordons) with the jars of Godin Tepe than with those from Mesopotamia.

Tal-i Malyan

Two jars published from Tal-i Malyan, TUV Operation, share attributes with the jars from Tepe Yahya (Figure 3.31). The first one (Nicholas 1990: pl. 17 f; Figure 3.31, n°1) is a four-nose-lugged jar with a cordon and painted decoration. The decoration consists of dark red and white paint over a dark grey slip. Dark grey slip is reminiscent of a series of sherds found at Tepe Yahya (Yahya 0736; Figure 3.19, n°5). This vessel was found in Building Level II in a secondary context. The second vessel (Nicholas 1990: pl. 14a-b; Figure 3.31, n°2) does not have any lug. This jar has profile not very different from that of jar Yahya 1170, with a carination, high neck, and a ledge rim. The surface is red burnished and the decoration consists of a cordon located below the neck, from which a painted white and maroon panel was applied. The painted composition has no parallel. This jar comes from Building Level II and a secondarily admixed context.

Several types of similar shape were found in the ABC Operation (Sumner 2003:49-50). Among them, W. Sumner mentions examples with nose-lugs. The specimen published by him (2003:pl. 18c; Figure 3.31, n°5) has a lug comparable to those discussed previously where the lugs are connected to the others by an incised cordon. Plain and impressed cordons are present (Sumner 2003:fig. 25i-j; Figure 3.31, n°3-4). Impressed cordons were used to decorate the distinctive "relief decorated jars" slipped in brown

and red-brown (Sumner 2003:49, fig. 2a–j, pl. 16a–b, and pl. 17a–e). Finally, W. Sumner mentions thirteen large pithoi found in Building Level 2 (Room 71) (Sumner 2003:49–50, fig. 28a–f; Sumner 1974:fig. 5a; Figure 3.31, n°6–7). These vessels are very large (approximately 1–2.5 m), with a carination on the upper part and very narrow necks compared to their size (with the exception of some vessels). They are painted black, some of them are white slipped, and one example with a brown slip is mentioned. Two of these pithoi bear incised Proto-Elamite signs. These ceramics do not have parallels outside of Tal-i Malyan. One can, nonetheless, compare their size to the unusual, very large lugged jar from Tepe Yahya (Yahya 1207; Figure 3.16, n°3). The profile of the pithoi illustrated by W. Sumner, especially the narrow necks in comparison to the maximum diameter of these vessels, can be compared to the jar Yahya 1169 from Tepe Yahya (Figure 3.16, n°2). Chessboard patterns in metops are also attested at Tepe Yahya.

Other parallels from Tal-i Malyan, ABC Operation, for the material found at Tepe Yahya are represented by a heavy rim with a Proto-Elamite sign and a smaller version of this type of rim (Sumner 2003:fig. 28g, fig. 25r). This type of heavy rim is reminiscent of that of the unusual, very large jar Yahya 0606 (Figure 3.25) from Tepe Yahya. A series of jars with painted bands and slip/wash illustrated by W. Sumner and I. M. Nicholas resemble ceramics from Tepe Yahya (Yahya 0630; Figure 3.16, n°13; Figure 3.21) and are compared to examples from Susa (see Sumner 2003:fig. 25; Nicholas 1990:pl. 19).

Overall, the materials described at Tal-i Malyan correspond to the Late Middle Banesh period. The Middle Banesh is thought to have started in the second half of the fourth millennium BC. The current chronological bracket for the Middle Banesh period is placed between 3300 and 2900 BC (Sumner 2003:52 and 55–57).

Tal-i Ghazir

Reliable parallels for the decorated jars from Tepe Yahya are found at Tal-i Ghazir and share types of profiles, slips of brown and whitish colors, black/brown and white painted decoration, compositions with friezes of metops above the carination or above the maximum diameter, impressed cordons, and lugs (see Whitcomb 1971:85–90, Pls I–III; Figure 3.32). D. S. Whitcomb notes that two main techniques were in use at this site (Whitcomb 1971:53): "In the first [which is attested on four-lugged jars only], the ware is buff slipped, then receives a red slip which is held in reserve of the zone of decoration. The design is then executed in black paint. (...) The Proto-Elamite potters of Ghazir devised an alternate technique for achieving the same aesthetic result. The vessel is entirely red slipped; then a white paint is added instead of the buff reserved area. Black paint then completes the design."

Tepe Arisman and Tepe Sialk

B. Helwing noted several parallels for the material recovered from Tepe Arisman (Proto-Elamite period) to Fars and Tepe Yahya (Helwing 2005:176–177). These parallels include decorated jars, some being similar to Yahya 1170 (Helwing 2005:fig. 7, n°3 and see Helwing 2011a; Figure 3.33). B. Helwing notes (2005:176) that a "significant group are nose-lugged jars that occur undecorated, with plastic lines or red-brown slip, and can sometimes be painted as well. (...) Most rarely, and so far attested only from fragments, brown paint is combined with white paint on a red slipped surface, creating a polychromatic effect." Another parallel from Tepe Yahya for Tepe Arisman material indicated by B. Helwing is the painted decoration of Yahya 0606 (Helwing 2005:177). Most of the comparisons observed at that site

correspond to vessels used as burial pottery and are dated to the later phase of Arisman (Arisman C Phase 3 and later) (Helwing 2011a:219). There are, however, other parallels in the older phases of the Proto-Elamite occupation (Helwing 2011a: figs 14–15, 20–21), and Phase 3 is described as a phase of "burials that were interred at a time not very distant from the final usage phases, 4A1 and 4A2" (Chegini et al. 2011:44). As indicated above, the phases corresponding to the Proto-Elamite occupation at Tepe Arisman (Phases 7–4) are dated to between 3300 and 3100 BC (Helwing 2011a:219). One could also add several vessels with traits observed on Tepe Yahya materials recovered from the previous, Sialk III-related, settlement of Tepe Arisman, such as cordons (Boroffka and Parzinger 2011:fig. 43, n°360, 362) and a pierced lug (Boroffka and Parzinger 2011:fig. 44, n°379).

At Tepe Sialk, R. Ghirshman noted (1935:236) that polychrome jars occurred toward the end of Couche 2 (Period IV), the level in which the Proto-Elamite tablet was found.

Tal-i Iblis

At Tal-i Iblis, one sherd of a carinated jar with a perforated nose-lug is mentioned by J. Caldwell. This sherd was recovered from the bottom of the "standing brick ruin" associated with beveled-rim bowl fragments and Aliabad ware (Caldwell 1967:197–199, fig. 45:5).

Shahr-i Sokhta

Jars with short neck with everted rim and pierced lugs were recovered from Shahr-i Sokhta in Seistan, in contexts assigned to Period I. These features can be paralleled to those of the jars detailed before. Other traits of the vessels from Shahr-i Sokhta are of a different ceramic tradition; they are painted black/brown on a buff ware, and the profiles and decorations are not the same (Lamberg-Karlovsky and Tosi 1973:36 and figs. 139–140). A comparison with Shahr-i Sokhta is represented by the large jar Yahya 0606. As indicated above, its form is original and its rim has equivalents at Tal-i Malyan. Technological aspects of this jar – decoration technique and fabric – appear consistent with the rest of the decorated jars that one would connect to areas located west of Tepe Yahya. The composition of the decoration is, however, comparable to that observed on bowls from Shahr-i Sokhta Period I, recovered from architectural levels and the graveyard (see for example Piperno and Salvatori 2007:fig. 605, n°7984).

Mundigak

One jar recovered from the site of Mundigak in southern Afghanistan was published in detail by J.-F. Jarrige (1987). This jar was found in Period III, 6. He noted that its shape can roughly be compared to that of the examples found at Shahr-i Sokhta, but it is not of the same tradition. Nor can it be compared to the other jars described before. The decoration is, according to J.-F. Jarrige, connected to a ceramic tradition of eastern Pakistani Balochistan. However, the pierced lugs and polychrome decoration are noteworthy.

The Oman Peninsula

Several jars discovered beyond the Persian Gulf in the Oman Peninsula clearly resemble those found in Mesopotamia and are characteristic of the Jemdet-Nasr and Early Dynastic I–II periods (this section refers to Méry 2000:20–22 and 169–189). These ceramics in Oman and the United Arab

Emirates were found in contexts related to the Hafit period (3100–2700 BC). Similar ceramics were also reported from Bahrain, Tarut Island, and northeastern Saudi Arabia. They were mostly found in tombs, although a limited number of sherds were also reported from domestic contexts at Hili 8 in Period I. The parallels for these ceramics are to Mesopotamia with materials of Jemdet-Nasr to Early Dynastic I-II dates, and even, perhaps, to Early Dynastic III. Most of them, nonetheless, appear limited to the Jemdet-Nasr and Early Dynastic I periods (Méry 2000:177). The categories represented in the Oman Peninsula include a majority of undecorated vessels (Méry 2000: figs 103 and 106–108). The few painted jars were painted black on reddish and beige colored slips. Nose-lugs and cordons below the neck are rare in the Omani corpus; they are, however, attested by one jar at Hili 8 Period I (Méry 2000:171, fig. 105). The clear stylistic affiliation of the Omani material to Mesopotamia demonstrated by S. Méry is also corroborated by fabric analyses that showed that the jars were manufactured in southern Mesopotamia (Méry 2000:187–188; see Méry and Schneider 2001).

Overall, several examples from the Oman Peninsula, both in their painted and unpainted versions are convincingly reminiscent of the ledge-rim jars from Jemdet-Nasr mentioned above. Thus, even though the jars from Tepe Yahya share certain attributes with materials located beyond the Persian Gulf, they cannot be considered the same, but of the same horizon style (see below). Furthermore, contrary to the materials from Iran discussed before, pierced lugs and punctuated or incised cordons below the neck are rare in the Oman Peninsula.

Synthesis

In sum, the elements described above indicate that the decorated jars from Tepe Yahya Phases IVC2–IVB6, referred to as Jemdet-Nasr-related, were part of a large sphere spreading over Mesopotamia, Iran and the Persian Gulf in which particular ceramic attributes were shared. These attributes are carinated profiles, certain profiles of rims, lugs, paint, slip, polychromy, and cordons; and they were combined in many ways. This sphere was defined as a Jemdet-Nasr oikumene or interaction sphere (Caldwell 1968:182; Whitcomb 1971:62–63). The existence of such a sphere cannot be denied, but the situation appears a little bit more complicated and it is worth discussing these jars as a horizon style, a style spread over a large region that shares general similarities and shapes but differs regionally. The horizon style varies in the chronological range and in the attributes selected. That some of the jars found at Tepe Yahya have something to do with the Jemdet-Nasr period and assemblage in Mesopotamia is not contradicted, but the nature of the relation requires further examination. In terms of chronology, there are also parallels in the Uruk period such as at Susa II (both at Tepe Yahya and Tepe Arisman; Helwing 2005:175). Besides the problem of the exact chronological relationships between the Late Uruk, Jemdet-Nasr and Proto-Elamite occupations, it appears that certain traits attested on the Proto-Elamite and Jemdet-Nasr jars developed initially in an Uruk period context. Differences are then observed (such as the disappearance of incised decorations) in the Proto-Elamite and Jemdet-Nasr assemblages. In terms of style, some decorated jars from Tepe Yahya IVC2–IVB6 appear to have their best counterparts at Tal-i Ghazir, Tepe Arisman, Godin Tepe, and in Fars. Overall, they are more closely connected to western Iran than to Mesopotamia. D. S. Whitcomb already differentiated a Jemdet-Nasr oikumene from a Proto-Elamite one that embraced Khuzistan and territories located eastward (see Whitcomb 1971:60–68). Following R. J. Matthews (1992a:17) and based on the

descriptions provided above, it seems that the term "Jemdet-Nasr" should be abandoned to name a series of carinated jars, lugged or not, polychrome and/or slipped, and with cordons, found in Iran in the late fourth into the early third millennia BC. On the other hand, direct relations with Mesopotamia are attested in the Persian Gulf, reflecting a path and process distinct from that observed on the Iranian Plateau.

Convincing comparative materials are lacking in the areas located east of Tepe Yahya. The jars found at Shahr-i Sokhta share only certain attributes with those collected from Tepe Yahya and further west; their decoration is clearly of another tradition. The same can be said about the jar from Mundigak. Relations to the Jemdet-Nasr are mentioned by J.-M. Casal at Amri, in the Pakistani province of Sind. This author evoked a common origin for the polychrome pottery found at Amri and Jemdet-Nasr. However, he also noted marked differences (Casal 1961:120; 1964:56, 63) and, thanks to more recent work, we now know that polychrome ceramics developed in the Indo-Iranian Borderlands around the middle of the fourth millennium BC within separate ceramic traditions. It is attested by Kechi-Beg materials in Pakistan and Aliabad ware on the Southeastern Iranian Plateau.

The fact that the decorated jars found at Tepe Yahya IVC, often termed as Jemdet-Nasr-related, were part of a wide sphere of similarities, a horizon style, cannot be denied. That certain attributes point toward Mesopotamia is true, but this horizon is better defined when it includes two levels. The first level would correspond to the diffusion of similar attributes (carinated profiles, certain profiles of rims, lugs, paint, slip, polychromy, and cordons), and the second level would correspond to the way of combining these attributes: the styles. Stylistic comparisons tend to distinguish a sphere in Iran,[41] best identified at Tal-i Ghazir, in Fars, Isfahan, and Kerman (as well as in Kermanshah and at Susa), from that of Mesopotamia, westward, and the Persian Gulf. This Iranian – Proto-Elamite – sphere was characterized by vessels such as Yahya 1170 (Figure 3.16, n°1), Helwing 2005:fig. 7, n°3 at Tepe Arisman, and materials from Tal-i Ghazir. Some material from Tepe Yahya IVC show that within the Proto-Elamite sphere, distinct outside relations and sources of influences existed as well. The decoration of Yahya 0606 resembles that of bowls from Shahr-i Sokhta I. The jar Yahya 0102 (Figure 3.17, n°1) is, by several aspects, similar to the characteristic Yahya 1170, yet its decoration has no parallel. The local polychrome Aliabad tradition and that of Kechi-Beg situated in Pakistan precede that of the Proto-Elamite. They suggest that we are facing a phenomenon larger than the Jemdet-Nasr/Proto-Elamite polychrome tradition and that other cores and probable sources of influences for the spread of certain techniques and aesthetic in Middle Asia in the fourth and third millennia BC existed. Although the corpus from Tepe Yahya IVC does not represent a large number of jars, it already shows a variety of combinations among which some may represent fusions of local (?) and Proto-Elamite traits.

3.1.8 Fragments with inscribed Proto-Elamite signs (?)

Two sherds are discussed in this section (Figure 3.34). One is a fragment of a plain jar recovered from Phase IVC2, Area A (Yahya 1128). This jar bears an incised sign on its shoulder. Description and comparisons for this fragment was already offered by D. T. Potts (2001:6, fig. 1.6G). This sign can be paralleled to the "hairy triangle" attested on some Proto-Elamite tablets (Damerow and Englund 1989:12–13, note 30, 67–68; sign M136?: Dahl 2006). The second fragment (Yahya 0742) was found in a context of Phase IVC1, in Areas F–G. It bears two signs. The incisions are wide and the signs consist of an hourglass and a series of hatches. With reservation, the hourglass motif is reminiscent of a sign inscribed on tablets

TY13, TY15, and TY18 found at Tepe Yahya (Damerow and Englund 1989:pls. 3b–4b; sign M098?: Dahl 2006). It has also a parallel at Tepe Arisman reported from the Proto-Elamite occupation (Helwing 2011a:fig. 15, n°16). The hatches could be part of several Proto-Elamite signs.

3.1.9 Fragment with an incised animal decoration

One sherd (Yahya 1211; Figure 3.35) has an incised motif representing the rear legs of an animal. It is a buff ware with a brown slip and comes from a context of Phase IVB6 in Trench B (context B.70.18). This motif was compared to one observed on a Proto-Elamite vessel at Tal-i Malyan (see Potts 2001:82; Sumner 1976:fig. 3).

3.2 Western Balochistan Ceramics (SEIP Group A)

The Southeastern Iranian Plateau ceramic component (SEIP) consists of two main assemblages of painted ceramics: one that relates to the Western Balochistan Ceramic Complex discussed in Chapter 1 (Group A) and one that includes materials with no clear parallels outside of Kerman and, thus, tentatively termed as Kerman-related (Groups B–D). Group A can be easily distinguished from the other painted sherds on the basis of its specific, grey (but not only) and very fine fabric, forms, decorations, and of available parallels observed on the Southeastern Iranian Plateau (in Iranian Seistan-Balochistan and Pakistani Kech-Makran). There are, however, uncertainties regarding a series of vessels that share aspects with Group A materials (same or inspired decorations and similar shapes), but that, at the same time, also have distinct characters (coarser fabrics and different decorations). We tentatively define them as "imitations" of Group A, until further comparative analysis is conducted. Regarding Groups B–D, it is important to note that the definition of these groups should be taken with reservations. Groups B–D are composed of various types of painted productions, including vessels with very fine to fine and buff to red, fabrics and different types of forms and styles of decorations. The majority of the sherds have no clear parallels beyond Kerman or Tepe Yahya, and, although they were found in Phases IVC2–IVB6, given the problem of mixes between Periods IVB and IVC materials, it is safer not to rule out the possibility that some of these sherds may have belonged to Period IVB (and even to Period V). While Groups B–D appear as original products in the context of Middle Asia, certain fragments have features that resemble those of Group A imitations and other sherds tend to indicate connections to the Chalcolithic tradition of Kerman (Tepe Yahya Period VA) as well as with ceramics discovered at Mahtoutabab (Halil Rud Valley) in association with Uruk-related pottery. Although this is not totally satisfying, it appeared to us safer to discuss Groups B–D by categories of forms, until further excavation in southeastern Iran allows the finding of new materials and provide us with more details about this series of ceramics.

3.2.1 Western Balochistan Ceramics (SEIP Group A)

Number of sherds: 53
Number of rims: 24
Contexts: mostly Phases IVC2 to IVB6 (and IVB5)
Ware: very fine
Color: grey (mostly), buff, and brown
Forms: small to large size shallow bowls, bowls and goblets

Decoration: painting
Comparisons: Seistan-Balochistan and Kech-Makran

3.2.1.1 Quantity

SEIP Group A is represented by 53 fragments, including 24 rim fragments, 23 body sherds, and six base fragments (Table 3.4, Graph 3.5).

3.2.1.2 Description

SEIP Group A is characterized by painted ceramics with a very fine fabric (no inclusions are usually visible with the naked eye). These ceramics are mostly grey, but a few sherds have buff or brown colors (Figure 3.36). Group A ceramics are well fired and finely manufactured. The thicknesses of the rims and walls appear regular throughout the production and are between 0.2 and 0.4 cm, with the exception of a few thicker vessels. The surfaces of these vessels were carefully smoothed. Fabrication marks and, in particular, parallel strokes, observed on the surface of several examples indicate that the ceramics were smoothed using a tool (spatula?) on a rotating device (Figure 3.37). During this process, the clay had a leather-hard texture and the marks correspond to pressure of a tool while the vessels were rotating. The grey color of the surfaces and the cores of a series of ceramics probably result from firing the vessels in atmospheres with low content of oxygen, in closed kiln and/or covered by larger vessels, as it is attested in Kech-Makran from the first half of the fourth millennium BC (see hereafter). Certain fragments from Tepe Yahya have marks (mirror effect of painted decoration, color changes of the surface and of the painted decoration) that indicate that they were stacked during the firing.

Three main categories of forms are defined for Group A at Tepe Yahya (Figure 3.38). The first category (Category 1) includes vessels with proportions of bowls (estimated ratio RimD/H = 1.5 to 1.8) with vertical or slightly inverted rims and vertical and concave walls. Group A Category 1 includes a class of small size ceramics with rim diameters ranging from 12.8 to 15 cm (and a single miniature vase: Yahya 0905 measuring 6 cm; Figure 3.38, n°1), and a class of medium size vessels with rim diameters measuring 20 cm to the maximum. The second category (Category 2) is represented by shallow bowls (estimated ratio RimD/H = 2 to 2.85) with everted rims and walls, including vessels with concave or straight rims and walls. The bases of Group A identified in the collection likely come from ceramics of Category 2. One has a circular ring (Yahya 0313; Figure 3.38, n°22), while the others are flat. Category 2 includes small and large vessels. The rim diameters are 12 cm for one vase (Yahya 0539; Figure 3.38, n°9) and between 20 and 23 cm for the rest of them. The bases measure 6 to 10 cm. The third category (Category 3) includes ceramics with proportions of goblets (estimated ratio RimD/H = around 1.15). A first variant can be defined by goblets with everted rims and walls similar to those of Category 2. The second variant is represented by a goblet with vertical walls and rims (Yahya 1323; Figure 3.38, n°19). Ceramics of Category 3 are small to medium size with rim diameters ranging from 14 to 18.5 cm. The rims of these three categories are usually thin and tapering, but a few rims are round and thickened. In addition to these categories, two sherds (Yahya 1097 and 0703; Figure 3.38, n°20–21) can be distinguished. They probably have the proportions of ceramics of Categories 1 or 3, but they show that other types of profiles of Group A were represented at Tepe Yahya.

Most of the sherds of Group A have a painted decoration. The unpainted ones appear very similar in terms of fabric, so that they likely correspond to unpainted parts of painted vessels. The paint includes black and reddish (burgundy, purple, and brown) colors. Both these two colors can be represented on the same vessel. The differences in color observed between portions of the same ceramics result from differential exposures of these portions to oxygen during the firing. Ceramics of Categories 1 and 3 have friezes painted on the outside rim or panels that cover half of the outside surface. The inside surface is usually not decorated, with the exception of one sherd (Yahya 0167; Figure 3.38, n°3). A line is painted on the lip from the outside surface into the inside surface. The small bowls of Category 1 have friezes filled with cross-hatched or concentric triangles. The medium bowls of the same category have panels decorated with triangles filled with cross-hatched hourglasses and triangles laid on superimposed rows. The same decorations are observed on ceramics of Category 3, and one vase of this category has a frieze filled with two horizontal rows of scallops (or wavy lines) (Yahya 1323; Figure 3.38, n°19). Vessels of Category 2 have also an outside painted frieze. The outside decorations are not very clear, but one can mention friezes of cross-hatched triangles (Yahya 0037; Figure 3.38, n°10) and probable scallops. Due to the piling during the firing, these friezes are also often visible by mirror effect on the inside surfaces (Yahya 0502; Figure 3.38, n°12). Contrary to most of Categories 1 and 3 vessels, Category 2 ceramics are painted on their inside surfaces. A characteristic decoration, better known by comparative materials, consists of a swastika-like motif with (hatched) curved branches. This motif usually covers the base to the upper part of the body (Yahya 0313; see also Yahya 0525, 0860, 0068, 0419, and 0435?; Figure 3.36, n°10; Figure 3.38, n°22-27). The other inside decoration observed on the material from Tepe Yahya includes a frieze of palm-tree leaves painted on the upper part of the body (Yahya 0502 and 0908; Figure 3.36, n°2; Figure 3.38, n°12–13).

3.2.1.3 Context

Out of the 53 sherds, 12 sherds come from Phase IVC2; 14 sherds from Phase IVC1; nine from Phase IVB6; and four from Phase IVB5 (Table 3.4, Graph 3.5). Fourteen fragments come from "secondary contexts," including a majority of rims. When considering the totality of the corpus from Phases IVC2-IVB6, one notices that approximately 75% come from areas located outside of the mudbrick building (Figure 3.39). No sherd assigned to Phase IVC2 was found in the mudbrick building, while five fragments that belong to Phase IVC1 and five to Phase IVB6 were found in the area of the building. Among the latter, two (Yahya 0067 and 0068; Figure 3.38, n°14, 27) come from a context corresponding to a pit (Pit 4) and IVC fill mixed. Phase IVC2 sherds are in Areas A, B, and C, east of the mudbrick building, and in Areas F–G, west of it. In addition to the sherds found on the location of the mudbrick building, the other sherds of Phase IVC1 are in Areas F–G, and a few material of Phase IVB6 was found in Trenches A and BW.

One can remark that two "masterpieces" of Group A, the two goblets Yahya 0030 and 1323 (Figure 3.38, n°17, 19), were found in Room 5 in Phase IVC1. Another goblet (Yahya 1134; Figure 3.38, n°16) was in Area C in Phase IVC2, and a fourth one (Yahya 0557; Figure 3.38, n°18) from "secondary context" may be related to the building complex of Period IVC (see below). The bowls Yahya 0258 and 0259 (Figure 3.38, n°6–7) are from "secondary context" in Trench B, but they may be stratigraphically related

to Period IVC (see below). This could be the same for the bowl Yahya 0947 (Figure 3.38, n°8) found in Trench CW. The shallow bowls Yahya 0502 and 0908 (Figure 3.38, n°12–13) were in Areas F–G, the former from Phase IVC2 and the latter from Phase IVC1. The base with a swastika motif Yahya 0313 comes from Area A in Phase IVC2.

The 14 sherds from "secondary contexts" and the four from Phase IVB5 deserve further examination:

- As discussed above regarding the beveled-rim bowls, one sherd (Yahya 0395) found in context A.75.T8.12 can be connected to the complex of Period IVC.
- In Trench B, one sherd (Yahya 1097; Figure 3.38, n°20) comes from context B.69.T5.3.3, which corresponds to deposits excavated above the complex of Period IVC. Another one (Yahya 0539; Figure 3.38, n°9) is from context B.71.6. As discussed before (see discussion regarding the contexts of beveled-rim bowls), this context may be related to the building complex. The context of another sherd (Yahya 0150; Figure 3.38, n°4) is partially missing, but one knows that it was excavated in Trench B in 1971. Finally, two other fragments are from context B.73.1 (Yahya 0258 and 0259; Figure 3.38, n°6–7). Contexts B.73.1.1 to 1.6 as well as context B.73.2 were assigned by D. T. Potts to Phase IVC2, while T. W. Beale associated context B.73.2 to Phase VA.1 (Lamberg-Karlovsky and Beale 1986:329). Context B.73.1 is the first stratum of field-season 1973 in Trench B and appears, in any case, related to the complex of Period IVC. One fragment (Yahya 0152) is from context B.71.2.1; no detailed information could be obtained about this context.
- In Trench C, one sherd (Yahya 0968; Figure 3.38, n°28) is from context C.68.T7.1. This context was assigned by T. W. Beale to Phase VA.1 (Lamberg-Karlovsky and Beale 1986:330). The context (C.?.T6.1) of another sherd (Yahya 0952) from the same trench could not be determined.
- In Trench CW, one sherd (Yahya 0947; Figure 3.36, n°5) is from context CW.71.T1. As seen before (see discussion regarding the contexts of beveled-rim bowls), contexts and materials related to the complex of Period IVC were excavated in this test trench.
- In Trench BW, the goblet fragment Yahya 0557 (Figure 3.36, n°4) may be related to the complex of Period IVC (context BW.71.7.6 discussed with the beveled-rim bowls). On the other hand, no information could be obtained on the context of Yahya 0525 (BW.71.7).
- One sherd comes from context B-BW.71.7 (Yahya 0167; Figure 3.38, n°3). According to E. Stone (report BW 1971:37), this context seems in relation to the excavation of, and in contact to, the buttressing of the complex of Period IVC. The same might be said about one sherd (Yahya 0176) found in context B-BW.71.6.
- The material from Phase IVB5 is represented by two sherds that come from the north wall of the Persian Gulf Room (context B-BW.71.1.2) and two sherds from contexts B–C Balk.71.26 and B–C Balk.71.27 which correspond to basal floors.

In conclusion, there is evidence that enables us to connect most of the sherds of SEIP Group A from "secondary contexts" to the complex of Period IVC. There are three sherds that were assigned to Period VA by T. W. Beale. As indicated above, the layers immediately below the complex were shaved off, and it is likely that they were disturbed. It is not possible to be certain that the sherds of Group A from contexts located below the complex were intrusive, but comparative materials for this type of ware tend to indicate that it was not produced at the same time as Period VA ceramics (see below and Chapter 1). As for the sherds found in Phase IVB5, one may consider them as intrusive. Nevertheless,

their presence in Phase IVB5 would not be totally surprising. As discussed hereafter, painted, grey ware in the same tradition as that found at Tepe Yahya is attested (with stylistic changes) in Kech-Makran until the mid-third millennium BC.

3.2.1.4 Comparisons

Parallels for the vessels of Group A are mostly on the Southeastern Iranian Plateau and correspond to the Western Balochistan Ceramic Complex (see Chapter 1). They are in southwestern Pakistani Kech-Makran including the Kech Valley, the Dasht Plain, some sites close to the coast (sites surveyed by R. Besenval), and the Panjgur area north of the Kech Valley (sites surveyed by Sir M. A. Stein). They are also at Shahr-i Sokhta in Iranian Seistan (M. Tosi's expedition) and in the Bampur Valley in Iranian Balochistan (Stein's collection of the PMAE).

As noted above, recent work in Kech-Makran provides more information about the evolution of fine grey, painted vessels characteristic of the Southeastern Iranian Plateau in the Chalcolithic and early part of the Bronze Age. Based on these works and examination of the collection of the PMAE, it seems that the first grey, painted ceramics appeared in this area and in the Bampur Valley in the first half of the fourth millennium BC (Kech-Makran Period II). The tradition of which they are part then continued and expanded over a larger portion of southeastern Iran during the second half of the fourth (Period IIIa) into the third millennia BC (Period IIIb). There are clear stylistic changes within this chronological bracket, and the period of interest here, Kech-Makran Late Period IIIa, around 3000 BC, to which Group A from Tepe Yahya relates, is unfortunately the less well-defined in Kech-Makran and requires more data in stratigraphic contexts. However, as detailed above, both stylistic and stratigraphic evidence tend to delimit consistent markers for Late Period IIIa, posterior to Early Period IIIa and prior to Period IIIb and the so-called Emir grey ware in Kech-Makran which started around 2800 BC. So far, the Late Period IIIa ceramic assemblage (and its related time-period) can be delineated by combining data from Kech-Makran, Shahr-i Sokhta, Tepe Yahya, and survey collections and is included in Western Balochistan Ceramic Complex (see Chapter 1; Figures 3.40–3.41). It is likely that variants existed over the Southeastern Iranian Plateau within this ceramic complex, but strong links are observed in shapes, decorations, and manufacture between ceramics of distant sites. Same technological features which include a very fine fabric, parallels marks on the outside surface related to the fabrication (as illustrated at Shahr-i Sokhta by Tosi 1969:figs 111–114), same fabric colors (mostly grey but that can be buff and brown colors), variations of paint color (black that turns to brown or red on the same vessel), ceramics stacked during the firing, and well-fired materials, are observed at Tepe Yahya IVC2–IVB6, Shahr-i Sokhta Period I (see Lamberg-Karlovsky and Tosi 1973:39–40), Kech-Makran Late Period IIIa, and in the Bampur Valley. It is, thus, clear that a same style of ceramics (including chronological and geographical variants), which we propose to name Western Balochistan Ceramic Complex, was produced and/or distributed at a minimum from Kech-Makran to Seistan and in the Bampur Valley up to Tepe Yahya from around the end of the fourth millennium BC.

One of the main diagnostics of this style is the swastika-like motif with hatched curved branches painted on bowls. To us, this motif corresponds to the proto-type of the swastika made with curved lines attested from Kech-Makran Period IIIb, Shahr-i Sokhta Period II, and at Khurab (see Mutin 2013; e.g. Didier 2007:Vol. II, fig. 108; Salvatori and Vidale 1997:fig. 189; Lamberg-Karlovsky and

Schmandt-Besserat 1977:fig.6, n˚14). The other diagnostics are painted friezes with triangles or scallops motives, the palm-tree motif, triangles filled with hourglasses, and certain profiles of bowls and goblets. Other categories of forms could probably be assigned to this style, but we are lacking for this of stratigraphic evidence.

Parallels for the bowls with swastika-motif from Tepe Yahya (Group A Category 2) are at Shahr-i Sokhta in burials of the oldest phases (Period I phases 10-8) (Figure 3.40, n˚10-11; Piperno and Salvatori 2007:189, fig. 410, n°7527; 24, fig. 558, n°7570; 258, fig. 592, n°7966; 263, fig. 605, n°7896; 265, fig. 609, n°7992; 267, fig. 614, n°7998, 8000; 30, fig. 726, n° 8140, 324; fig. 773, 8559, 8591; 329, fig. 784, n° 8580; 349, fig. 834, n°8203). Clear equivalents are in architectural levels of the same period (within the material named black-on-grey and black-on-buff; see Tosi 1969; collection of the Palazzio Brancaccio, Rome). The bowls with swastika-like motif are characteristic of funerary deposits found by Sir M. A. Stein at Shahi-Tump, in Kech-Makran (Stein 1931:pls. XV–XVI). Fragments of such bowls were collected from architectural levels at Miri Qalat and Shahi-Tump and in survey in Kech-Makran (Besenval 1992; Mutin 2007; Figure 3.40, n˚7-8), the Bampur Valley and in the area of Fanuch located ca. 340 km west of Miri Qalat (Stein 1931; collection of the PMAE). The outside friezes with triangles painted on the rims of these ceramics and on some of Category 1 have also parallels in the assemblage from Kech-Makran. This type of frieze was reported by Sir M. A. Stein from the Panjgur oasis (Pakistan) and from the Bampur Valley at Katukan and at Takkul, ca. 400 km and 150 km southeast of Tepe Yahya, respectively (Stein 1931; collection of the PMAE).

The bowls of Category 1 and the goblets of Category 3 from Tepe Yahya have counterparts in the same areas. Comparable shapes of bowls are reported from surveys in Kech-Makran and in funerary context at Shahr-i Sokhta (Piperno and Salvatori 2007:323, fig. 770, n°8551), while goblets were found at Miri Qalat, Trench IX, in a burial (Level 2) (Figure 3.40, n˚1-2), and in architectural levels at Shahr-i Sokhta Period I (see below). Hourglass motif painted inside a triangle observed on sherds of Categories 1 and 3 (Yahya 0258, 0259, and 0557) is a characteristic of the material from Kech-Makran as well, represented on bowls, jars, and large hole-mouth jars from Miri Qalat, Trench IX (burial of Level 2) and survey collection. This motif was observed on a goblet from Tepe Bampur (Sajjadi 2005:115, n°14; De Cardi 1970:fig 22, n˚141; Figure 3.40, n˚3) and on other forms with the same type of fabric from Shahr-i Sokhta Period I (Figure 3.41, n˚3-4; collection of the Palazzio Brancaccio, Rome). The goblet Yahya 0030 (Figure 3.36, n˚3; Figure 3.38, n˚17) decorated on the rim with a frieze filled with superimposed rows of triangles has an equivalent at Fanuch, collected by Sir M. A. Stein (collection of the PMAE: Figure 3.40, n˚4). One would also connect a ceramic found by Sir M. A. Stein at Khurab (collection of the PMAE, Figure 3.40, n˚5) to Group A from Tepe Yahya IVC and Kech-Makran Late Period IIIa. This goblet has an outside frieze filled with metops filled with crosses that is similar to the decoration of a goblet recovered from Miri Qalat, Trench IX (burial of Level 2: Figure 3.40, n˚1). The same decoration is observed on goblets from Shahr-i Sokhta Period I (collection of the Palazzio Brancaccio, Rome: Figure 3.41, n˚1-2).

The palm motif identified on some sherds from Tepe Yahya IVC seems also to have appeared mostly during the late phase of Period IIIa in Kech-Makran; it was observed at Miri Qalat, Shahi-Tump, and in the survey collection (Stein 1931:pls. XVII and XIX; Mutin 2007). It is attested at Shahr-i Sokhta during Period I (collection of the Palazzio Brancaccio, Rome). This motif is, however, more ambiguous

because it continued into the following Period IIIb in Kech-Makran. With regard to this, it is important to recall that a series of features that seem to have appeared essentially in Kech-Makran Late Period IIIa (and sporadically in Early Period IIIa) continued after this period. For example, the swastika-motif appeared in Late Period IIIa and continued but was then made of curved lines instead of curved branches in Period IIIb. The friezes filled with triangles, observed in Period IIIa, are also attested in Kech-Makran Period IIIb. It is, thus, not always clear whether comparative materials for Group A ceramics from Tepe Yahya, and more generally speaking for Western Balochistan Ceramic Complex, come from contemporary or slightly more recent contexts. At Khurab and Bampur, besides the parallels for Group A mentioned above, the rest of the assemblage is mostly dated to more recent periods (De Cardi 1970; Lamberg-Karlovsky and Schmandt-Besserat 1977:figs 2-4 and 6-7),[42] so that the vessels with affinities to Tepe Yahya IVC and to the rest of the parallels on the Southeastern Iranian Plateau may represent vestiges of local older occupations or continuation of older stylistic features.

The distribution of ceramics of the Western Balochistan Ceramic Complex seems so far limited in the west to Tepe Yahya and the Daulatabad Plain (Prickett 1986a:figs III.14-III.16; see Chapter 7). It, however, would not be surprising to find such material in the Bardsir Plain and at Tal-i Iblis to the north. So far, the best evidence for its roots and centers of production are in Pakistani Makran, particularly in the Dasht Plain, but one may, of course, expect other workshops elsewhere.

3.2.2 Western Balochistan Ceramics imitations (?)

Number of sherds: 44
Number of complete profile: 1
Number of rims: 31
Contexts: Phases IVC2, IVC1, and IVB6
Ware: very fine to fine
Color: buff (mostly) and pinkish
Forms: small to very large shallow bowls
Decoration: painting
Comparisons: SEIP Group A, Yahya "Period VA" Black-on-Smooth Buff ware, and original traits

3.2.2.1 Quantity

This group is represented by 44 sherds, including a single vase with complete profile, 31 rim fragments, five body sherds, and seven bases (Table 3.5, Graph 3.6).

3.2.2.2 Description

The vessels that are tentatively defined here as imitations of Group A[43] (and of Western Balochistan Ceramic Complex) include a majority of black-on-buff painted bowls (Figure 3.42).

The vessels are very fine, painted ceramics (no inclusion is usually visible with the naked eye, except for Yahya 0246; Figure 3.43, n°10). Their colors are mostly buff, including sherds with buff-pinkish color. These ceramics are well fired. They have relatively thin walls, but on average thicker than those of ceramics of Group A. The thickness of the rims is mostly equal to 0.3 and 0.4 cm, with a few sherds with thinner and thicker rim thicknesses. Wall thicknesses include the same bracket, but

higher values are more common (up to 1 cm). The surfaces of these vessels were carefully smoothed. A few examples show parallel strokes on their outside surfaces similar to those observed on ceramics of Group A (Yahya 0700 and 0933; Figure 3.42, n°4; Figure 3.43, n°14), but this feature appears rarer than in Group A. Certain fragments bear mirror effects of painted decoration, which indicates that they were stacked during the firing (Yahya 0958 and 0326; Figure 3.43, n°21-22).

The forms consist of shallow bowls, with proportions that match those of Group A Category 2 (estimated ratio RimD/H = 2 to 2.85), of small to very large sizes. The rim diameters are comprised between 10 and 30 cm, with a majority of vessels measuring 19 to 26 cm in rim diameter. Different types of profiles are attested. The most common is characterized by everted rims and walls, including ceramics with concave or straight walls and rims. A few vessels have vertical or slightly inverted rims (such as Yahya 0233, 0558, 0673, and 1408; Figure 3.43, n°1-4). The lips are usually round or tapering, but a few vases with flattened (Yahya 0233; Figure 3.43, n°1) and thickened (Yahya 0578 and 0962; Figure 3.43, n°15, 20) lips can be mentioned. The bases that are included with reservation in this group are flat in five cases (Yahya 0046, 0107, 0734, 0749, and 0755; Figure 3.43, n°11; Figure 3.44, n°3-4, 6-7) and annular in two cases (Yahya 0158 and 0956; Figure 3.44, n°1-2). The base diameters are comprised between 5 and 10 cm.

These ceramics are painted black (and sometimes brown). The bowl with a complete profile Yahya 0107 (Figure 3.42, n°2; Figure 3.43, n°11) has a grey paint that probably results from over (?) firing conditions and/or paint composition. The main decoration is almost systematically on the inside surface, associated with a line, often wide, painted on the lip down on the inside and outside rim. In one case a frieze is attested on the outside rim (Yahya 0856; Figure 3.43, n°13), but friezes are usually painted on the inside rim and the rest of the inside surface of the vessels can be left blank or painted as well. Cross-hatched and hatched triangles as observed on the outside rims of some bowls of Group A (Yahya 0558, 0909, and 0107; Figure 3.42, n°1-2; Figure 3.43, n°16), solid-black triangles (Yahya 0092, 0806, 0536, 0073, and 0326; Figure 3.42, n°6; Figure 3.43, n°8, 18-19, 22), hatches (Yahya 0933, 0906, 0700, 0958, and 0246; Figure 3.42, n°4; Figure 3.43, n°7, 10, 14, 21), row of dots (Yahya 1408 and 1410; Figure 3.43, n°4, 9), and hatched diamonds (Yahya 1408) represent the main motifs used to fill the friezes. Among the recognizable compositions on the body can be mentioned the swastika-like motif on several sherds (Yahya 0747, 0906, 0107, and 0909; Figure 3.43, n°6-7, 11, 16) as observed on Group A vessels and more generally on Western Balochistan Ceramics. The same type of motif, with six hatched branches, is attested on a base (Yahya 0956; Figure 3.44, n°1; Figure 3.45). Three other bases were decorated with swastikas, or using quadripartite compositions (Yahya 0046, 0755, and 0749; Figure 3.44). The other motifs used for inside decorations include a small cross (Yahya 0734; Figure 3.44), solid black triangles (Yahya 0746; Figure 3.44), hatched triangles (Yahya 0673; Figure 3.43, n°2), hatched curved motifs and "V" motifs (Yahya 0856; Figure 3.43, n°13).

3.2.2.3 Context

More than 60% of the sherds come from Phases IVC2, IVC1 and IVB6: 16 from Phase IVC2, five from Phases IVC1, and six from Phase IVB6 (Table 3.5, Graph 3.6). Seventeen fragments come from "secondary contexts" (Figure 3.46). In Phase IVC2, three sherds were recovered from inside the mudbrick building: one in Room 1, one in Room 4, and one in Room 6 (Yahya 0806; Figure 3.43, n°8). The

other fragments of this phase were recovered from Areas C and G outside of the mudbrick building. The sherds of Phase IVC1 were found outside of the building in Areas F–G. As for Phase IVB6, one can note that the bowl with a complete profile, Yahya 0107, was found in Pit 8. In the same phase is the large rim fragment Yahya 0558 (Figure 3.42, n°1). As for the other "masterpieces," as seen below, the ceramic with a swastika motif Yahya 0909 (Figure 3.43, n°16) was assigned to Phase VA.2. Yahya 0906 (Figure 3.43, n°7), also with a swastika motif, is from a "secondary context." The base Yahya 0956 (Figure 3.45) with a probable swastika with six branches may be connected to Period IVC.

The 17 sherds from "secondary contexts" were in:

- Trench B, with two sherds (Yahya 0154 and 0158; Figure 3.44, n°2) from context B.71.2.1 and one (Yahya 0147; Figure 3.43, n°17) from context B.71.2. No information could be obtained for these contexts. On the other hand, Yahya 0092 (Figure 3.43, n°5) is from B.71.15, a context that was assigned to Period VA–IVC by T. W. Beale, and Yahya 0909 is from B.73.4 that was assigned to Phase VA.2 by the same author (Lamberg-Karlovsky and Beale 1986:329).
- In contexts B–BW were sherds Yahya 0734 (Figure 3.44, n°4) from B-BW.71.3 and Yahya 0856 (Figure 3.43, n°13) from B-BW.71.2. In contexts BW.T5 and BW.T6 were sherds Yahya 1408, 1409, and 1410 (Figure 3.43, n°4, 9). No detailed information could be obtained about these contexts.
- Yahya 0747 (Figure 3.42, n°5) is from context BW/CW.71.T3.7; the only information regarding test trench 3 is that a beveled-rim bowl fragment was recovered from it. Yahya 0906 and 0933 (Figure 3.43, n°7; Figure 3.42, n°4) from BW/CW.71.7.1 could not be connected to the rest of the stratigraphic sequence, as well as Yahya 0673 (Figure 3.42 n°3) from context BW/CW.71 (.12.1?) whose label is incomplete.
- In Trench C, Yahya 0956 (Figure 3.44, n°1) from context C.T6.6, if the year of excavation (missing on the label) is 1968, could be linked to Phase IVC2, while Yahya 0962 (Figure 3.43, n°20; from C.69.5) and Yahya 0958 (Figure 3.43, n°21; from C.69.1) have contexts assigned by T. W. Beale to Period VC and Periods VB-VA, respectively (Lamberg-Karlovsky and Beale 1986:330).

In sum, only four to five fragments from "secondary contexts" could be assigned a period or phase. They appear connected to Period IVC or more ancient occupations.

3.2.2.4 Comparisons

Only a few decorations could be reconstructed so that comparisons remain difficult to ascertain for these ceramics. As mentioned above, one may however note that some of the sherds share similarities with vessels of Group A in terms of decorations and forms and may almost be considered variants or imitations of Group A and of its related parallels on the Southeastern Iranian Plateau labeled as Western Balochistan Ceramics. The similarities concern some profiles and decorations such as the swastika-motif and friezes with triangles. Swastika with six branches of Yahya 0956 is attested in Kech-Makran. These vessels show, nevertheless, certain differences in comparison with Group A and original traits. The texture and thickness of the vessels appear different from those of vessels of Group A. With the exception of one ceramic, the friezes are painted on the inside rims instead of the outside rim as attested in Group A. The use of solid-black triangles to fill the friezes seems less common on Western Balochistan Ceramics. Also, there is a series of decorations (such as the dots) that do not match the decorations of Group A. One can note that the use of friezes filled with triangles to decorate the inside rims of bowls is

attested at Shahr-i Sokhta on more recent materials: the ceramics of Phases 8 to 6 (Salvatori and Vidale 1997:84, fig. 82, n°5; 86 fig. 85, n°4; 92, fig. 96, n°4; fig. 97, n°4; 95, fig. 102, n° 3-4; fig. 103, n°4; 96, fig. 105, n°4; 97, fig. 106, n°4-5; fig. 107, n°3; 98, fig. 109, n°2; 99, fig. 110, n°3; fig. 111, n°1; 100, fig. 113, n°3; and 101, fig. 115, n° 4), dated to from around 2800 BC (Salvatori and Tosi 2005). However, the sandy fabric of the material from Seistan is different from that of the ceramics from Tepe Yahya.

In sum, if aspects of Group A seem to represent the best parallels for a series of ceramics of this group so that they may be considered imitations of Group A, comparisons are more complicated to ascertain for other fragments which remain relatively original or for which parallels are vague. It is necessary to remember that T. W. Beale connected one vessel of this group (Yahya 0909; Figure 3.43, n°16) to a type of production he named Black-on-Smooth Buff ware (Lamberg-Karlovsky and Beale 1986:82-83, fig. 4.39e). He noted that this production was rare in Period VA and continued into Period IVC where it was, still rare, but more common. Several characteristics noted by T. W. Beale such as the fabric color (buff to pinkish), smoothed surface, wide line painted on the lips, and the decoration of Yahya 0909 (apparently with a swastika and a frieze of triangles) agree with the materials included in this section and parallels dated to around the late fourth and early third millennia BC on the Southeastern Iranian Plateau. The gap between Period VA and Period IVC represented by Aliabad ware in Kerman, the fact that the production of vessels decorated with a swastika motif and a frieze of triangles such as Yahya 0909 is found essentially from the late fourth millennium BC, and the rarity of Black-on-Smooth Buff ware in Period V at Tepe Yahya and its stylistic connections to materials better attested from Period IVC suggest that this production and Group A imitations are intrusive in Period V contexts.

3.3 Kerman-related (?) Ceramics (SEIP Groups B-D)

As indicated above, the second group of ceramics considered a Southeastern Iranian Plateau component (SEIP Groups B-D) include sherds with an original style in the context of Middle Asia, ones that have features resembling those of Group A imitations and others indicating connections to the Chalcolithic tradition of Kerman (Yahya Period V) and with assemblages recently discovered at Mahtoutabab (Halil Rud Valley). These sherds were found in Phases IVC2-IVB6, yet, given the problem of mixing between Periods IVB and IVC materials and the fact that there is no parallel for several of them, it is safer not to rule out the possibility that some of these sherds were originally part of Period IVB (or of Period V) and intrusive in Period IVC contexts. These ceramics are classified in three groups presented by categories of forms: Group B monochrome painted vessels, Group C polychrome vessels, and Group D black-on-red slipped vessels.

3.3.1 Group B1: shallow bowls

Number of sherds: 8
Number of rims: 8
Contexts: Phases IVC2, IVC1, and IVB6
Ware: very fine to fine
Color: buff, pinkish and red
Forms: small to large shallow bowls

Decoration: painting
Comparisons: Yahya Period VA Black-on-red ware and original traits

3.3.1.1 Quantity

SEIP Group B1 is represented by eight rim sherds (Table 3.6).

3.3.1.2 Description

Vessels of Group B1 are very fine to fine, painted ceramics of red, pinkish and buff colors (Figure 3.47). Two fragments (Yahya 0119 and 0403; Figures 3.49-3.51) can, however, be distinguished because of their fabrics somewhat reminiscent of Yahya V/IVC Transitional ceramics discussed below (see section 3.9). Vessels of Group B1 are well fired. The thickness of the rims is comprised between 0.3 and 0.5 cm, and the wall thicknesses are between 0.4 and 0.7 cm. The surfaces of these vessels were carefully smoothed. One sherd has parallel strokes on its outside surface similar to those observed on vases of Group A (Yahya 0801), but this feature appears rarer and less pronounced on Group B1 ceramics.

Group B1 is composed of shallow bowls with proportions that match those of Group A ceramics and Group A imitations (estimated ratio RimD/H = 2 to 2.5), of medium to large sizes. The rim diameters are comprised between 15 and 25 cm. Their profiles consist of everted rims and walls, including vessels with concave or straight walls and rims (Figure 3.48). Two vessels have vertical rims (Yahya 0403 and 1411; Figure 3.48, n°4; Figure 3.49, n°2). The lips are usually round or tapering.

These ceramics are painted black. The decoration of a series of vessels (Figure 3.47) consists of a frieze of garlands pending from the rim on the inside surface associated with a line painted on the lip onto the inside and outside rims. Two sherds (Yahya 0119 and 0403; Figures 3.49-3.51) have friezes painted on their outside surface and a line painted on the lip. Yahya 0119 is decorated with upturned garlands, while the decoration of Yahya 0403 apparently consists of two superimposed friezes filled with hatched triangles and dots.

3.3.1.3 Context

These sherds come from Phase IVC2 Room 4 (Yahya 0119) and Area C (Yahya 0403 and 0404); Phase IVC1 Areas F-G (Yahya 0711); Phase IVB6 Trench A (Yahya 0341) and Trench BM (Yahya 0801 and 0799); and "secondary context" on which no detailed information could be obtained (Yahya 1411: context BW.T6.2A) (Figure 3.54).

3.3.1.4 Comparisons

These vessels appear original in the context of southeastern Iran in the late fourth and early third millennia BC. Nevertheless the fabric and red color (such as Yahya 0801) of these ceramics are reminiscent of Black-on-red ware of Yahya Period VA, although the decorations and shapes are different. As discussed before, Period VA and associated materials (Black-on-red ware) are followed by a chronological gap before the building complex of Period IVC was constructed. If the gap between Period VA and Period IVC at Tepe Yahya had not been attested, Group B1 ceramics could easily be interpreted as the continuation of the same tradition.

3.3.2 Group B2: bowls

Number of sherds: 18
Number of rims: 17
Contexts: Phases IVC2, IVC1, and IVB6
Ware: very fine to fine
Color: cream, buff, light brown, and red
Forms: miniature to small size bowls
Decoration: painting
Comparisons: SEIP Group B1, Yahya Period VA Black-on-red ware, and original traits

3.3.2.1 Quantity

SEIP Group B2 is represented by 18 fragments, including 17 rim sherds and one body fragment (Table 3.7, Graph 3.7).

3.3.2.2 Description

Vessels of Group B2 have mostly a very fine fabric, of buff color, of cream color for three of them (Yahya 0038, 0929, and 0698; Figure 3.52, n°6; Figure 3.53, n°2, 17), of light brown color for one sherd (Yahya 0750; Figure 3.52, n°5), and of red color for five of them (Yahya 0593, 0589, 0788, 0072, and 0704; Figure 3.52, n°2–4, 7; Figure 3.53, n°16). The red color seems in two cases to have resulted from a slip applied on the surfaces of the vessels (Yahya 0072 and 0704; Figure 3.52, n°4; Figure 3.53, n°16). Presence of a creamier wash might also be suggested on a few fragments. Group B2 vessels are well manufactured; their surfaces are carefully smoothed, and their rim and wall thicknesses are comparable to those of Group B1. Their rim thicknesses are comprised between 0.2 and 0.4 cm (0.3 cm on average), and their wall thicknesses are also mostly comprised between 0.2 and 0.4 cm (0.4 cm on average), although more 0.4 cm thick walls and two thicker ones (0.5 and 0.6 cm) were measured. Some of the sherds, especially Yahya 0133 (Figure 3.52, n°1), tend to indicate that these vessels were built using coils. This observation corroborates that of P. Vandiver (1986) whose technological analysis of the ceramics from Tepe Yahya has shown that coiling was being used to build ceramics during Period IVC. Yahya 0133 also bears traces on the lower part of its body that indicate that it was stacked during the firing.

These vessels correspond to bowls and deep bowls (Figure 3.53). The ratios RimD/H that could be estimated on the most complete fragments are around 1.2 (Yahya 0133, 0593, and 0788), and one vessel appears slightly more shallow with a ratio higher than 1.5 (Yahya 0750). The profiles include everted and concave walls and vertical or slightly inverted and concave rims. The lips are tapering. The bases are not known. Group B2 include bowls of miniature to small size, with rim diameters measuring 6 to 15.5 cm. The heights of these bowls estimated on the most complete and larger vessels do not appear to have been more than 10 cm.

With the exception of one ceramic (Yahya 0237; Figure 3.53, n°4) that, however, has a fabric very similar to the rest, Group B2 bowls are painted. They are painted black (brown in one case: Yahya 0750). The decorations mostly consist of a frieze painted on the outside rim or a panel covering the outside rim and a part of the body, associated with a line painted on the lip. This line usually covers

the uppermost parts of the rims on the outside and inside surfaces. It has, however, not been observed on three fragments (Yahya 0072, 0704, and 0698). The recognizable motifs used to decorate the outside surfaces include horizontal bands filled with parallel oblique hatches, joined (Yahya 0038, 1329, and 0698; Figure 3.53, n°2-3, 17) or separated (Yahya 0929; Figure 3.53, n°5); upturned concentric scallops (Yahya 0593, 0072, 1412, and 0704; Figure 3.53, n°8, 10, 15-16); alternatively opposite groups of oblique lines (Yahya 0133, 0232, 0664, 0589, and 0750; Figure 3.53, n°6-7, 11-13); and crosses in metops (Yahya 0788; Figure 3.53, n°9).

3.3.2.3 Context

Group B2 bowls are attested in the same quantities in contexts of Phases IVC2 (5), IVC1 (6), and IVB6 (5) (Figure 3.54). One fragment comes from "secondary context" that corresponds to the cleaning of Trench B in 1971 (Yahya 0929). The other fragment from "secondary context" is Yahya 1412 (Figure 3.53, n°10; context B-BW.71.3). In Phase IVC2, only one small sherd was recovered from inside the mudbrick building (Yahya 0127; Figure 3.53, n°1), in Room 6. The rest for this phase was found in Areas F-G west of it. In Phase IVC1, two sherds were excavated in Room 4; among them is the "masterpiece" Yahya 0133 (Figure 3.52, n°1). The other four fragments found in this phase are in Areas F-G; they include the relatively well-preserved vessels Yahya 0698, 0704, and 0750 (Figure 3.53, n°12, 16-17). In Phase IVB6 are three sherds from the areas located west of the mudbrick building; they include the black-on-red painted bowls Yahya 0589 and 0593 (Figure 3.52, n°3, 7). The two other fragments from this phase are from contexts located above the mudbrick building of Period IVC. One can notice that the black-on-red bowl Yahya 0788 (Figure 3.52, n°2) was in the same context as the complete low-sided tray Yahya 0813 and the large fragment of decorated jar discussed before Yahya 1207.

3.3.2.4 Comparisons

The fabric of these bowls, the use of the garland motif and the presence of a thick line painted on the lips down on the inside and outside rims are reminiscent of the shallow bowls of Group B1. Likewise Group B1, the black-on-red materials of Group B2 also resemble Tepe Yahya Period VA Black-on-red ware, although the shapes and decorations are different. Extraregional parallels are almost lacking for Group B2 bowls. Some exceptions are represented by vases decorated with bands filled with parallel oblique hatches (Yahya 0038 and 1329; Figure 3.53, n°2-3). With reservation, for we have not seen the vessel, they resemble the decoration of a ceramic found in a burial at Shahr-i Sokhta (Piperno and Salvatori 2007:fig. 609, n°7991). The rest of the funerary deposit from this tomb includes vessels related to Group A. A few analogies in decorations of Group B2 vessels may also be observed with materials found recently at Mahtoutabad in deposits that contained Uruk-related materials whose drawings were generously showed to me by M. Vidale. However, as we are lacking of information to better understand this production, Group B2 fragments may for now be defined together with Group B1 as a probable local/Kerman ceramic production with reminiscences of Tepe Yahya Period VA Black-on-red ware.

3.3.3 Group B3: deep bowls-pots-goblets

Number of sherds: 20
Number of rims: 19

Number of complete profile: 1
Contexts: Phases IVC2, IVC1, and IVB6
Ware: very fine to fine
Color: buff, light brown, pink, and red
Forms: deep bowls, goblets, and/or pots
Decoration: painting
Comparisons: Groups B1 and B2, and original traits

3.3.3.1 Quantity

SEIP Group B3 is represented by 20 sherds including one complete profile (Yahya 1376) and 19 rim fragments (Table 3.8, Graph 3.8).

3.3.3.2 Description

With the exception of one vessel with a complete profile (the tall goblet or chalice Yahya 1376), the fragments discussed in this section could not be assigned a specific category of form. If some of them appear to have belonged to deep open ceramics (deeper than the bowls discussed above), it is not always possible to determine whether they were part of vessels with proportions of deep bowls, goblets or pots. One can neither be sure that all these fragments belonged to the same type of production, although a part of them share similar attributes and may be connected to the bowls of Groups B1 and B2 described above.

The fabric of Group B3 ceramics is very fine. Their colors include buff, light brown, pink, and reddish colors (Figure 3.55). In terms of making, finishing, and firing, Group B3 vessels appear to be of the same quality as the vessels of Group B discussed above. One can notice on several fragments that the color of the outside surface, buff or yellowish, was different from the inside surface, light brown to reddish (Yahya 0751, 0561, and 0257; Figure 3.55, n°1; Figure 3.56, n°2, 14). That this resulted from a wash/slip applied on the outside surface or from firing conditions is not clear. Yahya 0564 bears traces of mirror effect on its inside surface (Figure 3.56, n°7), which indicates that this ceramic was stacked on another vessel during its firing. Group B3 vessels appear, overall, as thick as the shallow bowls and bowls of Group B and materials of Group A, with rim thicknesses mostly ranging from 0.2 to 0.4 cm, with a few smaller and larger values (0.1 cm and up to 0.6 cm), and wall thicknesses mostly comprised between 0.2 and 0.6 cm (up to 1 cm). The average is 0.4 cm in both cases.

As indicated above, the only ceramic of Group B3 with a complete profile is a tall goblet or chalice (Yahya 1376; Figure 3.56, n°1). Most of the other sherds are not preserved enough to enable accurate estimation of their ratios RimD/H. Based on the most complete fragments, sherds of Group B3 were probably part of deep bowls, pots, or goblets. Yahya 1376 is the only clear example of very deep goblet (RimD/H = 0.3) reported from Tepe Yahya Phases IVC2-IVB6. Its profile includes slightly inverted rim, slightly everted and concave upper body, vertical and slightly convex lower body, and flat projecting base. It measures 24 cm in height and 7.5 cm in rim diameter. The diameter of its base measures 7 cm. The other sherds of Group B3 might perhaps have been part of the same category of vessel (such as Yahya 0751 and 1153?; Figure 3.56, n°2, 6), but the most complete fragments tend to illustrate shallower forms (for example, the estimated ratio RimD/H of Yahya 0011 (Figure 3.56, n°5)

is probably approximately equal to 1). Miniature vessels (rim diameters = 7 to 9 cm) and large vessels (rim diameter = 25 cm to the maximum) are included in Group B3. The profiles represented by these fragments include a variety of types: vessels with vertical (and slightly inverted) to everted rims, and with either a slightly concave, straight, or slightly convex section. The lips are tapering or round in most cases. Except for that of Yahya 1376, the bases of these vessels are not known.

These ceramics are painted black. The decorations consist of friezes or panels painted on the outside surface, associated with a line, often wide, painted on the lip down on the inside and outside rims. One ceramic, however, has a more sophisticated decoration on its inside surface than the simple line (Yahya 0977; Figure 3.56, n°8). Among the recognizable motifs of the outside compositions are parallel oblique lines (Yahya 0564, 0590, and 1413; Figure 3.56, n°7, 9, 16), parallel horizontal solid-black bands (Yahya 0759, 0177, 0959, 0197, and 0584; Figure 3.56, n°3, 11-12, 17, 19), series of parallel horizontal cross-hatched bands (Yahya 1376; Figure 3.56, n°1), horizontal hatched bands used on the rim (Yahya 0977 and 0646; Figure 3.56, n°8, 10), upturned concentric garlands (Yahya 0751, 0561, and 0257; Figure 3.56, n°2, 14-15) as attested on the Group B2 bowls, triangles (Yahya 0011, 0977, 0495, and 1153; Figure 3.56, n°5-6, 8, 18), cross-hatched hourglasses (Yahya 1153), metops filled with crosses (Yahya 0942; Figure 3.56, n°13) as observed on the Group B2 bowl Yahya 0788, and horned animal motifs(?) (Yahya 0380 and 0646; Figure 3.55, n°11-12).

3.3.3.3 Context

Out of the 20 sherds of Group B3, 11 fragments could be assigned a phase, while nine were found in "secondary contexts" (Table 3.8, Graph 3.8). Five fragments were recovered from Phase IVC2; three from Phase IVC1; and three from Phase IVB6 (Figure 3.57). In Phase IVC2, only one sherd (Yahya 1153; Figure 3.56, n°6) was found inside the mudbrick building, on the floor of Room 1, whereas the four other fragments were in Areas G-H west of it, associated with a few sherds of beveled-rim bowls (Yahya 0257, 0495, and 0569; Figure 3.56, n°4, 15, 18) and a low-sided tray fragment (Yahya 0977; Figure 3.56, n°8). One sherd from Phase IVC1 was found inside the mudbrick building, in Room 5 (Yahya 0011; Figure 3.56, n°5). The two other fragments of Phase IVC1 were recovered from areas located west of the building. The sherds of Phase IVB6 were recovered from contexts located above and east (Yahya 0380; Figure 3.56, n°20) and west of the building (Yahya 0590 and 1376; Figure 3.55, n°9; Figure 3.56, n°1). The "masterpiece" goblet Yahya 1376 was found in the same context as one low-sided tray fragment, seven beveled-rim bowl fragments, a carinated bowl sherd, and five diagnostic decorated jar sherds discussed before.

Among the nine sherds recovered from "secondary contexts," the label of one fragment from Trench B lacks the year (Yahya 0197, Figure 3.56, n°17; context B.?.18). However, such stratum - 18 -, seems to have been excavated in Trench B in 1970 only, so that this fragment may be assigned to Potts's Phase IVB6 and may have, thus, been perhaps associated with a beveled-rim bowl fragment, a sherd of Group A, and another sherd of Group B in the same context. One sherd found in B-BW.71.6 (Yahya 0177; Figure 3.56, n°11) was in the same context as a sherd of Group A. As indicated above, this context was probably in relation to the complex of Period IVC (see discussion on the context of Group A materials). Five fragments are from Trench BW. No contextual information was obtained about one found in context BW.5.10 (Yahya 1413). One (Yahya 0584; Figure 3.56, n°19) comes from

the same context (BW.71.7.6) as a beveled-rim bowl fragment and a diagnostic sherd of goblet of Group A (Yahya 0557). As indicated above, context BW.71.7.6 seems to be related to the excavation of material in contact to the southern wall of Room 7 of the IVC complex. Two other fragments (Yahya 0564 and 0561; Figure 3.56, n°7, 14) come from context BW.71.7.4, associated with two beveled-rim bowl fragments and two sherds of decorated jars discussed above. The last sherd from Trench BW was found in context BW.71.T1.6 (Yahya 0646; Figure 3.55, n°12). The materials found in this context (especially the lid sherds; see section 3.10) seem mostly related to Period IVB. One fragment was found in context CW.71.T1.5 (Yahya 0942; Figure 3.56, n°13), which corresponds to a series of floors likely related to the IVC complex (Beale, report CW/BW/B 1973:15-16). A beveled-rim bowl fragment was in the same context. In Trench C, Yahya 0959 (Figure 3.55, n°7) was recovered from context C.69.T1.1, a context that was assigned to Period VB-VA by T. W. Beale (Lamberg-Karlovsky and Beale 1986:331).

3.3.3.4 Comparisons

The fabric, the association of a line on the lip and outside friezes or panel painted on the vessels, and certain motives used for the decoration (such as upturned garlands, cross, and cross-hatched bands) may be compared to the bowls of Groups B1 and B2. A certain consistency is also illustrated by the vessels decorated with friezes of parallel solid-black bands and lines (Yahya 0759, 0569, 0197, 0584, 0177, and 0959; Figure 3.56, n°3-4, 11-12, 17, 19). Nevertheless, without any clear comparative materials, it is difficult to define all these vessels, how they all relate to Groups B1 and B2, and even to guarantee that all of them belong to the same period.

3.3.4 Group B4: very large pots

Number of sherds: 6
Number of rims: 6
Contexts: Phases IVC2, IVC1, and IVB6
Ware: very fine
Color: buff, light brown, and pink
Forms: very large pots
Decoration: painting
Comparisons: Group B3 and original traits

3.3.4.1 Quantity

Pots of SEIP Group B4 are represented by six rim fragments (Table 3.9).

3.3.4.2 Description

Vessels of Group B4 have very fine fabrics of buff to pinkish color (Figure 3.58). Two fragments seem to have been covered with a buff/whitish wash on their inside surfaces (Yahya 0782 and 0140; Figure 3.58, n°4-5), and one vessel (Yahya 0009; Figure 3.58, n°2) has a clear buff/whitish, flaked, slip on its outside surface. These ceramics are as well manufactured and fired as the Group B materials previously presented. Parallel strokes similar to those attested on ceramics of Group A and on one fragment of

Group B1 are observed on the outside surface of Yahya 0282 (Figure 3.58, n°3). The rims and walls of Group B4 are thicker, with rim and wall thicknesses comprised between 0.5 and 0.8 cm, and 0.6 and 0.9 cm, respectively.

These six fragments belonged to very large vessels that probably have the proportions of pots (Figure 3.59). The profiles include vertical rims with slightly concave, straight or slightly convex sections, and one pot with an everted rim (Yahya 0117). The lips are round or tapering. The rim diameters that could be measured are comprised between 28 and 42 cm.

The decorations consist of friezes or panels painted black or brown on the outside surface, associated with a wide line painted on the lip down on the inside and outside rims (Figures 3.58–3.59). The recognizable arrangements include diamond chessboard in metops (Yahya 0105), columns filled with solid-black lozenges and triangles (Yahya 0140), cross-hatched hourglass associated with a cross-hatched half-circle (Yahya 0782), superimposed rows of cross-hatched triangles alternatively upturned (Yahya 0282), and an original fishbone pattern in metops associated with metops filled with a diagonal wavy line (Yahya 0009). In addition, vertical lines and probable concentric squares in metops were used (Yahya 0117).

3.3.4.3 Context

The only sherd that was recovered from Phase IVC2 (Yahya 0282) was found in Area C, east of the mudbrick building (Table 3.9, Figure 3.62). Four fragments come from Phase IVC1. One fragment is from outside the mudbrick building, in Areas F–G located west of it (Yahya 0782), while three are from inside the building in Room 3 (Yahya 0105), in Room 5 (Yahya 0009), and in Room 6 (Yahya 0117). One should, however, note that the ceramic from Phase IVC1 Room 5 (Yahya 0009) has sherds that come from this context and others from a Phase IVB6 context: a deposit of fill on a floor that runs over the building of Period IVC (context B.70.18). The sherd from Phase IVB6 (Yahya 0140) was found in a pit (Pit 9, context B.71.4.1).

3.3.4.4 Comparisons

As indicated above, these pots may be compared in terms of texture and fabrication to the other materials of Group B. The decoration made with a cross-hatched hourglass associated with a cross-hatched half-circle of Yahya 0782 (Figure 3.59, n°1) resembles that of Group B3 Yahya 1153 (Figure 3.56, n°6). Also, the composition of Yahya 0140 (Figure 3.59, n°4) resembles that of a bichrome ceramic discussed below (Yahya 1377). Beyond Tepe Yahya, one may only note that the decoration of the pot Yahya 0009 (Figure 3.59, n°3), especially the diagonal line in metop, is attested at Mundigak in Period IV (Casal 1961:fig. 89, n°383), which indicates a more recent chronological context, as well as at Sarazm in Tajikistan. Nevertheless, we are lacking of firm parallels for most of these ceramics. One may say that some of these vessels are not attested in Tepe Yahya Period V, while they do not seem characteristic of Period IVB.

3.3.5 Group B5: hole-mouth vases

Number of sherds: 6
Number of rims: 6
Contexts: Phase IVC1
Ware: very fine

Color: buff, pink, and red
Forms: hole-mouth jars
Decoration: painting
Comparisons: Group B, Southeastern Iranian Plateau Chalcolithic and Bronze Age ceramics, and original traits

3.3.5.1 Quantity

SEIP Group B5 is represented by six rim fragments (Table 3.10).

3.3.5.2 Description

Group B5 vessels are essentially made with a very fine fabric. Their color is mostly buff to pink (Figure 3.60), and one fragment is described as red (Yahya 1414; Figure 3.61, n°1). As noted on certain vessels presented before, one fragment has a cream-whitish slip (Yahya 0410; Figure 3.60, n°2). It is applied on both surfaces. In terms of texture, these ceramics are comparable to those of Group B discussed above. They are on average thicker than the ceramics of Groups A and B, except for the very large pots of Group B4. Their rim and wall thicknesses range from 0.5 to 1.4 cm and 0.4 to 1.1 cm, respectively.

These vessels are characterized by their hole-mouth shapes (inverted continuous rims) of medium to very large sizes (with maximum diameters on the body between 17 and more than 30 cm) (Figures 3.60–3.61). It is not possible to tell whether these vessels were deep (with proportions of goblets) as it is attested in Chalcolithic and Early Bronze Age assemblages of the Southeastern Iranian Plateau, in Kech-Makran and at Tepe Yahya (Period V; Lamberg-Karlovsky and Beale 1986: figs 4.31–4.32), or if they were shallow (which is less likely). The rim diameters are comprised between 12 and 30 cm. Most of these ceramics are slightly closed. The profiles are various. They include straight rim with tapering lip (Yahya 0701), concave rim with round lip (Yahya 1414, 0200, and 0887), concave rim with tapering lip (Yahya 0410), and concave rim with flat inward beveled lip (Yahya 1404).

The decorations are painted black or brown on the outside surface, accompanied by a black line painted on the lip down on the inside and outside rims. The line is replaced by a wide band on two sherds (Yahya 1404 and 0887; Figure 3.61, n°3, 6). The outside decorations include friezes painted on the rims (Yahya 0410) and panels placed on the rim and the body (Yahya 1404). The motifs include oblique ladders (Yahya 0200), crosses in metops (Yahya 0701), cross-hatched diamonds (Yahya 0410), and cross-hatched hourglasses in metops (Yahya 0887 and 1404). One can also mention the row of dots positioned on the rim of Yahya 1414.

3.3.5.3 Context

These fragments were recovered from Phase IVC1 (3) and "secondary contexts" (3) (Table 3.10, Figure 3.62). The sherds from Phase IVC1 are from Areas A-E (Yahya 0410) and Areas F–G (Yahya 0701 and 0887), outside of the mudbrick building. From "secondary context" were recovered Yahya 0200, 1404, and 1414. The context of the first one, context CW.73.T1.8, as indicated before, was assigned by T. W. Beale to Period IVC, and several beveled-rim bowl fragments were recovered from it. Yahya

1404 is from context XC.71.T2.5, which corresponds to areas excavated in the northern part of the site, stratigraphically disconnected from the mudbrick building. No detailed information could be obtained about the context of Yahya 1414 (BW.T6.2A).

3.3.5.4 Comparisons

Large hole-mouth jar is a form produced and used on the Southeastern Iranian Plateau, at a minimum from Tepe Yahya to Pakistani Makran, during the Chalcolithic and in the Bronze Age periods. They are attested at Tepe Yahya in Periods VI and V (Lamberg-Karlovsky and Beale 1986:fig. 4.15a–e and g–j; figs 4.31–4.32) in the late fifth and fourth millennia BC and in Pakistani Makran in Periods II to IIIb from the first half of the fourth into the third millennia BC. Rough parallels for the Yahya IVC2–IVB6 jars can be found within this chronological bracket. Jars with simple inverted rims with round or tapering lips are found from the oldest periods in Kech-Makran (Mutin 2007). The crosses in metops painted on Yahya 0701 (Figure 3.61, n°2) resemble those of Yahya 0788 (Figure 3.52, n°2), a bowl of Group B2. The dots on Yahya 1414 (Figure 3.61, n°1) are also attested on Group B materials discussed before, while the decorations made with hourglasses of Yahya 1404 and 0887 (Figure 3.61, n°3, 6) resemble decorations observed on vessels of Group B and on Proto-Elamite decorated jars. One can also add that the decoration of Yahya 0887 resembles that of more recent vessels found at Mundigak in Period IV (Casal 1961:fig. 67, n°198–198a). Beyond these comparisons, since we are lacking of solid parallels for the hole-mouth jars of Group B5, it is not possible to determine their cultural affiliation, but one may say that we have no exact match in the previous periods of Tepe Yahya, while little is known regarding this type of form in the context of Period IVB.

3.3.6 Group B6: necked-jars

Number of sherds: 20
Number of rims: 10
Number of complete profiles: 1
Contexts: Phases IVC2, IVC1, and IVB6
Ware: very fine, fine, and medium
Color: buff, pinkish, light-brown, and buff-greenish
Forms: medium to very large necked-jars
Decoration: painting
Comparisons: Group B, Seistan-Balochistan and Kech-Makran, and original traits

3.3.6.1 Quantity

SEIP Group B6 is represented by 20 fragments. They are one vessel with a complete profile, 10 rim fragments, and nine body fragments (Table 3.11, Graph 3.9).

3.3.6.2 Description

Group B6 includes various types of ceramic products, including different fabrics, surface treatments, and styles of decoration. Certain consistencies between several vessels enabled us to define some groups, but it is clear that separate cultural affiliations may be envisioned in Group B6.

The fabric of the vessels is very fine, with the exception of a few sherds (Yahya 0710, 0591, and 0877; Figure 3.64, n°3; Figure 3.65; Figure 3.67, n°4) with fine and medium fabrics (with a few to numerous small mineral inclusions). The fragments are mostly of buff to pinkish and light-brown colors, and several sherds have a buff fabric with a greenish hue (Yahya 0554, 0104, 0489, and 0222; Figure 3.64, n°1, 4-6; Figure 3.63, n°1, 3). A single sherd has a grey core (Yahya 0489). A series of sherds bear a buff slip or wash applied on the outside surface, similar to those observed on certain ceramics described before (Yahya 0103, 0605, 0104, 0221, 0222, 0817, and 0554; Figure 3.63, n°1-2, 4; Figure 3.64, n°1-2, 5-7, 11; Figure 3.66). Group B6 vessels are well-manufactured and carefully smoothed. Some vessels (such as 0710 and 0591; Figure 3.64, n°3, 9; Figure 3.65) however appear less well-fired than others (such as Yahya 0489; Figure 3.64, n°4). Several sherds illustrate that the necks were joint from the inside surface (at a minimum Yahya 0554, 0103, and 0591; Figure 3.64, n°1, 7, 9). This technological feature is frequently observed on necked-jars found on the Southeastern Iranian Plateau during Chalcolithic and Bronze Age times. Parallel strokes similar to those attested on some ceramics of Groups A-B are observed on the outside surface of Yahya 0103 (Figure 3.63, n°2). Overall, the vessels of Group B6 have rim and wall thicknesses that include brackets seen before on vessels of Groups A and B; they range from 0.2 to 0.8 cm and from 0.3 to 1.1 cm, respectively. One ceramic that can also be distinguished from the rest by its size, is, however, much thicker (Yahya 0056: RimT = 1.1 cm and WallT = 1.7 cm; Figure 3.68).

Group B6 includes close forms characterized by a short everted neck added to the body. Within this group are various types of profiles and sizes, including slightly close shapes to close shapes with more constricted necks (such as Yahya 0554 and 0605; Figure 3.64, n°1-2). Their proportions, estimated on the most complete sherds, roughly correspond to those of bowls and goblets (ratios MaxD/H = 1.15 to 1.65). The sizes are medium (MaxD = 13 to 18.5 cm) and large (MaxD = 20 to 26 cm), with rim diameters comprised between 7 and 22 cm. Two ceramics (Yahya 0056 and 1165; Figure 3.67, n°5; Figure 3.68) can, however, be distinguished by their very large sizes (MaxD more than 30/40 cm). The walls of Group B6 vessels are concave, with the upper part being inverted and the lower part everted. The orientation change is usually continuous, but it is marked by a carination on a few sherds (Yahya 0605, 0591, and 0489; Figure 3.64, n°2, 4, 9). The necks are short, convex and everted. Neck heights are comprised between 0.9 and 2.8 cm. The lips are either round, tapering, or flattened, and beveled in several cases (Yahya 0103, 0056, 0877, 1415, and 1416; Figure 3.64, n°7; Figure 3.67, n°1, 3-4; Figure 3.68). The two bases that could be observed are flat (Yahya 0605 and 0104; Figure 3.64, n°2, 6).

The decoration is painted black or brown. It consists of a panel painted on the outside rim and body, associated with a line or band painted on the lip down on the inside and outside surfaces of the rim. The single more elaborated decoration observed on an inside surface consists of a series of five hatches pending from the rim attested on Yahya 0591 (Figure 3.64, n°9). One can distinguish one group of jars (Figures 3.64-3.65) whose outside compositions are made with repeated solid-black, cross-hatched, hatched or concentric triangles used in superimposed rows, and/or sometimes alternatively upturned (Yahya 0104, 0554, 0710, 0221, 0489, 0222, 0363, and 0591). In one case these rows are interrupted by a row of chevrons (Yahya 0605), and in two other cases, they are associated with a frieze filled with dots painted above (Yahya 0221 and 0591). Frieze of dots is also present on the rim of another vessel (Yahya 0488; Figure 3.64, n°8); it is not clear in this example whether the motifs used

to decorate the body are hatched triangles. Hourglasses were also part of some decorations. They are cross-hatched in metops on Yahya 0056 and 0483 (Figure 3.68; Figure 3.64, n°12). On another ceramic (Yahya 0103; Figure 3.63, n°2), they are cross-hatched or solid-black in metops, and they alternate with a horned animal motif (ibex?) in metops. The second main group of decoration (Figures 3.66–3.67) includes jars decorated with friezes with upturned garlands painted on the upper part of the body (Yahya 0817, 1416, 1415, and perhaps 0877).

3.3.6.3 Context

Out of the 20 fragments, nine are from Phase IVC2; two from Phase IVC1; three from Phase IVB6; while six fragments come from "secondary contexts" (Table 3.11, Graph 3.9, Figure 3.69). In Phase IVC2, only two sherds were recovered from inside the mudbrick building: Yahya 1165 in Room 1 and the "masterpiece" Yahya 0103 (Figure 3.63, n°2) in Room 4. One sherd (Yahya 0314) was in Area C and two in Area A (Yahya 0363 and 0364; Figure 3.64, n°10), east of the mudbrick building, while four fragments were in Area G, west of it (Yahya 0483, 0488, 0489, and 0710; Figure 3.64, n°3-4, 8, 12). Among them, Yahya 0488 could be reconstructed with one sherd from this context and one from a Phase IVB6 context. From Phase IVC1, in Room 3 was found Yahya 0104 (Figure 3.64, n°6), the single vessel of Group B6 with a complete profile, while another sherd was found outside of the mudbrick building in Areas G-H (Yahya 0877; Figure 3.67, n°4). Yahya 0104 has a sherd that comes from Phase IVB6 (context B.71.T1.2.1). In Phase IVB6, two remarkable ceramics (Yahya 0591 and 0605; Figure 3.64, n°2, 9) were found in Trench BW, while the fragment of the very large jar Yahya 0056 (Figure 3.68) was in a test trench in Trench B. Out of the five sherds from "secondary contexts," two are from context CW.73.T1.Surface (Yahya 0221 and 0222). Although this context remains uncertain as it corresponds to a deposit on the surface of the mound, as indicated above, several beveled-rim bowl fragments and one low-sided tray sherd were recovered from the same context. In Trench BW, one fragment (Yahya 0554) was found in "secondary context" BW.71.7.6, which was probably in relation to the Period IVC complex (see above). Yahya 1416 (Figure 3.67, n°1) is from context BW.71.7.4, which might be connected to Period IVC as well; two beveled-rim bowl fragments and two sherds of Proto-Elamite decorated jars were found in it. No detailed information could be obtained about the two fragments from context B-BW.71.3 (Yahya 0817 and 1415).

3.3.6.4 Comparisons

Some ceramics of Group B6 resemble the style of Group B materials described before, such as those with painted garlands. The compositions made with triangles are on the other hand different from the ceramics described above. The groups of hatches painted on the inside rim of a jar (Yahya 0591; Figure 3.64, n°9) is reminiscent of a feature well-represented on materials from Kech-Makran during Periods IIIa and IIIb (mid-fourth - early third millennia BC). Examples are in a burial found at Miri Qalat, Trench IX Level 2 (Besenval 1997a:fig. 16). In Early Period IIIa, these hatches are repeated all around the inside rim (Mutin 2007), while it seems that interspaced series of hatches appeared later on the sequence of Kech-Makran (Late Period IIIa/Period IIIb; see also the canister-jars in Figure 3.116). The same feature is also observed at Shahr-i Sokhta. The vessel is a grey ware with painted hatches on the inside rim and an outside painted panel filled with cross-hatched tri-

angles alternatively upturned (Piperno and Salvatori 2007:fig. 398, n°7493). In the same burial was also a bowl with a painted swastika-like motif, which can be connected to Yahya SEIP Group A and Western Balochistan Ceramic Complex. Nevertheless, in spite of these relations, the fabric and texture of the vessel (Yahya 0591) from Tepe Yahya are different from those of the ceramics farther to the East. Additionally, the distinctive slip observed on the jars from Group B6 with painted decorations made with triangles is not attested at Shahr-i Sokhta and in Kech-Makran. Finally, D. T. Potts (2001:12) noted that the jar Yahya 0103 (Figure 3.63, n°2) has metops filled with hourglasses that resemble decorations of Jemdet-Nasr decorated jars, but that the horns which probably belong to a caprid are not part of the repertoire observed on this type of jar. Furthermore, as noted above, Yahya 0103 shares features (buff slip, decoration, and parallel strokes of tool) that are consistent with other vessels of Group B while the hourglass motif (also attested on Yahya 0483 and 0056; Figure 3.64, n°12; Figure 3.68) is not limited to the Proto-Elamite assemblage, as observed on other forms of Group B.

In sum, exact parallels are lacking for the vessels of Group B6. We are left with the impression that one vessel may be connected to the ceramic tradition of Seistan-Balochistan and Kech-Makran in Late Period IIIa and Period IIIb (Yahya 0591), but it is not exactly identical (could it be an imitation?). A series of sherds appear connected in decoration with other vessels of Group B, certain analogies to the Proto-Elamite materials should not totally be discarded, while another series of materials presents original characters. Regarding this last series, the possibility that they are more related to Period IVB should not be entirely ruled out, although they do not seem to match the styles that appear dominant in the assemblage of Period IVB.

3.3.7 Group C: polychrome vases

3.3.7.1 Description

A series of fragments is distinguished from the ceramics discussed above, because they are characterized by a painted polychrome decoration (Figures 3.70–3.71). These sherds probably represent four vessels. One of them (Yahya 0559) has a fine fabric (with small inclusions); one was not observed in the collection but is illustrated by D. T. Potts (Yahya 1377); and the rest have very fine fabrics that can be compared to the ceramics of Group B discussed above (Yahya 0588, 0686, and 0758).

One vessel (Yahya 0588; Figures 3.70, 3.71, n°3) was reconstructed from a series of ten sherds, including rim and body fragments. All these sherds show tight connections to one another in their fabric, form and decoration so that it may be assumed that they were part of the same ceramic, or perhaps of two ceramics to the maximum. Nine of these fragments come from a context assigned to Phase IVB6 (BW.71.T2.2a), and one is from Phase IVC1 (context BW/CW.71.7.2, Areas F–G). An additional fragment (Yahya 0758; Figure 3.71, n°4) found in the same context of Phase IVC1 is consistent with the features of these sherds. Although no reconstruction could be made, this sherd was very likely part of the same vessel or of the same type of vessel. The fabric of these fragments is very fine and has a pinkish to buff color. The form that could be partially reconstructed from the available sherds is a very large goblet (estimated ratio RimD/H = 1 and rim diameter = 31cm) with everted wall and rim. The wall is straight, while the rim is slightly convex. The lip is thickened and flattened. Rim and wall thicknesses of this goblet equal 0.5 and 0.4 cm, respectively. One sherd that one would associate to

this ceramic (Yahya 0758) has a carination; this sherd may indicate that the vessel was carinated on the lower part of its body. No base related to this ceramic was observed.

The decoration consists of a red color patch painted on the rim and most of the outside surface, with the exception of vertical panels left in reserve on the body. The red paint disappeared in several portions. A wide horizontal black line is painted on the red paint on the lip down on the inside and outside rim, and another one is painted below the rim. The panels are delimited by the latter, by two vertical lines painted black, and another horizontal line painted on the lower part of the body. The panels are filled with two columns of repeated blank triangles drawn in black. Some drops of black and red paint are visible on the inside surface. Some sherds show a panel with a creamier background color that might correspond to a wash or cream-color paint applied on the panel. This creamish color is not observed on all the fragments, but both the form and decoration of these sherds indicate if not the same vessel, the same type of ceramic production.

The second sherd with bichrome decoration (Yahya 0686; Figure 3.71, n°5) is a rim fragment very similar to the ceramic discussed above. Its profile is comparable and the outside surface has the same red and black decoration. Nevertheless, contrary to Yahya 0588, this rim fragment was clearly painted white on its inside surface. This sherd was found in a context assigned to Phase IVC2, but in the same area as Yahya 0588/0758 (Area G).

The third vessel (Yahya 1377; Figure 3.71, n°1) was not observed in the collection of the PMAE, but it is illustrated by D. T. Potts (2001:fig. 2.12B). It was recovered from Phase IVC1 Room 3. This ceramic, a medium size goblet (estimated ratio RimD/H = 1.10 and rim diameter = 18 cm) with an everted rim, can be compared to certain ceramics of Group B3. The organization of its decoration is also not very different from that of Yahya 0588. It includes a red color painted on the outside surface, with the exception of panels left in reserve on the rim and upper body. The panel is delimited by a horizontal black line painted on the lip down on the inside and outside rim, vertical lines, and another horizontal line painted below. In this case, the panel is filled with two columns of solid-black triangles and lozenges. Contrary to Yahya 0588, red paint is applied on the inside surface on the rim.

The last sherd with a bichrome decoration (Yahya 0559; Figure 3.71, n°2) is a rim fragment recovered from the same context as that of most of the fragments of Yahya 0588 (Phase IVB6, context BW.71.T2.2a). Its fabric, with visible mineral inclusions, is different from the previous ones. This black and red painted, buff ware has a profile and rim and wall thicknesses comparable to those of some of Group B3 vessels. Its rim diameter measures 24 cm. The decoration consists of a frieze filled with black hatched triangles delimited by two horizontal red bands themselves delimited by wide black lines on the inside surface. A black line is also painted on the lip down on the outside rim.

3.3.7.2 Comparisons

Overall, these polychrome vessels appear unique at Tepe Yahya. Yahya 0559 does not have any parallel beyond this site. The frieze of triangles of Yahya 0559 can roughly be compared to those observed on materials of Groups A and B as well as on materials from Shahr-i Sokhta Phases 8-6. These parallels are, however, too vague. The fabrics of Yahya 0588 and 0686 are similar to those of the ceramics of Group B while the profiles of these vessels and of Yahya 1377 have parallels among Group B3. The decoration of Yahya 1377 has analogies with that of one very large pot of Group B4

(Yahya 0140; Figure 3.58, n°5). On the other hand, the polychrome decorations of these three vessels remain original at Tepe Yahya. Broader and rougher parallels for bichrome and trichrome goblets from Tepe Yahya are to polychrome Aliabad ware and Aliabad-related materials found on the Southeastern Iranian Plateau mostly from the second quarter of the fourth millennium BC. The fabric and style of this last production are, however, different. As noted above, the usage of goblets with polychrome decorations tends to be more generalized in the Indo-Iranian Borderlands from around the middle of the fourth millennium BC, but tight connections to the polychrome materials from Tepe Yahya Period IVC are absent or rare. Possibly better comparable ceramics for the polychrome goblets recovered from Tepe Yahya seem to be at Chah Husaini in the Bampur valley. Ten sherds collected by Sir M. A. Stein at this site and held by the PMAE show features similar to those of the goblets found at Tepe Yahya (Figure 3.72). These ceramics were discussed by C. C. Lamberg-Karlovsky and D. Schmandt-Besserat (1977). The fabric of these fragments is fine and has a buff-reddish color. The few reconstructible forms include high goblets, with one (Figure 3.72, n°3) that may more specifically be compared to the materials from Tepe Yahya. It has quite a similar profile, although the rim diameter is smaller. The bichrome decoration of this vessel is comparable too. It consists of a red color painted on the outside surface of the vessel, with the exception of a vertical panel left in reserve. The panel is limited by two vertical black lines, like Yahya 0588, and filled with hatched hourglasses. A black line is painted on the lip down on the inside and outside rims. The red paint of this goblet and of the other polychrome ceramics from Chah Husaini has several wiped out portions as observed on Yahya 0588. Sir M. A. Stein noted that the red color of some ceramics from Chah Husaini was not as well fixed as the other colors painted on the vessels, and that it sometimes rubs off in powder (Stein 1937:130). The red color of the goblet from Tepe Yahya does not rub off in powder, but it shows other traces of wearing effect similar to some also attested on some sherds from Chah Husaini. With the exception of the polychrome material from Tepe Yahya, the bichrome production from Chah Husaini does not have exact parallels in Iran and Pakistan. However, the archaeological contexts and associated ceramics of the comparative materials from Chah Husaini do not provide any accurate chronological correlation for the goblets from Tepe Yahya. Most of the fragments of Chah Husaini from the collection available in the PMAE come from the surface of the main mound. Materials found in archaeological strata are few, and their contexts are uncertain. The other types of ceramics collected at Chah Husaini and the indications offered by Sir M. A. Stein provide information: the collection from Chah Husaini held by the PMAE includes a majority of Black-on-red ware and Black-on-buff ware related to Phases VB–A at Tepe Yahya. Sir M. A. Stein noted that "the painted pottery found both on the surface and at varying depths of the mound shows such common characteristics that it can safely be attributed to a single protracted phase of production" (Stein 1937:130). The rare indications with regard to the contexts show that some Husaini bichrome ceramics were found associated with Black-on-red ware in close or same contexts. Thus, bearing in mind some reservations, one can assume that these two productions were relatively contemporaneous, considering them in a large chronological bracket. Black-on-red ware would set the dating of the Husaini polychrome ceramics in a chronological bracket mostly placed before the mid-fourth millennium BC, anterior to Phases IVC2–IVB6 at Tepe Yahya. There is, however, no evidence for such material at Tepe Yahya in Period V.

3.3.8 Group D: black-on-red-slipped ware

Four painted ceramics can be distinguished from the rest of the decorated vessels from Tepe Yahya (Figures 3.73-3.74). These vessels are represented by three rim fragments (Yahya 0029, 0549, and 0790) and one body sherd (Yahya 0804). Their fabric is fine (small mineral inclusions are visible) and of buff to light brown color. The surfaces (at a minimum the inside surface) are covered with a reddish slip. These sherds were part of very large shallow bowls (with rim diameters measuring 35 and 38 cm), with relatively thick walls (rim and wall thicknesses are equal to 0.5-0.8 cm and 0.7-1 cm, respectively). They are painted black on the inside surface on the slip. The motifs observed are a cross-hatched triangle pending from the rim (Yahya 0029), two oblique lines associated with a parallel wavy line (Yahya 0549), a group of parallel thick hatches pending from the rim (Yahya 0790), and rectangles filled with solid-black hourglasses (Yahya 0804).

These four sherds were recovered from Phase IVC2 contexts. Three (Yahya 0549, 0790, and 0804) come from the same context (BM.71.3.1), which corresponds to a hearth associated with the latest floor of Room 1 (Potts 2001:11). Yahya 0029 was found in Room 5. Black-on-red-slipped ware has no parallels. One may only compare the motif observed on Yahya 0549 to that of two sherds of Black-on-Smooth Buff ware (Lamberg-Karlovsky and Beale 1986:fig. 4.39c, g).

3.4 Burnished ware

Number of sherds: 162
Number of rims: 83
Number of complete profiles: 2
Contexts: Phases IVC2, IVC1, IVB6, and IVB5
Ware: mineral-tempered (mostly), mineral- and vegetal-tempered (rarely)
Color: grey (mostly), black, buff, brown, and red
Forms: medium to very large size bowls and goblets, and necked-jars
Surface treatment/decoration: burnishing, painting in one case
Comparisons: northern Iran, Seistan, and Central Asia

3.4.1 Quantity

Burnished ware is represented by 162 sherds. The present corpus is composed of two sherds with complete profiles, 83 rim fragments, 16 bases, and 61 body sherds. As discussed below, several fragments described here as goblet rim fragments may also correspond to pedestal bases (Table 3.12, Graph 3.10).

3.4.2 Description

Burnished ware is a type of ceramic which is characterized by a particular shiny aspect of the inside and/or outside surface(s) of the vessels (Figures 3.75-3.76). The fabrics are mostly fine to medium mineral-tempered; they commonly include black, white, and shiny particles, and sometimes small holes that correspond to burnt out vegetal temper. Burnished ware is usually grey (to black) and the surfaces are in most cases darker than the core. There is, however, a series of fragments with red (Yahya 0111, 0161, and 0383; Figure 3.78, n°10, 13; Figure 3.75, n°8; Figure 3.79, n°9) and buff-to-brown (Yahya 0729,

0361, and 0795; Figure 3.77, n°5, 18; Figure 3.81, n°11) surface colors. Burnished ware is usually well-manufactured and fired. Overall, the rims and walls of these ceramics have roughly the same thicknesses throughout the different categories of shapes defined for this type of product. Rim thicknesses are mostly between 0.5 and 0.8 cm, and the average is 0.62 cm. A few marginal values of thinner (0.3 cm) and thicker (1 and 1.2 cm) fragments were, however, measured. Wall thicknesses range mostly from 0.5 to 1 cm; the average is 0.7 cm. A few marginal values (0.3 cm and 1.5 and 1.6 cm) are also recorded. These vessels, thus, appear thicker than most of, or as thick as the thickest, ceramics of the SEIP Groups A and B; their thickness is comparable only to that of a few bowls, the very large vessels of Group B4, some hole-mouth-jars of Group B5, and some necked-jars of Group B6. The particular burnished aspect of the surfaces results from rubbing the surfaces on leather-hard clay (usually moistened) with a tool such as a smooth stone or a bone fragment. The effect rendered results from compaction of the surface particles. The corpus presented here includes ceramics with inside or outside surfaces burnished, or with both inside and outside surfaces burnished. The vessels were either relatively evenly burnished all over the surface(s) or pattern-burnished, which consists of series of burnished bands usually horizontal and parallel to the rim alternating with bands left unburnished. In this case, it appears on certain fragments that the unburnished bands were made by scratching the surfaces. This left shallow grooves on the surface (Figure 3.76; Yahya 0108). While some fragments illustrate very regular and well-made burnishing, other sherds are poorly burnished. Burnishing is usually the only decorative aspect of Burnished ware; the single exception that illustrates association of burnishing and painting is represented by a small necked-jar (Yahya 0004; Figure 3.75, n°10; Figure 3.80, n°2). This jar is burnished on its outside surface only. The paint is red. The decoration is not completely visible. It consists of a band below the rim and lines painted on the body and radiating from the base.

Fourteen categories of forms are distinguished within Burnished ware (Figures 3.77–3.80). They are mostly open vessels (Categories 1 to 13); only a dozen of sherds recovered from the collection appear to have belonged to close shapes (Category 14). Categories 1 to 6 are simple shapes (the profiles are continuous) with slightly inverted to slightly everted rims. Categories 1 to 3 are defined on the basis of the ratio RimD/H estimated on the most complete fragments. Category 1 is represented by a single sherd (Yahya 0541; Figure 3.77, n°1), which corresponds to a shallow bowl (with a ratio RimD/H probably approximately equal to 2.5 to 3). This bowl has a slightly concave and inverted rim and a concave and everted wall. Its rim diameter is 18 cm. Contrary to the vessels of the following Categories 2 and 3, its lip is tapering. Categories 2 and 3 include ceramics with ratio RimD/H equal to around 2 and 1.5, respectively. The former corresponds to bowls, while the latter corresponds to deep bowls or shallow goblets. These ratios were estimated on two vessels with complete profiles. Overall, numerous rim fragments can be assigned to either Category 2 or Category 3. The complete profile of Category 2 (Yahya 1334; Figure 3.77, n°2) has a straight and vertical rim and a concave and everted wall. Its base is flat. The ceramic of Category 3 with a complete profile (Yahya 1132; Figure 3.77, n°3) has a similar profile, but it is deeper and its base is slightly concave. Overall, the other rim fragments of Categories 2–3 have the same type of profile. The lips of these vessels are usually round and sometimes flattened. These two categories include medium to large ceramics with rim diameters ranging from 15 to 30 cm. They are mostly equal to 20 to 25 cm; the average is 21.6 cm. The two

heights that could be measured are 9.6 cm for the complete profile of Category 2 (Yahya 1334) and 13 cm for the complete profile of Category 3 (Yahya 1132). Ceramics of Category 4 have a slightly different profile characterized by more everted rims (Figure 3.77, n°20-23). Their proportions are probably similar to those of Categories 2 and 3. The lips are the same as those of the vessels of Categories 2 and 3, and the rim diameters also range between 15 and 30 cm. The single fragment of Category 5 (Yahya 0260; Figure 3.77, n°24) also probably belonged to a bowl with proportions similar to the ceramics of Categories 2 to 4. Its profile appears comparable to those of fragments of Categories 2 and 3, but its lip is tapering. Its rim diameter measures 20.5 cm. A single sherd was assigned to a separate category, Category 6, because of its different everted and straight rim with a tapering lip (Yahya 0249; Figure 3.77, n°25). Its rim diameter measures 20 cm.

Contrary to the previous ceramics with simple profiles, ceramics of Categories 7 to 12 (Figure 3.78) are characterized by more complex profiles with slightly to frankly protruding lips. The proportions of these vessels are those of bowls and deep bowls similar to the ceramics of Categories 2 to 6. Categories 7 to 12 correspond to medium to large vessels with rim diameters measuring 15 to 30 cm, although a small (RimD = 11 cm) and a very large ceramic (Yahya 1331: RimD = 40 cm; Figure 3.78, n°17) are recorded. The average is 24 cm. Category 7 includes vessels with short vertical rims and concave and vertical or slightly inverted upper walls. The lips of these ceramics are round or slightly flattened. Category 8 is a variant of this category with everted rims and walls. Fragments of Category 9 have concave and vertical or slightly inverted rims and walls similar to those of Category 7, but their lips are flat. A variant of Category 9 with everted wall is represented by a single sherd (Yahya 1196; Figure 3.78, n°14) included in Category 10. Vessels of Category 11 resemble those of Category 9, but their lips are more protruding. One can underscore one of them (Yahya 1331; Figure 3.78, n°17) which has a very large size and a carination below the rim. Category 12 is a variant of Category 11 with fragments with everted rims and walls.

As indicated above, although Category 13 is presented here as goblets (Figure 3.79), certain rims of this category of Burnished ware might actually have been part of pedestal bases of the type attested at Tepe Hissar. Category 13 includes vessels with ratios RimD/H probably comprised between 1 and 1.5 as seen from the most complete fragments. These ceramics correspond to goblets, although it is possible that some of the fragments were part of bowls with ratios RimD/H superior to 1.5 (Yahya 0791; Figure 3.79, n°6). Ceramics of Category 13 are mostly large size vessels with rim diameters superior to 20 cm and up to 30 cm on one unusual fragment (Yahya 0655; Figure 3.79, n°12). One small rim diameter of 14 cm is, however, recorded (Yahya 0685; Figure 3.79, n°1). The average is 22.7 cm. These ceramics have simple conical profiles with everted rims and walls. The walls are mostly convex, although a few straight and concave walls are observed. Some of the sherds show a slight inflexion located below the rim, with the rim being slightly more everted than the wall (Yahya 0108, 0397, 0383, and 0342; Figure 3.79, n°7-10). Most of the lips are round while beveled rims are observed (Yahya 1147 and 0655; Figure 3.79, n°11-12).

Category 14 groups all the close shapes of Burnished ware (Figure 3.80). It includes five rim fragments and six body sherds. The rim fragments belong to necked jars of different profiles and sizes (RimD = 4.5 to 15 cm) with everted rims and inverted and concave upper walls. The vessel Yahya 0004 deserves to be underscored (Figure 3.80, n°2). The profile of this vessel was approximately

reconstructed on the basis of several fragments. As noted above, it is the only example of painted Burnished ware. In Category 14 are also body fragments with a carination, which likely belong to close shapes (Figure 3.80, n°7-10). At a minimum, these sherds indicate that carinated vessels were produced in Burnished ware.

Finally, 16 bases of burnished vessels can be mentioned (Figure 3.81). As seen before, the base of the vessel with a complete profile of Category 2 is flat (Figure 3.77, n°2), while that of Category 3 complete profile is slightly concave (Figure 3.77, n°3). Overall, most of the other bases are flat. Their diameters range from 6 to 8.5 cm. The lower walls associated with them are everted and slightly concave, straight, or slightly convex. These bases could have belonged to shallow bowls, bowls, and deep bowls. In particular, a flat base with a concave and less everted wall (Yahya 0930; Figure 3.81, n°12) may be compared to that of the complete profile of Category 3. Two short feet can be distinguished; their diameters measure 4 and 4.8 cm. Their lower walls are concave and less everted (Yahya 0142 and 0729; Figure 3.81, n°10-11). These bases could have belonged to deeper forms. Finally, three bases are radically different from the rest and indicate unusual types of forms. One is a small flat base with vertical and slightly concave lower wall (Yahya 0731; Figure 3.81, n°13). Its diameter measures 5 cm. One is a slightly tapering round base measuring 6.3 cm (Yahya 0412; Figure 3.81, n°14). The last one is a foot measuring 1.4 cm in height and 4 cm in base diameter (Yahya 0678; Figure 3.81, n°15).

3.4.3 Context

Of the 162 fragments of Burnished ware, around 30% (51 sherds) are from contexts assigned to Phase IVC2; around 30% (48 sherds) from Phase IVC1; while around 11% (18 sherds) are from Phase IVB6 (Table 3.12, Graph 3.10). The rest consists of two fragments from Phase IVB5 and 26.5% (43 sherds) found in "secondary contexts." The majority of the diagnostic sherds (complete profiles, rims and bases) also come from Phases IVC2 and IVC1. In Phase IVC2, most of the fragments come from outside of the mudbrick building, with 28 sherds in areas located west of it (Areas F-H) and ten sherds in Areas A-C, east of it (Figure 3.82). Among them is Yahya 1132 (with a complete profile; Figure 3.77 n°3) from Area B. The fragments found inside the building are five sherds in Room 1, four sherds in Room 5, one sherd in Room 3, two sherds in Room 4, and one sherd in Room 6. From inside the building in Phase IVC2 were recovered several relatively well-preserved and diagnostic fragments such as Yahya 1147, 1156, 0108, and 0022 (Figure 3.75, n°7; Figure 3.77, n°6, 21; Figure 3.79, n°11). In Phase IVC1, more fragments than in Phase IVC2 (half of the IVC1 corpus) were reported from areas located inside the mudbrick building: one sherd was in Room 1, 14 sherds were in Room 5, one in Room 3, three in Room 4, and three in Room 6. As for the second half (26 sherds), the majority was in areas located west of the mudbrick building and three sherds were found east of it. From inside the building can be mentioned the "masterpieces" Yahya 0001, 0002, 0004, and 1334 in Room 5 and Yahya 0791 in Room 1 (Figure 3.75, n°2, 6, 10; Figure 3.77, n°2; Figure 3.78, n°19). From outside the mudbrick building are Yahya 1331 and 1335 (Figure 3.78, n°15, 17). One should add that Yahya 0004 which was recovered from Room 5 has sherds found in both IVC1 and IVB6 contexts. Fragments from Phase IVB6 are in majority from areas located east of the mudbrick building (Areas A-E). One sherd (Yahya 0795; Figure 3.77, n°5) comes from a surface that seals an infilling or a brick fall in Room 1b (context BM.71.1.1). Two other fragments (Yahya 0142 and 1344; Figure 3.81, n°10)

were found in a pit dug into the IVC levels (Pit 8), while four come from areas located west of the mud-brick building. In Phase IVB5, one sherd (Yahya 0999) was recovered from a fill located east of the Persian Gulf Room (context B.70.8), while the second one from Phase IVB5 (Yahya 0163) comes from a fill in the B-C Balk (context B-C Balk.71.15).

Forty-three fragments are from "secondary contexts":

- In Trench A, two fragments were found in context A.75.T8.12 (Yahya 0394 and 0397; Figure 3.79, n°8) and one sherd in context A.75.T7.4 (Yahya 0373). As discussed above regarding the beveled-rim bowls and a sherd of Group A, the former can be connected to the IVC occupation. No information could be obtained about the latter context.
- In Trench B, one sherd (Yahya 1050) comes from context B.68.10. No detail was found about this context, but the deposits excavated in 1968 in Trench B mostly correspond to more recent occupations. The same might be said about context B.69.T5.1, where two fragments were found (Yahya 1104 and 1105; Figure 3.78, n°18). No detailed information was found about contexts B.70.T1.10 (that contained Yahya 0066; Figure 3.81, n°6), B.71.2 (that contained Yahya 0155), B.73.2.6 (with Yahya 0191), B.73.3 (with Yahya 0953), and that of one sherd (Yahya 0161; Figure 3.75, n°8), which label is partly missing (context B.71).
- The sherd from context B–C Balk.71.20 (Yahya 0890; Figure 3.78, n°11) is probably related to IVC or IVB occupations since this context and those excavated below, above and around are assigned to these periods.
- In Trench C, one sherd was found in context C.68.T1-2.8 (Yahya 0123) and one from context C.68.5 (Yahya 0983), which were assigned by T. W. Beale to Period VA.1/IVC and Period IVB, respectively (Lamberg-Karlovsky and Beale 1986:330). Two sherds are from context C.68.T6.9.2 (Yahya 0969 and 1353), where one beveled-rim bowl fragment and one low-sided tray sherd were found. No information could be obtained regarding this context, but context C.68.T6.9 was assigned to Period VA.1-IVC (Lamberg-Karlovsky and Beale 1986:330). Two fragments were recovered from context C.69.5 (Yahya 0964 and 0965; Figure 3.77, n°17; Figure 3.81, n°7), which was assigned to Period VC by the same author (Lamberg-Karlovsky and Beale 1986:330).
- In Trench CW, one sherd (Yahya 0948; Figure 3.79, n°4) is from context CW.71.T1. As seen before (see discussion regarding the contexts of the beveled-rim bowls), contexts and materials related to the complex of Period IVC were excavated in this test trench. The same may be said about the fragment from context CW.71.T1.5 (Yahya 0940), which corresponds to a series of floors likely related to the IVC complex (Beale, report CW/BW/B 1973:5–16). No detail was obtained about the context of one fragment (Yahya 0270 from context CW.73.T1.3). On the other hand, from the same test trench was recovered Yahya 0202 (Figure 3.80, n°8) from context CW.73.T1.8. A concentration of beveled-rim bowls was noticed in this context (Beale, report CW/BW/B 1973:35). According to the excavator, although this context appeared first stratigraphically anterior to the complex of Period IVC, the layers located above did probably not seal the underlying contexts. The related assemblage is indeed mixed; it includes material from Period IVB and the area was interpreted as a dump into IVB times. Also, this context was finally assigned to Period IVC in the 1986 publication of the Early Periods at Tepe Yahya (Lamberg-Karlovsky and Beale 1986:333). The contexts of four other sherds from Trench CW could not be detailed (Yahya 0260 and 0261 from context CW.73.1 and Yahya 0249

and 1346 from context CW.73.1.5; Figure 3.77 n°4, 24–25).

- In Trench BW/CW, one fragment was found in context BW/CW.71.12 (Yahya 0677; Figure 3.75, n°1). As seen before, this context corresponds to the construction surface of the buttressing of the IVC complex above the rubble level of Period VIA (Stone, report BW-CW 1971:98 and 109). Two low-sided tray sherds and three beveled-rim bowl fragments were recovered from this context. Context BW/CW.71.12.1, which contained two fragments (Yahya 0678 and 1345; Figure 3.81, n°15), was assigned to Periods VII–VC by T. W. Beale (Lamberg-Karlovsky and Beale 1986:330). No information was found about context BW/CW.71.8.3a with two fragments (Yahya 0685 and 1369; Figure 3.79, n°1) and context BW-CW Balk.71.4 with one sherd (Yahya 0785).
- In Trench BW, the fragment Yahya 1196 (Figure 3.78, n°14) comes from context BW.69.T5.6. The few sherds associated with this fragment seem to relate mostly to Period IVB. From context BW.71.7.4 was found a series of sherds (Yahya 0527, 0528, 1347, 1348, 1349, 1350, 1351, and 1352; Figure 3.77, n°16, 20). As indicated above, this context might be connected to Period IVC and two beveled-rim bowl fragments and two sherds of Proto-Elamite decorated jars were found in it. As for the sherds from B–BW contexts, one (Yahya 0171) was found in context B–BW.71.7, which, according to E. Stone (report BW 1971:37), seems in relation to the excavation of, and in contact to, the buttressing of the complex of Period IVC. No detailed information could be obtained about the second one (Yahya 0815 in context B-BW.71.3).

In sum, less than half of the fragments from "secondary contexts" may be related to the IVC occupation. There are materials reported from older contexts. One can suppose that there were intrusions in these contexts as other fragments from the same contexts also indicate more recent dates. There are also sherds of Burnished ware from more recent contexts. These sherds may be intrusive in these contexts or may also correspond to more recent Burnished ceramics as Burnished ware was still produced, with changes, in later occupations.

3.4.4 Comparisons

Parallels for Burnished ceramics in general are extensive, but exact equivalents for those found at Tepe Yahya are not always evident. In Kerman, J. Caldwell mentioned ceramics with burnished surfaces from uncertain contexts that appeared to him as posterior to Tal-i Iblis Period IV. The materials he illustrated are necked-jars (Caldwell 1967: 199, fig. 30, n°1, and pl. 13). The chronological position of these ceramics, posterior to Iblis Period IV, agrees with the dating of Tepe Yahya Period IVC, but we do not know, on the limited basis of descriptions and illustrations, if they are similar to those found at Tepe Yahya. No evidence for burnished material is mentioned so far southeast of Tepe Yahya for a context chronologically compatible with Period IVC. The only examples are from more recent contexts at Tepe Bampur in the Bampur Valley, and they include burnished and painted ceramics (Period IV.2–3, Period V, and Period VI: De Cardi 1970:287, 294, 306, 310, 314–316, figs. 27, 42–43). Burnished ceramics are also reported in a chronological context mostly more recent than Tepe Yahya Period IVC at Khurab in the same valley (Stein 1937:Khur.D.245, pls. 15, 34). Farther east, streak-Burnished ware is attested in Kech-Makran from Period IIIc, which is dated to around the middle of the third millennium BC (Besenval 2005:7; Didier 2007). The types found in Kech-Makran are similar to those reported from Tepe Bampur.

Parallels for Burnished ware at Shahr-i Sokhta Period I Phase 10 are two conical goblet rims found in architectural context (Amiet and Tosi:1978: 22, fig. 3; Figure 3.83, n°3-4). The context is dated to the late fourth millennium BC, and the forms of these ceramics resemble Yahya 0108 and 1147 from Tepe Yahya (Figure 3.75, n°7; Figure 3.79, n°7, 11). Furthermore, the fragments from Shahr-i Sokhta were recovered in association with Proto-Elamite tablet and cylinder-seals. As suggested for the conical goblets from Tepe Yahya, those from Shahr-i Sokhta might also correspond to pedestal stands. Other examples of Burnished ware from Shahr-i Sokhta are necked-jars from burial deposits. The materials associated with a series of them are of a more recent date (Piperno and Salvatori 2007:fig. 9, n°6398; fig. 731, n°8154), while another series of jars were found in burials in association with painted, grey ceramics that stylistically compare to Yahya SEIP Group A and Western Balochistan Ceramic Complex (Piperno and Salvatori 2007:fig. 310, n°6572; fig. 371, n°7110; fig. 398, n°7491; fig. 410, n°7530; fig. 551, n°7564; fig. 558, n°7572; fig. 592, n°7965; fig. 609, n°7993; fig. 778, n°8569; fig. 834, n°8207). Two burnished bowls were also found in one of these burials (Piperno and Salvatori 2007:fig. 549, n°7560 and fig. 550, n°7561). Two additional necked-jars found in a burial (Piperno and Salvatori 2007: ig. 368, n°7102 and 7103) may probably be placed on the same chronological horizon.

With the unclear exception of Tal-i Iblis, Shahr-i Sokhta has, thus, provided the geographically and chronologically closest, albeit rare, parallels for Burnished ware found at Tepe Yahya. Production of Burnished ceramics is more extensively attested in northern Iran. Burnished grey ware is indeed at Tepe Hissar in Period II, in which such material dominated the ceramic assemblage (Schmidt 1937: 111-116, figs 67-70, Pls XXIII, XXV, and XXVI; Dyson and Remsen 1989:figs 1, 16, 27, 33-34; Dyson 2009; Figure 3.83, n°1-2). One can note among the burnished materials from this site the conical pedestal stands that appear similar to the conical goblet rims reported from Tepe Yahya and Shahr-i Sokhta (Figure 3.83, n°1). As indicated above, it is not impossible that certain of the goblet rims from Tepe Yahya (and those from Shahr-i Sokhta) were in fact such base fragments. Burnished ceramic was also recovered from Tureng Tepe (Wulsin 1932: Pls IV-XIII), Shah Tepe (Arne 1945:171-185), and Yarim Tepe (Stronach 1972:23). The date of apparition of Burnished ceramics in northern Iran, in the second half of the fourth millennium BC (Cleuziou 1986: 232), and more specifically the date of Tepe Hissar II, situated in the last third of the fourth millennium BC (Dyson 2009), agree with their presence at Tepe Yahya in Period IVC. We are, however, lacking of exact parallels.

Burnished grey ceramics were also discovered at Tepe Sialk and Tepe Arisman. The recent excavations conducted at Tepe Arisman provided such materials in Sialk III-related Period, although the quantities reported are low compared to the other productions of this period (Group IC: Boroffka and Parzinger 2011:100, fig. 53). Burnished material is also reported from the following Sialk IV-related Proto-Elamite period represented at Tepe Arisman, in relatively low quantities (Group C: Helwing 2011a: 198, Cat. 47, 110, 114, 117-118, 124, 140-142, 178, 205, 208-209, 222, 252, 259, 264-265, 269, 276-277, 280-288, 292-294, and 300-303). The Sialk III-related occupation at Tepe Arisman is dated to the mid-fourth millennium BC, while the Sialk IV-related one is situated in the late fourth millennium BC (3300-3100 BC: Helwing 2011a:219; Helwing 2011c; Boroffka and Parzinger 2011:132). With the exception of a few vessels from Tepe Arisman in the Proto-Elamite period, the shapes of burnished material reported from this site are essentially different from those

recovered from Tepe Yahya, and the specific groove decoration attested at Tepe Arisman is not observed at Tepe Yahya.

Burnished ceramics were identified in the Tehran Plain at Barlekin (Burton Brown 1981:pl. I, n°338 and pl. VIII, n°311). They were also part of the assemblage of the Kura-Araxes complex which occupied Caucasia and northwestern Iran during the fourth and third millennia BC (see Rothman 2003; Palumbi 2008), and Burnished ceramics were found in Mesopotamia at Tell Brak (Oates 1985:fig. 1, n°3; Oates 1986:fig. 5, n°87) and at Khafadjeh, around the Jemdet-Nasr and Early Dynastic I periods (Frankfort 1936:55–56, fig. 49). This technique was also known as far as Egypt in the Nagada culture and period.

Some 1,200 km east of Tepe Hissar and more than 1,550 km northeast of Tepe Yahya, Burnished ceramics composed an important part of the local assemblage of Sarazm in Tajikistan (Lyonnet 1996). The exact dating of the occupations reported from Sarazm is still an on-going discussion. The site was settled during the fourth and third millennia BC, and the bulk of the occupation seems mostly dated to the mid to late fourth and first half of the third millennia BC. Burnished ceramics are reported throughout the chronological sequence of the site. They are of black and grey colors, and buff/brown to reddish colors. As observed on a few sherds from Tepe Yahya (Yahya 0161; Figure 3.75, n°8), buff/brown to reddish color materials from Sarazm sometimes bear black portions resulting from the firing.

Beyond the Persian Gulf, a burnished carinated necked-jar was recovered from Ra's al-Hamra in Oman. This ceramic is dated to the end of the fourth millennium BC (Didier and Méry 2012). The shape of this vessel can be compared to the few carinated body fragments found at Tepe Yahya, but it seems to better match examples from Mesopotamia. This burnished ceramic is not unique beyond the Persian Gulf as S. Cleuziou already reported fragments from this area (Cleuziou 1986).

As indicated above, the technique that consists of burnishing ceramics was widely used during Chalcolithic and Bronze Age periods, and plain burnishing and pattern-burnishing are both attested. Nevertheless, all the forms found at Tepe Yahya do not have exact counterparts in the areas mentioned above. The closest parallels are at Shahr-i Sokhta. Evidence for Burnished ceramics in Kerman and even on the Southeastern Iranian Plateau in contexts contemporary with Tepe Yahya Period IVC are lacking, and the only somewhat comparable local production that shows similar surface treatment is represented by Lapui ware found in Period VA (Lamberg-Karlovsky and Beale 1986:55–58). This ware is, however, older and chronologically separated from Tepe Yahya IVC by Aliabad ware and related period, which does not contain any burnished material. It, thus, seems likely that the Burnished ceramics of Period IVC illustrate connections to an outside cultural sphere. Shahr-i Sokhta represents a track of investigation, but the "core" for Burnished ceramics represented in the northern fringe of Iran (in the Kura-Araxes occupations, the Gorgan Plain and Turkmenistan, discussed in Chapter 1) appears as the best chronologically possible "source" for the materials from Tepe Yahya. Further examination and comparative analysis with materials from northern Iran is required to confirm this.

Our analysis of the materials from the collection of Tepe Yahya allowed the distinction of several types of forms of Burnished ware that appear consistently mostly distributed in contexts related to the complex of Period IVC and overall in Phases IVC2 to IVB6. This type of product then continued into Period IVB, although changes are noted (see Potts 2001:fig. 7.9E–F, I, fig. 4.36; Lamberg-Karlovsky and Tosi 1973:figs 129–30).

3.5 "Face pots"

Another connection to the northern areas of Iran is represented by two vessels (Yahya 1394 and 1395; Figure 3.84) originally referred to as "face pots" (Lamberg-Karlovsky 1970:81). These ceramics were found in a test trench in Trench BW (test trench 6) in which a large fragment with an ear-lug (Yahya 1393; Figure 3.16, n°7), Burnished ware and beveled-rim bowls were reported (Lamberg-Karlovsky 1970:81).

The first vessel has red paint, buff slip, grooves, one stud, and a nose-lug (Yahya 1395; Lamberg-Karlovsky 1970:81, fig. 31L). The panel painted on the outside surface is filled alternatively with vertical red bands and bands in reserve. The second vessel has a black burnished outside surface, grooves, studs, and a nose-lug (Yahya 1394; Lamberg-Karlovsky 1970:81, fig. 31K). The sherd Yahya 0407 found in Phase IVC2 Area C may have been part of the latter or of the same type of vessel (Figure 3.84, n°3).

Studs similar to those observed at Tepe Yahya on Yahya 1394 and 1395 were also observed at Tal-i Ghazir (Whitcomb 1971:pl. ID). However, relations to the northern areas are evident. When discussing these ceramics C. C. Lamberg-Karlovsky connected them to the Jemdet-Nasr jars and also mentioned parallels from Yanik Tepe and Shah Tepe in northern Iran (Burney 1961:pl. XLIII, n°12; Arne 1945:pl. XXXIX, 268 and S. 206, abb. 412 a-b, 323) and connections to Anatolia and southeastern Europe. One may add that burnished material with studs is well-attested in the Kura-Araxes (Palumbi 2008:figs. 2.8, 5.2, 5.6, 5.8).

3.6 A Sialk III fragment (?)

From Phase IVB6 was reported a sherd described as a black-on-red washed buff ware with a painted leopard (Yahya 1210; see Potts 2001: 81, fig. 3.13 G; Figure 3.85). This fragment was found in Trench A, in an area situated above Areas A-E of Phase IVC2. It is decorated with a leopard painted black on the outside surface and is described as "in skid position" (Potts 2001:81). The leopard is associated with a chessboard pattern. D. T. Potts indicated parallels for the "skid leopard" at Tepe Sialk Period III6-7b, at Tepe Hissar in Period IC, and in the Kangavar Valley at Seh Gabi mound F (see Potts 2001:81; Dyson 1965:238; Young and Levine 1974:fig. 14.14). Recent investigations at Tepe Arisman provided additional examples of such decoration from deposits assigned to Sialk III-related Period (Boroffka and Parzinger 2011:fig. 33, n°219-225). The style illustrated on those sherds is not exactly the same as that observed on Yahya 1210. Metop filled with a chessboard pattern is also attested at Tepe Arisman (Boroffka and Parzinger 2011:fig. 35, n°250).

3.7 Nal ware and Amri ware

Two sherds recovered from Tepe Yahya deserve specific discussion (Figure 3.86). One is a buff goblet or bowl fragment found in Trench C in context C.68.T6.6 (Yahya 1405). It measures 9.5 cm in rim diameter and its profile includes vertical straight wall and rim and a carination located on the body. It is characterized by its outside painted decoration that includes orange-red and black painting. The decoration consists of two superimposed friezes filled with a zigzag band. The bands are designed in black and infilled in orange-red (Lamberg-Karlovsky 1970:95, fig. 38A, pls. 33-34). This ceramic was immediately compared to Nal-type ceramics defined in eastern Pakistani Balochistan and the context in which it was found was first assigned to Period VA (Lamberg-Karlovsky, Lamberg-Karlovsky 1970:95, fig. 38A,

pls. 33-34). It was later included within Phase IVC2 (Potts 2001:Appendix A). The same motif and comparable forms from Nal are illustrated by H. Hargreaves (1929:pl. XVII n°51; pl. XVIII, n°6, 8-13). The dating of Nal-related ceramics has recently been reappraised thanks to the work conducted by U. Franke at Sohr Damb/Nal (Franke-Vogt 2005a, 2005b). The material with such style belongs to the newly defined Sohr Damb Period II, which is radiocarbon dated to 3200/3100-2700 BC (Görsdorf and Franke-Vogt 2007). As discussed in Chapter 1, Nal ceramic tradition seems best represented in the southern half of eastern Pakistani Balochistan, but it is also attested in the northern part of Balochistan up to southern Afghanistan. The sherd from Tepe Yahya is not unique in southeastern Iran. Several fragments of Nal ware are reported from Shahr-i Sokhta Period I (Amiet and Tosi 1978:fig. 4). Nevertheless, as stressed in Chapter 1, it is important to repeat that the term "Nal ware" probably included several separate, yet somewhat related styles of polychrome ceramics.

The second ceramic (Yahya 1406) was recovered from the surface of Tepe Yahya (Lamberg-Karlovsky 1970:95, pl. 34). It is a small bowl with an everted rim and a convex upper wall measuring approximately 7.5 cm in rim diameter. The decoration is painted black and red on the outside surface and includes parallel lines that delimit a frieze filled with cross-hatched triangles alternatively upturned. As already stated in 1970, this ceramic has counterparts at Amri in the Pakistani province of Sind (Lamberg-Karlovsky 1970:95, pl. 34). Parallels seem indeed to be found in Amri Period I (see Casal 1964), and perhaps more specifically in Amri Period ID (Casal 1964:fig. 65, n°220, 222). U. Franke recently placed Amri ID on the same horizon as Balakot Period I and dated Balakot I to 3100/3000-2600 BC (Franke-Vogt 2005c:98, 101). Similar decoration is also attested at Siah Damb, Period II, Phase III (assigned to Late Anjira Period III) and in the Surab Valley (De Cardi 1965:fig. 15, n°64; see De Cardi 1983:67, fig. 16, n°8).

3.8 Plain wares

The present analysis of ceramics from Tepe Yahya Period IVC is primarily focused on diagnostic materials that allow discussion regarding cultural and chronological relationships during this period. However, a description of the assemblage of this period is not complete without taking into account plain wares. Plain wares are not evident chrono-cultural indicators so that we limited our selection of plain wares to contexts of Phases IVC2, IVC1, and IVB6, and only a few "secondary contexts" that clearly relate to these phases. Given the mixes that occurred in some cases at Tepe Yahya and the absence of solid parallels for the plain wares, one should not dismiss the possibility that some of those presented here are intrusive from Period IVB or Period V. Plain ware sherds were not as systematically counted and detailed as the fragments of the productions discussed before. The corpus grouped here nevertheless allows an overview of the main categories of forms present at Tepe Yahya.

Plain wares are classified into two groups: vessels with very fine-to-fine fabrics and vessels with medium-to-coarse fabrics. In addition, two specific series of fragments with textile and mat impressions are included.

3.8.1 Very fine and fine plain ware

3.8.1.1 Quantity

Very fine and fine plain ceramics are represented here by 19 fragments including three vases with complete profiles, 12 rim sherds, three bases, and one handle (Table 3.13, Graph 3.11).

3.8.1.2 Description

These fragments include fabrics with no visible inclusions and fabrics with several small inclusions. The colors reported range from buff to red, including orange, brown and pinkish materials. The forms are (Figure 3.87):

- Miniature open vases (Yahya 0293, 0663, and 0327);
- Various profiles of bowls including vessels with simple rims and more sophisticated rims (round, tapering, flat, beveled, and protruding: Yahya 1144, 1161, 1183, 1168, 1172, 1129);
- Ceramics with proportions of goblets (Yahya 0238 and 0682) and bases that are perhaps connected to goblets (Yahya 0378 and 0303);
- Hole-mouth jar (Yahya 0121);
- Jar (Yahya 1141);
- Bottle (Yahya 1125);
- Ledge-rim jars (Yahya 0721);
- And one handle.

3.8.1.3 Context

Of the 19 fragments represented in our corpus, 14 were reported from Phase IVC2 contexts; four from Phase IVC1; and one from "secondary context" (Table 3.13, Graph 3.11). Five of the sherds from Phase IVC2 were recovered from inside the mudbrick building: in Room 1a(3), Room 2(1), and Room 4(1); five from the areas located east of it: Area A(1), Area B(1), and Area C(3); and four from Area G located west of it. From Phase IVC1 are found one fragment in Room 4; one in Areas A–E, east of the mudbrick building; and two in Areas F–G, west of it. The fragment from "secondary context" (Yahya 0682) is from context BW/CW.71.12, which corresponds to the construction surface of the buttressing of the building of Period IVC (Stone, report BW-CW 1971:98 and 109). Two low-sided tray fragments and three beveled-rim bowl sherds were found in the same context.

3.8.2 Medium and coarse plain ware

3.8.2.1 Quantity

Medium-to-coarse plain ware is represented by 61 sherds. They are a majority of rim fragments (49), six ceramics with complete profile, four handles, one base, and one body fragment (Table 3.14, Graph 3.12).

3.8.2.2 Description

These ceramics include vessels with fabric containing several or numerous mineral particles larger than 0.5 mm and vessels with both mineral and vegetal inclusions. Several categories can be distinguished on the basis of the size, quantities and types of tempering materials: black, white, and red inclusions, and presence/absence of vegetal temper. The fabric colors range from buff to red, and include orange, brown, pinkish, purple, and grey colors. One vessel, heavily tempered (Yahya 0552; Figure 3.89, n°18), is included here, although its outside surface seems to be covered with a whitish paint or wash and may include traces of red paint. The same may be said about Yahya 0613 (Figure 3.89, n°26). Another fragment (Yahya 0707; Figure 3.88, n°5) seems also to have been covered with a whitish wash. Several of these fragments have smoke-blackened traces that probably result from firing activities.

The forms identified are (Figures 3.88-3.90):

- Miniature open vessels (Yahya 1162, 0292, and 0499);
- Various types of profiles of bowls, from shallow to deep bowls, of small to very large sizes, with simple to more sophisticated rims (tapering, round, flat, protruding, beveled, and club; Figure 3.88, n°4-13, 18-19);
- Goblets (Yahya 0069, 0347, 1155, 0551; Figure 3.88, n°14-17);
- A relatively important series of close shapes, including slightly close to very close forms, of small to very large sizes, and with different types of rims (Figure 3.89);
- Handles (Yahya 1163; Figure 3.90);
- And a single type of "shovel", or "large-spoon-shaped" vessel (Yahya 0433; Figure 3.90).

Although parallels are difficult to ascertain for these ceramics, one can mention that certain slightly close shapes, which appear to be beakers, such as Yahya 0115, 0015, and 1192 (Figure 3.89, n°4, 8, 16), resemble those found at Tepe Arisman in Proto-Elamite deposits (Helwing 2011a:fig. 15, n°24-27, fig. 16, n°38).

3.8.2.3 Context

Almost half of the sherds included here come from Phase IVC2 (29 sherds), while the rest is represented by 14 sherds from Phase IVC1; 12 from Phase IVB6; and six from "secondary contexts" (Table 3.14, Graph 3.12). From Phase IVC2 were recovered 13 sherds from inside the mudbrick building, including eight in Room 1a and five in Room 4. The rest was found in Area A (4) and Area C (5) east of it and in Area G (7) west of it. In Phase IVC1 were recovered ten sherds from inside the mudbrick building, with four in Room 5, three in Room 4, two in Room 3, and one in Room 6. The rest is from Areas F-G (4) west of it. The plain ware from Phase IVB6 was found in Trench A (four sherds), Trench B (five sherds), and Trench BW (three sherds). From "secondary contexts" were recovered:

- One sherd (Yahya 0093) in context B.71.15. A ceramic of Group B1 was found in this context (Yahya 0092), a context that was assigned to Period VA-IVC by T. W. Beale (Lamberg-Karlovsky and Beale 1986: 329);
- One sherd (Yahya 0113) in context B.71.6. Two low-sided tray fragments, two beveled-rim bowl sherds, one sherd of Group A were also recovered from this context, which can be connected to Period IVC;
- One sherd (Yahya 0433) in context A.75. The context of this sherd remains unclear; it could either be connected to Period IVB or Period IVC;
- One sherd (Yahya 0567) in context BW.71.7.4. As indicated above, this context might be connected to Period IVC. Two beveled-rim bowl fragments, two sherds of Proto-Elamite decorated jars, five Group B fragments, and eight Burnished ware sherds were found in it;
- One sherd (Yahya 0615) in context BW.71.7.6. This context seems related to the excavation of material in contact to the southern wall of Room 7 of the IVC building complex. Three Group B, one Group A, and a beveled-rim bowl fragments were found in it.
- One sherd (Yahya 0675) in context BW/CW.71.12.1. No detail was found about this context, which, nevertheless, contained two fragments of Burnished ware (Yahya 0678 and 1345). T. W. Beale assigned it to Periods VII-VC (Lamberg-Karlovsky and Beale 1986:330).

3.8.3 Textile-impressed ware

A distinct group of sherds is characterized by textile impressions on their inside surface. This group is represented by two base fragments and 12 body fragments, some probably belonging to the same ceramics (Figure 3.91, n°1-3).

These fragments have a medium mineral-tempered fabric. Vegetal temper is also observed on some sherds. Their color is mostly light brown, with the exception of one grey fragment. Smoke-blackened traces are observed on some sherds, indicating that this type of production was used for firing activities. The walls are 0.7 to 1 cm thick. The two bases are flat and they measure 6 and 8 cm in diameter. The reconstruction illustrated for this type of production is clearly hypothetical (Figure 3.91, n°1-3) and nothing indicates whether the fragments belong to open or close forms. The knots impressed on the inside surface seem to be of a similar size on all the fragments recorded. They measure approximately 0.05 cm.

Most of the sherds of Textile-impressed ware were recovered from Phase IVC2 contexts. Seven fragments were found in Area C; one fragment was in Area A; one in Area G; and one in Room 1. Only one fragment was recovered from Phase IVC1 context, in Areas F-G (the base Yahya 0708), while two were in Trench BW in Phase IVB6. Finally, one sherd was reported from context CW.73.7. Although this context was not assigned a phase, as noted before, 11 beveled-rim bowl fragments and one low-sided tray sherd were found in this context, which was likely in relation to the complex of Period IVC.

3.8.4 Mat-impressed ware

Mat-impressed ware is represented by a single base fragment found in Phase IVC2 Area B (Yahya 0192; Figure 3.91, n°4). This vessel has a medium mineral-tempered fabric of buff color. The base is flat and its diameter measures approximately 20 cm. The form of this ceramic is not known.

This ceramic has mat impressions on its outside base. The matting technique illustrated by Yahya 0192 seems to consist of plaited basketry with four elements passing over four others (4/4) at right angle. The width of the elements is approximately equal to 0.4 cm.

3.9 Yahya Period V and VA-IVC Transitional Period (?) ceramics

The descriptions provided above attempted to present the main ceramic products of Tepe Yahya in Period IVC. This section and the following discuss certain ceramic types characteristic of the assemblages of the previous (Period V and V-IVC Transitional Period) and following periods (Phases IVB5-IVB1) that were found in Phases IVC2-IVB6.

3.9.1 Yahya Period V ceramics

Tepe Yahya Period V ceramics recovered from Phases IVC2-IVB6 are the fine, painted Black-on-buff ware and Black-on-red ware and the burnished Lapui ware, all being anterior to the mid-fourth millennium BC (see Chapter 1). They are discussed here on the basis of 25 sherds (Table 3.15, Graph 3.13).

3.9.1.1 Black-on-buff ware

Fragments of Black-on-buff ware (Figures 3.92-3.93) were recovered from Phase IVC2 contexts in Area G (five sherds) and on a floor in Room 1 (one sherd). Five fragments were recovered from Phase

IVC1 in Areas F-G, while three sherds were found in Phase IVB6 (Trenches B and BW). There are three sherds from "secondary contexts." One is from context BW-CW.71.12.1, in which two fragments of Burnished ware were found. One is from context A.75.8S, from which several ceramics that can be connected to Period IVB were recovered. The third fragment is from context CW.71.T1.5, which corresponds to a series of floors likely related to the IVC complex (Beale, report CW/BW/B 1973:15-16). This sherd was associated in the same context with sherds of Group B, beveled-rim bowl, Proto-Elamite decorated jar, and Burnished ware. Black-on-buff ware was also observed in Phase IVB5 contexts.

As indicated above, Black-on-buff ware was very common in Yahya Period VB and continued to be attested in Period VA. The types represented in the contexts detailed above can be compared to those illustrated by T. W. Beale for Period V (Lamberg-Karlovsky and Beale 1986:58-67).

3.9.1.2 Black-on-red ware

Two sherds of Black-on-red (Figure 3.94) ware were found in Phase IVC1 Areas F-G, while five sherds in "secondary contexts," including one in context BW.71.7.6, which, as discussed above, can be connected to the IVC complex; two in context B-BW.71.3, associated mostly with Period IVB materials; one from context CW.71.12.1, a pit posterior to Phase VA.1 (Lamberg-Karlovsky and Beale 1986:333); and one from context B.73.1, which, as discussed before, is related to Period IVC.

Black-on-red ware was common mostly in Period VA, and the types represented in our corpus are similar to those reported from this period (Lamberg-Karlovsky and Beale 1986:67-80).

3.9.1.3 Lapui ware

A rim fragment of Lapui ware (Figure 3.95) was reported from Room 5, Phase IVC2. This type of ceramic is attested at Tepe Yahya from Period VI, it is very common in Period VB and common in Period VA (Lamberg-Karlovsky and Beale 1986:55-58).

3.9.1.4 Synthesis

As indicated in Chapter 1, these three ceramic types are characteristic of the Chalcolithic occupations at Tepe Yahya, mostly of Period V, chronologically separated from Period IVC by the Aliabad Phase (and Dashkar ware), which was identified at Tal-i Iblis, Mahtoutabad and many other sites in Kerman. The hiatus at Tepe Yahya lasted for approximately 500 years as it is considered that Aliabad ware essentially developed in southeastern Iran within the second quarter of the fourth millennium BC. These wares can thus be considered intrusive in Phases IVC2-IVB6 contexts. It is however important to recall that Lapui ware, although it disappeared with Black-on-red ware in Kerman, continued to exist in Fars until the beginning of the Banesh period. As for Black-on-red ware, although comparative stratigraphies indicate a chronological gap between Phase VA and Period IVC at Tepe Yahya, one may note that certain ceramics of Group B found in Period IVC indicate relationships to Black-on-red ware, as if aspects of the Chalcolithic tradition survived, if not at Tepe Yahya, elsewhere, until Proto-Elamite times or re-appeared during this period. In this regard, it is hoped that the fine, painted materials recently found in association with Uruk-related ceramics at Mahtoutabad, posterior to Aliabad ware and anterior to Period IVC, will help clarify this point.

3.9.2 Yahya VA-IVC Transitional Period ceramics (?)

As indicated in Chapter 1, the definition of the chronological hiatus between Yahya Periods V and IVC is partly based on stratigraphic evidence from Tal-i Iblis and is contemporary with Iblis Periods III-V. These periods are essentially characterized by Dashkar ware and Aliabad ware and the appearance of Uruk-related materials at Tal-i Iblis while important complementary information about this transitional period was collected by M. Prickett from survey in the Daulatabad Plain. In this survey, M. Prickett defined a Yahya VA-IVC Transitional Period, corresponding to Iblis Periods IV/V, on the basis of different types of plain and painted wares including some types of Aliabad ware. At Tepe Yahya, D. T. Potts recalls that M. Prickett identified "no more than ten sherds related to this phase (...) from various contexts," and "only two absolutely distinctive Iblis IV/V sherds (...) in strata between Yahya VA and IVC" (Potts 2001:198; Prickett 1986a:450-451).

Six fragments from Tepe Yahya observed in the collection of the PMAE share aspects with the Yahya VA-IVC transitional material from the Daulatabad Plain as described by M. Prickett, although we cannot tell whether these sherds correspond to those identified by her. Four of them are included within the groups presented before (Yahya 0119, 0403, 0710, and 0469; Figures 3.49-3.51; Figure 3.64, n°3; Figure 3.88, n°6), while two supplementary sherds are added here (Yahya 0148 and 0441; Figures 3.96-3.98). These six fragments are characterized by a particular aspect of their surfaces bearing numerous small holes (diameter = 1 mm to the maximum) surrounded by whitish rims. The fabrics are fine to medium mineral-tempered and of buff, pinkish-purple, and bricky-reddish colors. The forms associated with this particular rimmed-holes surface include conical deep bowl and goblet (Yahya 0441 and 0148) with rim diameters measuring 17 and 25 cm; painted bowls (Yahya 0119 and 0403) included in Group B; a plain bowl (Yahya 0469) included in plain wares; and a painted jar included in Group B (Yahya 0710). These fragments were recovered from Phase IVC2 (3), Phase IVB6 (2), and "secondary context" (1). The sherds from Phase IVC2 were found in Room 4 (Yahya 0119), Area C (Yahya 0403), and Area G (Yahya 0710). Those from Phase IVB6 were found in Trench A (Yahya 0441 and 0469). No detailed information was found on the "secondary context" (context B.71.2) in which one sherd was located (Yahya 0148).

Our comparisons with the Yahya VA-IVC transitional materials need to be taken with reservation and are essentially based on the descriptions of fabrics identified by M. Prickett in the Daulatabad Plain. These are: 1) a sand-tempered, white speckled red fabric ware (Prickett's Ceramic Dating Criterion 11), associated with Iblis IV/V type materials (Prickett 1986a:1432-1439) and characterized by "fairly frequent fine holes," with many of them being "surrounded by white, yellow or pale greenish-yellow rims." M. Prickett also noted that "some sherds also show many fine white speckles (...) which are probably also rims surrounding extremely fine but similar holes." "The surfaces of the more speckled examples show many small yellowish rimmed 'craters' dotting the dark pink to dark red fabric" (Prickett 1986a:1438); and, 2) additional ceramic products related to Aliabad ware: Cream to Orange Fabric with rimmed holes (Ceramic Dating Criterion 13), Medium Orange Fabric with fine holes and Fine to Coarse Sand temper (Ceramic Dating Criterion 14), and Brown to Purplish-Brown Fabric with rimmed holes (Ceramic Dating Criterion 15) (Prickett 1986a:1440-1456). M. Prickett noted that each of these wares has a broad range of variation. The fabric of some of them has at a minimum a few small holes, while the most common fabric has a fine white- to cream-colored mottling

or speckled appearance. Aliabad ware was found first by Sir M. A. Stein when he visited Tal-i Iblis and the Kerman province in the 1920s (Stein 1937). Aliabad ware was then more detailed by J. Caldwell on the basis of surveys at the site of Aliabad in the Bardsir Plain and excavations at Tal-i Iblis (Caldwell 1967, 1968). It was analyzed again later by M. R. Sarraf (1981). J. Caldwell (1967:79) wrote that "the paste of the pottery from Aliabad is generally pink or brick red but buff slips, either on the interiors or exteriors or sometimes both surfaces of the vessels, are usual" and mentioned some "tiny lacunae in the paste" interpreted as disappeared "finely divided vegetal substance (...) used as tempering." Fabrics similar to those described by J. Caldwell and M. Prickett are represented on several other sites on the Southeastern Iranian Plateau. Aliabad ware has recently been found east of Tepe Yahya at Mahtoutabad in the Halil Rud Valley (Madjidzadeh 2008:91, fig. 21; Vidale and Desset 2013). Ceramics with similar aspects were found as far as Kech-Makran at Shahi-Tump and Miri Qalat mostly in Early Period IIIa with elements in Period II. They are mostly characterized there by high conical goblets and certain types of decoration similar to materials found at Tal-i Iblis (Mutin 2007, 2012a, 2013). Additionally, the goblets from Kech-Makran Early Period IIIa were built by coiling as was a "straight-sided coiled slab cup" mentioned by M. Prickett (1986a:1453) in the Daulatabad Plain (Prickett 1986a: figs III.11-III.14). Fabrics "with holes" are also attested at Shahr-i Sokhta on ceramics of Period I (collections of IsIAO and collection of the Palazzio Brancaccio, Rome). Broadly speaking, although it would be very tentative to include all the ceramics showing "rimmed-holes" fabrics within a single group of production, it appears to us that this particular aspect and these preliminary parallels are worthy of further investigation in relation to questions concerning the development, spread and end of Aliabad phenomenon and related materials on the Southeastern Iranian Plateau in the period prior to the Proto-Elamite period. The elements of Yahya VA–IVC Transitional Period previously identified at Tepe Yahya and the hypothetic ones presented above are, in any case, too rare to suggest an occupation of this period on the site and to dispute their anteriority to Period IVC.

3.10 Yahya Period IVB ceramics

This section discusses ceramics associated with greater consistency from Phase IVB5 onward while their styles relate to products found in the third millennium BC, not to the late fourth and early third millennia BC Proto-Elamite period. Parallels for these ceramics are found essentially and in better-defined contexts from Phase IVB5 at Tepe Yahya (see Potts 2001:chapters 4–7) and appear mostly different from those illustrated in sections 3.1 to 3.9. The presence of these Period IVB-related ceramics in Phases IVC1 and IVB6 led D. T. Potts to place the date of these phases several centuries after Period IVC and even at the end of the third millennium BC. These ceramics and their parallels are briefly presented and discussed here on the basis of 124 fragments from Phases IVC2-IVB6 contexts and a review of additional comparative ceramics from Period IVB (from Phase IVB5 onward) (Table 3.16). The IVB material is discussed here on the basis of three main ceramic components, which correspond to: 1) a group of painted, slipped, slipped and painted, incised, and ridge and impressed decorated ceramics that appear as dominant ceramic constituents of the Period IVB assemblage and related to discoveries in the Halil Rud Valley; 2) very fine, painted ceramics with stylistic ties pointed toward Emir grey ware; 3) and very fine, painted ceramics likely related to products found in northern Kerman. Period IVB ceramic assemblage is not limited to these materials. Additional ceramic types

not detailed here, plain ware, grey ware and Burnished ware, were also present, with elements evident in Phases IVC2-IVB6 (see Potts 2001) while a sherd of incised grey ware was also reported from Tepe Yahya (Lamberg-Karlovsky 1970:fig. 26; Lamberg-Karlovsky and Potts 2001:274).

3.10.1 Component 1

Component 1 includes a large group of ceramics that contain mineral inclusions of black and white color and shiny particles of small to medium size. Further investigation would confirm the homogeneity of the fabric of these ceramics, but for now, it appears that the same type of paste was prepared and used to manufacture several separate categories of vessels. These categories include painted, slipped, slipped and painted, incised, and ridge and impressed decorated ceramics. In addition to a comparable fabric, same forms and decorations are sometimes observed between painted, slipped, and slipped and painted ceramics. With the exception of the impressed and ridge ceramics, these vessels seem mostly connected to the Konar Sandal sites in the Halil Rud Valley, with elements at Shahr-i Sokhta and in the Bampur Valley.

3.10.1.1 Description and context

Painted ceramics

The painted ceramics are of buff, light-brown to reddish color (Figures 3.99-3.100). The decoration is painted black on the outside surface. The forms reported from Phases IVC2-IVB6 include mostly necked jars and/or bottles, and a few open vessels.

Twenty-four sherds including seven rim fragments were counted in Phases IVC2-IVB6 (Table 3.16). Four sherds were recovered from Phases IVC2; five from Phases IVC1; and 15 from Phase IVB6. In Phase IVC2, the fragments were found in Area A (1), Area B (1), Area C (1), and Area G (1). In Area B was recovered the well-preserved vessel Yahya 0367 (Figure 3.100, n°1). In Phase IVC1, painted ceramics were found in Areas A-E (1), Areas F-G (3), and Room 6 (1). Seven sherds were reported from Areas A-E in Phase IVB6. The rest from this phase was located in Trench A context A.75.10.2 (1); Trench BW (2); Trench B/BW (1); and Trench B context B.71.7 (1) where two low-sided tray and one spout fragments were found, context B.70.T4.2 (2), and context B.70.11 (1) associated with material of Groups A and B in a fill between the IVC building complex and the Persian Gulf Room.

Slipped painted ceramics

These ceramics are characterized by a dark buff, brown to red slip applied on their outside surfaces and inside rims (Figures 3.99-3.100). Friezes and panels are painted black on the outside slip. The forms comprise close shapes including probably a majority of necked-jars, and a few open shapes.

Forty-seven fragments including 17 rim fragments were counted in Phases IVC2-IVB6 contexts, with half of the sherds from Phase IVB6 contexts. Rims are in majority in Phases IVB6 and IVC2 (Table 3.16).

In Phase IVC2, the fragments were recovered from Area A (2), Area B (5), Area C (2), Area G (4), and on the floor of Room 1 (1). In Phase IVC1, they were found in Areas A-E (2), Areas F-G (5), in Room 3 (1), in Room 4 (1), and in Room 5 (1). In Phase IVB6, 14 fragments were recovered from

Areas A-E in Trench A, seven from Trench B including one from a pit (Pit 8) and one from context BM.71.7, and two from Trench BW.

Slipped ceramics

Slipped ceramics are represented by 23 sherds. They include 11 close shapes (11 rim fragments of jars, necked-jars, and hole-mouth jars), five club-rim bowl fragments, two rim sherds of pots, two pedestal bases (Figure 3.107), one handle, and two scorpion-bowl tails (Figure 3.104; Table 3.16). Some plain club-rim bowls (illustrated in Potts 2001) are included here as well, because it appeared that they belong to the same type of production as the slipped ones, and one may suppose on some fragments that the slip disappeared. The close shapes, pots, and scorpion-bowl tails have fabrics of buff to brown color. The slip is of brown to red and pinkish color, with the exception of fragments with a white slip and others with a buff slip. The club-rim bowls have fabrics of dark buff to dark brown color, including plain and slipped materials. When present, the slip is of brown to red color. The pedestal bases are represented by two fragments. One is of buff color with a brown/light-red slip (Yahya 0643) and the other one is of red color with a red color slip (Yahya 0550; Figure 3.107). The handle is buff and its slip is pink.

The majority of the fragments were recovered from Phase IVC2, with nine sherds in Area G, four in Area C, one in Room 2, and one on the floor of Room 1. In Phase IVC1, they are found in Room 5 (1), Room 6 (1), Areas A-E (2), and Areas F-G (2). Two sherds come from Phase IVB6 contexts in Trench B (contexts B.71.3 and B.71.7).

Incised ceramics

Incised ceramics are represented by three fragments of close shapes (two body and one rim sherds) and ten lid fragments including portions of rim, base, and handle (Figures 3.110-3.111; Table 3.16). The close shapes and lids are of buff to dark brown color. Some of the close shape fragments have a brown to reddish slip on the exterior. The decoration is on the outside surface.

Overall, these materials were found in Phase IVC2, Area B (1), Area D (1), and Area G (1); in Phase IVC1, Areas F-G (3); and in Phase IVB6, where one sherd of close shape and two lids were found in Trench B and four lid fragments in Areas A-E.

Ridge and impressed decorated ceramics

Ridge materials from Phase IVC2-IVB6 are discussed here on the basis of ten sherds (six body and four rim fragments; Table 3.16; Figure 3.112). These fragments are of buff to brown/light-red color. They are sometimes red slipped. The decorations include ridges and impressions. One fragment combines painted decoration and ridge (Yahya 0354; Figure 3.112, n°7).

These ten sherds are reported from Phase IVC2 contexts in Area G (1); from Phase IVC1 in Areas F-G (3) and Room 5 (1); and from Phase IVB6 in Trench B (3), in Areas A-E (1), and in Pit 7 (1).

3.10.1.2 Comparisons

Overall, based on an overview of Period IVB collection of the PMAE and of previous publications related to this period, the assemblage of Period IVB seems essentially characterized by slipped, painted, slipped and painted vessels, incised, ridged, and impressed ceramics, and fine, painted, grey

and buff ceramics (the plain grey and burnished materials are not discussed here). In addition to the bottles and jars (see Potts 2001:figs 3.15, 3.21, 4.28, 4.31, 7.1, and 7.2; Figure 3.101–3.103), among the main forms that seem to characterize the assemblage of Period IVB can be mentioned carinated vessels which include both plain and slipped types such as those illustrated by D. T. Potts (2001:figs 4.7–4.8, 4.11, and 4.35). Scorpion-bowls (Lamberg-Karlovsky and Tosi 1973:fig. 107 upper left; Figure 3.105), pedestal vessels (see Potts 2011:fig. 3.19; Figure 3.108), club-rim bowls, trays, and lids (see Potts 2011:fig. 1.5) may be connected to our Component 1.

Although we are lacking of quantitative data, it appears that a minimum of several vessels of Component 1 were closely connected to ceramics discovered recently in the Halil Rud Valley (Madjidzadeh 2008). This is the case of the numerous painted and slipped ceramics decorated with geometric, vegetal (palm tree leave) and animal (caprid) motives (Madjidzadeh 2008:fig. 22, lower middle) and those with the "W" motif (Madjidzadeh 2008:fig. 22, upper left) found at Konar Sandal South (Figure 3.113). Y. Madjidzadeh underscores the significant presence of slipped materials in the Halil Rud Valley and also notes the dominant use of a fabric containing mica inclusions (Madjidzadeh 2008:90). The scorpion-bowls and pedestal-bowls found at Tepe Yahya have clear parallels at Konar Sandal South (Madjidzadeh 2008:fig. 24, upper row; fig. 22, lower left; Figure 3.106, n°5). Thanks to the recent excavations in the Halil Rud Valley, it is now evident that the incised lid illustrated in Potts 2001, fig. 1.5 is not of a Parthian or early Sasanian date as suggested before (Potts 2001:5). This lid is complemented by more than 30 fragments in the Tepe Yahya collection of the PMAE found in Periods IVC and IVB contexts, while a clear parallel from Konar Sandal North is illustrated (Madjidzadeh 2008:fig. 27 upper middle; Figure 3.113). An important part of these comparisons (Madjidzadeh 2008:fig. 22) comes from the earliest levels of Konar Sandal South which are radiocarbon dated to ca. 2880–2580 BC. However, parallels for other materials such as the scorpion-bowls are apparently characteristic of the later phases of the lower town in Konar Sandal South which are radiocarbon dated to ca. 2500–2300 BC (Madjidzadeh 2008:90). The lids found at Konar Sandal North are thought to relate to the later phases of the lower town of Konar Sandal South (Madjidzadeh 2008:94–95).

Parallels for some of these ceramics, or for some aspects of them, are also at Shahr-i Sokhta. One can mention: 1) a scorpion-bowl and fragments of scorpion-bowls found in levels of Periods II-III and funerary contexts (Phase 5B, beginning of Phase 4 and Phase 3: Salvatori and Tosi 2005:286–87, figs. 7–8; Salvatori and Vidale 1997:62, fig. 186, n°12–13; Piperno and Salvatori 2007:figs 634–636, 683; Figure 3.106, n°1–4); 2) a series of pedestal bowls found in funerary deposits (Piperno and Salvatori 2007: fig. 569, n°7613 and 7616; fig. 624, n°8012; figs. 637–38; fig. 675; Figure 3.109, n°1–4); 3) and a necked-jar and sherds decorated with a frieze of "W" motifs from the graveyard and architectural contexts (Piperno and Salvatori 2007: fig. 34 n°6116; Salvatori and Vidale 1997:fig. 188, n°2, fig. 191, n°9; Figure 3.109, n°5–7). Two of the pedestal bowls from Shahr-i Sokhta have decoration motives similar to those painted on some vessels from Tepe Yahya. The style of the caprids painted on one of them is very close to the examples of caprids from Kerman (both at Tepe Yahya and Konar Sandal South). The association of palm tree leaves and caprid motifs on the second pedestal bowl from Shahr-i Sokhta is also similar to examples from Kerman. The shapes of the pedestal vessels from Shahr-i Sokhta are, however, not exactly the same and the decorations observed on the other examples from that site are different. One may add other fine, painted ceramics found

in the Central Quarters (Phase 5B) whose decorations made with parallel zigzag lines may link them to Yahya Period IVB ceramics (Salvatori and Vidale 1997:fig. 187, n°4-5, 7, and 9, figs 224, 226; see also Salvatori and Vidale 1997:fig. 204, n°5; Figure 3.109; n°8-10). Overall, the parallels from Shahr-i Sokhta seem to be mostly situated in Phases 5 and 4 of the Central Quarters (Periods II-III), which provides us with an absolute date between 2600 and 2400 BC, according to S. Salvatori and M. Tosi (2005:fig. 13).

In addition to the Halil Rud Valley which tends to concentrate the majority of the parallels for the slipped, painted, slipped and painted ceramics, and lids from Tepe Yahya, and to Shahr-i Sokhta, comparative materials are also observed in the Bampur Valley at Tepe Bampur. In Tepe Bampur Period II are attested incised ceramics (De Cardi 1970: fig. 18, n°30-34), although the comb-incised types attested at Tepe Yahya do not seem very abundant at Tepe Bampur. From the same period were also reported ceramics with friezes of painted parallel zigzag lines (De Cardi 1970:fig. 18, n°25, 28-29, and 42, fig. 20, n°80), "W" motives (De Cardi 1970: fig. 19, n°61-62), and "M" motives (De Cardi 1970:fig. 20 n°81-83) as observed at Tepe Yahya. Some vessels from the same period were termed dishes-on-stands (De Cardi 1970:283, fig. 18, n°51-52), yet, if upturned, these vessels may correspond to lids as observed at Tepe Yahya and Konar Sandal South. Among those parallels, one may note the almost identical decorations of a bottle from Tepe Yahya and a jar from Tepe Bampur (De Cardi 1970:fig. 19, n°61). S. Salvatori and M. Vidale (1997:62) identified parallels for the scorpion-bowls from Shahr-i Sokhta at Tepe Bampur Periods II and IV.3 (De Cardi 1970:327, figs 47, n°4 and 48A). These parallels may also be mentioned for the examples from Tepe Yahya. Comparisons between Tepe Yahya IVB ceramic assemblage and Tepe Bampur are not limited to Period II, but continue into Bampur Periods III and IV.1 (De Cardi 1970:figs 30-31). Connections to Tepe Yahya and the Jiroft area are well-illustrated in Period IV.1 (see De Cardi 1970:figs 22-23, including the palm-tree motif in fig. 23, n°185, 187). In addition to the parallels with Kerman, Tepe Bampur in Period IV also contains elements connected to the ceramic painted tradition of Shahr-i Sokhta (from Period II), apparently absent of Kerman (De Cardi 1970:fig. 24 n°202, fig. 25, n°226, and fig. 29, n°305) and ceramics with relations to Kech-Makran (see below).

In addition to parallels observed in the Halil Rud Valley, at Shahr-i Sokhta and Tepe Bampur, one may compare the pedestal-bowls from Tepe Yahya with those found at Mundigak Period IV.1 in southern Afghanistan (Casal 1961: fig 66, n°190-192). One may also mention the lid fragments from the same site and period (Casal 1961:fig. 131, n°11-11a), although the examples from Mundigak are painted. Period IV is dated to 2800-2500 BC (Jarrige *et al.* 2011b:208 Table).

Numerous parallels for Period IVB ceramic material are also observed beyond the Persian Gulf such as at Umm-an Nar dated to between ca. 2700 and 2200 BC (Lamberg-Karlovsky 2001a:275).

3.10.2 Component 2

3.10.2.1 Description and context

Component 2 includes fine, painted black-on-buff ware. It is represented here by four fragments including one with almost complete profile and three rim sherds (Table 3.16). These ceramics are three close shapes and one goblet (Figures 3.114-3.115). They were found in Phase IVB6 in Trench A (Yahya 1206), Trench B (Yahya 1421 and 1423), and Trench B/BW (Yahya 1422).

3.10.2.2 Comparisons

Component 2 is connected to fine, painted, grey and buff jars, bowls, goblets, and canisters found from Period IVB. The frieze filled with hatched triangles painted on Yahya 1206 (Figure 3.114) is similar to the decoration observed on a canister-jar found in Phase IVB5 (Yahya 1267; Figure 3.116, n°1). Sherds with similar decoration are observed in Seistan where they were termed Emir grey ware (Fairservis 1961:122, n°99-100). This type of decoration and, more generally speaking canister-jars have a widespread distribution on the Southeastern Iranian Plateau (Figure 3.116). Other fragments of canisters were found at Tepe Yahya (Yahya 0430 and 1401; Figure 3.116). They may broadly be linked to those attested at Tepe Bampur in Period IV.1 (De Cardi 1970:fig. 25 n°258), Period V.2 (De Cardi 1970:fig. 38, n°361-63), and Period VI (De Cardi 1970:fig. 43, n°477-79 and 481), although differences can be noted in the last period (including the use of painted caprids in the friezes). This type of form is also attested in Kech-Makran from Period IIIb (Didier 2007:figs 63, 95). Canisters continued in Kech-Makran in Period IIIc, but their style seems then different (Didier 2007:figs 193, 207); they include painted caprids in the friezes. Close parallels are also reported from Konar Sandal South where they are considered most common in the later phases of the lower town (Madjidzadeh 2008:90, 92-93, fig. 24 lower row, with one bearing the same frieze of triangles as that of Yahya 1206; Figure 3.116, n°4; see also Madjidzadeh 2003, n°162). One vessel found in a funerary context (Piperno and Salvatori 2007:fig. 379, n°7130) and fragments from Period II-III contexts at Shahr-i Sokhta (Tosi 1969:fig. 33b, e) may also be compared to the examples mentioned above. On the other hand, the example illustrated from Period IV at Shahr-i Sokhta (Lamberg-Karlovsky and Tosi 1973:fig. 64) is not exactly the same (one can note the use of painted caprids in the friezes) and resembles ceramics from Tepe Bampur (De Cardi 1970:fig. 43, n°481). As noted in several occasions, these types of canister are found beyond the Persian Gulf in Oman Peninsula, at Hili (see Méry 2000:fig. 123, n°3, fig. 124, n°7-8; Bibby 1966:fig. 11) and Umm an-Nar (Méry 2000:fig. 123, n°5; Frifelt 1975:fig. 11D). Overall, the dates provided for the canisters are at Konar Sandal situated after the middle of the third millennium BC. At Shahr-i Sokhta, the examples from Periods II-III overlap with the mid-third millennium BC (Salvatori and Tosi 2005:fig. 13). In Kech-Makran, they are dated to 2800-2400 BC (Periods IIIb-IIIc; Besenval 2005:fig. 13) (Didier 2007:228), although examples are found in Period IV, which extends their presence in this region slightly beyond the mid-third millennium BC (Besenval 1997b:24-28). In the Oman Peninsula, they are found in the Umm an-Nar period which started around 2700 BC and ended around 2100 BC, with a majority found within the last third of the third millennium BC (Méry 2000:193).

The frieze of painted caprids observed on the goblet rim Yahya 1421 (Figure 3.114) from Tepe Yahya is also reminiscent of the decoration observed on canisters found at Shahr-i Sokhta, Kech-Makran Period IIIc, and Tepe Bampur Period VI. Such frieze is well-attested on different shapes at Tepe Bampur Periods V and VI (see De Cardi 1970:fig. 36, n°81 and fig. 39).

As for the jars with painted garlands found in Phase IVB6 (Figure 3.115), they can be compared to materials from Tepe Bampur Periods II-IV.1 (De Cardi 1970:fig. 18, n°22 and 35, fig. 21, n°101, 106-108 and 113, fig. 22, n°160 and 164, fig. 24, n°209-212), while examples of garlands are in Kech-Makran Period IIIb (Didier 2007:fig. 85). Kech-Makran Period IIIb is dated to 2800-2600 BC (Besenval 2005:fig. 13).

3.10.3 Component 3

3.10.3.1 Description and context

Component 3 is composed of three painted vessels with similar, very fine, smooth fabric of buff to brown light-red color (Yahya 0106, 0118, and 0248; Table 3.16; Figures 3.117–3.118). One was found in Phase IVC2 Area G (Yahya 0248);[44] one is from Phase IVC1 Room 3 (Yahya 0106); and the third one is from Phase IVC1 Room 4 (Yahya 0118). Two of these ceramics are bowls with inverted rims (Yahya 0248, RimD = 16 cm and Yahya 0106, RimD = 27.5 cm), while the third one is probably also a bowl with slightly everted rims (Yahya 0118, RimD = 21.5 cm). Yahya 0118 and 0248 are decorated on both their inside and outside surfaces, while Yahya 0106 is only painted on its outside surface. The inside surface of Yahya 0106, however, presents a mirror effect that shows that it was piled on a vessel during the firing. The blurry decoration of the mirror effect is similar to that of the outside surface while the outside surface has variations in color and a painted line that transferred from another bowl stacked on Yahya 0106 during the firing.

3.10.3.2 Comparisons

These ceramics were found in Phases IVC2 and IVC1 contexts and their decorations seem to be unique in the Tepe Yahya collection of the PMAE. However, their style better compares with materials dated to the third millennium BC. One can underscore the decoration of Yahya 0248, which consists of a probable symmetrical composition made with vegetal motifs (palm tree leaves) on the inside surface. Such type of composition seems more frequent in the third millennium BC than in the chronological context of Period IVC. In addition, the decoration of Yahya 0118 made with cross-hatched hourglasses placed in metops resembles that of a vessel from site 037 (Kandar-e Asiab) located in the Bardsir Plain (Sajjadi 1987:31–2, 103, n°15). This type of material is assigned to the so-called Bahramjerd horizon whose beginning is situated around 2800/2700 BC and apparently lasted throughout the third millennium BC (Sajjadi 1987:fig. 12). S. M. S. Sajjadi noted similarities between the assemblage of Bahramjerd horizon with ceramics from Shahr-i Sokhta in Period II Phases 6–5 (Sajjadi 1987: 32), which are situated around 2750–2500 BC (Salvatori and Tosi 2005:fig. 13).

3.11 Synthesis

In addition to plain wares, the ceramic assemblage of the Tepe Yahya Period IVC complex is mostly composed of a series of ceramic products that are: 1) essentially found in this context, while not, or rarely, in the previous Period V and the following Period IVB and 2) have parallels with ceramics found elsewhere in the late fourth and early third millennia BC. This series includes Proto-Elamite ceramics; Western Balochistan Ceramic Complex material (SEIP Group A) and possible imitations; Burnished ware and "face pots;" and two Nal and Amri ceramics. An additional group, termed Kerman-related (SEIP Groups B–D), is consistent with a date placed around 3000 BC. As parallels are more complicated to find for SEIP Group B, some doubts remain for certain vessels of this group as to whether they belong to Period IVC, yet there is a consistency in the distribution of this group in the same contexts as the ceramics listed above and not in the previous and following Periods V and IVB. Examination of the distribution of the ceramics listed above indicates that they were found in Phase IVC2, IVC1, and IVB6, including the building and layers and features located at its top and above, according to the definition proposed by D.

T. Potts (2001).

The ceramic assemblage of Period IVC is also composed of older materials, which include sherds of Black-on-red ware, Black-on-buff ware, Lapui ware, some vessels related to the Aliabad period, a Sialk III-related fragment (?), and perhaps certain vessels such as the polychrome ceramics of SEIP Group C. These products are rarer than those mentioned above in Phases IVC2–IVB6 while their parallels, when found, indicate chrono-cultural contexts older than Period IVC, dated to Yahya Period V and to the chronological hiatus that followed at the site.

The ceramic assemblage of Period IVC includes also ceramics that are mostly represented and in more reliable contexts from Phase IVB5 onward. This IVB ceramic assemblage has parallels to third millennium BC products found in Middle Asia, Mesopotamia and the Persian Gulf, with dates situated within the first and/or the second half (ves) of the third millennium BC.

3.11.1 Chronology

3.11.1.1 The gap before Tepe Yahya Period IVC

As indicated in Chapter 1, the period prior to the Proto-Elamite period at Tepe Yahya is attested in Kerman, but not at Tepe Yahya, by a type of ceramic production termed Aliabad ware and found at Tal-i Iblis in Periods IV–V. The beginning of this period is currently situated in the first half of the fourth millennium BC, around 3700/3600 BC. This dating is corroborated by the dates of the previous Lapui ware in Fars and Kerman as well as the date of the end of Period VA at Tepe Yahya, although it is important to recall that radiocarbon dates from Tal-i Iblis do not provide the same chronological bracket. This dating is also corroborated by the stratigraphic sequence from Kech-Makran. Besides the similarities observed between Aliabad ware and a fine, painted production from Kech-Makran termed Miri ware, dated to the first half of the fourth millennium BC (Kech-Makran Period II), parallels for Aliabad ware are evident in this area from upper levels of Period II in Kech-Makran (at Shahi-Tump) and mostly in Early Period IIIa whose beginning is dated to the mid-fourth millennium BC (Besenval 1997b:34–35 notes 37, 50). The earliest evidence for ceramics related to Aliabad ware in Kech-Makran was not necessarily strictly contemporaneous with the earliest evidence for Aliabad ware in Kerman; nevertheless this date has a general correspondence to data from Kerman. The end of Aliabad ware in Kech-Makran is not clear. Following Early Period IIIa, it is absent in Late Period IIIa. A beginning date for Late Period IIIa can be placed within the late fourth millennium BC on the basis of stratigraphic evidence, stylistic comparisons and radiocarbon dating (Besenval 1997b:34–35 notes 37, 50; see Chapter 1 and below). One may add that at Miri Qalat, deposits containing important quantities of Togau C/D style ceramics were located above the burials of Early Period IIIa and below deposits of Late Period IIIa in which were recovered a few beveled-rim bowl fragments and materials assigned to the Western Balochistan Ceramic Complex. Recent excavations and radiocarbon determinations conducted at Sohr Damb indicate that the Togau style disappeared around 3200 BC (Görsdorf and Franke 2007:704). J. Caldwell suggested a late fourth millennium terminal date for Aliabad ware. Shahr-i Sokhta was founded in the late fourth millennium BC as well, around 3200 BC (Salvatori and Tosi 2005:284-285, fig. 13). No Aliabad ware was found at this site.

In sum, evidence from several sites shows that Aliabad ware had a long duration, with a beginning dated to around 3700/3600 BC and an end in the mid-late fourth millennium BC. The lack or

extreme rarity of Aliabad ware and related materials at Tepe Yahya indicates a chronological hiatus between the end of Tepe Yahya Period VA and the construction of the building complex of Period IVC. Within this gap may be included the Uruk evidence in Kerman as seen in Chapter 1. At Tal-i Iblis, Uruk-related elements were associated with Aliabad ware, while at Mahtoutabad, they were found in deposits located above levels containing Aliabad ware.

3.11.1.2 The dating of the ceramic assemblage of Period IVC

Even if a chronological gap between Period VA and Period IVC existed at Tepe Yahya, a gap represented by Aliabad ware, certain stylistic similarities between Chalcolithic material of Period VA (Black-on-red ware and Black-on-Smooth Buff ware) and ceramics found in Phases IVC2–IVB6 included here as part of our SEIP Group B suggest a partial filling of this gap. As noted, certain vessels of SEIP Group B can be defined as a coherent chronological evolution of the previous Period V painted tradition and can suggest that, in spite of the gap after Period VA at Tepe Yahya (shown both by archaeological contexts and materials), the tradition survived somewhere. Thus, we face a dilemma. The only chronologically intermediate ceramic product in Kerman is represented by Aliabad ware (and Dashkar ware) which is essentially different from both its precursors (Period V Black-on-buff ware and Black-on-red ware) and its successors (Yahya SEIP Groups B1–2). Only the "hybrid" combination of Aliabad fabric aspect and SEIP Group B decoration-like represented by Yahya 0119 and 0403 could indicate a continuation. Also, the chrono-cultural affiliation for the polychrome vessels of SEIP Group D is not clarified. They may represent an older tradition. In any case, the problem cannot be solved at Tepe Yahya. On the other hand, further comparative analysis of the fine, painted ceramics recently found at Mahtoutabad in the Halil Rud Valley, associated with Uruk-related materials (drawings kindly shown to me by M. Vidale), may help solving the problem of the presence or absence in the continuation of the Chalcolithic tradition of painted ceramics in Kerman and the roots of some of the materials defined as Kerman-related in Period IVC (SEIP Group B). In any case, as the parallels for SEIP Group B ceramics are either absent or unclear, they do not provide clarification for the dating of Phases IVC2–IVB6. One should also recall that, if a certain stylistic coherence is attested for a majority of SEIP Group B vessels, there are still doubts regarding a part of them as to whether they belong to the Proto-Elamite period at Tepe Yahya or were intrusive from Phase IVB5 onward (especially some of SEIP Group B3-6).

SEIP Group A ceramics illustrate better stylistic connections that point toward the late fourth and early third millennia BC at Shahr-i Sokhta Period I and Kech-Makran Late Period IIIa. As indicated above, the distribution of this style is defined as the Western Balochistan Ceramic Complex. The definition of this type of material is currently based on combined stratigraphic data from Tepe Yahya IVC, Shahr-i Sokhta I, and Kech-Makran Late Period IIIa. Although the dating of these ceramics can only be firmly solved through more stratigraphical investigation, the parallels are coherent and corroborated by the materials associated with them. The first period of Shahr-i Sokhta contained a Proto-Elamite tablet fragment, glyptic art, and Burnished ware. In Kech-Makran, fine, painted materials characteristic of Late Period IIIa were found in association with beveled-rim bowl fragments and occur after burials that contained types related to Aliabad ware assigned to Early Period IIIa. The assemblage of Tepe Yahya Period IVC compares to both Kech-Makran Late Period IIIa and Shahr-i Sokhta I as it incorporates

Proto-Elamite ceramics and objects, Burnished ware, and Western Balochistan Ceramics. The dates and parallels from Kech-Makran Late Period IIIa and Shahr-i Sokhta Period I situate the Western Balochistan Ceramic Complex to the late fourth millennium BC and lasting to approximately 2800 BC. In the Kech-Makran sequence 2800 BC corresponds to the beginning of Period IIIb (Besenval 2005:6), while at Shahr-i Sokhta the beginning of Period II is placed around 2750 BC (Salvatori and Tosi 2005:285, fig. 13).

Burnished wares have wide parallels within Chalcolithic and Bronze Age periods, especially in northern Iran, but also in the Caucasus in the west and Turkmenistan in the east. The chronologically and geographically most coherent parallels for the burnished material found in Tepe Yahya Period IVC (Phases IVC2–IVB6) are at Shahr-i Sokhta Period I, Tepe Hissar Period II, and Tepe Arisman Sialk IV/Proto-Elamite Period (although it is represented in Arisman Sialk III Period as well). As previously discussed, parallels at Tepe Yahya to Shahr-i Sokhta Period I are chronologically further confirmed by a related material inventory. The same may be said about Tepe Hissar II and Tepe Arisman in the Proto-Elamite/Sialk IV-related Period. The brackets proposed for these periods at these sites are situated within the late fourth millennium BC and are, thus, coherent with the dating of Tepe Yahya Period IVC. The cultural relations of Burnished ware from Tepe Yahya to northern Iran need further investigation, but the dates of the burnished grey ware and of its spread to the south in Iran and Mesopotamia are coherent with a date in the late fourth – early third millennia BC for Tepe Yahya Period IVC.

The ceramics at Tepe Yahya with the most solid parallels to the Proto-Elamite settlements of the western half of Iran are the beveled-rim bowls, low-sided trays, and decorated lugged jars. It is thought that the Proto-Elamite period is partially contemporary with the Jemdet-Nasr period in Mesopotamia, while parallels for the Proto-Elamite assemblage are also to be found in contexts defined as Uruk-related. This is further complicated by the fact that the dates of some Late Uruk occupations overlap with those of Proto-Elamite occupations (Wright and Rupley 2001). Beveled-rim bowls existed for more than five centuries while it is suggested that a chronological distinction existed between shallow and deep beveled-rim bowls, the former being older than the latter (Helwing 2004:52f; Boroffka and Parzinger 2011:135). The shallow examples from Tepe Yahya IVC tend to resemble those in Sialk III Period at Tepe Arisman, while the deep bowls resemble those from Sialk IV Period (Proto-Elamite occupation). Low-sided trays are not evident at Susa Uruk-related Period II, but are present in Proto-Elamite Period IIIA, and are attested in Mesopotamia in Late Uruk and post-Uruk Jemdet-Nasr settlements. Low-sided trays are also mentioned in contexts defined as Late Uruk at Godin Tepe and at Chogha Mish in Iran. In Fars, low-sided trays emerged in contexts anterior to the apparition of Proto-Elamite tablets (before the Middle Banesh period). The decorated jars reported from Tepe Yahya IVC were previously referred to as of Jemdet-Nasr type, implying both chronological and stylistic relationships to Mesopotamia. A review of the parallels for this type of vessel shows that we are dealing with a widespread sphere of similarities dated to the Uruk to Early Dynastic periods, and that within this horizon style separate geographical and chronological styles existed. Chronologically speaking, parallels for this type of ceramic are in the late fourth – early third millennia BC Jemdet-Nasr period, Susa Period III, Tepe Arisman/Sialk IV, and Fars Middle Banesh period. Nevertheless, a number of analogies can be noted between Yahya IVC jars and the Susa Uruk-related Period II assemblage, materials from Chogha Mish in the same chronological context, jars from Godin Tepe in Uruk-related contexts

of Period V, and from the site of Jemdet-Nasr in the Late Uruk period. In addition to this, one should remind that comparisons between Tepe Sialk IV and Proto-Elamite Tepe Arisman (Area C) and Susa Period II were mentioned before (Helwing 2005:175), although B. Helwing has recently noted that the Proto-Elamite occupation at Tepe Arisman should rather be compared to Susa Period III (Helwing 2011a:216). W. Sumner noted for the Middle Banesh period "strong parallels" with Susa Period III, but also "many parallels" with Susa Period II (Sumner 2003:53).

At Tepe Arisman four phases of the Proto-Elamite settlement (Area C, Phases 7–4) with valuable parallels to the assemblage from Tepe Yahya IVC are radiocarbon dated to between 3300 and 3100 BC (Helwing 2011a:219). The decorated jars reported from this site are among the best parallels for the Yahya IVC examples and come from burials assigned to a later phase (Area C, Phase 3). These "burials (...) were interred at a time not very distant from the final usage phases, 4A1 and 4A2" (Chegini *et al.* 2011:44). In Fars, J. Alden suggests that beveled-rim bowls occur without Banesh trays (which is not the case at Tepe Yahya) and are indicative of an Initial or Early Banesh occupation (Alden 2003:196–197). Ceramically speaking, the very beginning of the Banesh period in Fars appears to be older than Tepe Yahya IVC. On the other hand, there is no evidence at Tepe Yahya for painted materials of the Late Banesh period as defined by W. Sumner (1985). This may indicate a lack of cultural relationship between Tepe Yahya and Fars at the time of the Late Banesh period in Fars, while this may also indicate that Period IVC at Tepe Yahya ended before this period and did not last after 2900 BC (as based on the sequences from Tal-i Malyan and the Mamasani region). The Middle Banesh period, containing the Proto-Elamite tablets (in Late Middle Banesh period), begins to ca. 3300 BC (Sumner 2003:52) or 3200 BC (Alden 1982a:620), which is in agreement with the Tepe Arisman radiocarbon determinations. Furthermore, B. Helwing notes that the Proto-Elamite assemblage from Tepe Arisman "can be correlated best with the earlier part of the Banes[h] period, specifically with the early to middle phases of Banes[h]" in Fars (Helwing 2011a:217). Within a short chronological bracket, the parallels to Fars (including the tablets) and Tepe Arisman may tend to indicate an earlier date for the beginning of the Proto-Elamite settlement at Tepe Arisman than at Tepe Yahya.

Overall the Proto-Elamite settlement and associated finds at Tepe Yahya may be dated to between 3300/3200 to 2900 BC on the basis of the Proto-Elamite discoveries and radiocarbon dates from Tal-i Malyan and Tepe Arisman and perhaps more to 3100-2900 BC if one compares the tablets found in Late Middle Banesh period at Tal-i Malyan. This dating is not in variance from that proposed earlier (3100–2800 BC, Lamberg-Karlovsky 2001a:270). It is difficult given the brackets of the ^{14}C dates to provide a more detailed date. In terms of relative chronology, one may connect Tepe Yahya IVC (at a minimum the building complex of Phase IVC2; Phases IVC1–IVB6 are discussed below) to Middle Banesh period in Fars, Shahr-i Sokhta Period I, and Kech-Makran Late Period IIIa. The ceramics connected to Nal ware and Amri ware do not help detail the dating of Tepe Yahya IVC. They can be compared to productions of eastern Pakistan dated to within the late fourth and the early third millennia BC. The assignment of the Nal sherd within Phase IVC2 (Potts 2001: Appendix A) is consistent with the evidence for Nal sherds or related types from Shahr-i Sokhta Period I (see Amiet and Tosi 1978) and the recent dating of Nal-related occupations at Sohr Damb in Pakistan (Period II) radiocarbon dated to 3200/3100–2700 BC (Görsdorf and Franke-Vogt 2007). Thus, one may place Fars Middle Banesh period, Tepe Yahya IVC, Shahr-i Sokhta I, Kech-Makran Late Period IIIa, and Sohr Damb II

(Nal ceramic tradition) to the same chronological horizon. As indicated in Chapter 1, R. H. Dyson proposed to include in his "Proto-Elamite (phase) 1" Tal-i Malyan Middle Banesh period and Tepe Yahya Phase IVC2, and in "Proto-Elamite 2" Tal-i Malyan Late Banesh period, Shahr-i Sokhta Period I (Phases 10-8), and Tepe Yahya Phase IVC1 (Dyson 1987:650). As seen above and discussed again below, it is rather difficult, based on available data, to distinguish Phase IVC1 from Phases IVC2 and IVB6 at Tepe Yahya. Furthermore, it appears that the Proto-Elamite elements and associated finds at Tepe Yahya may be connected to the Middle Banesh period in Fars more than to the Late Banesh period, while being linked to Shahr-i Sokhta Period I.

A date within 3100–2900 BC for the assemblage of the Proto-Elamite period at Tepe Yahya would agree with a post-Uruk date. One should however recall the problem of the chronological relationship of the Proto-Elamite to the west; to the Late Uruk and Jemdet-Nasr periods. As indicated above, a recent reappraisal of radiocarbon determinations from Uruk sites and contemporary occupations by H. T. Wright and E. S. A. Rupley (2001) provide ca. 3800–3100 BC for the chronological bracket of Middle and Late Uruk periods, while parallels with Uruk assemblages are noted in the Proto-Elamite settlements. Additionally, there is the problem of a large plateau in the calibration curve for the period between 3300–2900 cal. BC (Dahl *et al.* 2013; Helwing 2011a:219), which directly affects the critical dating of, and the transition between, the Late Uruk, Jemdet-Nasr, and Proto-Elamite periods. There is a clear presence of the Uruk in Iran, attested at Susa, Tal-i Ghazir, in Fars, at Tepe Sialk, and Tal-i Iblis (as indicated above, see Helwing 2011a: 219-220). On the other hand, it is trickier to interpret the dating of Godin Tepe and perhaps parts of the Chogha Mish occupation. If one follows B. Helwing's view (2011a: 219) and considers that occupations defined as Proto-Elamite started to appear at the end of the Uruk, then some aspects of Godin Tepe could be included within the Proto-Elamite period in Iran.[45] Meanwhile, a dating of Late Uruk occupations to the late fourth millennium BC raises the problem of its chronological relation to the Jemdet-Nasr period, thought to follow the Late Uruk period, while, according to R. J. Matthews (1992b:196), the Jemdet-Nasr period is to be dated to ca. 3200–3000 BC, which would overlap with the Late Uruk. Instead of a strict succession, we might need to envisage an overlap of the Proto-Elamite with both the Late Uruk and Jemdet-Nasr periods, especially perhaps for its beginning with the beginnings of sites such as Tepe Arisman and Tal-i Ghazir. This would agree with D. S. Whitcomb's suggestion that the Jemdet-Nasr period was later than the Proto-Elamite, although overlapping with the Proto-Elamite occupation at Tal-i Ghazir (Whitcomb 1971:42). This would also agree with the first designation of the Proto-Elamite settlement of Tepe Yahya as of "Uruk/Jemdet-Nasr" period (see Lamberg-Karlovsky 2001a:270). In addition to the important implications this would have on the broader picture of Mesopotamia and Iran in the late fourth - early third millennia BC, this has implication on the directions of ceramic influence represented by the styles of the slipped and painted Proto-Elamite and Jemdet-Nasr jars.

3.11.1.3 The end of Tepe Yahya Period IVC and the ceramic assemblage of Period IVB

Although radiocarbon dates and stylistic comparisons tend to indicate that elements of Period IVB may be dated to the second half of the third millennium BC, the ceramic comparisons mentioned above for elements of the ceramic assemblage of Period IVB found in Phases IVC2–IVB6 (Components 1–3) are attested from the second quarter of the third millennium BC, that is before 2500 BC.

Putting aside the problem of the dating of Phases IVC1 and IVB6, ceramics of Components 1–2 related to Period IVB can be clearly distinguished from the rest of the ceramic assemblage found in Phases IVC2–IVB6. Overall the assemblage of Period IVB is different from that of Period IVC. Certain aspects such as the use of impression and slip are reminiscent of the Proto-Elamite jars, but, altogether, the forms, decorations including the layout of different techniques (painting, incision, ridge, and impression) and different compositions and motives, and the very common use of slips appear in contrast to most of the vessels of sections 3.1 to 3.9. In addition, many vessels have a fabric apparently rare or absent within the ceramics of those sections. Burnished ware continued into Period IVB, while changes are noticed in forms.

Period IVB is not the primary focus of this publication and its assemblage is not detailed here, but additional remarks and two comparisons concerning Period IVB deserve mention.

First, one may discuss a ceramic recovered from Trench XCE[46] (Figure 3.119, n°1) with a series of materials that are clearly connected to Tepe Yahya Period IVB (including examples discussed above). This ceramic, which may be labeled as Emir grey ware as defined above, resembles one bowl found in a burial at Shahr-i Sokhta (Piperno and Salvatori 2007:fig. 115; Figure 3.119, n°2). The beakers placed in the same burial relate to Period II. A ceramic from Shahr-i Sokhta, from Period II (Phase 5), with a swastika motif made with lines (Salvatori and Vidale 1997:fig. 189) can also be included within the same group as those ceramics. As indicated above, Shahr-i Sokhta Period I provided numerous examples of very fine, painted Western Balochistan Ceramics. Period II at Shahr-i Sokhta (2750–2500 BC) contains very fine, black-on-grey ceramics (see Salvatori and Vidale 1997:71–72) of the type termed Emir grey ware observed also in the Bampur Valley and Kech-Makran. At Tepe Bampur, one can mention in Period III a fine, painted, grey ceramic with an inside painted decoration made with palm tree leaves (De Cardi 1970: fig. 22, n°143) that can be probably connected to the examples seen above from Tepe Yahya and Shahr-i Sokhta. Additional parallels for the vessel from Tepe Yahya and for the ceramic decorated with a swastika motif made with lines from Shahr-i Sokhta are in Kech-Makran in Period IIIb (from ca. 2800 BC; Besenval 2005: 6; Didier 2007:figs 108 and 121–122).

Second, the chlorite carved vessels of the Intercultural Style found at Tepe Yahya were the topic of a paper published by C. C. Lamberg-Karlovsky (1988). In this paper, it was shown that more than half of the Intercultural Style fragments belong to Phase IVB1 and almost 70% come from Phases IVB4–IVB1. In addition to the stone materials, one incised grey ceramic was recovered from Phase IVB5 at Tepe Yahya (Lamberg-Karlovsky 2001a:274). Ceramic parallels for the Intercultural Style of chlorite vessels are well-attested by incised grey ceramics found on the Southeastern Iranian Plateau and beyond the Persian Gulf. There are some at Tepe Bampur where, contrary to most of the ceramic comparisons indicated above which seem mostly to relate to Periods I–IV.1, they were mostly found in Periods IV.2-VI, while the only fragment of carved stone recovered from stratified context was found in Period IV.2 (During Casper 1970: 319–20). In Kech-Makran, a few carved chlorite vessels are attested in Period IIIc (Besenval and Didier, pers. comm.), while incised grey ceramics are essentially found from the end of Period IIIb to Period IV, the bulk of them being in Period IIIc (Besenval 2005:6–7; Didier 2007:375). Those periods in Kech-Makran provide us with a chronological bracket overlapping the mid-third millennium BC, 2600–2400 BC if one considers Period IIIc (Besenval 2005:fig. 13), while the examples from Shahr-i Sokhta are dated to a more recent period, Period IV (Lamberg-Karlovsky and Tosi 1973:figs. 147–150), dated to the late third millennium BC (Salvatori and Tosi 2005:fig. 13). Parallels in Oman

Peninsula date essentially to the Umm-an Nar period and especially its end (Méry 2000:205, figs 125–128; see for example Frifelt 1975:fig. 11e; Cleuziou and Vogt 1985:fig. 9, n°1; Bibby 1966, fig. 12). Imports of ceramics from Kech-Makran (Dasht Plain) to the Oman Peninsula are demonstrated from ca. 2700 BC (see Méry *et al.* 2012). Radiocarbon dates obtained at Tepe Yahya for Period IVB (Phase IVB5) date this period to ca. 2400-2100 BC. C. C. Lamberg-Karlovsky does not reject a date earlier than the end of the third millennium BC for this period and would place its end when Rimush, son of Sargon of Akkad, defeated Marhashi (Lamberg-Karlovsky 2001a:276, 279–280), that is in the 23rd/22nd century BC.

As indicated above, other types of ceramics (such as plain grey, burnished, impressed, ridge, and perforated ceramics) are not detailed here while their parallels are not discussed. Furthermore, other assemblages and comparisons such as those from Damin, Khurab and several sites surveyed in the Bampur Valley (see Stein 1937; Tosi 1970; Lamberg-Karlovsky and Schmandt-Besserat 1977) and Shahdad (see Hakemi 1997) are not presented. Chronologically, examination of a few types of ceramics found in Period IVB (also present in Phases IVC2–IVB6) provide us with parallels making their appearance within the first half of the third millennium BC, from the earliest levels of Konar Sandal South, Shahr-i Sokhta Periods II–III (and IV), Kech-Makran Periods IIIb–IIIc (and IV) and the Umm an-Nar period. Some of the types attested at Tepe Yahya continued throughout and after the mid-third millennium BC in all above sequences. The oldest dates of the ceramic extraregional parallels, are those situated at the beginning of Kech-Makran Period IIIb (2800 BC) and on the oldest boundary of the earliest levels of Konar Sandal South (2880 cal. BC; Madjidzadeh 2008:tab. 1). There are, however, parallels that seem mostly represented from Period IIIc in Kech-Makran (such as the incised grey ware) between 2600 and 2400 BC. The possible relations of our Component 3 with the Bahramjerd horizon indicated above provide us with a date situated between 2800–2600 BC for the beginning of this horizon (Sajjadi 1987:32, fig. 12). Additionally, recent radiocarbon dates obtained from Sohr Damb Period III, which is placed on the same chrono-cultural horizon as Mehrgarh VIIB–C and Nausharo IA–D, Mundigak IV, Shahr-i Sokhta II–III, and Kech-Makran IIIb–IIIc, are situated between 2700 and 2400 BC (Franke 2008; Görsdorf and Franke 2007:706–707). On the other hand, the radiocarbon dates from Phase IVB5 at Tepe Yahya are between ca. 2400–2100 BC (Lamberg-Karlovsky 2001a:276), those from Shahr-i Sokhta Periods III–IV in the second half of the third millennium BC (Salvatori and Tosi 2005:fig. 13), and some parallels in the Oman Peninsula are also dated to the second half of the third millennium BC. Furthermore, there are also parallels for materials from Tepe Yahya Period IVB at Konar Sandal, radiocarbon dated to ca. 2500–2300 BC (Madjidzadeh 2008:90).

The majority of the comparisons indicated above tend to indicate a date older than the end of the third millennium BC for Period IVB. If a date for its beginning placed too close to 3000 BC, around 2800/2700 BC, as certain parallels tend to show, seems to old because it is consistent with a limited portion of the assemblage, these comparisons tend at least to push back the beginning of Period IVB toward the middle of the third millennium BC more than to its end. The middle of the third millennium BC, 2600–2400 BC, is also the period in which most of the chronological brackets mentioned above overlap. Regardless, it is evident that only a return to excavations (Lamberg-Karlovsky 2001a:275) and greater analysis of materials from this period in Kerman may solve the problem. In conclusion, if one considers that the Proto-Elamite elements at Tepe Yahya may be dated to around 3200/3100–2900 BC, then the end of Period IVC and the beginning of Period IVB are chronologically separated by a gap situated

roughly on parts of Shahr-i Sokhta Period II and Kech-Makran Period IIIb and Late Banesh period in Fars. The settlement of Period IVB then began after the developments that happened in the early third millennium BC immediately following Period IVC on the Southeastern Iranian Plateau, not at Tepe Yahya but elsewhere.

3.11.1.4 Chrono-stratigraphy

D. T. Potts argued that Phases IVC1 and IVB6, the layers and features located directly above the building complex of Phase IVC2, were culturally connected to Period IVB and belonged to the second half and even the end of the third millennium BC. The Proto-Elamite elements found in Phases IVC1 and IVB6 were considered intrusive (Potts 2001:201–203). As stated before, it is suggested that the building complex of Period IVC (including its successive floor levels) did not last more than 100 or 150 years. This appears consistent with the fact that it corresponds to a single architectural level and with H. Nissen's estimate of the life span of mudbrick architecture to between 10 and 60 years (Nissen 1987:610). On the other hand, nothing indicates that the Proto-Elamite elements and, therefore, the settlement of Tepe Yahya, were limited to the building complex. The amount of sherds related to the occupation of the Proto-Elamite building complex of Phase IVC2 found at the top of the building and above it, in Phases IVC1 and IVB6, and the variety of productions they represent are not negligible. Considering the beveled-rim bowls, low-sided trays, and diagnostic decorated jars discussed here, 80 sherds are reported from Phases IVC1–IVB6 contexts. These ceramics and other IVC materials as defined above seem well-represented throughout Phases IVC2–IVB6. Furthermore, certain well-preserved pieces characteristic of the Proto-Elamite complex found in contexts located above the building complex tend to indicate that they were in situ and not intrusive. This is the case of the large fragment of decorated jar Yahya 1207 and the complete low-sided tray Yahya 0813 found on a surface assigned to Phase IVB6. Contrary to D. T. Potts's opinion (2001:81), one cannot consider Yahya 0813 as intrusive in this context. It was found resting on the surface and it is complete.

Thus, it is extremely difficult to determine whether the contexts located above the building complex of Phase IVC2 and below Phase IVB5, that is Phases IVC1–IVB6, were chronologically more connected to Phase IVB5 than to Phase IVC2. Furthermore, it is even possible to formulate the contrary hypothesis that would envisage the IVB-related ceramics as intrusive in contexts defined as Phases IVC1–IVB6. Following this, it may be suggested that, little after the abandonment of the Proto-Elamite building complex, the area was sporadically occupied by squatters or used as a dumping area, with the core of the Proto-Elamite occupation located elsewhere on the site. The rotation of occupation is attested on numerous archaeological sites. Even if one considers that the Proto-Elamite settlement continued after the building complex, this does not significantly change the date of the Proto-Elamite period at Tepe Yahya. The archaeological contexts of Phases IVC2–IVB6 are contained within less than one meter thick deposit and the parallels for the Proto-Elamite and associated elements indicated above still point toward the same bracket of 3100–2900 BC. Regardless, the only solid stratigraphical marker after the building complex of Phase IVC2 is the Phase IVB5 Persian Gulf Room complex. The IVB5 occupation, with a new material inventory, was in most places settled directly upon the building complex of Period IVC. A more reasonable interpretation is that following the abandonment of Phase IVC2 building and the construction of Phase IVB5, there was a mixing of both periods.

3.11.2 Culture

As indicated above, C. C. Lamberg-Karlovsky noted that the ceramic assemblage of Period IVC was mostly composed of indigenous types of ceramics with few outside parallels. The ceramics termed here Proto-Elamite were believed to represent less than 15% (Lamberg-Karlovsky 1977:37). The corpus of material presented in the present publication offers no possibility of quantification, as half of the preserved collection is in the Tehran Iran-Bastan Museum. It nevertheless allows us to give more detail concerning the ceramic cultures present during the Proto-Elamite occupation of Tepe Yahya. Based on this corpus, it appears that in addition to "a local population and a foreign Proto-Elamite culture," a more complex set of components was involved in the "process of acculturation" mentioned by C. C. Lamberg-Karlovsky (2001a:270) for Period IVC. In spite of uncertainties regarding the distribution of certain types of vessels in the stratigraphic sequence, it appears that the inhabitants of Tepe Yahya were dealing with a minimum of four separate ceramic traditions, with additional elements from Pakistan: the Proto-Elamite types; materials that are perhaps of a local or Kerman origin (SEIP Group B); ceramics mostly distributed on the Southeastern Iranian Plateau and with numerous parallels located in western Balochistan (SEIP Group A); and Burnished ware (Figure 3.120).

3.11.2.1 Southeastern Iranian Plateau

The indigenous materials mentioned by C. C. Lamberg-Karlovsky include certain ceramics included here within SEIP Groups A–D painted vessels. SEIP Group A (Western Balochistan Ceramic Complex) is represented overall in western Balochistan, from Tepe Yahya to Kech-Makran and Shahr-i Sokhta. Parallels are lacking for Groups B–D outside of Kerman, and the only connections for some vessels of SEIP Group B point, in spite of the chronological incoherence discussed above, to the previous traditions attested in Kerman and in the Bampur Valley and to elements found at Mahtoutabab. If one considers that these materials are not intrusive in the Proto-Elamite occupation, then these ceramics may be interpreted as part of a local or Kerman tradition.

3.11.2.2 Burnished ware

Burnished ware has a fabric, a specific surface treatment, and forms different from SEIP Groups A–D ceramics and from Proto-Elamite materials. No solid local predecessor is attested for this type of material in Kerman. The burnished Lapui ware found in Period V is different and chronologically earlier than Tepe Yahya Period IVC, separated by the period characterized by Aliabad ware. Burnished ware seems to represent a separate ceramic tradition, while most of the parallels point to Shahr-i Sokhta, almost 500 km distant, and Tepe Hissar and Tureng Tepe in the Gorgan Plain in northern Iran, 900 km apart. Burnished ware tends to indicate outside cultural relations rather than the local development of a new ceramic product. With the exception of the Burnished ceramics from Shahr-i Sokhta, the burnished vessels from Tepe Yahya represent the single evidence for contact in southeastern Iran with populations of a probable northern cultural sphere.

3.11.2.3 Proto-Elamite

The Proto-Elamite ceramic component of Tepe Yahya has its closest parallels to the west in Fars, in particular at Tal-i Malyan. However, comparisons do not concern only Fars but also Susa, Tal-i Ghazir,

and Tepe Arisman. These links clearly connect Tepe Yahya Period IVC to sites of the western half of Iran. One should, however, recall that there are elements of cultural continuity between the ceramic assemblage of the Uruk and that of the Proto-Elamite. It appears that, if one follows evidence from Tal-i Iblis and Mahtoutabad, certain Proto-Elamite ceramic types were not totally new in Kerman. Evidence from Tal-i Iblis suggests that beveled-rim bowls and low-sided trays started to appear in Period IV, a period that is characterized by Aliabad ware. At Mahtoutabad, materials defined as Uruk-related are reported from layers located above Aliabad-related deposits. Although the western areas of Iran have so far provided the most numerous evidence for Uruk and Proto-Elamite ceramics, recent data from Mahtoutabad may tend to confirm that Kerman was another important zone for the development of an Uruk/Proto-Elamite material culture. Considering the Uruk background in the Halil Rud Valley, it does not seem unrealistic to envisage influences from the immediate eastern areas instead of the western ones for the origin of the Proto-Elamite occupation of Tepe Yahya. These recent discoveries in the Halil Rud Valley are not completely surprising. They add a new chronological background to the Proto-Elamite presence on the Southeastern Iranian Plateau, already suggested in northern Kerman at Tal-i Iblis, but also at Shahr-i Sokhta and in Kech-Makran, hundreds of kilometers to the east. Generally speaking, D. T. Potts notes (2009:12) that "it is time to rethink our approach to BRBs [Beveled-rim bowls] and to stop looking at them as non-indigenous, intrusive elements in the many local ceramic traditions in which they appear" and later that "they must be viewed as part of the local cultural repertoire." This remark could apply to the examples of beveled-rim bowls from Tepe Yahya and the rest of the Proto-Elamite ceramic assemblage, especially when one considers a previous Uruk background in Kerman. Kerman appears to date as the southeastern boundary of the Uruk/Proto-Elamite phenomenon. Indeed, although some elements of the Proto-Elamite phenomenon (glyptic and beveled-rim bowls) are widely attested (up to Shahr-i Sokhta and Kech-Makran), it is important to note that the Proto-Elamite ceramic assemblage is less widely produced and distributed. As noted above, Shahr-i Sokhta ceramic corpus is clearly connected to other traditions, and the same may be said about Kech-Makran. No evidence for Proto-Elamite vessels are found in the areas located between Seistan and Kech-Makran and Kerman. Considering solely the ceramics, the Proto-Elamite sphere seems essentially represented in the western half of Iran and in Kerman; a sphere best defined at Susa, Tepe Arisman, Tal-i Ghazir, Tal-i Malyan, and Tepe Yahya, with important elements in the Tehran area as well.

3.11.2.4 Nal ware

As noted above, the single Nal sherd found at Tepe Yahya corroborates evidence from Shahr-i Sokhta and further illustrates the penetration to the west of a ceramic tradition or related style whose origin seems to be in eastern Pakistani Balochistan. This cultural infiltration, however, still appears minimal in southeastern Iran.

3.11.3 Function

3.11.3.1 Southeastern Iranian Plateau ceramics

SEIP Group A ceramics with open shapes (bowls and goblets) would fulfill requirements for food and liquid presentation and consumption. The sherds from Tepe Yahya corroborate evidence from Kech-Makran and Shahr-i Sokhta and contradict Sir M. A. Stein's interpretation of this type of ceramic product.

Sir M. A. Stein (1931:94, 98-99) suggested that the very fine, grey ceramics were limited to funerary practices. Yet, evidence from architectural contexts from Seistan, Kerman and Kech-Makran indicate that these ceramics were not only used for funerary rituals.

SEIP Group B ceramics include six main categories that comprise various types of open shapes (shallow bowls, bowls, pots, goblets, and very large vessels) and close shapes (hole-mouth jars and necked-jars). Generally speaking, the open forms probably include at a minimum functions such as food and liquid presentation and consumption, while the close shapes may have been used for food (grain?) and liquid consumption, transportation and storage.

3.11.3.2 Burnished ware

Burnished ware is mostly represented by bowls probably used for food presentation and consumption. Caution should be taken regarding the goblet rims attested in the collection. If these sherds truly come from goblets, they indicate that burnished materials were also used in relation to liquid consumption. As noted, these fragments may also represent parts of pedestal stands for banquet display.

3.11.3.3 Proto-Elamite ceramics

Beveled-rim bowls

Numerous interpretations have been offered regarding the presence of beveled-rim bowls, their function, and their possible social, cultural, economic and political implications. D. T. Potts has recently provided a synthesis regarding hypothetical functions of beveled-rim bowls (Potts 2009).

These vessels are interpreted as:

- Votive items or offering containers (see Beale 1978:304);
- Marker of infant burial at Susa (de Mecquenem 1943:13);
- Related to milk production (Delougaz 1952:128);
- Bread pots (Burton Brown 1946:36-37); bread-baking molds (K. Schmidt 1982; Millard 1988; Chazan and Lehner 1990);
- Used in food consumption during banquets (Forest 1987);
- In relation to copper objects production (see Potts 2009:7-8);
- Aromatic substance holders (Buchanan 1967:539);
- Containers for rations distribution (of grain) (Nissen 1970:137; Johnson 1973:135)
- Used in the desiccation, transport and distribution of salt cakes (Buccellati 1990:25);
- Tax-containing bowls brought to the administrators' building at Tal-i Malyan (Nicholas 1987:71; 1990:128).
- And multi-functional objects (Le Brun 1980; Abdi 1999:223).

Two aspects of these hypotheses are discussed: bread making and a measure system. D. T. Potts (2009:12-14) has recently favored the hypothesis that envisages beveled-rim bowls as molds for the production of bread rations in Mesopotamia and southwestern Iran, and/or a culinary practice and related technology outside of these areas. He noted that the beveled-rim bowl developed first in Mesopotamia and/or Khuzistan before it spread to other areas. The bread making hypothesis is seductive and agrees with the fact that there is no clear evidence for the standardization of the bowls. T. W. Beale (1978) noted that there is no volume standardization in the corpus from Khuzistan or at

Tepe Yahya where three main clusters of rim diameters were defined. As stressed by D. T. Potts, it is unlikely that the variations in volume observed on the beveled-rim bowls corresponded to gradations in the Archaic system of grain metrology (*contra* G. A. Johnson's suggestion; Potts 2009:4). M. Chazan and M. Lehner (1990:31) pointed out the "difficulties inherent in trying to hand build a bowl which adheres to a standardized size, not to mention the difficulty of calculating in advance the degree of shrinkage of a highly tempered ware during firing." In their opinion, "it seems far more realistic to see the Bevel Rim Bowls as functioning to process (through baking) a measure of grain than actually serving to measure out the grain." The same authors recall B. J. Kemp's remark (Chazan and Lehner 1990:31; Kemp 1989:124–125) that "in Egypt (...) the quantities going in [bakeries/breweries] were measured in standardized units. The products were counted as loaves and jars of so much pefsu [cooking ratio or potency] value depending on the amount of grain in the recipe, which varied. Standardization was never expressed in the actual bread mold or beer jar." We are left to ponder over whether a system of bread making, or a function of the vessel, or both, was transmitted throughout a wide area,[47] beginning in the Uruk period. It is to be expected that the interpretation of this system/function may have varied according to the regions concerned and the standards. This remark seems corroborated by the fact that beveled-rim bowls were locally made (see Potts 2009:10), allowing for a large range of interpretations of their production and function.

The ration container hypothesis, a system enabling quantification, does not necessarily have to be discarded. If one envisages free and various interpretations of this system, which is likely, given their large distribution in time and space, the absence of universal standardization needs not to be a problem. In other words, it seems that most of the beveled-rim bowls fall roughly in the same dimensions. Following the bread making hypothesis, one can compare it to the French "baguette," which represents a "standard" quantity of bread that everybody refers to in estimating a need in bread, even though the shapes and sizes of the baguette may vary from one bakery to another. One can also compare this to pita bread, which is spread from the Balkans to Iran and include various sizes across this area. To go further with culinary analogies, a pint of beer is also a common and shared measure that means a large glass of beer roughly equivalent to half a liter. There are however differences in detail between the British, French, American, and Australian pints, although in these four cases a pint remains approximately equal to half a liter (no less than 40/45 cl and no more than 57/60 cl. The volume variation around 50 cl is 20% more in the larger glass). The same may be said about a glass of wine: the quantity of wine served in a so-called "glass of wine" is not exactly the same in all places that serve wine, but everybody knows that when one orders a glass of wine, one does not expect a pint.

Returning to the bread making hypothesis, M. Chazan and M. Lehner (1990:32) noted that "the technology of bread production was the same in the administrative, religious, and domestic spheres. The range of archaeological contexts in which Bevel Rim Bowls (...) are found make it clear that, although the state [in Mesopotamia] was capable of providing rations of bread, baking was by no means a state monopoly. The only difference we can detect between state, religious, and domestic production of bread is the scale of operation." It is suggested here that the bread making hypothesis conforms to a variety of both different contexts and quantities. It agrees with J.-D. Forest's (1987) hypothesis that sees beveled-rim bowls as used in banquets and could agree as well with that formulated by T. W. Beale (1978:304, 308–309, 312) who considered them as containers for votive offerings.

Beveled-rim bowls could, in addition to bread-making, serve multiple purposes, including in rituals and religious functions. Thus, on the Warka Vase, found in an Uruk III context (late fourth millennium BC) in the Eanna precinct at Uruk (McIntosh 2005:68; Beaulieu 2007:166), a procession of men is depicted holding various types of vessels, including conical forms (flower pots, beveled-rim bowls?). The vases in question do not seem to be filled with bread.

At Tepe Yahya, sherds of beveled-rim bowls were mostly found in areas east and west of the mudbrick building, and it was noted that the higher concentrations came from contexts such as pits (Beale 1978:300); this is the case in Trench CW. The concentration of beveled-rim bowls in Trench CW, considered a dumping area with a large pit, indicates that beveled-rim bowls were voluntarily and relatively massively thrown away. If this fact agrees with both the bread making device (see Potts 2009) and offering container (see Beale 1978) hypotheses, it may, at a minimum, indicate that beveled-rim bowls were produced for a one-time episode and then thrown away such as "disposable products." Bread making device and ritual object hypotheses, rather than being distinguished, could be combined.

Low-sided trays

Low-sided trays, in spite of their distinguishable form, are the closest parallel to the beveled-rim bowls as their fabric is very similar. The distribution of low-sided trays at Tepe Yahya appears comparable to that of beveled-rim bowls. They were in both cases mostly found in areas located west and east of the Period IVC mudbrick building. Several low-sided tray fragments were found associated in the same contexts as the beveled-rim bowls. The fact that their fabric is similar to that of the beveled-rim bowls could lead to envisage a similar function. Several examples of low-sided trays have traces of burning on the outside base, which indicates a proximity to firing and perhaps cooking activities. If one follows the hypothesis that beveled-rim bowls and low-sided trays were bread cooking devices, and D. T. Potts's remark (2009:14) that "(...) increasing diversification in bread-baking occurred after the fourth millennium, and one could suggest that after an initial phase in which the BRB was used as the main form for baking leavened bread, a greater number of ceramic forms came to be employed to produce loaves of a wide variety of shapes," one could envisage that low-sided trays allowed for producing alternate - flat and oval or tear-drop - pita forms of bread in the fourth millennium BC.

Spouted vessels

Spouts and spouted vessels are clearly connected to the use of liquids. If consumption of liquids (water or other types?) can be envisaged, one may also suggest that these ceramics were used as washing devices (for hands and/or body). We are unfortunately not well informed about the shapes of the spouted vessels.

Decorated jars

As indicated above, three different large jars were found in Phase IVC2 Room 4, including certain "masterpieces." Room 4 is considered a storeroom. Other "masterpieces" were recovered from Room 1 (in addition to three other jar fragments) and Room 5. The function of these decorated jars can be associated with storage. One that contained a pit of *Prunus* sp. (Lamberg-Karlovsky 1984:349) was found in Room 4 (Yahya 1170). These types of jars can also be related to the transport of goods. The

sealed jar stoppers found at Tepe Yahya may indicate the control of stored goods, but may also indicate control of those goods during transportation from one place to another. Another function for these jars, not observed at Tepe Yahya but well-attested at Tepe Arisman is that of burial container (see Chegini *et al.* 2011).

3.11.3.4 Plain ware

In addition to the above, the assemblage of Period IVC comprises a series of coarser materials, some bearing smoke-blackened traces on their surface resulting from firing/cooking activities. The context of these materials does not help in interpreting their function, as they were recovered from various areas in and outside of the mudbrick building. Some were reported from areas containing firing structures, so that we may envisage those vessels as cooking ware. However, the forms represented by plain ware from Phases IVC2-IVB6 include other activities related to liquids and food consumption, and certainly other functions (miniature ceramics).

3.11.4 Technology

As noted above, Tepe Yahya in Period IVC was traversed by separate ceramic traditions. It is not known whether these ceramics were produced locally, imported, or both. It was noted that the beveled-rim bowls were locally made. The hypothesis of local production of other ceramic types, even at the site, should not be totally dismissed, although evidence is lacking. At Tepe Yahya, distinct ceramic traditions were present at the same time thus making clear that the inhabitants and, among them, potters, were aware of a variety of techniques of fabrication, forms and decorations, in other words, of a variety of technological spheres and ceramic types. This remark applies to the broader context of Middle Asia around 3000 BC, a period marked by important ceramic interactions, with various styles of ceramics widely attested and found together in many settlements. In this context, one may expect forms of emulation, borrowing, imitation, and finally hybrid combinations of styles. Bearing this in mind, it is not surprising that: various types of decorative combinations are observed on the Proto-Elamite jars; a series of vessels appear as imitations of SEIP Group A; while one low-sided tray bears a burnished inside surface (Yahya 0346: Figure 3.5, n°9).

4 The Small Finds

Three hundred and forty-one small finds are discussed in this chapter, not including inscribed and blank tablets and glyptic art which are discussed in the following chapter. Two hundred and eighty-eight small finds were previously reported from Phases IVC2–IVB6 contexts (Potts 2001). An additional series of 48 elements of lithic industry are assigned to Period IVC and five small finds from Trenches AN2 (SF 821 and 822), XBE (ad-0014), and XC (ad-0016 and ad-0017) are included in this presentation of the small finds and labeled as from "secondary contexts" of Period IVC. The small finds from Trench AN2 were previously labeled as "IVC1/2?" (Potts 2001:290). A part of this corpus was observed and documented in the collection of the PMAE and/or was previously illustrated, while additional information for other small finds comes only from registration cards whose data were published by D. T. Potts (2001:Appendices C–E).

Almost 35% of the small finds are reported from Phase IVC2 contexts, while around 23% and almost 27% are from Phases IVC1 and IVB6, respectively (Table 4.1, Graph 4.1). The materials from "secondary contexts" of Period IVC contexts represent ca. 15%.

In terms of raw materials, it appears that more than 70% of the small finds represent fragments and industries of stone (240 small finds), including various types of raw materials. Clay industry composes 13.5% of the corpus (46 small finds) and metals represent more than 11% (39 small finds, with 34 copper objects or fragments). The rest is represented by bone, shell, and ivory items (4.7%: 16 small finds). The raw materials of half of the stone small finds recorded here are based on D. T. Potts's publication of the registration cards and collection of the PMAE: they include chlorite materials consisting of more than 22% of the small finds corpus, and agate, serpentine, lapis lazuli, turquoise, obsidian, heulandite, quartz, chromite, limnite, red ochre, and chalk (?). More than 27% of the small finds are referred to as stone on the registration cards, with no additional detail. The vessel fragments are described as white stone, silt stone, sand stone, alabaster, and marble. The materials available from the collection indicate that a large number of the vessels were made of alabaster and marble. However, the mineralogical characterization of these objects requires further analysis. The same may be said of the 48 elements of lithic industry which represent more than 14% of the small finds corpus.

In terms of types of objects, more than 25% of the small finds represent vessels production (in chlorite, alabaster, and undetailed stone). A significant part is represented by ornaments (more than 23%, if one considers beads, pendants, bracelet, buttons, needles, pins and disks made in chlorite, undetailed stones, semi-precious stone, clay, copper, bone, shell, and ivory). The rest of the small finds are mostly represented by less than 15 items per category of object. This last series indicate various types of activities, including agricultural production (mortars, pestles, axe and hoe), wood cut (axe and hoe), fabrication and repair of tools (shaft straighteners and whetstones), weaving (whorls) and hunting (and/or warfare (?), see below) (balls and slingballs).

4.1 Stone vessels

In this section are presented stone vessels including 43 sherds defined as stone including undetermined materials and probable alabaster and marble, and 45 chlorite fragments.

4.1.1 Stone vessels

4.1.1.1 Quantity

Forty-three fragments that belonged to stone vessels are registered from Phases IVC2-IVB6. The corpus of stone vessels is composed of seven vessels with complete profiles, 14 rim fragments, six bases, and 16 body sherds (Table 4.2, Graph 4.2).

4.1.1.2 Description

With the exception of the chlorite materials that are distinguished and discussed below, the type of stone used for the manufacture of the stone vessels is not systematically defined. The mineralogical characterization of numerous fragments requires more detailed analysis. In addition to the chlorite materials, stone vessels were made at least of three types of stone. The first type of stone, a type of alabaster, is translucent, of whitish, buff, or greenish color, sometimes with reddish and light-brown veining. At a minimum, nine fragments seem to have been made using this type of stone (SF 1962, 2412, 2424, 2430, z-564, z-567, and z-705; Figures 4.1, 4.3). The second type, another type of alabaster, is opaque and of a white-to-yellowish color. Most of the vessels made with this type of stone have thicker walls than those of the vessels of the first group and of chlorite, but a thinner category of containers was also manufactured. At a minimum, 10 vessels seem to have been manufactured with this type of stone (SF 2252-2253-2254, 2256, 2257, 2400, 2426, ad-0005, z-722, z-723, and z-725; Figures 4.2-4.3). The third type, marble, is represented by one sherd (SF 2399; Figure 4.1, n°7; Figure 4.3, n°15). It is white and opaque.

Altogether, these three types of stone were used to produce a quite wide range of forms, with wall thicknesses ranging from 0.3 cm to 1.5 cm. Among the available documentation can be mentioned:

- One hole-mouth jar with a 5 cm rim diameter (SF ad-0002; Figure 4.3, n°1);
- A small bowl with vertical wall and rim (SF 2430, RimD = 8 cm; Figure 4.3, n°2);
- A shallow bowl with a flat base and vertical wall and rim (SF ad-0001, RimD = 18 cm; Figure 4.3, n°3);
- Bowls and shallow bowls with everted walls and rims (SF 2424, 1962, ad-0003, and z-0564, RimD = 17, 15, and 14 cm; Figure 4.3, n°4-7). One has a flat base, one has a round base, while a convex base is also observed (SF 2412; Figure 4.3, n°10);
- A series of thick-walled bowls and shallow bowls with everted walls and rims (SF 2256, z-725, ad-0005, and 2252-2253-2254, RimD = 17 to 28.5 cm; Figure 4.3, n°11-14). One has a flat base, and one can mention one with an irregular wall thickness SF ad-0005);
- A series of conical goblets (SF 2399, 2257, and 2400, RimD = 14 to 19 cm; Figure 4.3, n°15-17);
- Two heavy bases (SF z-723 and 2426; Figure 4.3, n°18-19);
- And more sophisticated forms with expanded rims (SF z-567 and z-722, RimD = 12 and 14.5 cm; Figure 4.3, n°8-9).

4.1.1.3 Context

The majority of the stone vessel fragments come from Phase IVC1 (18 sherds). They are then represented in Phase IVC2 (16 sherds) and Phase IVB6 (9). The differences are not significantly important, but one can note that Phase IVC1 also includes the majority of rim sherds and three complete profiles (Table 4.2, Graph 4.2, Figure 4.4).

In Phase IVC2, three fragments were found on a floor of Room 1 inside the mudbrick building. Among them is a vessel with a complete profile (SF 3745). Five sherds were recovered from a surface in Area C, east of the mudbrick building. These sherds include a vessel with a complete profile (SF ad-0003; Figure 4.3, n°6). An additional sherd may belong to either Area C or Area B. One vessel with a complete profile (SF z-564) was recovered from Area H, southwest of the mudbrick building. Two fragments were found on the floor level of Area A while one was in a fill in the same area. The contexts of three fragments remain unclear. Two were recovered from context B.73.2, which was assigned to Phase IVC2, Area G by D. T. Potts (2001: Appendix A) and Phase VA.1 by T. W. Beale (Lamberg-Karlovsky and Beale 1986: Appendix C). The third one was found in Trench C, context C.68.T1-2.8. This context was assigned to Phase IVC2 by D. T. Potts (2001: Appendix C-D) and Phase VA.1-Period IVC by T. W. Beale (Lamberg-Karlovsky and Beale 1986:Appendix C).

In Phase IVC1, ten fragments were recovered from areas corresponding to the interior of the mudbrick building: in Room 1 (1), Room 3 (1), Room 4 (4), Room 5 (2), and Room 6 (2). Room 4 contained three vessels with complete profiles. The rim fragments SF 2400 and z-567 (Figure 4.3, n°8, 17) were found in Room 6. Outside of the mudbrick building, three sherds come from Areas A–E located east of it, and three from Areas F-G, west of it. The context of two sherds from Trench B-BW, Phase IVC1, remains unclear.

In Phase IVB6, six fragments were found in Trench B. Among them can be noted a vessel with a complete profile (SF 2252-2253-2254; Figure 4.3, n°14) found in a mass of bricks at the top of Room 1 fill (context B.70.17). Two sherds were recovered from Trench BW (including the large rim fragment SF 2424 found on a surface; Figure 4.1, n°4), while one from Trench A.

4.1.1.4 Comparisons

Stone vessels are very common in Middle Asia and the same types of forms can often be found within separate geographical and chronological contexts (see Lamberg-Karlovsky 2001a:273 regarding the alabaster vessels). Stone vessels are indeed a constant part of the material inventory of the Chalcolithic and Bronze Age populations, and parallels for the shapes described above can be found within this large chronological bracket. At Tepe Yahya, stone vessels were produced in the Neolithic period, but they appear to have become common only from Periods VB and VA (Lamberg-Karlovsky and Beale 1986: 190). Stone vessels are also still attested in Phase IVB5 contexts onward. On the Southeastern Iranian Plateau, examples are found at Shahr-i Sokhta in Periods I to III (Tosi 1969:figs 40, 226–227) and Tal-i Iblis in Period II and Period IV (Caldwell 1967:155, 187, pl. 11). Many fragments and vessels are also reported from Kech-Makran in architectural levels of Period II (first half of the fourth millennium BC) and in burials of Period IIIa (second half of the fourth millennium BC) (Besenval 2005:5). Long-distance parallels can be mentioned at Sarazm in Tajikistan, where stone vessels were produced throughout the occupation of the site (collections of Dushanbe Museum, Penjikent Museum, and Sarazm Museum).

4.1.2 Chlorite vessels

4.1.2.1 Quantity

Forty-five chlorite vessel fragments are registered from Phases IVC2–IVB6. The corpus is composed of six complete profiles, 14 rim fragments, two bases, and 23 body sherds (Table 4.3, Graph 4.3).

4.1.2.2 Description

The vessels of chlorite are mostly of a grey color with bluish and greenish hues. The term "chlorite" should be used with caution. Indeed, as shown by P. Kohl, 15% of the corpus of chlorite vessels from Tepe Yahya was not chlorite (Kohl 2001:219). These vessels were studied and published by P. Kohl (1975, 1977, 1978, 1979, 1986, 2001) and C. C. Lamberg-Karlovsky (1988). They are not expanded upon here.

The finds presented here include two small thin-walled deep bowls both with the same type of everted rim (SF 310 and 542; Figures 4.5-4.6). Their walls are 0.4 cm thick and their rim diameters are 12 and 14 cm. One is carved (SF 310); the pattern represented is a grid below two horizontal ridges. The other chlorite vessels are plain. They correspond to a small thick bowl (SF 307, Rim D = 6.5 cm), a small shallow bowl (SF 529, RimD = 12), and a large vessel with a flat rim (SF 313, RimD = 24 cm). In addition, one fragment that seems to be part of the rim of an unfinished vessel deserves mention (SF 528, RimD = 20 cm; Figure 4.5, n°5).

4.1.2.3 Context

The chlorite vessel fragments are distributed throughout Phases IVC2-IVB6, with a slight majority of rim sherds in Phase IVB6 (Table 4.3, Graph 4.3, Figure 4.7).

In Phase IVC2, six sherds were recovered from inside the mudbrick building: two were recovered from Room 1; one from Room 4; two from Room 5; and one from Room 6. Four fragments are reported from a surface in Area C, and one from Area G. Two sherds come from Trench C, from contexts C.68.T1-2.8 and C.68.T3.2.3. The former was assigned to Phase IVC2, while the latter could be related to the Period IVC complex but was assigned to Phase VA.1 by T. W. Beale (Lamberg-Karlovsky and Beale 1986:330).

In Phase IVC1, two fragments were found in Room 3; one in Room 4; and one in Room 5 (the rim sherd SF 313). One sherd comes from Areas A-E, located east of the mudbrick building, and four are in Areas F-G, west of it. In addition, five fragments assigned to Phase IVC1 come from Trench B-BW.

In Phase IVB6, six fragments come from a fill in Trench A. Seven were found in Trench B in fill deposits located above the building complex of Period IVC and below Phase IVB5 (contexts B.70.11 and B.70.T3.2). From the same trench and phase are five additional sherds. Among the Phase IVB6 chlorite vessels can be mentioned the carved example SF 310, the small bowl SF 307, SF 529 (found on a floor), and SF 528 (the unfinished vessel fragment) found in burnt debris.

4.1.2.4 Comparisons

Parallels for chlorite vessels in general are numerous at Tepe Yahya. Indeed, chlorite was the most common material used to make stone vessels throughout the Neolithic and Chalcolithic sequence of Tepe Yahya (Lamberg-Karlovsky and Beale 1986:190-191, figs 7.20, 7.24). Production of chlorite artifacts dramatically increased in Period IVB, especially during Phases IVB4-IVB1 (Kohl 2001:210). The corpus represented in Phases IVC2-IVB6 cannot be compared to the larger quantities of chlorite vessel fragments and debitage recovered in Phases IVB4-2. The unfinished fragment SF 528 found in Phase IVB6 attests to local production, while D. T. Potts reported finds in this phase and in Phase IVC2 that he assumed indicate chlorite working (Potts 2001:182, Table 7.2). The finds listed by D. T. Potts are: in Phase IVB6 chlorite bowl fragments with scrapers and blades (context B.70.11),

a chlorite bowl with scrapers and blades (context B.70.17), a chlorite fragment with flint blade fragment (context BM.71.1.1), and in Phase IVC2 a chlorite fragment with flint flake in Room 6 (context BM.71.6). In addition to vessels, other categories of objects were produced using chlorite in Phases IVC2-IVB6, and a block (SF 3660, see below) was recovered from a fill in Phase IVB6. P. Kohl discovered chlorite outcrops with evidence of mining extraction in the mountains immediately north of Tepe Yahya (Kohl 2001:210, fig. 2). The production of chlorite vessels is from the Neolithic and Chalcolithic periods and continued into Period IVC. Carved examples were very rare in the early periods. Intercultural Style vessels of the style defined from Period IVB are not represented in Period IVC (see Kohl 2001:214; Lamberg-Karlovsky 1988). The only finds that are reminiscent of the later examples (see Lamberg-Karlovsky 1970:figs 21-22) are SF 310 (Phase IVB6) and SF 542 (Phase IVC1) (Figure 4.6, n°1-2). The forms of these bowls resemble those of examples from Period IVB (see Lamberg-Karlovsky 1970:fig. 23E and N). The carved decoration of SF 310 is also observed in the later deposits.

4.2 Stone objects and fragments

In this section are presented 104 stone objects and fragments and 48 supplementary items of lithic industry studied by M. Piperno (1973). The majority of these small finds are made of undetermined stones; this concerns 51 small finds and the 48 implements of lithic industry. Chlorite is represented by 31 small finds, while each other type of raw material is represented by five items to the maximum. They include agate, black stone, green stone, heulandite, lapis lazuli, serpentine, turquoise, obsidian, quartz (?), chromite, limnite, red ochre, and chalk (?) (Table 4.4, Graph 4.4, Figures 4.11-4.12).

One third of the corpus comes from Phase IVC2, while almost 24% comes from Phase IVB6 and almost 11% from Phase IVC1. The last third is composed of two chlorite small finds from Trench AN2 and 48 items of lithic industry included within "secondary contexts" of Period IVC.

4.2.1 Chlorite

Chlorite objects and fragments are represented by 31 small finds. They include nine categories of objects, which are bracelet, button, disk, incised object, pin, token, whorl, shaft straightener, bead and pendant, and additional unidentified items and raw or worked fragments. Eight of these small finds were found in Phase IVC2, six in Phase IVC1, 15 in Phase IVB6, and two in Trench AN2 ("secondary context" of Period IVC) (Table 4.5, Graph 4.5, Figure 4.11).

4.2.1.1 Bracelet

The single chlorite bracelet fragment (SF 538; Figure 4.8, n°7; Figure 4.10, n°4) was recovered from Phase IVC1, Trench B-BW. It is flat, approximately 6.5 cm in interior diameter, and 2.5 cm wide and 0.9 cm thick to the maximum.

4.2.1.2 Buttons

Two buttons were found in Phase IVB6, in Trench A (SF 3663 and 3665, not illustrated). These buttons measure 1.9 x 0.2 cm (SF 3663) and 2.2 cm x 0.9 cm (SF 3665) in diameter and thickness, respectively. Another chlorite button (SF 821), not detailed, was also reported from Trench AN2 ("secondary context" of Period IVC).

4.2.1.3 Disks

Chlorite disks were recovered from the three phases. One (SF 3674) was found on the earliest floor of Room 1, Phase IVC2. It measures 5.8 x 3.15 x 0.7 cm. One (SF 530), not detailed, was found in Room 4, Phase IVC1. In the same phase is one (SF 312) from Room 5. It measures 8.5 x 10 x 2.5 cm. From Phase IVB6 are two chlorite disks; one in Trench A (SF 3662, 1.7 x 1.2 x 0.7 cm) and one in Trench BW (SF 548, not detailed).

4.2.1.4 Incised object

A particular small find (SF 532; Figure 4.8, n˚6; Figure 4.10, n˚9) comes from Trench B, from a context assigned to Phase IVB6. This small find is a fragment of an object rectangular in shape with a tapering extremity. It measures 2.8 x 1.2 x 0.9 cm. The tapering extremity may indicate that this fragment was perhaps part of some sort of driller. One of its faces has an incised sign: a square.

4.2.1.5 Pin

One pin (SF 563) was found in Areas F-G, Phase IVC1. It measures 5.8 x 0.2 cm.

4.2.1.6 Token

One token or a gaming piece made in chlorite (SF 3667; Figure 4.10, n˚3) was reported from Trench A, Phase IVB6. This object measures 2.6 cm high x 1 cm wide.

4.2.1.7 Whorls

Two whorls were found in Phase IVC2 contexts. One, not detailed, is from Room 6 (SF 550). The second one was found in Area D (SF 3675). It is biconical and measures 1 cm in diameter. A third one was recovered from Phase IVB6, Trench BM (SF 549). It measures 1.1 cm in diameter and 3.4 cm in height.

4.2.1.8 Shaft straighteners

Four shaft straighteners are listed in Phases IVC2-IVB6. One is from Phase IVC2 (SF 3680). It was found on the surface of Area C and measures 6.2 x 4.7 x 1.4 cm. Two are from Phase IVB6; one was reported from a fill deposit above the building complex of Period IVC in Trench B (SF 309; Figure 4.9 n˚1; Figure 4.10, n˚11) and measures 6.6 x 4.7 x 1.7 cm, while the second one (SF 3668) was found in Trench A and measures 9.6 x 8 x 3.5 cm. The fourth shaft straightener (SF 822), not detailed, was recovered from Trench AN2, in a context assigned to Phase IVC1 or IVC2 (included here in "secondary context" of Period IVC).

4.2.1.9 Beads and pendants

One chlorite object termed as bead was found on the earliest floor of Room 1, Phase IVC2 (SF 3671). It measures 1.1 x 1.25 cm. Chlorite pendants were found in Phase IVC2 in Room 5 (SF 314) and Room 6 (SF z-417; Figure 4.8, n˚2; Figure 4.10, n˚7), and in Phase IVB6 in a fill above the mudbrick building of Period IVC (SF 308). SF 314 is an object measuring 4.5 x 1.3 x 0.8 cm. SF z-417 is shaped like a spindle whorl and measures 2.4 cm in diameter and 1 cm in height. SF 308 measures 3.5 x 3.5 x 2.1 cm.

4.2.1.10 Unidentified objects and fragments

In Phase IVB6, from a fill in Trench A, were recovered two fragments shaped like arrows (SF 3664a and 3664b) and measuring 3.6 x 1.7 cm, and a long object (SF 3666) measuring 21.5 x 9.7 x 1.9 cm (not documented). Two additional unidentified fragments were recovered from Phase IVC1, from Room 4 (SF 531, undetailed) and Room 5 (SF 311, 9 x 5 x 1.3 cm), and one was found in Phase IVC2 (SF 841, undetailed).

The corpus of chlorite small finds includes two unworked or slightly worked fragments from Phase IVB6: SF 3660 and 547. The former is a block that was found in a fill in Trench A; it measures 10.5 x 6.5 x 3.5 cm. The latter was found in Trench BW and measures 6 x 3.4 x 2 cm. In addition, as indicated above, D. T. Potts identified three associations of chlorite fragments and lithic implements in Phase IVB6 and one in Phase IVC2 that may indicate chlorite working areas (Potts 2001:182, Table 7.2).

4.2.2 Stone

Objects and fragments of undetermined stone are represented by 51 small finds. They include nine categories of objects at minimum and additional unidentified fragments. Thirty of these items come from Phase IVC2, six from Phase IVC1, and 15 from Phase IVB6 (Table 4.6, Graph 4.6, Figure 4.12).

4.2.2.1 Balls

Eight balls of undetermined types of stone are reported, including seven in Phase IVC2 and one in Phase IVB6. In Phase IVC2, four were found on the lowest floor of Room 1 (SF 3716a, 3716b, 3721b, and 3721c). These balls measure 6 cm in diameter, 7 cm in diameter, 4.7 x 4.5 cm, and 5.7 x 5.2 cm, respectively. On the second floor of the same room was found SF 3715. It measures 6.4 x 5.7 x 5 cm. A smaller stone ball was in Room 6 (SF 2402, 2.6 cm in diameter), and another one, not documented, was in Area G (SF 2531). The ball from Phase IVB6 (SF z-251; Figure 4.8, n˚8; Figure 4.10, n˚8) measures 3.6 cm in diameter.

Similar types of objects are reported from the Proto-Elamite occupation at Tepe Arisman. Some of them have roughly similar sizes ("hammers," see Helwing 2011b:257, figs. 12, 63).

4.2.2.2 Cone

A single cone was found in Phase IVB6, in a fill in Trench A (SF 3710). It measures 2.8 x 1.2 cm. Its shape is not detailed.

4.2.2.3 Disks

One disk was found in the drain of Phase IVC2 in Area H (SF 2118; Figure 4.8, n˚1; Figure 4.10, n˚1). It is probably made of some sort of alabaster. It is polished and measures 2.4 cm in diameter and 0.4 to 0.6 cm in thickness. Two thicker stone disks come from Phase IVB6. One (SF 3709; Figure 4.10, n˚2) was found in a fill in Trench A. It measures 4.5 cm in diameter and 2 cm in thickness. It is decorated on both faces with incised motifs. One face shows a grid pattern, while the decoration of the other face could be a vegetal motif. The other disk from Phase IVB6 is from Trench BM (SF 2410, 6.7 x 5.2 x 2 cm).

4.2.2.4 Drilled and perforated objects

One drilled piece of stone was recovered from Phase IVB6, from a fill in Trench A (SF 3707a).

This object, not documented, measures 13.2 x 3.5 cm. A fragment of another perforated object was found in Phase IVB6, in Trench BW (SF z-547; Figure 4.10, n°13). The fragment is a rectangle measuring 6.2 x 3.6 x 2.4 cm, and the perforation measures 1.6 cm in diameter. One small find termed ring (SF 3705; Figure 4.10 n°12) was recovered from the same phase in a fill of Trench A. This object is 6.4 cm in diameter and 3.1 cm thick. The perforation measures approximately 1 cm in diameter.

4.2.2.5 Whetstones

Ten whetstones were recovered from Phase IVC2 contexts, while one was found in Phase IVB6. In Phase IVC2, four were found on the lowest floor of Room 1 (SF 3720b, 3720c, 3720d, and 3721d; Figure 4.10, n°16-18). They measure respectively 10.1 x 4.5 x 1.2 cm, 9 x 5.5 x 1.6 cm, 9.5 x 7 x 1.5 cm, and 12 x 8 x 1.6 cm. Two fragments were found in Room 5 (SF 2502 and 2503, measuring 8 cm in diameter and 8.3 x 7.5 x 2 cm, respectively), and one in Area C (SF 3713). The latter, not documented, measures 5.5 x 3.5-4.2 x 1.2 cm and has a groove on one face. Two whetstones were found in Area G, southeast of the mudbrick building. One is not documented (SF 2530), while the other (SF 2422; Figure 4.9, n°2; Figure 4.10, n°14) is more oblong in shape than the examples cited previously. It measures 7.7 x 1.4 x 0.6 cm. The context of the tenth whetstone assigned to Phase IVC2 (SF 3722) is not known and the object is not described. As for the whetstone from Phase IVB6 (SF 2255; Figure 4.10, n°15), it was found in Trench B, in a fill deposit located above the building complex of Period IVC. It measures 9 x 3 x 1.5 cm.

4.2.2.6 Axe and hoe (?)

One stone axe or macehead (SF 2411) was found in Room 1, Phase IVC1. The only information regarding this object concerns its dimensions: 5.5 x 2.5 x 3.5 cm. A hoe (?) was also reported from Phase IVC1, Room 3 (SF z-538; Figure 4.9, n°5; Figure 4.10, n°19). It is sub-triangular in shape and measures 17.4 x 2.8-8 x 3 cm.

4.2.2.7 Mortar

Four mortars were found in Phase IVC2 contexts and one in Phase IVC1. The IVC2 mortars were in Room 1, on the earliest floor (SF 3720a and 3721a) and on the third floor (SF 3714 and 3714a). They include small (SF 3721a, 8 x 7.2 x 4 cm), medium (SF 3714, 15.9 x (?) x 2.5 cm and SF 3714a, 17.4 x 12.5 x 2-6 cm), and large size (SF 3720a, 28 x 12.5 x 2.8-3.8 cm) mortars. The mortar from Phase IVC1 was in Room 4 (SF z-566; Figure 4.9, n°4; Figure 4.10, n°20). It measures 8.8 x 5.5 x 2.8 cm.

4.2.2.8 Pestles

One pestle measuring 17.5 x 7 cm was reported from the drain in Area H, Phase IVC2 (SF 1963). Another pestle measuring 14.5 x 3.8 cm was recovered from Trench A, in Phase IVB6 (SF 3708).

4.2.2.9 Beads and pendants

Nine beads of undetermined stone were recovered from Phase IVC2 to IVB6 (Table 4.7). In Phase IVC2, two were found on floors of Room 1 (SF 3813 and 3814), one was on a surface in Area C (SF 3815), and one was recovered from Area H, in the drain area (SF z-64). One stone bead was reported from Phase IVC1, Areas F-G (SF 2425). Four beads were found in Phase IVB6 contexts in Trench A

(3707, 3810 and 3811) and in Trench B, in a fill above the building complex of Period IVC and below Phase IVB5 (SF e2334).

Two pendants made of undetermined stone were recovered from Room 5, Phase IVC1 (SF z-348 and 2258). SF z-348 is a sub-rectangular perforated stone disk measuring 2.3 x 1.5 cm (Figure 4.8 n°3; Figure 4.10, n°6). SF 2258 measures 2.3 x 2 x 1.5 cm.

One can indicate parallels for a stone bead from Tepe Yahya mentioned by M. M. Voigt and R. H. Dyson (1992:171). These parallels were found at Tepe Hissar (Period II) and consist of "square beads pierced diagonally across two corners" (Schmidt 1933: pl. CVIII: H1202) that the two authors compare to material from Tepe Yahya IVC (Potts 1980:fig. 57a, not detailed here), Susa, Acropole I Levels 14B-15 (Le Brun 1971:fig. 70, n°2 and 4), and Mesopotamia in Jemdet-Nasr to Early Dynastic II periods (McCown 1942:51, fig. 14).

4.2.2.10 Unidentified fragments

In addition, five unidentified stone fragments were reported, including two from Phase IVB6 (SF z-330 and e2335) and three from Phase IVC2, Area C (SF 3733) and Room 6 (SF 3485 and 3845).

4.2.3 Serpentine

The single object in serpentine is a needle found in Areas F-G, Phase IVC1 (SF z-522; Figure 4.8, n°5; Figure 4.10, n°10; Figure 4.15). It measures 5.8 x 0.3 cm.

4.2.4 Agate

One bead of agate was reported from Phase IVC1, Areas F-G (SF 2973). It measures 1.4 x 1.1 x 0.4 cm.

4.2.5 Turquoise

Turquoise is represented by four small finds. Three are beads found in Phase IVC2, Area C (SF 3816, 0.25 cm in diameter) and Area G (SF 2505, 0.4 x 0.2 cm and SF 2990, 0.6 x 0.2 cm; Figure 4.13, n°1-2; Figure 4.14, n°2-3). One is a fragment (ca. 0.5 cm) recovered from a fill above the building complex of Period IVC in Trench B, Phase IVB6 (SF 2941; Figure 4.13, n°3).

4.2.6 Lapis lazuli

One bead made of lapis lazuli is reported from a surface in Area C, Phase IVC2 (SF 3817). It measures 0.6 x 0.4 cm.

4.2.7 Heulandite

Two beads in heulandite were found on the earliest floor of Room 1, Phase IVC2 (SF 3812a and 3812b; Figure 4.13, n°5). They are biconical, facetted and longer than the other beads reported from Phases IVC2-IVB6. They measure 5 and 4.85 x 0.8 x 0.4 cm.

4.2.8 Black stone

One bead in an unidentified black stone comes from Phase IVC2, Area G (SF z-614; Figure 4.13, n°4; Figure 4.14, n°1). It measures 0.7 x 0.5 cm.

4.2.9 Lithic industry

4.2.9.1 Lithic industry

Information about lithic industry from Tepe Yahya was reported by M. Piperno (1973). This report concerns a part of the assemblage as observed in 1972 and additional observations made at the PMAE in 1973. M. Piperno counted 48 implements for Period IVC (Piperno 1973:tab. 1), including unretouched blades (17), retouched blades (7; Figure 4.16, n°1-2), sickle blades (10; Figure 4.16, n°3, 6), truncated blades (4), end-scrapers (2; Figure 4.16, n°4-5), backed tools (1; Figure 4.16, n°7), notched flakes (3), denticulated blades or flakes (1), retouched flakes (1), and miscellaneous implements (2). There is, unfortunately, no detail about the contexts of the items included in Period IVC, nor on the type(s) of material used for knapping.

Overall, based on the evidence at hand in 1972 and 1973, M. Piperno observed an impoverishment in Period VA and Period IVC in comparison to the previous and following periods, both in terms of the quantity and number of categories represented (Piperno 1973:72). Blades appear to be a constant in the lithic industry at Tepe Yahya throughout Periods VI to IV. There are, however, fewer blades with concave profiles from Period VA onward. Sickle blades are more common from Period VA and during Period IV, which M. Piperno explained as the result of increasing agricultural activities and demographic increase. He also noted differences in terms of morphology between the examples from Periods VI-VB and those from Period VA onward. Burins were absent of Period VA and Period IVC, while they were present in Periods VI-VB and in small percentages during Periods IVB-IVA. End-scrapers are attested in Period VI-VC. They are absent of Phases VB-VA and present again in Period IVC. Another difference with the early periods is the presence of microlithic geometrics in Periods VI-VC, which became rare and disappeared in the third millennium BC. M. Piperno noted that the truncated blades were represented by four items in Period IVC. The implements termed backed tools are characteristic of the early periods only. Denticulated and notched flakes are present in all periods.

The rarity of drill-heads at Tepe Yahya (only two were reported from Period VC) is noteworthy. This led M. Piperno (1973:71) to suggest that micro-drilling activity "must have been extremely restricted and sporadic throughout the whole life of Yahya." Another remark concerns the presence of a single crescent, a tool that is thought to be used to manufacture vessels. The single example from Tepe Yahya is from Period IVB. Also noteworthy is the fact that only four arrow-heads were reported from Tepe Yahya; three were found in Periods IVB and IVA, while the fourth one is noted as from Period IV. This is in contrast to what was observed at Shahr-i Sokhta where both micro-drills and arrowheads were common (Piperno 1973:tab. 1, 71, 74).

4.2.9.2 Lithic industry on obsidian

Obsidian is attested by five small finds, including two blades and three flakes, from Phases IVC2-IVB6. In Phase IVC2, one blade (SF 3839) was recovered from a surface in Area A. It measures 1.4 x 1 cm. The obsidian remains from Phase IVC1 consist of two flakes. One was found in Room 5 (SF 3327; Figure 4.17, n°6) and measures 1 x 0.7 x 0.3 cm. The second (SF 3332) was found in Areas F-G southeast of the mudbrick building and measures 3.1 x 2 x 0.2 cm. The two items from Phase IVB6 are from Trench BW. One is a flake (SF z-570; Figure 4.17, n°5) measuring 1.2 x 0.8 x 0.1 cm. The context of the other one, a blade (SF 2420, undetailed), is not detailed but is assigned to Phase IVB6.

T. W. Beale reported 10 examples of obsidian small finds from Periods VII-V, with a majority in Period V, and additional three items from "poor contexts" including one from a context probably belonging to Period IVC (Lamberg-Karlovsky and Beale 1986:182-184). The flakes from Phases IVC1 and IVB6 represent meager evidence indicating debitage of obsidian in these phases. The obsidian objects from the Neolithic and Chalcolithic periods discussed by T. W. Beale are connected to sources located in eastern Turkey (Lamberg-Karlovsky and Beale 1986:183).

4.2.10 Green stone

One square fragment, apparently worked, of a green stone was found in Phase IVB6, Trench B (SF z-409; Figure 4.17, n˚4). It measures 2.2 x 2 cm.

4.2.11 Quartz

One worked fragment of quartz (?) was recovered from Phase IVC2, Room 6 (SF z-593, 5.1 x 2.4 x 2.1 cm; Figure 4.17, n˚1). Another one was found in Phase IVB6, Trench B (SF z-408, 3.2 x 2 x 0.7 cm; Figure 4.17, n˚2).

4.2.12 Red ochre, chromite, limnite, and chalk?

In addition, one can mention a fragment of red ochre measuring 3.5 x 1.5 cm (SF 3825), a fragment of chromite measuring 10 x 8 cm (SF 3823), and a bowl containing a limnite fragment measuring 10.5 x 3 cm (SF 3824). They were recovered from a surface in Area C, Phase IVC2. A piece of chalk was found in Phase IVB6, Trench B (SF z-328, 2.1 x 1.7 x 1.5 cm; Figure 4.17 n˚3). D. T. Potts reported six pigment samples (see Potts 2001: 60 and below).

4.3 Clay

Forty-six clay objects are reported from Phase IVC2-IVB6, not including the tablets (blank and inscribed), a cylinder seal made of clay and seal impressions. Clay small finds represent ten categories of objects and additional unidentified items. The largest category includes the figurines which represent one third of the corpus. Slingballs and comb handles represent 15% and 13%, respectively. More than 45% of the clay objects were found in Phase IVC1; around 28% in Phase IVC2; and around 26% in Phase IVB6 (Table 4.8, Graph 4.7, Figure 4.24). The majority of these objects were not baked.

4.3.1 Balls

D. T. Potts reported clay balls measuring 0.9 cm in diameter (SF 3797), 2 cm (SF 3796), 3 cm (SF 1160), and 3.5 cm (SF 1148). They were found in Phase IVC2, in Area A (SF 3797) and on a surface in Area C (SF 3796); in Phase IVC1, Areas F-G (SF 1160); and Phase IVB6, Trench B (SF 1148) (Figure 4.24).

4.3.2 Drilled balls

Drilled balls are represented by two objects with different forms and sizes. One was found in Phase IVC1, Room 5 (SF z-255; Figure 4.18, n˚5; Figure 4.19, n˚5). It is made of a fine, unbaked clay. It is a ball-shaped object measuring 3 x 3 cm with a flat base. The perforation is 0.65 cm wide. The second object (SF ad-0009; Figure 4.18, n˚9; Figure 4.20, n˚7) was recovered from Phase IVB6, Trench A.

It was fired. It is of red color. It is a ball with one part elongated and pierced. It measures 2.4 x 1.8 cm and the perforation measures 0.15 cm in diameter.

4.3.3 "Slingballs"

Seven objects referred to as "slingballs" were recovered from Phases IVC2-IVB6, with four in Phase IVC1, two in Phase IVC2, and one in Phase IVB6. In Phase IVC2 one was found on a surface in Area C (SF 3794), and the second one in Trench B-BW (SF z-280). Those of Phase IVC1 were recovered from Room 5 (SF z-262 and z-263) and Areas A-E, northeast of the mudbrick building (SF 3791 and 3798). The slingball of Phase IVB6 was found in Trench B (SF z-449) (Figure 4.18, n°1-4; Figure 4.19, n°1-4).

These objects were made of fine clay, and then sun-hardened. They are biconical in shape. They measure 3 to 5.3 cm in height and 1.2 to 3.4 cm in width (SF 3791, 3 cm in diameter; SF 3798, 4.3 x 2.7 cm; SF z-262, 3.6 x 1.2 cm; SF z-263, 3.3 x 2.6 cm; SF z-449, 3.8 x 3.2 cm; and SF z-280, 5.3 x 3.4 cm).

Parallels for these slingballs are found in Period IVB, starting with Phase IVB5. Eleven examples of slingballs are listed in Phases IVB5 to IVB1 (Potts 2001:Appendices C-E). Several other slingballs related to Period IVB are present in the collection of the PMAE (Figure 4.21). Slingballs are not attested in the previous periods of Tepe Yahya. Parallels are present at Shahr-i Sokhta (Tosi 1969:fig. 180). Numerous examples (more than a hundred) were found at this site in all the levels of Periods I to III (?) (Tosi 1969:361-362). They are also made in unbaked clay, and their average size (5 x 1.5 cm) is in agreement with that of some slingballs, but not all, found at Tepe Yahya. At Shahr-i Sokhta, five were found in a bowl within a burial (Piperno and Salvatori 2007:217-218, fig. 483). They measure 5.6 cm in height and are reminiscent of Yahya Period IVB examples. 49 slingballs were also recovered from a single burial (Piperno and Salvatori 2007:264-265, figs 607, 610). They measure 5.1 x 2.8 cm on average. The ceramics associated with them include a parallel to Yahya SEIP Group A (Piperno and Salvatori 2007:fig. 609, n°7992). M. Tosi stressed parallels for the slingballs from Shahr-i Sokhta with the "weights" from Tepe Hissar in Period III (Schmidt 1937), with materials from Deh Morasi Ghundai II (Dupree 1963:108, fig. 21c) and Mundigak IV, 1 (Casal 1961:fig. 131, 22) in southern Afghanistan, and Bampur IV in Iranian Balochistan (De Cardi 1970:326-327, figs. 47, n°3, 48b). These last parallels can be dated to the third millennium BC. One can add that more than 1,700 slingballs were reported from the oval complex at Godin Tepe Period V. V. Badler suggests that the oval complex served as "a fort with food rations and weapons (sling balls) being distributed (...) to village recruits queued up in the courtyard" (Badler 2002:83).

4.3.4 Disk

One disk of clay was found in Phase IVC1, Room 5 (SF 1141). It measures 1.6 cm in diameter.

4.3.5 Whorls

Clay small finds include a series of four spindle whorl-shaped objects, with perforations. One was found in Phase IVC2, Room 4 (SF 1149; Figure 4.18, n°6; Figure 4.19, n°7). Three were in Phase IVC1, with one in Room 3 (SF 1152) and two in Areas F-G (SF 1163 and z-467; Figure 4.18, n°7; Figure 4.19, n°6). SF 1149 measures 3.1 x 2 cm, SF 1152 measures 2.2 cm in diameter, and SF z-467 measures 3.2 x 1.8 cm.

4.3.6 Beads

An additional clay perforated disk, a bead or pendant (?), was found in Phase IVC1, Areas F-G (SF z-436; Figure 4.18, n°8; Figure 4.19, n°8). It measures 2.2 cm x 0.85 cm. Another bead measuring 2.1 cm was reported from Phase IVB6, from a fill in Trench A.

4.3.7 "Comb handles"

Six "comb handles" or fragments of "comb handles" are registered from Phases IVC2 to IVB6. They were recovered from Phase IVC2, Room 4 (SF 1150); Phase IVC1, Room 6 (SF e1243) and undetailed contexts in Trenches BW and B-BW (SF 1154 and 1155); and Phase IVB6, Trench B (SF 1147a and 1147b; Figure 4.19, n°9).

These objects were made of fine clay and were not fired, although a few examples from later contexts (Period IVB) are fired. Their shapes are reminiscent of rectangular pillows or trunks of quadruped animals such as bovids (Figures 4.22-4.23). One of the two longer sides bears numerous tiny perforations aligned in a row. The comb handles from Phases IVC2-IVB6 that were measured are SF 1150, with 8.7 x 2.7 x 1.9 cm, and SF e1243, with 4.7 x 5.5 x 2.4 cm. Comb handles from other contexts found in the collection of the PMAE are 5.6 to 9.7 cm long, 1.9 to 4.6 cm large, and 2.1 to 4.7 cm high. Several of them tend to indicate that these objects were made by sandwiching a series of parallel sticks between two slabs of clay or by folding one slab. The tiny holes result from the sticks that disintegrated.

Parallels for these objects are better-represented from Phase IVB5, and one may hypothesize, that these objects began in the third millennium BC, after Period IVC. Nine comb handles are listed by D. T. Potts in Phase IVB5 and Phases IVB2-1 contexts (2001:Appendices C-E). Comb handles were also found at Tepe Yahya immediately north of Trench A in Trench AN2, and in the northern part of the mound in Trench XD (SFz-282, XD.70.T1.2-3), Trench XC (SFz-247, XC.70.T2.6), Trench XCE (SF1228, XCE.71.T1.10, SF1223, XCE.71.13.20, and SFz-457 XCE.71.13C), and Trench XB (SFz-458, XB.71.T2.6b). No parallels are identified beyond Tepe Yahya for this type of object, but their shapes may indicate analogous function as, or complementary function to, wooden combs such as those found at Shahr-i Sokhta (Tosi 1969:figs 207-208, 210-212).

4.3.8 Figurines

Fourteen zoomorphic figurines and figurine fragments are reported from Phases IVC2-IVB6, including in Phase IVC2, two from the earliest floor of Room 1 and one in Area G; seven in Phase IVC1, Areas F-G; and four in Phase IVB6, Trenches A, BM, and BW. An additional possible figurine was found in Phase IVC2, Area G.

Most of the figurines observed are unbaked and are manufactured using fine clay (Figure 4.18, n°10-15; Figure 4.20, n°1-6). The animals represented appear to be bovids and perhaps ovi-caprids. They measure 6-7 cm to the maximum in length. A fragment from Trench BW (SF z-440; Figure 4.18, n°13; Figure 4.20, n°3) measures 6.5 cm in length. It is fired, brown light-red, and painted black. One small find counted as a figurine is a horn, probably originally part of a bovid figurine, fired, and of brown light-red color (SF z-438, 2.2 cm in length, Phase IVB6; Figure 4.18, n°14; Figure 4.20, n°5). One can finally mention the small find SF ad-0010 from Phase IVC2 (Figure 4.18, n°15;

Figure 4.20 n°6) which is either a figurine or a gaming piece (?). It measures 4.1 cm in height and is brown light-red fired.

4.3.9 Miscellanea

The rest of the clay small finds include a token from Phase IVC2, Area C (SF 3795, 1.2 cm in diameter); a vessel from Phase IVC2, Area G (SF 1285, undocumented); and three unidentified fragments from Phases IVC2 and IVB6.

4.4 Metal

4.4.1 Copper

Copper industry from Phases IVC2–IVB6 is represented by 34 small finds. Almost half are from Phase IVC2; less than 12% from Phase IVC1; around 32% from Phase IVB6; and three items from "secondary context" of Period IVC (Table 4.9, Graph 4.8, Figure 4.27). Among the latter, one is from Trench XBE (Heskel and Lamberg-Karlovsky 1980:figs. 8.10–12) and two are from Trench XC (Heskel and Lamberg-Karlovsky 1986:fig. 8.1a–b). It was noted that copper metallurgy in Period IVC used the same technology as that employed in Period V, but that, in comparison to the previous period, Period IVC is characterized by an "increase in decorative-like pins and the decrease in tool objects" (Heskel and Lamberg-Karlovsky 1980:242, 245). Almost 65% consists of pins and needles. The ten other categories of copper small finds are represented by one or two items.

Details about the composition and technology of several small finds in copper were provided before (Heskel and Lamberg-Karlovsky 1980, 1986; Tylecote and McKerrell 1986) and are summarized in Table 4.10. In sum, analyses indicate that the small finds were cast, hammered and annealed. The mineral compositions include copper with arsenic (As) and traces of tin (Sn); arsenic and silver (Ag); silver and nickel (Ni); lead (Pb), silver, and nickel; and with silver.

As possible sources for acquisition of copper, R. F. Tylecote and H. McKerrell mention Rafsanjan, located 100 km west of the city of Kerman (Tylecote and McKerrell 1986:214). Numerous sources of copper have been located in Kerman starting in the vicinity of Tepe Yahya and in the neighboring Seistan and Balochistan province (Berthoud *et al.* 1976, 1982; R. Law, Indus Google Earth Gazetteer Gaz.08.08.KMZ). D. Heskel and C. C. Lamberg-Karlovsky (1986:212) suggest that the source of the copper with arsenic found in Period V was the Anarak-Talmessi region (Isfahan province), located more than 600 km northwest of Tepe Yahya. T. Berthoud *et al.* (1982:45) suggest the same for Period IVC. Recent work conducted in that area shows that the Anarak source was exploited at that time. It was likely the source that supplied Tepe Arisman (Pernicka *et al.* 2011:675).

4.4.1.1 Pins and needles

Pins and needles were recovered from Phase IVC2, on the floor of Room 1 (SF 3759, 3760, 3764 and ad-0011), on a surface in Area C (SF 3763), and in Area H including the drain (SF 2627 and 2629). Three additional pins were in Trenches C (SF ad-0015), BW-CW (SF ad-0013), and B-BW (SF 2728). The pins from Phase IVC1 were found in Room 4 (SF 2782), Room 5 (SF 2723 and z-295), and Areas A–E (SF 3765). In Phase IVB6 there are: one from Trench A (SF 3761), three from fills above the building complex of Period IVC in Trench B (SF 2719, 2786, and 3368), two from

pits in Trench B (SF 2780 in Pit 10 and SF 2781 in Pit 8), and two from Trench B-BW (SF 2734 and 2735).

The pins include simple types with the extremity opposite to the point folded and with greater diameter (SF 3759), and types with decorated heads (SF 3765 and ad-0011) (Figure 4.25, n˚1-4; Figure 4.26, n˚2-6). They are round in section. The sizes reported from the complete and almost complete pins are: 16 x 0.2 cm (SF 3761), 15.9 x 0.3 cm (SF 2781), 13.7 x 0.4 cm (SF 2629), 12.5 x 0.6 cm (SF 2780), 12.2 cm x 1 cm (SF 3759), 8.5 x 0.4 cm (SF 2719), and 7.92 x 1.86 (head) cm (SF ad-0011). With the exception of a few examples, the section diameters are usually inferior to 0.5 cm. The heads of two more sophisticated pins are rectangular (SF ad-0011) and circular (SF 3765). The decoration of the former could not be identified. The head of the latter consists of a disk measuring 3.2 cm in diameter with a wheel- or solar-like compartmented decoration.[48] Compartmented decoration is reminiscent of the disk discussed below.

4.4.1.2 Disk

A single copper disk (SF 2783; Figure 4.25, n˚5) reported from Phases IVC2-IVB6 was found in a jar in Room 4, Phase IVC2. The jar in question is Yahya 1170, a typical Proto-Elamite jar (Lamberg-Karlovsky 1984:349-350). The disk measures 3.7 cm in diameter by 0.3 cm in thickness. The decoration consists of an asymmetric grid-like pattern. C. C. Lamberg-Karlovsky compared this disk to more recent examples from Central Asia, while pointing out that the latter disks were of a more recent date (Lamberg-Karlovsky 1984:349-350; Potts 2001:13). Many parallels can be found for compartmented seals in the fourth and third millennia BC in Middle- and Central Asia. Typologically and chronologically closer parallels for the disk from Tepe Yahya are found in Pakistani Kech-Makran. The comparative materials were found in burials dating to the Early Period IIIa (second half of the fourth millennium BC). The decorations from Kech-Makran are not exactly the same, but the grid-like technique and sizes of the examples from this region are comparable (R. Besenval, French Archaeological Mission in Makran, unpublished material).

4.4.1.3 Nail

A single copper nail (SF ad-0017; Figure 4.26, n˚8) was recovered from Trench XC ("secondary context" of Period IVC). It measures 1.6 x 0.7 (head) x 0.05 (point) cm. This object is reminiscent in shape of a longer one found at Tepe Arisman in the Proto-Elamite occupation (Helwing 2011b:fig. 96, n˚406).

4.4.1.4 Spearpoint

Copper is also represented at Tepe Yahya by a spear point (SF ad-0012; Figure 4.25, n˚6) found on a surface in Area C, Phase IVC2. It measures 11.75 x 1.4 (blade maximum width) x 0.55-0.75 (handle width) cm.

4.4.1.5 Spatula

A spatula was recovered from the drain in Area H, Phase IVC2 (SF 2630; Figure 4.26, n˚1). The blade has the shape of a drop and the opposite extremity is folded. It measures 19.6 x 3.7 (blade maximum width) x 0.8-1 (handle width) x 0.4 cm.

4.4.1.6 Chisel

A chisel was found in a fill in Trench C, Phase IVC2, Area H (SF 2628; Figure 4.26 n°10). It is a rectangle with one extremity rounded and one flat and angular. It measures 14 x 1.4 (maximum width) x 0.9 (maximum thickness) cm. It was suggested that this object was used as a screwdriver and embedded in a wooden handle (Tylecote and McKerrell 1986:213).

4.4.1.7 Axe

A copper axe (SF ad-0016; Figure 4.26, n°7) comes from Trench XC, from a context ("secondary context") previously assigned to Period IVC. It is rectangular in shape and measures 7.8 x 4.5 x 0.1 cm.

4.4.1.8 Bracelet

A bracelet fragment (SF ad-0014; Figure 4.26, n°9) was found in Trench XBE, in a context ("secondary context") previously assigned to Period IVC. This fragment measures 3.8 cm and was part of a flat bracelet measuring 0.9 cm in width. One extremity is folded.

4.4.1.9 Figurine

A figurine was reported from a fill in Trench A, Phase IVB6 (SF 3762). This object was not illustrated but is described as a sheep figurine measuring 1.6 cm in length.

4.4.1.10 Sheet fragments

Sheet fragments were recovered from Phase IVB6, from a surface in Trench BM (SF 2787) and from a fill in Trench B (SF 2784). The former is perforated and measures 2.5 x 0.2 cm. The latter measures 2.3 x 0.4 x 0.05 cm.

4.4.1.11 Ores and slags

Two copper ores were found in Room 4, Phase IVC2 (SF z-526 and 3482; Figure 4.25, n°7). One measures 6 x 4 x 5 cm (SF 3482). In addition, it is noted that several ore and a slag pieces were recovered from a Period IVC context. The slag still contained small copper drops (Heskel and Lamberg-Karlovsky 1980:245).

4.4.2 Other metals

Five other small finds in metal are reported from Phases IVC2-IVB6 contexts. They are three in lead (?), one in frit (?), and one in iron.

Two items in lead come from Phase IVC2, Area A (SF 3827a and 3827b), and one comes from a surface located above the mudbrick building of Period IVC in Phase IVB6 Trench BM (SF 2880). These items are circular in shape (rings?) and measure 1.5 x 2 x 0.2 cm (SF 3827a), 1.8 x 2 x 0.2 cm (SF 3827b), and 1.2 (diameter) x 0.5 (thickness) cm (SF 2880). SF 2880 (Figure 4.28) was made with two superimposed coils. Sources for lead are reported in Kerman and farther north in the Anarak-Talmessi region (Isfahan province). Sources are also found in the Afghan Farah province, in the Chagai district in Pakistan, in eastern Pakistani Balochistan, and in northern Oman (R. Law, Indus Google Earth Gazetteer Gaz.08.08.KMZ; Stöllner *et al.* 2011:fig. 1). In the

context of the Southeastern Iranian Plateau, an impressive example is represented by the "leopard weight" found at Shahi-Tump (Kech-Makran Early Period IIIa), made of copper by lost-wax casting and filled with almost pure lead (Mille *et al.* 2004). Important quantities of lead and spectacular lead items are reported from Sarazm in Tajikistan (Dushanbe Museum, Tajikistan; Besenval and Isakov 1989:13-14, 17-18, fig. 29).

The object (SF 1246; Figure 4.13, n°8) in frit (?) comes from context B.73.2 which was assigned to Phase IVC2, Area G by D. T. Potts (2001: Appendix A) and Phase VA.1 by T. W. Beale (Lamberg-Karlovsky and Beale 1986: Appendix C). It is a bead measuring 0.75 cm in diameter and 1.25 cm in length.

The intrusive iron fragment (SF 3219, 3.5 x 3.2 x 1 cm) was recovered from Room 3, Phase IVC1.

4.5 Bone

One bone awl (SF 1354) was reported from Room 5, Phase IVC2. Its dimensions are 18 x 2.3 x 1.5 cm. Another bone artifact, a needle, was found in the same phase, in Area B (SF 3826, 5.1 cm).

4.6 Shell

Shell industry is represented by eleven finds, including five beads, three pendants, two buttons, and one fragment. Only one item is illustrated (the bead SF z-216; Figure 4.13, n°7; Figure 4.14, n°5).

The five beads were recovered from Phase IVC2, Room 4 (SF 1754, 1.1 cm in diameter), Phase IVC1, Room 6 (SF z-414, 3.5 x 1.9 cm), and Phase IVB6, Trench B (SF 1739, 0.7 x 0.2, SF 2887, and SF z-216, 1 cm in length and 0.5 cm in diameter).

The two buttons (SF 3801a and 3801b) come from a surface in Area A, Phase IVC2. These objects are in mother-of-pearl and measure respectively 1.7 and 1.3 cm in diameter.

The three pendants in shell were recovered from Phase IVC2, Area A (SF 3802), Phase IVC1, Room 4 (SF 1761), and Phase IVB6, Trench A (SF 1764). SF 3802 is noted as a shell with multiple perforations measuring 4 cm in length. SF 1761 measures 1.5 x 1.2 cm. SF 1764 is made of mother-of-pearl and measures 10.5 x 3.5 x 1 cm.

The shell fragment was recovered from Phase IVC2, on a surface in Area C (SF 3803).

4.7 Ivory

Ivory objects were recovered from Phase IVC1: two beads from Room 1 (SF 1697, 0.7 x 0.2 cm; Figure 4.13, n°6; Figure 4.14, n°4) and Room 4 (SF 1696), and a pendant from Room 6 (SF 1698, 2.2 x 1.3 x 0.45 cm).

4.8 Vegetal

No perishable material was recovered from Tepe Yahya Period IVC. Nevertheless, as indicated above, the impressions observed on Textile-impressed ware and Mat-impressed ware (Figure 3.91) provide a few information regarding basketry and textile industries. The textile impressions are worthy of further investigation. So far, one could only note that the knots measure approximately 0.05 cm. As for the basketry impressions, they belong to a mat built using plaited technique with four elements passing over four others (4/4) at right angle. The width of the elements is approximately equal to 0.4 cm.

4.9 Synthesis

4.9.1 Chronology

Firstly, it is necessary to recall that only a few small finds of Phases IVC2-IVB6 could be directly observed. The majority of the information comes from the registration cards from expedition archives published by D. T. Potts (2001:Appendices C-E). In summary, parallels are lacking for the majority of the illustrated items from Phase IVC2-IVB6 or are too general, i.e. pins and stone vessels. Some parallels are consistent with a date situated within the second half of the fourth and the early third millennia BC, i.e. slingballs and compartmented copper disk, while other objects found in Phases IVC2-IVB6 point toward Period IVB and may be considered intrusive in Period IVC, i.e. comb handles and certain chlorite vessels. The small finds of Phase IVC2-IVB6 offer little information regarding chronology but do not contradict, and tend to corroborate in some cases, chronological information obtained from the ceramic assemblage and the tablets and glyptic.

Many of the small finds have too general a form to allow us to connect them to any protohistorical period. As indicated above, stone vessels (including alabaster and marble) are not good indicators of a precise time frame. Indeed, stone vessels were produced at least from the Neolithic to Bronze Age periods at Tepe Yahya and beyond, and this bracket includes shapes similar to those recovered from Phases IVC2-IVB6. The same may be said about chlorite that was used at Tepe Yahya during the Neolithic and Chalcolithic periods; one can only note that the carved vessel SF 310 (Phase IVB6) and the profile of SF 542 (Phase IVC1) have relations to vessels found from Phase IVB5. Ornaments, especially beads and the raw materials used to make them, have wide parallels in Chalcolithic occupations of Middle Asia. There are, however, parallels for a bead from Tepe Yahya IVC mentioned at Tepe Hissar II, Susa III and Mesopotamia in a chronological bracket contemporary with the Proto-Elamite period (Voigt and Dyson 1992:171).

Slingballs seem relatively well-attested in the collection of the PMAE from Phase IVB5 onward. As noted above, this type of object seems to have been used in southeastern Iran from the late fourth into the third millennia BC. This includes Shahr-i Sokhta Period I and occupations dated to the third millennium BC from this site and from Tepe Bampur in the Bampur Valley. Late-fourth millennium BC examples are also at Godin Tepe, and third millennium BC examples are in southern Afghanistan at Deh Morasi Ghundai.

The copper technology including with arsenic component is in agreement with what is observed to the northwest at Tepe Arisman during previous and contemporary periods (mid-fourth to early third millennia BC) as well as in Kech-Makran of same chronological bracket (Mille *et al.* 2004:266). The copper disks with grid-like decorations from Kech-Makran in Early Period IIIa (from around the mid-fourth millennium BC) of the type observed on the copper disk from Tepe Yahya (SF 2783) are also chronologically consistent. As for lead exploitation, it is attested both to the southeast and to the northwest (Mille *et al.* 2004; Helwing 2011b:271-272; Benoit 2004:fig. 12) and as far as Sarazm in Tajikistan in the context of the fourth and third millennia BC (Besenval and Isakov 1989:18).

In our present state of knowledge, the only parallels for the clay comb handles are in Phase IVB5 onward, where they seem more common than in Phases IVC2-IVB6.

Finally, the connections between the lithic industry of Period IVC and that of Period VA found by M. Piperno reflect continuity from the Chalcolithic period within this type of industry.

4.9.2 Archaeological context and activities represented

4.9.2.1 Phase IVC2

In Phase IVC2, the floors and fill of Room 1 provide a series of ornaments (pins and beads), stone vessel fragments, mortars, whetstones, and balls in relatively important quantities. With some reservation, these objects appear to be located mostly in the northern half of Room 1 (Room 1a, contexts in Trench A) whose surface was lower than that of the southern half (Room 1b) and in which eight tablets were reported (see below). The northern half is connected to Area C outside of the mudbrick building, through a doorway to Area D. The deposits of Area C (two floors and fill) were also relatively rich in small finds, including stone and chlorite vessel fragments, shaft straightener and whetstone fragments, a series of ornaments, and a copper spear point. Fragments of red ochre, chromite and limnite were also found in this area. Firing/cooking activities are illustrated by hearths in Area C and in nearby Areas D and E. Area E was equipped with a mudbrick and stone bench. In comparison to the northern half of Room 1 and Area C, the southern half of Room 1 (Room 1b) and Area E appear poor in small finds. Room 1b contained a hearth. The access to it, Room 2, avoided going through Room 1a-Area C. These elements tend to indicate separate functions for the northern and southern parts of Room 1, with Room 1a and Area C interpreted as working areas, probably interconnected.

Concentrations of small finds in the mudbrick building were recovered in Rooms 4 and 6. Room 4 is considered a storeroom and provided the copper disk SF 2783 found in a Proto-Elamite type jar. The rest of the small finds from this room includes two copper ores (?), clay objects, a chlorite vessel fragment, and a shell bead. No small finds are reported from Room 3. Room 6, Phase IVC2 contained chlorite ornaments, a chlorite vessel fragment, stone objects, and a quartz (?) worked fragment. Room 6 was equipped with a bench and a hearth and may have been an area in which minerals were worked. Room 5 appears, in comparison to the adjacent Room 1, poor in small finds. It contained fragments of chlorite vessels, a chlorite pendant, whetstone fragments, and a bone needle.

Turning now to the areas located east and west of the mudbrick building, one can point to a series of copper objects in Areas F-H, including tools (spatula and chisel). Stone objects are also relatively well-represented in these areas. They include whetstones, a pestle, a ball, a disk, a bead, and stone and chlorite vessel fragments. In the east, Area A provided an obsidian blade, a ball in clay, lead objects, stone vessel fragments, and ornaments in shell.

4.9.2.2 Phase IVC1

In Phase IVC1, "concentrations" of small finds are in Areas F-H and in contexts located above Phase IVC2 Rooms 3-6. There are less small finds in Room 1, Area C and Area A in the contexts assigned to Phase IVC1 for these areas than for those assigned to Phase IVC2. In Areas F-H can be mentioned a series of clay objects including figurines, whorls, comb handles and a ball. A comb handle and a whorl were also in Rooms 6 and 3, respectively, while another series of clay objects were in Room 5: slingballs, a drilled ball, and a token. Slingballs were recovered from Area A as well. Metal objects are represented by copper pins from Rooms 4-5 and Area C. Ornaments in chlorite are from Rooms 4-5 and Area G. Ornaments of Phase IVC1 include small finds in ivory and shell found in contexts located above Phase IVC2 Rooms 1b, 4 and 6 and in stone from above Phase IVC2 Room 5 and Area G. Stone tools were recovered from Room 1b (hoe), Room 3 (hoe), and Room 4 (mortar). Stone vessel sherds

were found throughout Rooms 1b, Rooms 3-6, Area A, and Areas G-H. Chlorite vessel fragments were found in Areas F-H, Rooms 3-5, and Area A. Finally, the obsidian flake discovered in deposits excavated in Room 5 deserves mention.

4.9.2.3 Phase IVB6

As for Phase IVB6, documentation comes from several "concentrations" of small finds in areas located above Period IVC contexts of Area G, Room 6, Room 1b, Area C, and Area A.

Ornaments in stone were found in Area A and Room 6; one in chlorite in Room 1; those in shell in Area A and Rooms 1b and 2; and one in clay in Area C. A turquoise fragment was found in Room 6. A copper pin and a zoomorphic figurine were recovered from Area A. Other copper pins and a needle were found in Room 1b, Room 6, Area G, Pit 8 and Pit 10. Chlorite buttons were found in Areas A and C. Stone and chlorite tools were located in Area A (a chlorite shaft straightener and a perforated object: a macehead?), Room 1 (whetstones and a chlorite shaft straightener), and in Area G (perforated object: a macehead?). The other stone and chlorite small finds include a chlorite block and a chlorite token or gaming piece in Area A, an unidentified chlorite incised object in Trench B, chlorite disks in Areas C and G, a stone cone and an incised stone disk in Area A, a stone disk in Room 1b, and a stone ball in Area G. Stone and chlorite vessel sherds were reported from Area A, Area C, Room 1, Room 6, and Area G. A fragment of an unfinished vessel in chlorite was found in Trench B. Three contexts might correspond to chlorite working areas in Phase IVB6 (Potts 2001: 80, 182). One is a floor identified in Trench BM (context BM.71.1.1), one is a mass of bricks (context B.70.17), and one is a fill located above the building complex of Period IVC and below Phase IVB5 deposits (context B.70.11). Clay small finds of Phase IVB6 are a ball, a slingball, and comb handle fragments from Trench B, a drilled ball from Area C, and figurines from Area C, Room 1b, and Area G. In addition to the ornaments, copper is represented by sheet fragments in Room 1b and in Trench B. One lead object was found in Room 1b too. Finally, an unfinished object of green stone and a quartz fragment were found in Room 1b; a chalk (?) fragment in Room 6; and an obsidian blade and a flake in Area G.

4.9.2.4 Activities represented

Ornaments

A significant number of the small finds from Phases IVC2-IVB6 are related to ornaments. They include beads, pendants, pins, buttons, and bracelets made of stones, copper, clay, shell and ivory. Figurines may be envisaged as trinkets that were perhaps used for play, decoration or for rituals. Ornaments and figurines are observed in the three phases. The presence of red and yellow pigments at Tepe Yahya is notable (Potts 2001:60-61). Six pigment samples were recovered, with two found in a copper bowl from the floor of Area C (Reindell and Riederer 1978). Pigments could have been used to decorate walls, mats, vessels, and bodies.

Farming and craftwork

A series of stone tools such as pestle, mortars, axes/hoes, perforated objects (maceheads?) indicate activities related to the exploitation and transformation of agricultural products and environmental resources. Chlorite and stone whetstones and shaft straighteners may have been used for the fabrication and/or

maintenance of tools. These activities are well-represented in secure contexts inside the building complex in Phase IVC2. They are attested, with fewer concentrations, in Phases IVC1 and IVB6. As indicated by M. Piperno (1973:59), "even a superficial analysis of the lithic industries of the 3rd millennium BC reveals that they still formed the basis of numerous production techniques: the working of stone vases, wood and bone, beads and seals obtained from semi-precious stones, as well as certain aspects of agriculture, hunting and fishing." More specifically with regard to Tepe Yahya, M. Piperno noted that more sickle blades than before were present at the site starting with Period VA. He connected this fact to an increase in agricultural activities. On the other hand, according to him, the lithic industry does not reflect intense micro-drilling activities at the site.

In addition to the vessels made in clay, those in stone and chlorite may have been used to complement some of the tasks fulfilled by the ceramics, perhaps for consumption of food or liquids, food preparation and craftworks. Direct evidence for production of stone vessels is poorly attested in the excavated areas. A large amount of evidence for production of chlorite artifacts were reported from Phases IVB4-IVB1 (Kohl 2001:210). It is not obvious, albeit likely, that chlorite was worked on the site in Phases IVC2-IVB6. The only evidence is the block and the fragments found in Phase IVB6 (SF 3660, 528, and 547). This evidence complements that observed in three contexts of Phase IVB6 and in one context of Phase IVC2. Stone debitage is also attested by an unfinished object made of green stone found in Room1b, Phase IVB6; quartz fragments in Phase IVC2 and IVB6; flakes of obsidian in Phases IVC1-IVB6. It cannot be demonstrated that beads were produced on the site. The only evidence that might indicate production is the fragment of turquoise found in Phase IVB6.

Copper material is not negligible and represented by ornaments, a chisel, a spatula, and a spear point in Phase IVC2. In addition to the ores reported from Phase IVC2, Room 4, production of copper objects on the site is suggested by the presence of ores and slags mentioned by D. Heskel and C. C. Lamberg-Karlovsky (1980:245).

Weaving might be suggested by several perforated discs (clay whorls in Phases IVC2 and IVC1 and stone and chlorite small perforated objects), although some of these items may have been used as pendants. A bone awl and a needle from Phase IVC2 as well as a textile impressed pottery from Phases IVC2-IVB6 contexts are additional evidence of weaving at Tepe Yahya. Reed matting is attested only by its impression on a sherd from Phase IVC2.

Clay slingballs and balls and stone balls might indicate hunting activities. Small birds are still hunted using slings today in Kech-Makran. Bird bones are reported from Period IVC contexts (Meadow 1986). V. Badler (2002) joins many others who have suggested that slingballs were used for warfare.

Gaming/accounting

Finally, there is a series of objects including disks, a cone, and a token that could refer to gaming, and/or counting activities in complement to the tablets.

4.9.3 Cultural spheres and spheres of activities

The small finds recovered from Phases IVC2-IVB6 contexts indicate that various activities took place at Tepe Yahya that are embedded in wider spheres of activities placed at different geographical and cultural spheres. The activities implied by the small finds include procurement of raw materials and

objects that were required for the construction of the building complex, food production, and production of material culture.

4.9.3.1 In the Soghun Valley and the region

A first set of activities turned toward the production of food through farming and husbandry and their preparation and consumption. Hunting and gathering complemented agriculture. The pollen and macrobotanical remains from Period IVC contexts at Tepe Yahya indicate presence of grass, goat-face grass, domesticated barley, domesticated wheat, milk vetch, knotweed, almond, hackberry, and grape (Meadow 1986:tab. 3.2). Domesticated animals in Period IVC consisted of a majority of goat, supplemented by sheep and cattle (Bos sp.), while wild animals are attested such as bear, fox, mongoose, lion, tortoise, and several species of birds (Meadow 1986:fig. 3.3, Table 3.4). Counts of grain and animals were registered on the inscribed tablets (see below). As seen below (see Chapter 7), it is suggested that a scatter site (Prickett 1986b, site 1) that lies about 500 m northwest of Tepe Yahya "may have consisted of constructions like field workers' storage areas and rest places or herders' camps and corrals" and/or that this site "may have served as the focus for many water-procurement activities by the Tepe Yahya villagers, such as collecting drinking water, bathing, and watering animals" (Prickett 1986b:219-220). Another site with Yahya IVC-IVB materials was also identified next to a spring, south of the Soghun Valley (Prickett 1986b, site 25).

The wood used for construction (cf. postholes in Area C) and as fuel as well as the stones used for fabrication of tools were gathered in the vicinity. The same may be said for the clay used to construct and maintain the architectural structures and to manufacture objects.

Chlorite was exploited during the Neolithic and Chalcolithic periods at Tepe Yahya and in the phases following Period IVC. Sources of chlorite are located in the mountains immediately north of the site (Kohl 2001:210-211), while Y. Madjidzadeh writes that "recorded signs of ancient quarries in the vicinity of known mines of chlorite, steatite and serpentine in the basin of Faryab, Kuh-e Kalmond near Khanouj" (Madjidzadeh 2008:73-74). Another mineral, chromite, represented by a single small find at Tepe Yahya, was also available in the vicinity of the site, at about 9 km west, adjacent to the Abdasht village. More generally speaking, M. Prickett reported sources for numerous types of minerals in southeastern Iran, including salt, copper, lead, manganese, flint/chert, obsidian, marble, alabaster, turquoise, and lapis-lazuli (Prickett 1986a:253-407). Recent evidence for the production of objects in lapis lazuli is evident in the Halil Rud Valley (Vidale, pers. comm.).

4.9.3.2 Beyond

For a number of items it is not possible to tell whether the objects found at Tepe Yahya were produced on the site. A few evidence concerns chlorite, obsidian and quartz while a turquoise fragment found in Phase IVB6 might indicate bead making on the site. Lithic industry analysis revealed the rarity of drill-heads at Tepe Yahya, which led M. Piperno (1973:71) to suggest that micro-drilling activity "must have been extremely restricted and sporadic throughout the whole life of Yahya." Evidence for copper metallurgy at the site is very limited, albeit mentioned. In any case, whether it was the objects or the raw materials that came to the site, and whether it was through intermediaries or direct acquisition, some small finds indicate connections to areas located far from Tepe Yahya and in some cases within different cultural spheres.

As indicated above (Prickett 1986a:253–407), a number of mineral sources are known in Kerman. Sources of stones such as alabaster were available in the region and also in the Chagai Hills in western Pakistani Balochistan, more than 500 km northwest of Tepe Yahya and around 200 km southeast of Shahi-i-Sokhta (Figure 4.29). Additional sources of alabaster are mentioned in the western border of Seistan while Shahr-i Sokhta in Period I offers evidence for production of alabaster vessels (Lamberg-Karlovsky and Tosi 1973:27). Other sources are located in northern Pakistan and eastern Indian Rajasthan. Sources of lapis lazuli are located in the Badakshan in northeastern Afghanistan, serpentine in southern Afghanistan, turquoise sources are at Nishapur (Khorasan province) and in Afghanistan, while agate is mentioned in the Dasht-e Lut and in the eastern part of Isfahan province. Copper sources are reported in Kerman and Seistan-Balochistan provinces, the closest ones being 15 to 25 km of Tepe Yahya (Berthoud *et al.* 1976; Berthoud *et al.* 1982). The sources located in the Rafsanjan area, about 200 km north of Tepe Yahya, and in particular those in the eastern Isfahan province (Anarak-Talmessi region), more than 600 km northwest of Tepe Yahya, are mentioned as probable sources for the copper with arsenic found at Tepe Yahya. Lead sources are mentioned in the Isfahan, Yazd, Khorasan, and Kerman provinces (Stöllner *et al.* 2011:536, fig. 1). There is also lead in the Chagai Hills, in Afghanistan, around 200 km north of Shahr-i Sokhta and farther to the west, and in eastern Pakistani Balochistan (see Beale 1986:183; Heskel and Lamberg-Karlovsky 1986:212; Kohl 2001:210–211; R. Law, Indus Google Earth Gazetteer Gaz.08.08.KMZ; Stöllner *et al.* 2011:536, fig. 1; Algaze 2005:fig. 35). Shell objects from Phases IVC2–IVB6 are represented by eleven small finds while seafood does not seem to be part of the diet of the inhabitants of Tepe Yahya in Period IVC. The situation observed at Tepe Yahya, located at about 130 km from the Persian Gulf and the Oman Sea, is different from that of Miri Qalat and Shahi-Tump in Kech-Makran, located at about 90 km from the Oman Sea, where sea resources were eaten and used to manufacture objects at least since the early fourth millennium BC. It is also important to recall that, although this area is located about 650 km from Tepe Yahya, the production of shell objects abounds in Kech-Makran. Bracelets made from shell similar to those found in Kech-Makran are recovered as far as Sarazm in Tajikistan (Besenval 2005:fig. 12). Shell artifacts are also reported from the Bampur Valley at Tepe Bampur V.2 (De Cardi 1970:fig. 52). Obsidian remains indicate relations to eastern Turkey (Lamberg-Karlovsky and Beale 1986:183) and more specifically to Bigdol B as indicated by one sample from TUV Operation at Tal-i Malyan (Sumner 2003:114–115). W. Sumner suggests that this obsidian came through the southern Zagros to Tal-i Malyan before reaching Tepe Yahya (Sumner 2003:115). Finally, one can recall R. Meadow's remark regarding Period IVC (1986:30): he underscored the "proliferation of wheats" in Period IVC and noted that the "Proto-Elamite period is one of wide-ranging cultural contacts and thus opportunities for importation of various seed stocks and food stuffs".

The location of these various sources and their relation to Tepe Yahya implies the existence of routes that traversed areas located well-beyond Tepe Yahya. Some are limited to the Proto-Elamite sphere (if one considers the area of Tepe Arisman for the copper), while others crossed cultural boundaries (in the case of the obsidian for example). This does not mean that direct relationships existed between individuals from Tepe Yahya and populations located hundreds of kilometers apart. Settlements like the Tal-i Iblis area to the north and Shahr-i Sokhta to the east may have been involved in transporting such goods. It is important to remind that if some small finds found at Tepe Yahya IVC are indicative of probable long-distance relationships, beyond the region and the Proto-Elamite sphere, the quantities reported indicate limited transactions.

5 The Tablets and Glyptic Art

5.1 The tablets

5.1.1 Inventory and context

Twenty-seven tablets with inscribed Proto-Elamite signs were found at Tepe Yahya (Table 5.1; Figures 5.1–5.3). These objects are made of unbaked clay and are rectangular in shape, including pillow-shaped examples. Their dimensions include a series of measurements comprised between 3.2 x 2.2 cm, 4-4.5 x 2.5-3.4 cm, 5-5.3 x 3.2-3.9 cm, 6.7-6.8 x 4.4-5 cm, and 9.2 x 7.9 cm. Regarding their contexts, as indicated above, C. C. Lamberg-Karlovsky's definition of Phases IVC2 and IVC1 is not the same as that of D. T. Potts. D. T. Potts's Phase IVC2 includes C. C. Lamberg-Karlovsky's Phase IVC1 contexts. According to the former and his definition of these phases, the majority of the Proto-Elamite tablets were found in Phase IVC2, five were assigned to Phase IVC1, and three were considered probably part of Phase IVC1. In summary, C. C. Lamberg-Karlovsky noted that the majority of tablets were found on the floors, some were found in fill deposits, while some (of Phase IVC1) were in contexts slightly later than the initial construction of the building complex of Period IVC (Lamberg-Karlovsky 1989: vi). D. T. Potts's Phase IVC2 includes C. C. Lamberg-Karlovsky's Phase IVC1 contexts, so that in his classification of the archaeological contexts, most of the tablets are registered in Phase IVC2. Only one tablet without legible inscription and from Area B has no information regarding the phase of its context (tablet TY 27). The tablets were recovered from both inside the building in Room 5 (7), Room 1a (8), and Room 1b (3), and in the outside eastern areas in Area C (7) and Area B (2). In addition to this, 84 blank tablets were also reported from Tepe Yahya on the floor of the southwestern corner of Room 5 (Lamberg-Karlovsky 1989:vi and xiv; Damerow and Englund 1989:62 and pl. 6).[49] Four "blank tablets" were also reported from Trench AN2, ten meters north of Trench A (Potts 2001:Appendix D, p. 312).

5.1.2 Content

We are not competent to discuss the content of the texts so that we will repeat elements of the analyses conducted by Damerow and Englund 1989 and Lamberg-Karlovsky and Tosi 1989. Twenty-one of the 27 tablets report: grain quantities in the shape of rations to individuals; distributions of grain or allotments of lands to sow to groups of individuals; and distribution to a large number of individuals or harvest account (which may represent also the sum of individual rations). Four texts indicate counts of animals (sheep or sheep and goat). One text seems to refer to "a number of persons (female workers?)" with perhaps daily grain rations (Damerow and Englund 1989:31–32). C. C. Lamberg-Karlovsky and Tosi (1989) noted that the Proto-Elamite texts recovered from Tepe Yahya report small scale activities and quantities related to bread, sheep and goats, grain, drinks, and ploughing. Wood and textiles are also mentioned in the texts (Lamberg-Karlovsky and Tosi 1989:104–105). There is apparently no mention of resources such as stones and metals (Damerow and Englund 1989:63).

As stated by P. Damerow and R. K. Englund (1989:62): "the level of these administrative notations, the size of the recorded numbers of animals and humans and the measures of grain, are without exception

entirely within the range of expected local activity. The level of this activity is thus only to be distinguished from other periods in Yahya and elsewhere by the fact that it was, during the proto-elamite period, documented by 'proto-elamite' administrators." In sum, C. C. Lamberg-Karlovsky and M. Tosi (1989:110–111) note "the administration at Tepe Yahya would seem to be monitoring communal storage of seed-corn (within Room 5) distributed to members of extended families and/or lineages working their own lands. (...) They represent individual transactions of short-term significance, again more characteristic of domestic modes of production than state-administered economics. (...) those very tools of administration [tablets and seals], assuredly evident earlier in Mesopotamia within a state-ordered economy, could have been adopted in the distant periphery within a non-state structured domestic mode of production. (...) the tools of administrating the domestic economy at Tepe Yahya were sufficient but not necessary. They became both sufficient *and* [authors' emphasis] necessary in the state-controlled economics of Mesopotamia and Elam." In sum, the tablets report quantities related to the needs of a small group of families; they do not seem to relate to a monitoring system that involved territories located far beyond the Soghun Valley. It was suggested that 17 extended families and/or lineages are referred to on the tablets (Lamberg-Karlovsky and Tosi 1989:109).

5.1.3 Comparisons

As indicated before, these texts have parallels at Susa, Tal-i Malyan, and Shahr-i Sokhta. The 32 tablets from Tal-i Malyan come from Middle Banesh levels. W. Sumner noted that greater amounts were reported on the tablets from Tal-i Malyan compared to Tepe Yahya, but that they are also "certainly within the range expected for local agricultural or other administrative records" (Sumner 2003:116). He reported numbers as large as 700 or 1400 on texts from ABC Operation, and up to 153 on those from TUV Operation. The records of animals and grain measures from Susa are, on the other hand, remarkably higher and comparable to the largest records identified on Proto-cuneiform texts (Damerow and Englund 1989:63 note 171). At Shahr-i Sokhta, digit 1 and numeral 5 were reported from the single tablet found in Period I. The other signs have not been fully deciphered (Amiet and Tosi 1978:24). In addition to those examples, J. Dahl *et al.* (2013) have reported Proto-Elamite tablets from five other sites, including Tal-i Ghazir in Khuzistan, Tepe Sialk in Isfahan, Tepe Ozbaki in Qazvin, and Tepe Sofalin in Tehran.

5.2 Seals and seal impressions

5.2.1 Inventory and context

The glyptic art of Period IVC was studied by H. Pittman (2001, 1994). The corpus she reported for this period consists of two cylinder seals (TY.16-Cat.23 and TY.17-Cat.22) and 43 impressions on clay masses used as locking devices and on inscribed tablets (Table 5.2; Figures 5.4–5.6). An additional object (SF 1162) was also reported by D. T. Potts as a cylinder seal made of clay. This object was found in Phase IVC1 Areas F–G (Potts 2001:Appendix C, p. 291). Cylinder seal impressions were identified on 19 jar sealings, on one probable jar sealing, on one jar or bag sealing, on three door sealings, on six or eight clay slabs which H. Pittman interprets as devices to secure "an opening (door or window)," on two tablets, and on nine clay masses of uncertain function (Pittman 2001:232–234, catalogue: 240–244). The styles reported by H. Pittman include (Pittman 2001:232–233): the classic figural

style (13 examples), the glazed steatite style (Piedmont style) (16), the wheelcut style (9) as well as those of incised cylinder seals (4) and of a single engraved stamp seal.

The glazed steatite seals TY.16-Cat.23 and TY.17-Cat.22 measure respectively 0.8 cm in diameter x 3.1 cm in height and 1 cm in diameter x 1.7 cm in height (Lamberg-Karlovsky 1972:94, fig. 4a-b; Pittman 2001:242, figs 10.22–23). TY.17-Cat.22 was found in Phase IVC2, Area G (context BW/CW.71.8.1), while TY.16-Cat.23 in a context assigned to Phase IVC1, Areas F–G (context BW/CW.71.T3.2). The undetailed cylinder seal SF 1162 comes from Phase IVC1, Areas F–G (context BW/CW.71.7.2).

Six seal impressions were found in reliable contexts of Phase IVC2: in Rooms 1 (TY.20-Cat.3), 2 (Y.34-Cat.1), 4 (TY.22-Cat.4), and 6 (Y.22-Cat.2) and in Areas C (TY.19-Cat.5) and G (TY.24-Cat.21) outside of the mudbrick building. In Phase IVC1, there are eight fragments in Room 5 (TY.14-Cat.25, TY.27-Cat.31, TY.6-Cat.29, TY.13-Cat.26, TY.11-Cat.28, TY.4-Cat.30, Y.39-Cat.24, and TY.7-8-9-10-15-18-Cat.27) and one in Areas F-G (TY.3-Cat.32). H. Pittman also included in Phase IVC2 a series of 14 impressions recovered from context B.71.6 (listed here as IVC2-IVC1), in the storeroom area (Rooms 3–4) (Y.43-Cat.6, TY.29-Cat.7, Y.38-Cat.8, TY.27-Cat.9, Y.42-Cat.10, Y.44-Cat.11, TY.30-Cat.18, TY.31-Cat.13, Y.31-Cat.14, Y.36-Cat.15, TY.23-Cat.16, TY.25-Cat.17, Y.30-Cat.18, and TY.26-Cat.19). Three impressions were assigned to Phase IVB6 by H. Pittman (TY.2-Cat.36, TY.1-Cat.34, and Y.7-Cat.35). There are additional impressions assigned by H. Pittman to Period IVC and listed by her (2001:242–244) as from Phase IVC2 (TY.12-Cat.20), Phase IVC1 (Cat.33), Phase IVB2 (Y.35-Cat. 37), and with "No Controlled Context Information" (Y.11-Cat.38, Y.33-Cat.39, Cat. 40, Cat.41, Cat.42, Cat.43, Cat.44, and Cat.45). No detailed information is available regarding the contexts of these impressions.

Overall, the majority of the seal impressions were recovered from Room 5 and Rooms 3–4. Regarding the functions of the impressions, the door sealings and the clay slabs used to secure openings were reported from Room 5 and Rooms 3–4. Eleven jar sealings were found in Rooms 3–4, which corroborates the probable function of these rooms as storerooms. Other jar sealings (4) were found in Rooms 1, 2, 5, and 6.

5.2.2 Styles and comparisons

The styles reported by H. Pittman were found together in the same contexts as illustrated by the discoveries made in Room 5 and Rooms 3–4. With the exception of the single stamp-seal impression that appears to be connected to eastern Iran or southern Turkmenistan, the glyptic art from Tepe Yahya Period IVC is of the same type as that recovered in western Iran at Tal-i Malyan and Susa (Pittman 2001:236). H. Pittman notes (2001:232): "(...) the glyptic from Period IVC is so close in its iconography, style, and use to Susa and Malyan that it is understood to be foreign to Tepe Yahya." The classic style is reported only from sites with Proto-Elamite tablets, while the other styles are found on the Iranian Plateau, along the trans-Tigridian piedmont, up to Syria (Pittman 2001:233). The glazed steatite style does not seem to be very common in southern Mesopotamia, while the wheelcut style abounds in this area (Pittman 1994:65). The glazed steatite style was observed at Susa, Acropole I in Levels 17 to 14A (Pittman 1994:41, 80). In Iran, in addition to Susa, Tal-i Malyan, and Tepe Yahya, three cylinder seals have recently been recovered from Tepe Arisman (Helwing 2011b:274–276). They are compared to materials from Mesopotamia (Khafadje Periods III-IV of the Sin Temple and Tall

Gubba), Susa, Tepe Sialk, and the Proto-Elamite glyptic in general. Among them is a glazed steatite seal. East of Tepe Yahya, the glyptic art recovered from Shahr-i Sokhta Period I includes materials with parallels in Iran and Mesopotamia and with affinities to the Proto-Elamite glyptic (Amiet 1979; Amiet and Tosi 1978:25-29). P. Amiet and M. Tosi date this glyptic art to the Jemdet-Nasr period and the beginning of the subsequent period in Mesopotamia. H. Pittman summarizes the data from Shahr-i Sokhta as follows (Pittman 1994:104-05): "in Phase 10, one tablet impressed with a classic style seal; four door sealings impressed with classic seals; two basket sealings with effaced impressions, and two wheelcut impressions were found. In addition, a fragmentary seal of the classic proto-Elamite style was found. In Phase 9, four incised and wheelcut impressions were found along with one cylinder seal of the glazed steatite group. In Phase 8, four jar type sealings impressed with wheelcut, or interlocking style seals were found. On the surface were found four cylinder seals with incised designs and one glazed steatite seal." Additionally, a seal impression of the City Seal style, dated to around 2900 BC, was recently identified at Konar Sandal South on a door sealing in Trench XIV (Pittman 2008:100, fig. 32e). This style is attested in southern Mesopotamia and at Susa (Pittman 1994:67).

The chronological relations (around 3000 BC) and cultural connections (to western Iran in the Proto-Elamite sphere and to Mesopotamia) attested by the glyptic art of Tepe Yahya is well confirmed. Concerning the glazed steatite style H. Pittman (1994:xi) writes: "(...) it became clear that its imagery was, far from being a simple series of decorative designs, closely related in formal and structural terms to the proto-Elamite script with which it was used." In terms of chronology, the glyptic styles represented at Tepe Yahya can be dated to between the end of the Late Uruk period and the early Early Dynastic I (see Pittman 1994:60-71). Regarding the glazed steatite style, H. Pittman suggests that the Multiple Element Group was used slightly before the Hatched Group, that the two styles were then simultaneously used, and that the Multiple Element Group disappeared slightly before the Hatched Group (Pittman 1994:217-218). She also noted that the Hatched Group is the most common design element of the glazed steatite style of Tepe Yahya (Pittman 2001:235), that the two styles were used simultaneously at the site, but that it is not possible to determine the chronological relationship between Phases IVC2/IVC1 and IVB6 (Pittman 1994:219, note 38). With regard to the question of the chronological attribution of Phases IVC1 and IVB6, one may notice that a minimum of one seal and nine seal impressions were found in contexts assigned D. T. Potts to Phase IVC1, and two impressions in contexts assigned to Phase IVB6. The glyptic art from Phases IVC1 and IVB6 further attest to similarities with Phase IVC2.

6 Radiocarbon Dates

Twenty-three radiocarbon dated samples from Tepe Yahya recovered from contexts originally assigned to Phases VA.1 to IVB2 are discussed here. They include a series previously reported by M. Prickett (1986a: Table 3.4) from Phases VA.1 to IVB6/5 and a more recent series of nine dates (eight from Phase IVB5, including one assigned by D.T. Potts to Phase IVB4, and one from Phase IVB2) published and discussed by C. C. Lamberg-Karlovsky (2001a:276, tab. A.1). The original dates in BP years obtained are calibrated using the software OxCal 4.10 and the IntCal04 calibration curve.[50] The samples and results are listed in Table 6.1 and brackets of 17 of them are illustrated in Graph 6.1. Some samples that were previously considered unacceptable (Prickett 1986a: Table 3.4) and too recent do not appear in the graph: GX 1726 from a Phase IVB5 context (with dates in the first millennium BC); Beta 6475 from the main floor of the Persian Gulf room (Phase IVB5) (with dates in the late second millennium BC); Beta 6472 from a Phase IVB6 context (with dates in the late third and first half of the second millennium BC); Beta 6483 from Phase VA.1N context (with dates in the third millennium BC); and GX 5161 from a IVC2 contaminated (?) context (with dates in the third and first half of the second millennia BC). WSU 872 (Phase VA.1) is included in Table 6.1, but not in Graph 6.1; it is situated within the fifth to the early fourth millennia BC. On the other hand, the samples TUNC 37, GX 5159, and GX 5160, which were previously considered unacceptable, are illustrated here.

There are unfortunately very few samples analyzed for the phases that are primarily concerned here, for only seven are related to Phases IVC2-IVB6, with reservations for a number of them. Two dating results are from samples collected in Phase IVC2, Beta 6469 and GX 1730, from Areas B and H, respectively. Both these two samples fall from around 3600 to 3000 Cal. BC for a confidence of 68.2%. Two dating results are from Phase IVC1 contexts (GX 5159 and GX 5160).[51] GX 5159 concerns Room 5, while GX 5160 concerns Areas F–G. For a confidence of 68.2%, the former is between about 3330 and 2660 Cal. BC and the latter is between about 3100 and 2300 cal. BC. One can note that the sample TUNC 37, originally defined as "Phase IVB6–5 (? IVC contaminated)" ranges between ca. 3640 and 3370 Cal. BC for a confidence of 68.2%, a bracket that would be coherent with the IVC2 samples. The context of TUNC 37 is unfortunately unclear.

As for the materials from Phase IVB5 (new series), the dating results all fall within the second half of the third millennium BC (Lamberg-Karlovsky 2001a:276), with the exception of TF 1143 with dates between about 2900 and 2570 Cal. BC for a confidence of 68.2%. A sample from a context first assigned to Phase IVB5 and later assigned by D. T. Potts to Phase IVB4 (New Series #2) provided the following bracket: 2284–1831 Cal. BC (68.2% confidence), while one from a context first assigned to Phase IVB2 and later discarded by D. T. Potts (New Series #5) provided 2139–1976 Cal. BC (68.2% confidence).

Radiocarbon dates obtained from Miri Qalat (Kech-Makran), from levels containing the beveled-rim bowl fragments and materials related to Tepe Yahya SEIP Group A (Trench IX, Levels V and III) and from an anterior level (Trench IX, Level VI) were previously published (Besenval 1997b:35, note n°50). The results obtained with OxCal 4.10 and the IntCal04 calibration curve are approximately the same as those published before (Table 6.2, Graph 6.2). They fall within the second half of the fourth millennium BC, and one of them extends into the early third millennium BC (Gif-10062). The chronology of Shahr-i Sokhta (Seistan) has recently been reappraised (Salvatori and Tosi 2005).

Period I, which contains ceramic parallels for Tepe Yahya Phases IVC2–IVB6 and Proto-Elamite glyptic and tablet, is placed in the late fourth–early third millennia BC (Salvatori and Tosi 2005:283–85, fig. 13). Recent radiocarbon dates from Tepe Arisman provide the same bracket with dates from the second half of the fourth into the early third millennia BC (Görsdorf 2005, 2011; Helwing 2005, 2011c). B. Helwing dates the Proto-Elamite occupation at Tepe Arisman to between 3300 and 3100 BC. The Middle Banesh calibrated radiocarbon dates from Tal-i Malyan (ABC and TUV Operations) are in agreement with this bracket as well (Sumner 2003:tab. 13), with a majority of dates falling within the late fourth millennium BC. They are mostly not posterior to around 2900 BC.

There is, thus, a satisfactory consistency in the absolute dates of the occupations of the Southeastern Iranian Plateau (Shahr-i Sokhta I and Kech-Makran Late IIIa) and those of Tal-i Malyan and Tepe Arisman (Middle Banesh/Proto-Elamite period) farther to the west that compare to Tepe Yahya Period IVC. Farther to the east, as indicated above (Görsdorf and Franke-Vogt 2007), one may include the Nal-related Sohr Damb Period II of Pakistan within the same chronological bracket, a bracket situated in the last quarter of the fourth and the early third millennia BC. This would overlap with Mehrgarh Periods V–VI and a part of Period VII. As discussed above (Chapter 1), there is however the problem of the chronological relation of the Proto-Elamite in general to the Late Uruk period in Mesopotamia and related occupations in Iran. In Mesopotamian terms, the chronological bracket of the Proto-Elamite appears not only contemporary or overlapping with Jemdet-Nasr (starting around 3100 BC or 3200 BC) and Early Dynastic I periods, as traditionally thought, but also with the Late Uruk period if one follows H. Nissen (1987:613) and the results of the recent reappraisal and recalibration of radiocarbon determinations from Uruk sites and contemporary occupations by H. T. Wright and E. S .A. Rupley (2001). This problem is further complicated by the existence of a large plateau in the calibration curve for the period between 3300–2900 cal. BC (Dahl *et al.* 2013; Helwing 2011a:219).

7 Distribution of the Ceramic Traditions – Settlement on the Southeastern Iranian Plateau

Regional settlement during Tepe Yahya Period IVC can be approached thanks to the surveys and excavations conducted by several scholars in Kerman and beyond in southeastern Iran (Figure 7.1, Table 7.1). Nonetheless, relatively few sites were excavated compared to those identified in survey. Furthermore, the areas covered by these investigations may appear small in comparison to those that remain to be explored. These researches have, however, provided valuable data which is interesting to discuss in the light of the additional information from the Tepe Yahya materials.

In addition to the Soghun Valley, the Daulatabad Plain, located 25 km west of Tepe Yahya, was also investigated by C. C. Lamberg-Karlovsky and his team, in particular by M. Prickett (1986a, 1986b). The same team visited areas situated south and north of the Daulatabad Plain, along the Persian Gulf coast (mostly the region of Minab, Hormozgan), in the Halil Rud Valley, and in the area situated between the Persian Gulf and the Halil Rud Valley (Rudan). Southern Kerman and Hormozgan were also surveyed by W. Fitz, E. Vidale, and M. Vidale (Soghun Valley) and A. Williamson (coastal area and Jiroft and Rudan areas) all part of the Yahya Project (see Prickett 1986b:215). In the early 1930s southern Kerman (Halil Rud Valley, Rudan area, and western Bampur Valley) was explored by Sir M. A. Stein (Stein 1937), while the Halil Rud Valley was surveyed by S. M. S Sajjadi in 1984 and more recently by Y. Madjidzadeh, N. Soleimani, A. Daneshi, M. Naseri, M. Javadi, and D. Abyan to the Jaz-e Murian region (Madjidzadeh 2008:73–74). Important discoveries were made in the Halil Rud Valley at two sites, Konar Sandal A and B (Madjidzadeh 2008) and at Mahtoutabad (Cortesi *et al.* 2008:8–9; Vidale and Desset 2013). The northern half of the Kerman province is known from excavations and surveys conducted in the Shahdad area, around 250 km northeast of Tepe Yahya (Hakemi 1997); from excavations conducted by J. Caldwell (Caldwell 1967) at Tal-i Iblis, a site previously found by Sir M. A. Stein (Stein 1937); and from surveys conducted in the Bardsir Plain by S. M. S. Sajjadi in the mid-1970s (Sajjadi 1987). In addition, one site, Tepe Langar, was reported from northern Kerman by C. C. Lamberg-Karlovsky (Beale and Lamberg-Karlovsky 1986:88). East of the Kerman province, Sir M. A. Stein visited and dug sites in Iranian Balochistan: in the eastern part of the Bampur Valley, in the area of Fanuch, and on the coast (Stein 1937). Iranian Balochistan was later investigated by B. De Cardi (De Cardi 1970) and M. Tosi (Tosi 1970) in the Bampur Valley area, and by J. Miragliuolo in the Kash area (Marucheck 1976; Miragliuolo 1979). West of Kerman, the Darab region in Fars was surveyed by Sir M. A. Stein (Stein 1936) and P. De Miroschedji (1973). Beyond, the main landmarks known are Tal-i Malyan (Fars), ca. 470 km to the northwest; Shahr-i Sokhta (Seistan), ca. 500 km to the northeast; and Shahi-Tump and Miri Qalat (Pakistan), ca. 650 km to the southeast.

Survey data consisting mostly of ceramic sherds generally allow for dating and approach of settlement pattern analysis. The ceramic sequence of the Southeastern Iranian Plateau in Chalcolithic and Bronze Age periods is established, but there are still important discussion concerning the chronological position of certain materials while there are some limitations with regard to the ceramic assemblages in the period of interest here, namely contemporaneity of materials in Tepe Yahya Phases IVC2–IVB6. The problem of distinguishing certain ceramic types of Period IVC and Period IVB

remains and the two periods were combined in the survey analysis conducted by M. Prickett (1986b:217). Additionally, an important diagnostic for the chronological period and area considered here is the painted, grey ware defined as SEIP Group A at Tepe Yahya and included within the Western Baloch Ceramic Complex. As indicated above, SEIP Group A can be connected to materials found in Kech-Makran in Late Period IIIa, but the definition and relation of this type of material to the following Period IIIb has to be clarified, for we are lacking of solid stratigraphic contexts. This problem relates to the question of the definition of Emir grey ware and fine, painted ceramics in general on the Southeastern Iranian Plateau in Chalcolithic and Bronze Age periods. While important efforts have allowed detailing the stylistic evolution and geographical distribution of these ceramics (Lamberg-Karlovsky and Tosi 1973; R. P. Wright 1984; C. Jarrige *et al.* 1995; Besenval 2005; see Didier and Mutin 2013), important information lacks concerning the transition between the very fine, painted ceramics represented at Tepe Yahya Phases IVC2-IVB6 (SEIP Group A), Shahr-i Sokhta Period I, and Kech-Makran Late Period IIIa, namely the Western Balochistan Ceramic Complex, and those that followed, named Emir grey ware, known from ca. 2800/2700 BC in Kech-Makran (from Period IIIb) and at Shahr-i Sokhta (from Period II).

In sum, although elements of the relative chronology of the main ceramic types on the Southeastern Iranian Plateau are becoming clearer, it is not possible to provide a detailed analysis of survey data and we have no choice but to limit our approach to a degree of precision equal to several centuries. Within those limitations, it remains possible to provide information on sites reported from the Southeastern Iranian Plateau and on the settlement pattern contemporary to Tepe Yahya Period IVC in comparison to the previous (Iblis IV/V Period) and following (Tepe Yahya IVB) periods.

7.1 The Soghun Valley

Tepe Yahya is the only mounded site reported from the Soghun Valley. In addition to Tepe Yahya and its related scatter site, several sites termed as scatter sites were identified in the valley and six of them provided materials related to Period IVC (or mostly defined as Periods IVC-IVB).[52] According to M. Prickett (1986b:216), "a scatter site is a ground surface accumulation of sherds lacking both mounding and architectural debris. It can be either a site-related scatter site contiguous to a mounded site [such as that related to Tepe Yahya] or an independent scatter site not associated with other archaeological materials." These sites are (Prickett 1986b:243-244, Appendix 9.A; Figure 7.2):

- Site 1 (Yahya IVC-IVB);
- Site 15 (Yahya IVC-IVB, stray);
- Site 15A (Yahya IVC, stray);
- Site 22 (Yahya IVC-IVB, stray);
- Site 23 (Yahya IVC-IVB, stray);
- Site 25 (Yahya IVC-IVB, stray).

Four of them were identified in the southwestern corner of the Soghun Valley, in the vicinity of Tepe Yahya (sites 1, 15, 15A, and 22); one was identified approximately 4 km east of Tepe Yahya (site 23); and one is around 5 km to the southeast (site 25). One site (site 23) also provided Iblis IV/V-related material (Prickett 1986a:1315) and mention was made of six to seven scatters sites and two to three sites with stray artifacts related to Iblis IV/V (Prickett 1986a:1321-1322). M. Prickett pointed

out issues in interpreting this data. First, absence of mounded sites in Periods IVC–IVB does not necessary indicate absence of them in the past; it is still possible to envisage that low mounded sites were swept away by erosion, which is attested around Tepe Yahya (Prickett 1986b:219). The second issue is the formation process and the nature of the scatter sites. They could either correspond to eroded occupations originally located where the scatters are, or have resulted from occupations debris redeposited by flooding. M. Prickett tends to favor the latter hypothesis at least for the site 22.

Immediately northwest and southwest of Tepe Yahya, two sites were linked to Tepe Yahya Periods IVC–IVB: a grave in a cave (SU 70-9) and a burial cairn (SU 70-67) (Prickett 1986a:1324). There is, however, no detailed information about the dating material, and burials in cairn are attested in the late fourth and third millennium BC in the Oman Peninsula (Hafit and Umm an-Nar periods; see Frifelt 1991) and around the beginning of our era in Pakistan (Kech-Makran) (Besenval 1997b:30).

7.2 The Daulatabad Plain area

In the Daulatabad Plain, Period IVC is represented at two sites and by very few diagnostic materials (Prickett 1986b:218). M. Prickett noted that: "the only substantial mounded site in the surveyed drainage area (except in the Soghun Valley) during the entire 1,500-year time span of the (...) Yahya IVC-IVB period (R178, 2.2 ha) lies about 30 km south of the southern edge of the Shah Maran-Daulatabad basin silt plain on the Rud-i Nisa', a tributary of the Rud-i Gushk. Three sites, however, do have a few 'stray artifacts' probably dating within Yahya IVC–IVB time range, although only two of these sites are in the Shah Maran-Daulatabad basin, while the third lies to the south near R178." (Prickett 1986b:224). The sites in the Daulatabad Plain are R22 and R160A and the site close to R178 is R179 (Prickett 1986a:616-617). Approximately 30 km north of the Daulatabad Plain is mentioned a site assigned to Period IVB (Dih-i Sard, Prickett 1986a:1326). More radically, M. Prickett noted that the Daulatabad Plain was totally abandoned in Periods IVC–IVB (Prickett 1986a:784). In any case, in comparison to the previous periods attested in the Daulatabad area, a clear drop in settlement occupation is observed in Period IVC (Prickett 1986b:224). There were 53 mounded sites, 47 independent scatter sites, and five stray artifact sites in Period VA; and 34 mounded sites, ten independent scatter sites, and 16 stray artifact sites in Iblis IV/V Period. With reservations another eight sites with Iblis IV/V material were also reported north of the Daulatabad Plain (Sites R314-321) and one located 13 km southeast of Baft (Prickett 1986a:1250–1251, 1320).

Expectedly, the ceramic sherds illustrated by M. Prickett from surveyed sites that she assigned to Periods IVC–IVB include material that resembles some observed within Phases IVC2-IVB6 at Tepe Yahya. This is the case for a series of painted fragments that she illustrated (Prickett 1986a:fig. III.15 Q–R, T–V, and X). This series includes black-on-grey productions that are reminiscent of SEIP Group A vessels and of Period IVB painted, grey ware described above, and a black-on-orange/brown sherd (Figure 7.3). One would connect Prickett 1986a:fig. III.15 R, T–U, and X (Figure 7.3, n°1, 3, 5-6) mostly to materials characteristic of Phase IVB5 onward, but the palm-motif design already appeared in the previous phases at Tepe Yahya. The garland painted on the rim of the bowl Prickett 1986a:fig. III.15 Q (black-on-grey; Figure 7.3, n°2) is also reminiscent of decoration attested on SEIP Group A imitations (black-on-buff painted bowls). These fragments come from site R178, with the exception of Prickett 1986a:fig. III.15 R (Figure 7.3, n°5) which is from site P9 (Konar Sandal South,

Halil Rud Valley). Another series of fragments from site R178 includes painted materials of light orange to dark brown color fabrics (Prickett 1986a, fig. III.16 D–H, L, and X; Figure 7-3, n˚7–13). Again, these sherds share attributes with SEIP Group A and the materials considered here their imitations from Tepe Yahya Phases IVC2-IVB6 as well as elements of Period IVB, while one (Prickett 1986a:fig. III.16 Q) is reminiscent of some Proto-Elamite painted jars (Figure 7.3, n˚14).

Beside these parallels, M. Prickett does not mention any diagnostic ceramics such as beveled-rim bowls and low-sided trays in the Daulatabad area. In addition to the jar sherd from site R178 (Prickett 1986a, fig. III.16 Q; Figure 7.3, n˚14), only one fragment from site R50 (Prickett 1986a:fig. III.14 Z) was described as a vegetal-tempered low-sided tray. The site R50 was assigned to the Iblis IV/V Period and the description of the sherd does not agree exactly with the examples recovered from Tepe Yahya. Burnished ware well-attested at Tepe Yahya is also not mentioned, nor any clear parallels for the vessels included within SEIP Group B. In sum, the parallels in the Daulatabad area concern the very fine, painted vessels of SEIP Group A and the ceramics interpreted here as imitations of SEIP Group A for Yahya Period IVC, and elements of Period IVB. It is difficult, based on drawings only, to further compare the elements from this area.

7.3 The Halil Rud Valley

Elements of the recent discoveries in the vicinity of Jiroft at the sites of Konar Sandal appear to be related to Tepe Yahya Period IVB and more generally to the third millennium BC. Nevertheless, in the deepest levels of Trench IX at Konar Sandal South ceramics were recovered with clear affinities to Aliabad ware of the fourth millennium BC (Madjidzadeh 2008:90). No mention is made to ceramics that could be connected to Tepe Yahya Period IVC. East of Konar Sandal South, the site of Mahtoutabad was excavated by M. Vidale containing pottery connected to Aliabad ware in the earlier contexts, while in later deposits (Mahtoutabad III) are reported ceramics connected to the Uruk period (Cortesi *et al.* 2008:8–9; Vidale and Desset 2013). These materials include beveled-rim bowls, nose-lug jars, and flower pots which the excavator compares to Susa, Acropole I Levels 17 and 16a and dates to the late fourth millennium BC.

In addition, surveys conducted by S. M. S. Sajjadi in 1984 in the Halil Rud Valley to Jaz-e Murian, and more recently by Y. Madjidzadeh, N. Soleimani, A. Daneshi, M. Naseri, M. Javadi, and D. Abyan, identified 750 sites dating from the fifth millennium BC to the Islamic period (Madjidzadeh 2008:73–74). The region was most densely occupied during the third millennium BC. Important evidence for metallurgical activities is identified on third millennium BC sites, while evidence for ancient mining is also reported.

7.4 Southern Kerman and Hormozgan

Two sites dated to Periods IVC-IVB are reported southeast of the Jiroft area: Tepe Nurabad and Daruyi (Prickett 1986a:1326). The former provided ceramics connected to Tepe Yahya in Period VA and Period IVB (Lamberg-Karlovsky and Beale 1986:88; Stein 1937:pl. XXV). Based on the illustrations published by Sir M.A. Stein, it is not clear whether these sites were occupied in periods contemporary to Tepe Yahya IVC. Five sites are reported southeast of these two sites, in the western portion of the Bampur Valley: Jamalabad, Tump-i Surkh Qalat, Takkul A, Takkul B, and Takkul C, Jamalabad being related to Periods IVC–IVB (Prickett 1986a:1326). The material published by Sir M. A. Stein

(1937:pl. XX) includes one sherd with a painted palm-tree motif (Jal.15) that is reminiscent of friezes observed on bowls from Tepe Yahya. The palm-tree motif appears in Period IVC but is also characteristic of Period IVB. M. Prickett included Tump-i Surkh Qalat in her list of Yahya IVB–IVC-related sites, while noting that there were perhaps Iblis IV/V occupations as well (Prickett 1986a:1271). The material illustrated by Sir M. A. Stein (1937:pl. XX) from this site and observed in the collection of the PMAE, does not distinguish Yahya IVC-related material. In the vicinity of Tump-i Surkh Qalat were collected Yahya VA-related sherds (Lamberg-Karlovsky and Beale 1986:88; Stein 1937:pl. XX: Sur.2 and Sur.26). As for Takkul A, Takkul B, and Takkul C, these three sites contain Iblis IV/V assemblages, while Takkul A and Takkul C contain Yahya IVC–IVB parallels (Prickett 1986a:1320, 1326). Some sherds illustrated by Sir M. A. Stein from these sites (1937:pl. XX: Tak.C.68 and Tak.16) indicate relations to Iblis IV Aliabad ware, and one (Stein 1937:pl. XX: Tak.A.8) decorated with a frieze filled with a cross-hatched triangle is reminiscent of those observed at Tepe Yahya in Phases IVC2–IVB6 (SEIP Group A) and in Kech-Makran in Late Period IIIa and Period IIIb. One can also add as a parallel to Yahya IVC-IVB one sherd with a probable palm-tree motif (Stein 1937: pl. XX: Tak.A.20). The material from the Takkul area observed in the collection of the PMAE includes a sherd connected to Kech-Makran Early Period IIIa and other painted, grey fragments connected to third millennium BC materials observed in the Bampur Valley, i.e. at Damin (see below).

A series of sites is reported from the coastal area, in the Minab region, southwest of those just discussed: Tepe Sultan Miri, Tepe Mauru, Tump-i Chiraghabad, Chiraghabad, Tepe Ziyarat, and Qal'a Jagin. Tepe Sultan Miri is interpreted by M. Prickett as related to Yahya IVC–IVB (Prickett's site Q23; 1986a:1281). In addition to a series of ceramics that she identified and connected to Yahya Periods IVC-IVB and R178 assemblages (see Prickett 1986a:1281 and fig. III.15), M. Prickett mentions and illustrates a sherd she defines as a Jemdet-Nasr painted jar fragment (1986a:fig. III.16 BB). The ceramic fragments from this site, illustrated by Sir M. A. Stein (Stein 1937:pl. XXV), seem to be connected to the third millennium BC. Tepe Mauru, southwest of Tepe Sultan Miri (Prickett's site Q17; 1986a:1280) is included within the Yahya IVC–IVB-related sites, but contains material corresponding to later assemblages. Tump-i Chiraghabad (Prickett's site Q2; 1986a:1277) provided ceramic types similar to those reported from Tepe Sultan Miri and related to Yahya Periods IVC–IVB. It is also suggested, with reservation, that this site has Iblis IV/V and Yahya VA-related occupations. An Iblis IV/V-related ceramic component was also suggested as present at Chiraghabad and Tepe Ziyarat (respectively Prickett's sites Q5 and Q25; 1986a:1279, 1281, and 1320). Qal'a Jagin (Prickett's site Q6; 1986a:1279) was assigned a Yahya IVC-related occupation. The dating material reported by M. Prickett from this site is connected to painted ceramics from R178 (Prickett 1986a:fig. III.15 Q, S–V) and Konar Sandal South (Prickett's site P9; 1986:fig. III.15 R). This material is both connected to Phases IVC2–IVB6 and Period IVB at Tepe Yahya. A sherd from a jar with a brown slip and black painted decoration is also illustrated from this site (Prickett 1986a:fig. III.15 BB). Closer to the coast, mention is made of a third millennium BC cemetery (Prickett 1986a:1326), and a site (Prickett's site K14, approximate location on the map; Prickett 1986a:1271) is possibly contemporary with Yahya IVC.

7.5 Balochistan

Farther to the east, a large number of sites are reported in the Bampur Valley, with a majority of them

contemporary to Yahya Periods IVB-IVC and a few noted with Iblis IV/V materials. Those mentioned as Iblis IV/V-related are Chah Sardu and Tump-i Qasimabad in the Bampur Valley, Konarak near the coast, and a site in the Kash area (named Kash Spring site 1). A minimum of 26 sites were indicated as Yahya IVC-IVB-related (including Chah Sardu, Tump-i Qasimabad and the site mentioned above in the Kash area), with a majority of them located in the eastern portion of the Bampur Valley.

In this valley, starting from the west, these sites include:

- Tump-i Chah Ghulam with a single possible third millennium BC sherd reported (Prickett 1986a:1327);
- Chah Husaini is well-known for its Yahya VB-VA-related ceramic component. Its original polychrome and monochrome production discussed in section 3.3.7 is connected to the fourth millennium BC,[53] while a series of sherds may indicate a third millennium BC occupation (Stein 1937:pl. XIX: Hus.11, Hus.17);
- Cautions should be kept in mind for Bahistabad whose collection of sherds held by the PMAE does not provide any unambiguous diagnostic;
- The location of Tump-i Zarbadast remains uncertain but M. Prickett notes that it could be the same site as Chah Sardu (Prickett 1986a:1328);
- Chah Sardu was considered both an Iblis IV/V-related and Yahya IVC-IVB-related site (Prickett 1986a:1320, 1329) while B. De Cardi considered this site anterior to the occupation of Tepe Bampur (De Cardi 1970:262–263, tab. 3). The same author paralleled one sherd collected from this site to Aliabad-related material from Takkul (Stein 1937:pl. XX Tak.C.68). Observations on the ceramic assemblage from Chah Sardu held by the PMAE enable us to identify several sherds connected to Kech-Makran Early Period IIIa (from the mid-fourth millennium BC). No clear diagnostics of later periods are attested;
- B. De Cardi dated some ceramics from Tump-i Qasimabad to Bampur Periods IV–VI (third millennium BC) (De Cardi 1970:263). Diagnostic materials from this site in the PMAE illustrates clear connections to the first half of the fourth millennium BC ceramic production from Kech-Makran Period II (Miri ware) and perhaps to Aliabad ware-related material as attested in Kech-Makran from Early Period IIIa;
- With reservation, some material related to Bampur Period VI was identified at Deh-i Qadi, and Bampur Period V or VI sherds were at Pir Konar (De Cardi 1970:263, fig. 14, tab. 3);
- Tepe Bampur was excavated by B. De Cardi (1970). The occupation and material she found are mostly related to the third millennium BC. The assemblage from this site has parallels to Tepe Yahya in Period IVB, Shahr-i Sokhta from Period II, and Kech-Makran from Period IIIb, starting in the first half of the third millennium BC. One should, however, mention a goblet of very fine, painted, grey ware found in a Period III context at Tepe Bampur (De Cardi 1970:fig. 22, n° 141). This goblet resembles examples included within Western Balochistan Ceramic Complex from Tepe Yahya Phases IVC2–IVB6 (SEIP Group A), Shahr-i Sokhta Period I, Kech-Makran Late Period IIIa, and a vessel from Khurab (see below). As explained above the dating and chronological evolution of the very fine, painted, grey ware that characterizes southeastern Iran in Chalcolithic and Bronze Age periods are not fully understood. The goblet from Tepe Bampur may be of an older date or may also represent the continuation of the painted, grey ware tradition in a later chronological context;

- Material of Bampur Period IV was reported from Dambian (De Cardi 1970:263, tab. 3) and pottery of Bampur Periods IV–V type was identified at Gwargusht (De Cardi 1970:263, tab. 3, fig. 15). At the same site mention is also made of a bowl with swastika motif (De Cardi 1970:tab. 4). The site named Maula might be the same as Gwargusht (see Prickett 1986a:1328). The material illustrated by Sir M. A. Stein from Maula includes Bampur-related, Konar Sandal-related, and Yahya IVB-related ceramics (Stein 1937:pl. IX: Mau sherds). Among them is incised grey ware that is similar to material from Tepe Bampur and Kech-Makran Period IIIc ceramics (Stein 1937:pl. IX: Mau.19.21; De Cardi 1970:324);
- B. De Cardi identified parallels with Bampur Periods IV–V and Gwargusht at the cemetery of Khurab (De Cardi 1970:263–264, tab. 3). The material from Khurab includes parallels to Konar Sandal, Yahya Period IVB, and Kech-Makran (from Period IIIb) assemblages (see Stein 1937:pls. XII, XIV, XVII, and XXXIV; Lamberg-Karlovsky and Schmandt-Besserat 1977). This site seems to be occupied from the third millennium BC. The vessels illustrated in Stein 1937:pl. XV: L.i.291 and L.ii.295 have clear equivalents in Kech-Makran (from Period IIIb). Some interesting, albeit rarer, comparisons may be made between ceramics from Khurab identified in the Stein collection of the PMAE and grey, painted vessels from Tepe Yahya Phases IVC2–IVB6 (SEIP Group A), Kech-Makran in Late Period IIIa, and Shahr-i Sokhta Period I, namely Western Balochistan Ceramic Complex. They are: a goblet (Khur.surf.75) found on the surface of the site, a bowl with an inside painted swastika motif and an outside frieze filled with cross-hatched triangles from a burial (Khur.F.iii.275), and a sherd decorated with a cross-hatched triangle on the rim (Khur.surf.54). B. De Cardi mentions vessels with swastika motifs from Burial C (De Cardi 1970:264). As discussed before, the swastika motif from Khurab is not the same as those observed at Shahr-i Sokhta Period I and Kech-Makran Late Period IIIa; the latter are made with hatched branches, while the former is made with lines. Swastika motifs made with lines are attested from Period IIIb in Kech-Makran, while those with branches are at Shahr-i Sokhta in Period I and are associated with Late Period IIIa in Kech-Makran. The goblet and the hatched triangle observed on a sherd resemble examples from Tepe Yahya IVC2–IVB6, Shahr-i Sokhta Period I and Kech-Makran in Late Period IIIa/Period IIIb. Although most of the material from Khurab relates to third millennium BC assemblages, it might also indicate that the site was used from the late fourth millennium BC;
- The ceramic assemblage from Shahr Daraz is paralleled to Bampur Period IV (De Cardi 1970:263, tab. 3);
- The assemblage from Katukan corresponds to that of Bampur Periods IV–VI (De Cardi 1970:263, tab. 3; see Stein 1937:pl. XI). An incised grey vessel from this site (Kat.019: Stein 1937:pls VI, XXXII, n°12) may be paralleled to material from Bampur V–VI (see During Casper 1970:322, 324, see also the same reference for parallels for incised grey ware). The Stein collection of the PMAE from Katukan includes a fragment of a bowl with a swastika motif made with hatched branches (Kat.7), a rim sherd with an outside frieze probably filled with triangles and a palm motif painted inside (Kat.8), and a complete bowl with the same outside decoration (Kat.018). These ceramics are comparable in decorations, forms and manufacture to those of SEIP Group A materials from Tepe Yahya IVC2–IVB6, Kech-Makran Late Period IIIa (especially

in that the swastika is made with hatched branches), and Shahr-i Sokhta Period I, namely the Western Balochistan Ceramic Complex;

- The material from Damin can be compared to that of Bampur Periods III–VI (De Cardi 1970:263, 297, 305, 318, tab. 3; Stein 1937:pls XI–XII; Tosi 1970:11). Incised grey ware was also reported from this site (During Casper 1970:324).

East of the Bampur Valley, Gabro Maro (Saravan) is mentioned as a site related to Bampur Periods IV–V (De Cardi: 1970:265, figs. 13–14, tab. 3). Nearby, at Robahok material resembling the Bampur IV–V assemblage as well as components connected to Khurab and Shahi-Tump is reported. A third millennium BC dating for this site is most likely, while the parallels to Shahi-Tump could indicate that it was occupied in the mid-late fourth millennium BC too (De Cardi 1970:265, 292, 299 fig. 13, tab. 3). Approximately 130 km northeast of Tepe Bampur Iblis IV/V-related Aliabad ware and third millennium BC (Yahya Periods IVC–IVB) pottery are reported at several places in the Kash area (Marucheck 1976; Miragliuolo 1979; Prickett 1986a:1331). One sherd from this area has a palm motif (Marucheck 1976:282, fig. 11, n°5). Nearby, third millennium BC material (Yahya Periods IVC–IVB) was also reported from Shandala and Dahnag areas (Marucheck 1976; Miragliuolo 1979; Prickett 1986a:1331).

South of the Bampur Valley, third millennium BC sherds were collected by Sir M. A. Stein in the area of Fanuch (Stein 1937:pl. XXV). Material from this area can be connected to Kech-Makran Early and Late Period IIIa assemblage such as Fan.015b (a bowl noted by Sir M. A. Stein with a painted swastika inside) and Fan.016 in the collection of the PMAE. Of particular interest is a goblet of painted, grey ware that can be linked to those observed at Tepe Yahya IVC2–IVB6 and Shahr-i Sokhta Period I. Southwest of the Fanuch area cairns were reported from Sadaich which M. Prickett included within Yahya Periods IVC–IVB sites (Prickett 1986a:1326). Close to the coast and the Pakistani border, the site "GZ" (Ghazab) was reported as a possible Yahya IVC-IVB related site (Prickett 1986a:1327). One sherd from this site - ridged and painted - observed in the collection of the PMAE indicates a third millennium BC occupation (Stein 1937:pl. IX: Qz.10). It has numerous parallels at Tepe Bampur. The material illustrated from Damba Koh may also be connected to the third millennium BC assemblage from the Bampur Valley and Kech-Makran (Stein 1937:pl. IX: Dam.1.sur.9). The dating of Qalat-e Jamshid, on the other hand, is not clear. Farther west, on the Konarak Peninsula, Iblis IV/V ceramics are reported as well as painted, grey ware that could date to the third millennium BC (Prickett 1986a:1289 note 11, 1321) or perhaps to an earlier date. Finally, a stone vessel from Saiyyidabad (Stein 1937:pl. XXV) is reminiscent of Yahya Period IVB material.

7.6 Pakistani Kech-Makran

As indicated above, the Kech-Makran area in southwestern Pakistan provides numerous parallels for the fine, painted ceramics (Western Balochistan Ceramic Complex) found at Tepe Yahya IVC2–IVB6, Shahr-i Sokhta Period I, and other sites listed above (Kech-Makran Late Period IIIa), and to the third millennium BC ceramic assemblage from Tepe Bampur, Yahya IVB, and Konar Sandal (Kech-Makran Periods IIIb–IIIc). Incised grey ware of the third millennium BC was also reported from Kech-Makran (Besenval 1997b:24 and fig. 32; see Didier 2007). Besides the painted material, a few sherds of beveled-rim bowls from Miri Qalat provide a connection to the Proto-Elamite period in Kech-Makran Late Period IIIa (Besenval 2005:5–6). Broadly speaking it appears that the number of reported sites

increased from Period II to Period IIIa in Kech-Makran, with a dramatic increase from Late Period IIIa (Mutin 2007) and mostly from Period IIIb (Besenval 2005:6; Didier 2007).

7.7 Seistan

Shahr-i Sokhta provides numerous examples of grey, painted ware of the type included in Western Balochistan Ceramic Complex recovered from Tepe Yahya Phases IVC2-IVB6, Kech-Makran Late Period IIIa, and sites in the Bampur Valley. Shahr-i Sokhta Period I also provides burnished material, which, with the exception of Tepe Yahya, has not been reported elsewhere in southeastern Iran in this chronological bracket. Other parallels to Tepe Yahya Period IVC are represented at Shahr-i Sokhta Period I by the Proto-Elamite tablet fragment and glyptic art. Shahr-i Sokhta appears as a unique site in Seistan at times contemporary with Period I. In the following periods, from Period II in the third millennium BC, the site has ceramic relations to the south: at Tepe Bampur, Tepe Yahya Period IVB, Konar Sandal sites, and Kech-Makran from Periods IIIb-IIIc. The number of sites increases in the third millennium BC in Seistan with 28 sites of Shahr-i Sokhta Periods II-IV. Shahr-i Sokhta in Periods II-IV becomes an imposing settlement while neighboring Rud-i Biyaban, a ceramic production center, was founded at that time (Salvatori and Tosi 2005; Prickett 1986a:784, 1330; see Fairservis 1961).

7.8 The Bardsir Plain and Takab Plain areas

Evidence for settlements roughly contemporary with Tepe Yahya Phases IVC2-IVB6 are reported from the Bardsir Plain, located about 160 km north of Tepe Yahya, in north-central Kerman. This evidence consists of Uruk/Proto-Elamite ceramics recovered from ill-preserved contexts assigned to Periods IV to VI at Tal-i Iblis. In Period IV beveled-rim bowls, flower pots, trays, and shoulder spouts are attested for the first time (Caldwell 1967:184). The following Period V was defined on the basis of a type of ceramic, Mashiz ware, which can be compared to the earlier Aliabad ware. Period VI is known from the top of a 5 x 5 m excavation conducted outside of the mound which provided (Level 1) 61 beveled-rim bowl sherds, four trough spouts, and materials connected to Tepe Sialk Period IV. In addition, slipped painted fragments and a low-sided tray from Level 1 were illustrated (Caldwell 1967:36-39, 188, 197-199, figs. 40, 42, 45; 1968:179-180, 182). J. Caldwell proposed that Period IV ranged from 3600 BC to around 3000 BC. Ceramic parallels indicate that Period VI is probably not later than the early third millennium BC. S. M. S. Sajjadi situates Aliabad (Iblis IV), Mashiz (Iblis V), and Najefarabad (Iblis VI) periods respectively between 3600-3400 BC, 3400-3200 BC, and 3200-2800 BC (Sajjadi 1987:fig. 12). The later period, with no Aliabad ware, would mostly relate to Tepe Yahya Phases IVC2-IVB6. As indicated by this author, these periods need better definition (Sajjadi 1987:18-19).

S. M. S. Sajjadi indicated that the surveys conducted by him and J. Caldwell in the Bardsir area enabled them to identify 20 sites[54] dated to the second half of the fourth and early third millennia BC and related to Iblis Periods IV-VI (Sajjadi 1987:18-19, 87, fig. 12). Sites 134-139, not on map 7.1, correspond to sites surveyed by J. Caldwell in the area of Tal-i Iblis and site 062 is located south of site 27.) Sites with Iblis IV (Aliabad) component are: sites 001, 002, 015, 020, 021, 081, 106, 121, 122, 133 (Tal-i Iblis), 134, 135, 136, 137, and 139; sites with Iblis V (Mashiz) component are: sites 001, 002, 020, 027, 036, 062, 064, 094, 106, 121, 133 (Tal-i Iblis), 138, and 139; and sites with Iblis VI

(Najefarabad) component are: sites 106, 121, 133 (Tal-i Iblis), and perhaps Ghobeira (site 002: Sajjadi 1979:30). Details were provided about:

- Site 001 (Bahramjerd: "few fragments could be assigned to periods IV and V of the Iblis sequence;" Sajjadi 1987:25);
- Site 002 (Ghobeira: "the sample seems to have been partly intermediary between Caldwell's Aliabad (Iblis IV) and Mashiz Plain (Iblis V); Sajjadi 1987:26);
- Site 062 ("these ceramics are unquestionably to the Mashiz Painted, and Mashiz Plain types, and find comparative shapes in the morphology of Caldwell's Mashiz horizon;" Sajjadi 1987:32);
- Site 081 ("the ceramic complex can be classified as Iblis IV;" Sajjadi 1987:33);
- Site 094 ("the prehistoric pottery of this site matches sherds of the Ghobeira and Iblis sequence (Iblis V);" Sajjadi 1987:33);
- Site 106 ("there are some sherds like those of Aliabad and Mashiz assemblages (Iblis IV and V);" Sajjadi 1987:35);
- Site 121 (Gask: "the rest of them are comparable with Iblis sequence IV, V, and VI, the Aliabad, Mashiz and Najefabad phases;" Sajjadi 1987:35);
- Site 122 (Tall-e Ali Mirzai: "the pottery of this site is typologically alike those of Iblis II, III, and possibly V;" Sajjadi 1987:36).

S. M. S. Sajjadi observed that during Iblis Period IV, the number of sites continued to decrease in the Bardsir Plain, while in the following Period V, sites increased and new sites were established. Iblis Period V seems to correspond to the development of small towns such as sites 121 and 106. As for Period VI, S. M. S. Sajjadi reports two sites in addition to Tal-i Iblis (Sajjadi 1987:fig. 12). Meanwhile, conversely, he notes that the only Iblis Period VI site is site 121 (Sajjadi 1987:37). In any case, there was a dramatic decrease in terms of occupations from the late fourth millennium BC, a phenomenon that the same author compared to the situation in the Daulatabad area after Yahya Period VA (Sajjadi 1987:37–38, 52).

Evidence for Iblis IV/V occupations is also at Tepe Langar, a site located ca. 30 km southeast of the city of Kerman (Lamberg-Karlovsky 1968:167), at Tepe Atash to the north (Lamberg-Karlovsky 1968; Prickett 1986a:1320), and at Shahdad to the northeast (Hakemi 1976; Salvatori and Vidale 1982). A. Hakemi (1997:76) mentioned materials collected in surveys in the Takab Plain and on the surface of Shahdad which he related to Shahr-i Sokhta Periods I–II, Tal-i Iblis VI, Sialk Periods III and IV, Tepe Yahya VA and Late Uruk/Jemdet-Nasr materials. The rest of the sequence in this area includes third millennium BC occupations (see Hakemi 1997:77–82; Salvatori and Tosi 1997) and there is no clear evidence of Proto-Elamite presence at Shahdad (Lamberg-Karlovsky 2001a:271).

7.9 Synthesis

7.9.1 Aliabad period (Iblis IV/V)

The period prior to Tepe Yahya IVC is in southeastern Iran characterized by the ceramic production referred to as Aliabad ware and found at Tal-i Iblis from Period IV with continuation into Period V. This ware can be dated to ca. 3700/3600–3300/3200 BC. Ceramics related to the Aliabad period are well-attested in Kerman and are not limited to this province since sherds of this type are identified on sites from Iranian Balochistan (in the Bampur Valley area and in the Kash area). Ceramics with strong

affinities to Aliabad ware are observed in Kech-Makran where they are associated with other, very fine, painted vessels characteristic of Kech-Makran Early Period IIIa (Mutin 2007, 2012a, 2013). The Bampur Valley seems to represent a ceramic boundary where both Aliabad ware and Kech-Makran Early Period IIIa fine, painted materials are reported. The latter has not been attested farther west in Kerman and north in Seistan, while Aliabad ware, well-attested in Kerman, is not found farther west in Fars.

As noted above, the Aliabad period saw the emergence of Uruk-related types of ceramics at Tal-i Iblis (Period IV). The development of Uruk in southeastern Iran has been further documented thanks to the recent work conducted at Mahtoutabad in the Halil Rud Valley. The sequence observed at Mahtoutabad is slightly different than that of Tal-i Iblis since Uruk-related elements were found at the former site in deposits located above those containing Aliabad ware. Tal-i Iblis and Mahtoutabad represent the only sites bearing Uruk materials in southeastern Iran and the easternmost ones of the Uruk sphere, whereas elements of the Proto-Elamite sphere are found later several hundreds of kilometers to the east at Shahr-i Sokhta and Miri Qalat.

In the Soghun Valley and the Daulatabad Plain it is observed that following the period contemporary with Tepe Yahya Period VA, in the Iblis IV/V period, there was a general collapse in the number of settlements with a further decline at the end of Iblis IV/V Period. This decline may have corresponded to the "development of, or reversion to, a more nomadic lifestyle" (Lamberg-Karlovsky and Beale 1986:267; see Prickett 1986b:224). This situation can be compared to that observed in the Bardsir Plain where a marked decrease in occupations is also attested from the late fourth millennium BC (Sajjadi 1987:51-52, fig. 15).

7.9.2 Yahya Period IVC

It appears that Tepe Yahya was founded in the context of a considerable decline in settlements in Kerman in the areas of the Soghun Valley, the Daulatabad Plain and the Bardsir Plain. As many areas of the Southeastern Iranian Plateau have not been studied in detail the above observations are entirely tentative. Among the numerous sites defined as being contemporary with Yahya Periods IVC-IVB, only a few of them were noted as being related to Yahya IVC only (site 15A in the Soghun Valley and Qal'a Jagin and site K14 in Hormozgan). Evidence for Proto-Elamite occupations appears scarce in Kerman and is presently restricted to Tepe Yahya, the materials from Tal-i Iblis (Period VI), a possible Proto-Elamite jar fragment from site R178 (south of the Daulatabad Plain), and a ceramic sherd from Tepe Sultan Miri (southern Kerman) identified as a Jemdet-Nasr jar fragment by M. Prickett. One may anticipate settlements contemporary with Yahya IVC in the Halil Rud Valley. The seal dated to ca. 2900 BC at Konar Sandal South (Pittman 2008:100) is the only evidence consistent with the Yahya IVC chronological bracket or with a slightly later date. Beyond Kerman, Tepe Yahya remains the only site on the Southeastern Iranian Plateau with a concentration of cultural material related to the Proto-Elamite phenomenon. The only other evidence observed in stratigraphic contexts consists of a few items found hundreds of kilometers to the east at Shahr-i Sokhta in Period I and Miri Qalat in Late Period IIIa. As indicated before, this evidence is considerably fewer, included within separate cultural assemblages, and does not indicate Proto-Elamite settlements.

Proto-Elamite diagnostics are absent in the areas between Kerman and the Pakistani-Iranian border, while ceramics of the same period, those that compare to SEIP Group A at Tepe Yahya (Western

Balochistan Ceramic Complex) seem more common. Elements that relate to this group are perhaps in the Daulatabad Plain (R178?). Several examples are known from Kerman (Takkul A), in Balochistan in the Bampur Valley (Tepe Bampur, Khurab, and Katukan), south of this valley (Fanuch), and in Kech-Makran (Late Period IIIa), where sites bearing this type of production seem more numerous than in the previous period. In addition, numerous examples of ceramics linked to Yahya SEIP Group A were found at Shahr-i Sokhta, which is founded at that time (Period I). The distribution of the ceramics related to the Western Balochistan Ceramic Complex is in contrast to that of the Proto-Elamite elements on the Southeastern Iranian Plateau. The latter is well-attested in Kerman (particularly at Tepe Yahya) with elements[55] but no settlements known from the Seistan-Balochistan provinces. On the other hand, the former is well-attested in Seistan-Balochistan (with best evidence in Kech-Makran, the Bampur Valley and at Shahr-i Sokhta) with elements in Kerman. Although we are lacking of data on the Southeastern Iranian Plateau, one may envisions a ceramic boundary between Kerman and Seistan-Balochistan.

Overall, there is a decline in settlements in the period contemporary to Tepe Yahya Period IVC in Kerman, but sites with contemporary ceramic materials do not seem to be absent farther east, more sites are attested in Kech-Makran Period IIIa while Shahr-i Sokhta, the oldest site known so far in Seistan, is founded.

7.9.3 Third millennium BC

The third millennium BC occupations (contemporary with Tepe Yahya Period IVB) is not the main topic of this publication. Within the limitations indicated above, one may summarize the brief review of the sites assigned to Period IVB and third millennium BC settlements described above as: considerable evidence for the third millennium BC in Balochistan (particularly in the Bampur Valley); an apparent increase in the number of sites in Kech-Makran starting with Period IIIb (Besenval 2005:6; Didier 2007); more than two hundred sites dated to the third millennium BC in the Halil Rud Valley (Madjidzadeh 2008:73–74); an increase in the number of sites in Seistan and size of Shahr-i Sokhta (Salvatori and Tosi 2005:fig. 12); still a decline in the Daulatabad Plain and the Bardsir Plain (Prickett 1986a:784), but important material in the latter (sites 004-005, see in particular site 37; Sajjadi 1987:31–32, 101–105, fig. 12) and at Shahdad (Hakemi 1997). Again, the major issue that needs to be resolved is the problem of the exact dating of these occupations; whether they relate to the first half of the third millennium BC, its middle or its second half.

8 Conclusions and Interpretations

8.1 Chronology

8.1.1 The gap before Period IVC

It is proposed here that the gap following Period VA at Tepe Yahya began around 3700/3600 BC, while, on the basis of parallels for the material assemblage found in Phases IVC2–IVB6 and radiocarbon dates available in Fars, Isfahan, and Seistan as well as Kech-Makran and at Sohr Damb in Pakistan, Period IVC can be dated to around 3200/3100–2900 BC. The gap before Yahya Period IVC corresponds to the development of Aliabad ware in southeastern Iran. The period characterized by Aliabad ware also incorporates the emergence of Uruk-related elements in this area as attested at Tal-i Iblis in Period IV. Excavations at Mahtoutabad however indicate that Uruk-related materials follow the period containing Aliabad ware. The reconstruction that sees the development of Uruk-related materials in southeastern Iran during the gap before the settlement of Period IVC at Tepe Yahya is corroborated by the sequence established in Fars where Uruk-related objects are attested from the end of the Lapui period (Early Banesh period), a period connected to Tepe Yahya Period VA, and before the appearance of Proto-Elamite materials in the Middle Banesh period. The Early Banesh period is dated in Fars to around the mid-fourth millennium BC and slightly after. One may also place within this horizon the Uruk elements found at Tepe Arisman and Tepe Sialk in Period III, and those from Susa, Acropole I Level 17. In Pakistan, this episode was roughly contemporary with, or with a part of, Kech-Makran Early Period IIIa, Sohr Damb Period I, and Mehrgarh Period IV.

8.1.2 Period IVC

In addition to other comparisons, the parallels for the ceramic assemblage of the building complex of Period IVC (Potts's Phase IVC2) securely connect this complex to Shahr-i Sokhta Period I; likely to Tal-i Iblis Period VI; Kech-Makran Late Period IIIa; the Proto-Elamite occupations of Tal-i Malyan (Middle Banesh period) and Tepe Arisman radiocarbon dated to the late fourth millennium BC; Susa Period III; and parts of Sohr Damb Period II and Mehrgarh Periods V–VI in Pakistan. On the basis of these parallels, it is proposed that the building complex was built, occupied for a time and abandoned between 3200/3100 and 2900 BC. Within this bracket, the short duration of the building complex, estimated to 100 or 150 years, is consistent with the fact that the complex consists of a single architectural level including several floors. The tablets with Proto-Elamite signs found at Tepe Yahya provide a solid basis for a dating of Period IVC situated within the late fourth millennium BC, all the more if one considers, following J. Dahl *et al.* (2013), that the "diffusion" of the Proto-Elamite writing system was probably a rather fast phenomenon that took place within a few generations. Almost all the chronological brackets and most of the radiocarbon dates published for the occupations bearing Proto-Elamite tablets fall within ca. 3300–2900 BC. Furthermore, although there is a general agreement that considers that the Proto-Elamite developed after Proto-cuneiform writing system (Dahl 2002:1 note 1; 2005a:1), the connections of the Proto-Elamite to the beginning of Proto-cuneiform development, and not its end as indicated by R.K. Englund (2004:123–124, 139–140), represents another element favoring a date of the Proto-Elamite occupations with tablets (including Tepe Yahya) within the late fourth millennium BC

rather than the early third millennium BC. A date situated before 2900 BC for the Proto-Elamites at Tepe Yahya is further corroborated by the fact that there is no clear evidence at this site for the painted ceramics characteristic of the Late Banesh period in Fars as defined by W. Sumner (1985). The parallels for the glyptic art, at Tal-i Malyan and Susa (Pittman 2001), do not contradict this dating. The glyptic identified at Shahr-i Sokhta in Phases 9 and 8 (Period I) (Salvatori and Tosi 2005:fig. 13) extends the date of the glazed steatite style to 2800 BC, on the basis of evidence from Early Dynastic I in Mesopotamia (Pittman 1994:207–217). Overall the dating of the Proto-Elamite settlement and associated finds at Tepe Yahya proposed here is not different from that proposed earlier (3100–2800 BC; Lamberg-Karlovsky 2001a:270 and 3200–2900 BC; Lamberg-Karlovsky 1977:35).

D. T. Potts dated Phases IVC1 and IVB6, the layers and features located at the top of, and above, the IVC building and below Phase IVB5, to the second half and even the end of the third millennium BC. He considered intrusive the elements in relation to the Proto-Elamite period found in Phases IVC1–IVB6. Review of the material assemblage from Phases IVC1 and IVB6 indicates that an alternate hypothesis may be proposed that sees these phases as part of the Proto-Elamite period, not disconnected from Phase IVC2, and included within the chronological bracket proposed for this period at Tepe Yahya. Elements diagnostic of Period IVC (Potts's Phase IVC2) are well-represented in Phases IVC1–IVB6 contexts and include well-preserved vessels and large fragments. The study of the glyptic art conducted by H. Pittman also indicates that the same styles (which she links to Period IVC) were found in contexts attributed to Phase IVC2, IVC1, and IVB6. The proposal defended here would envision a continuation of Proto-Elamite occupation after the abandonment of the building complex of Phase IVC2, in which the area of the complex was used as a dumping area and sporadic squatter occupation in relation to a Proto-Elamite occupation situated elsewhere on the mound. Following this proposal, one may even propose to rename Phase IVB6 as Phase IVC0. It is, however, more reasonable to envisage that the dating of Phases IVC1–IVB6 cannot be solved. Phases intermediate between the complex of Period IVC and Phase IVB5 were located only in certain areas. The construction and leveling for the large scale construction of Period IVC and its subsequent abandonment, leveling and construction of Phase IVB5 resulted in considerable deposits of squatter occupation and mixing. Materials related to both Phase IVC2 and Phase IVB5 were found in Phases IVC2–IVB6. Clear intrusions of Period IVB materials are observed in contexts of Phase IVC2 and illustrate the mixing of materials at Tepe Yahya, not limited to Phases IVC1–IVB6, between the deposits of Period IVC and Phase IVB5. Additionally, there is no evident difference between the assemblages from Phases IVC2, IVC1, and IVB6. Because of the uncertainties mentioned above, any attempt to draw detailed conclusions on the distribution of ceramic types in the sequence defined as Phases IVC2, IVC1 and IVB6 seems tentative.

In sum, Tepe Yahya Period IVC can be connected to Shahr-i Sokhta Period I, Kech-Makran Late Period IIIa, and the Proto-Elamite occupations of Tal-i Malyan (Middle Banesh period) and Tepe Arisman radiocarbon dated to the late fourth millennium BC. In Mesopotamian terms, reappraisal of radiocarbon determinations from Uruk sites and contemporary occupations by H. T. Wright and E. S. A. Rupley (2001) provided ca. 3800–3100 BC for the chronological bracket of Middle and Late Uruk periods, a bracket overlapping with the dates of Proto-Elamite settlements. The Proto-Elamite chronological conundrum is further complicated by the fact that parallels with Uruk assemblages are

noted in the Proto-Elamite occupations. These parallels concern ceramics, elements of the Proto-Elamite tablets (see Englund 2004:23-129, 139-140), glyptic, and architecture. In addition, there is the problem of the existence of a large plateau in the calibration curve for the period between 3300-2900 cal. BC (Dahl *et al.* 2013; Helwing 2011a:219), which directly affects the critical dating of, and the chronological relations between, the Late Uruk, Jemdet-Nasr, and Proto-Elamite periods. Regarding the glyptic, one may add that the glazed steatite glyptic style (attested at Tepe Yahya in Phases IVC2-IVB6) existed in southern Mesopotamia from the very end of the Late Uruk period to the early Early Dynastic I.[56] At Susa, glazed steatite style is found in Acropole I from Level 17. It was suggested in the past that Level 17 was transitional to the Jemdet-Nasr period, but this level is nowadays assigned to the end of the Late Uruk period (see Pittman 1994:80, 211-212). At Godin Tepe Period IV, there is only one glazed steatite seal impression, which is paralleled to Susa, Ville Royale I Levels 18-9 (Pittman 1994:213), while the bulk of the glazed steatite style is in Godin Tepe V, a period considered Uruk-related. The relation of the Proto-Elamite occupations to the Late Uruk will be further discussed below. In Mesopotamian terms, the beginning of the Proto-Elamite may be placed on the same chronological horizon as part of the Late Uruk on the basis of the results from H. T. Wright and E. S. A. Rupley's analysis (2001) and as the Jemdet-Nasr period, dated to ca. 3200-3000 BC according to R. J. Matthews (1992b:196). Instead of a strict chronological succession, we might envisage an overlap of the Proto-Elamite period with both the Late Uruk and Jemdet-Nasr periods. In other words, instead of being after the Uruk period, occupations defined as Proto-Elamite began to appear in times contemporary with the Late Uruk as suggested by B. Helwing (2011a:219). At a minimum, one may suggest this hypothesis for the case of the so-called Uruk-related occupation excavated at Godin Tepe and parts of the elements found at Tepe Arisman, Tal-i Ghazir and in Fars. In addition to the multiple implications this would have on the broader picture of Mesopotamia and Iran in the late fourth and the early third millennia BC, this has implications on the directions of ceramic influences represented by the styles of the slipped and painted Proto-Elamite and Jemdet-Nasr jars. These remarks would agree with the first designation of the Proto-Elamite elements of Tepe Yahya as of "Late Uruk/Jemdet-Nasr" period (see Lamberg-Karlovsky 2001a:270; 1972:89). The settlement of Tepe Yahya IVC seems to have started after the beginning of the Proto-Elamite as seen in the above sites; it seems not later than the early Early Dynastic I in southern Mesopotamia and the beginning of the Late Banesh in Fars while the tablets connect this settlement to the Late Middle Banesh.

8.1.3 The gap after Period IVC

The transition between Period IVC and Period IVB and the dating of Period IVB were important topics of discussion in the previous monograph dedicated to Tepe Yahya Periods IVC-IVB. Beyond Tepe Yahya, these topics have direct implications on more general questions that concern the dating and chrono-cultural relationships of the main settlements and polities of the Indo-Iranian Borderlands, western Iran and Mesopotamia in the third millennium BC (see Cortesi *et al.* 2008; Jarrige *et al.* 2011a; Görsdorf and Franke-Vogt 2007:704). In summary, the debate regards the dating of Period IVB and whether there is continuity with Period IVC or its entirety is to be placed within the second half of the third millennium. D. T. Potts suggested that Tepe Yahya was occupied again only at the end of the third millennium BC. On the other hand, C. C. Lamberg-Karlovsky recalled parallels for the material assemblage of Period IVB

that are attested from the first half of the third millennium BC (essentially from around 2700 BC) and considers that Period IVB certainly started by the mid-millennium (Lamberg-Karlovsky 2001a:275).

As indicated above, Period IVB is not the main topic of this publication. This topic would need the incorporation of analyses and discussions regarding the specific contexts of many types of artifacts (ceramics, steatite objects, glyptic, and others). Elements regarding Period IVB and its relation to Period IVC provided and discussed above (in section 3.10) are a selection of ceramics not sufficient to investigate the question of the dating of Period IVB. Putting aside the problem of the dating of Phases IVC1-IVB6, the ceramics of Period IVB discussed above tend to show that the beginning of Yahya Period IVB could be situated within the second quarter of the third millennium BC (between around 2800-2500 BC) if one follows available sequences and parallels from Pakistan (and the Halil Rud Valley) and within the third quarter of the third millennium BC (between around 2500-2300 BC) if one follows other available sequences and parallels from Iran (including the Halil Rud Valley). On the other hand, a date situated at the end of the third millennium BC for the beginning of Period IVB is not consistent with the ceramic parallels and seems too late. Although we cannot be completely certain in the absence of substantial radiocarbon dates, the few parallels mentioned for the ceramics of early Period IVB tend to add more support to C.C. Lamberg-Karlovsky's demonstration (2001a:271-275) that favors a shorter gap after Period IVC. The highest possible date for the beginning of Period IVB seems to be situated around 2800 BC if one follows the date proposed for Period IIIb in Kech-Makran and the radiocarbon determinations from the lowest phase of Konar Sandal South, Trench XI (2880-2580 cal. BC; Madjidzadeh 2008:tab. 1). Meanwhile, the comparisons with materials from Kech-Makran Period IIIc and Shahr-i Sokhta from Period II (Phase 5) tend to push the starting date more toward the mid-third millennium BC, around 2600-2400 BC. Regarding Kech-Makran, this dating takes into account both material that appeared in Period IIIb and continued into Period IIIc and ceramics that seem mostly represented from Period IIIc, albeit already present in Period IIIb. A date situated at the end of the third millennium BC would mean that we have to discard all the ceramic comparisons observed at Shahr-i Sokhta from Period II, in Kech-Makran from Periods IIIb-IIIc, and those from Konar Sandal and the Persian Gulf evident from the first half of the third millennium BC. One may also add that, although H. Pittman dates the glyptic of Period IVB to the late third millennium BC, she mentions examples with parallels related to Shahr-i Sokhta Periods II-III (Pittman 2001:238), dated to 2750-2300 BC (Salvatori and Tosi 2005:fig. 13). Nevertheless, it would not be appropriate to eliminate the radiocarbon determinations and other comparative artifacts in Period IVB that date to after 2500 BC. The sequence of Period IVB (Phases IVB5-IVB1) as seen from the north section of Trenches B-BW indicates several phases of occupations, reconstructions, and reoccupations throughout the IVB sequence, which is contained within ca. 1 m thick deposits. This aggregate may suggest certain duration in total. This hypothesis seems consistent with the parallels observed both before and after the mid-third millennium BC on the provisional ceramic sequence of the Halil Rud Valley (Madjidzadeh 2008), the area that seems culturally the closest to Tepe Yahya Period IVB. If one considers that the Proto-Elamite settlement at Tepe Yahya dates to around 3000 BC, then the end of Period IVC and the beginning of Period IVB appear separated by a gap of ca. 500 years. This gap was contemporary with the important developments that seem to have occurred in the Halil Rud Valley and Kech-Makran in the early third millennium BC.

8.2 Life in the building complex of Period IVC

The tablets and glyptic recovered from the building complex of Period IVC were used to monitor amounts and distribution of resources, which has often led to define it as an administrative building (e.g. Heskel and Lamberg-Karlovsky 1980:242; see Lamberg-Karlovsky 2001a:270: "in distinction to such terms as 'temple' or 'palace'"). In addition to the administrative tool kit, the other remains reflect common activities one would expect in a *domestic* settlement during the Chalcolithic and Early Bronze Age periods in Middle Asia. C. C. Lamberg-Karlovsky and Tosi (1989:110-111) already indicated that the Proto-Elamite texts recovered from Tepe Yahya report small scale activities and quantities related to bread, sheep and goats, grain, drinks, and ploughing. In sum, they noted that "the administration at Tepe Yahya would seem to be monitoring communal storage of seed-corn (within Room 5) distributed to members of extended families and/or lineages working their own lands. The tablets do not seem to relate to a state-administrated monitoring system that primarily involved territories located far beyond the Soghun Valley, but rather to a local group of 15 to 20 extended families and/or lineages. (Lamberg-Karlovsky and Tosi 1989:109).

8.2.1 Food production, by-products, and habitat

The faunal bones, vegetal remains, texts of the tablets, small finds, and ceramics indicate that the primary activities conducted by the inhabitants of Tepe Yahya were likely related to food production and consumption. This required them to plant grains, protect the fields and harvest the plants (most likely in the Soghun Valley); to breed the animals; to manufacture tools for these tasks; to record, store, redistribute, and transform the agricultural and pastoral products and/or to record, store, and redistribute the transformed agricultural and pastoral products (as illustrated by the tablets, seals, sealings and certain small finds). These activities necessitated the development and maintenance of a system that assures the fields were supplied with water and animals with food, while their diets were supplemented by the hunting and gathering of other resources (fruits and wild fauna). One may emphasize that the list of animals and vegetals domesticated and hunted/gathered in Period IVC is not limited but includes a large spectrum of species (see Meadow 1986). In the Proto-Elamite writing there are several signs indicating by-products of husbandry. According to J. Dahl (2005b:113), the tablets from Susa indicate that "it may be assumed that the most important products obtained from a herd of sheep and goats are dairy products, followed by wool for sheep, goat-hair, hides and meat, as well as other products such as hoofs, tendons, horns, bones, etc." J. Dahl also suggests that two signs identified on those tablets represent butter-oil and dry cheese.

Water was undoubtedly collected for consumption, food preparation, and "bathing" (at the site and nearby sources).[57] Wood was collected as fuel for heating (while dung was probably also used), food preparation (firing structures), and for roof construction and posts (as seen in the building complex in Area C and perhaps to protect the fields and animals with fences). Wood may also be mentioned in the texts (Lamberg-Karlovsky and Tosi 1989:104-105). In addition to wood, three main construction materials were clay and chaff for brick construction and river pebbles. There is no evidence for the use of wood for the making of agricultural tools or other objects, nor were in perishable materials recovered such as baskets, mats, bags, and clothing. The only evidence for artifacts of

organic material is represented by mat and textile impressions on ceramic fragments, skin and string impressions on seal impressions, and the mention of textiles in the texts (Lamberg-Karlovsky and Tosi 1989:105).

8.2.2 Ceramics

The ceramics include forms that appear to be related to cooking, food and liquid display and consumption, storage, and perhaps transportation of food, liquids, and/or of other types of goods. If one follows D. T. Potts's hypothesis (Potts 2009), one could add bread making to the list of the activities operated at the site, åas illustrated by the beveled-rim bowls and perhaps also by the low-sided trays for baking a type of flat pita bread. Bread is also mentioned in the Proto-Elamite texts (C. C. Lamberg-Karlovsky and Tosi 1989:110–111). One may speculate that certain ceramics such as the beveled-rim bowls were used in rituals and feasts as proposed by several authors.

The ceramic inventory indicates the acquisition of some vessel types through local or regional exchange network(s), market center(s), production center(s) or local households. One may envision a local or regional origin for cooking ware used in food preparation and a series of painted ceramics used for food and liquid consumption (bowls and goblets of SEIP Group B) and storage/transportation (hole-mouth jars and necked-jars of SEIP Group B). No clear parallels are found for these ceramics beyond Kerman. Local or regional production is also likely for beveled-rim bowls[58] (Lamberg-Karlovsky, pers. comm.) and other categories of the Proto-Elamite ceramic inventory, i.e. low-sided trays. If a part of the Proto-Elamite ceramic inventory of Tepe Yahya was likely produced locally, that Proto-Elamite ceramics circulated between sites is illustrated by the Late Banesh sherds at Tal-i Malyan analyzed by instrumental neutron activation analysis that are thought to be imports from the region of Tal-i Ghazir, located 370 km apart from Tal-i Malyan (Alden 2013). Tepe Yahya and its Proto-Elamite ceramics may have been part of similar extraregional exchange networks.

As discussed below, the ceramics included in SEIP Group A and those termed as Burnished ware relate to separate cultural spheres, the former being connected to Western Balochistan Ceramic Complex and the latter likely to the production in northern Iran. For the former we know that workshops manufacturing these types of vessels existed in Kech-Makran (in the Dasht Plain), most likely at the same time as the occupation of Period IVC (Kech-Makran Late Period IIIa) and most assuredly in the following period (Kech-Makran Period IIIb). Since such vessels are identified over a large portion of the Southeastern Iranian Plateau, one supposes that other production centers existed, but for now, we are left with the evidence from Kech-Makran and the fact that these vessels are most common in Iranian Seistan-Balochistan and Kech-Makran. The quantities reported from Tepe Yahya and the fact that this site is located essentially outside the main core of Western Balochistan Ceramic Complex, at its westernmost boundary, tend to suggest that they arrived at Tepe Yahya through extraregional contacts rather than local or regional production. The case of the ceramics considered imitations of SEIP Group A at Tepe Yahya is more complicated to interpret. It is currently not possible to determine whether they are local/regional imitations, as part of the Kerman-related production, or variants of the style imported at the site.

As for the Burnished ceramics, nothing indicates that they were produced at Tepe Yahya or in Kerman where they are rare save for Tepe Yahya. This type of ceramic (or style of surface treatment)

is most popular in northern Iran while the examples from Tepe Yahya Phases IVC2–IVB6 are clearly different from those of other ceramic types at the site. Burnished ware tends to indicate an exogenous cultural presence at Tepe Yahya. The quantities reported from the collection of the PMAE are not negligible and greater than those reported for the Western Balochistan Ceramics.

Finally, the two Nal ware and Amri ware sherds represent long-distance imports. The main production/distribution cores of these styles are located beyond Kerman, in Pakistan. Nal ware or related types at Tepe Yahya, albeit found in a single example, complements the evidence from Shahr-i Sokhta (and Mundigak) and further illustrates that this type of production was not absent beyond Pakistan.

In summary, while a part of the ceramic assemblage from Tepe Yahya Period IVC may indicate that they were acquired/produced within the local/regional sphere, connections with more distant spheres are illustrated as well. Further investigation is required to determine the possible processes involved in the presence of vessels with more distant parallels at Tepe Yahya, not only the ceramics of the Western Balochistan Ceramic Complex, Burnished ware, and Nal ware, but also those defined as Proto-Elamite. For now, one may only list the possibilities of the processes the inhabitants of Tepe Yahya experienced: trade/imports of contents, imitations, migration of a population or of a part of a population (partial migration through matrimonial exchanges), booty, tribute, etc. (see below). Ongoing instrumental neutron activation analysis on some categories of ceramics found in Period IVC contexts will shed light on these issues and narrow the range of possibilities.

8.2.3 Raw materials and small finds

The list of small finds reported from Phases IVC2–IVB6 shows that diverse types of raw materials were acquired to fulfill the material needs of the inhabitants of Tepe Yahya. The quantities of items per category of raw material recovered are nevertheless quite limited. Most of the raw materials used for the production of objects at Tepe Yahya were available in Kerman and/or neighboring areas, while some illustrate long-distance relationships. Clay was probably collected and worked locally and it is demonstrated that local/regional sources of chlorite were used at Tepe Yahya (Kohl 2001:210, fig. 2), while copper, turquoise, obsidian, lapis lazuli, serpentine, chromite, chert, soft stones, and shells were available in Kerman or neighboring areas. Meanwhile, more distant sources exist for these materials (e.g. soft stones in the Chagai area of Pakistan, turquoise and lapis lazuli in the Badakshan area of northeastern Afghanistan, and turquoise in northern Khorasan), while it is suggested that copper with arsenic found at Tepe Yahya came from the Anarak-Talmessi area, near Tepe Arisman, while the obsidian was compared to materials from the Lake Van area in eastern Turkey.

The quantities of raw materials and/or objects possibly indicative of long-distance exchanges reported from the excavated areas at Tepe Yahya do not illustrate large scale and long-range trade. The situation regarding the small finds seems more likely that of a trickle trade as defined for the Periods VI–VC (Lamberg-Karlovsky and Beale 1986:266), although the variety of materials employed and long-distance connections suggested for the copper and obsidian deserve to be underscored. The situation in Period IVC appears in contrast to that observed in Periods VB–VA, where the quantities of "exotic" materials were higher (Lamberg-Karlovsky and Beale 1986:266). In addition, there is no clear or only scarce evidence for the manufacture of objects on the site. Mention is made of raw and partially worked minerals or waste such as copper, chlorite, turquoise, quartz, black stone, and green stone. This may indicate

manufacture on the site, but these examples are very few and not comparable to production centers or workshops such as Tepe Arisman for copper and Tepe Yahya Period IVB for chlorite. Furthermore, according to M. Piperno, Tepe Yahya in Period IVC lacks tools for micro-drilling so that production of beads seems unlikely or very minimal in the areas exposed. It is however important to recall that, on the basis of the discoveries made in the northern portion of the site, in addition to the ca. 500 m^2 excavated in the southern portion, the Proto-Elamite period clearly covered a much larger surface and could have included evidence for the manufacture of objects.

8.2.4 The residents of the complex

The layout of the building complex of Period IVC, the distribution of its features (fireplaces, benches, basin, drainage system, dumping areas and pits, storerooms, etc.), the distribution of the artifacts and the content of the texts and glyptic tend to indicate domestic activities focused on food resources acquisition, transformation for consumption and into by-products, storage, redistribution, and perhaps areas dedicated to a small-scale fabrication of objects. This took place within a small scale community of perhaps 15 to 20 extended families controlling production and distribution of labor and goods by using writing and sealing systems.

The administrative technologies, namely the texts and sealing systems, illustrate a certain degree of complexity; that of (a) household(s) with a collective but centralized management of resources (Lamberg-Karlovsky and Tosi 1989). Sophistication is also visible in the architecture, implemented through specific principles (shown by the standard bricks' size, the layout of the bricks, and the formal layout of the complex) as well as in other aspects of the material culture of the IVC community and the multiple relations it implies. The inhabitants left behind them a wide range of objects, including containers, tools, ornaments, possible trinkets or gaming pieces, and possible weapons, "seemingly of high value" according to C. C. Lamberg-Karlovsky (1989:vi). Ornaments represent an important part of the small finds while the pigments found in the settlement may have been used for different purposes including the making of "eye or body make-up" (Potts 2001:60–61). To this inventory may likely be added wool, clothes, mats, and baskets. As seen with the small finds, the material inventory listed above is the product of a wide range of technologies that the inhabitants of Tepe Yahya were able to acquire through local, regional, and extraregional networks in which they participated. Additionally, "various seed stocks and food stuffs" (Meadow 1986:30) may have been part of wider exchanges in Period IVC. Participation of the community of Tepe Yahya in a complex network of contacts is also illustrated by the various ceramic types with relations to cultural spheres located to the west, north, and east.

Who were these people? Important quantities of local, non Proto-Elamite, ceramics were reported from the settlement of Tepe Yahya IVC. This non Proto-Elamite material illustrated in Chapter 3 was even considered the majority of the assemblage of the Proto-Elamite period (Lamberg-Karlovsky 1977:37; 2001a:270). On the other hand, these people are Proto-Elamite in their architecture; in their economics as seen by their administrative inventory; in some of their ceramics; iconography; and diet (as seen by the production of bread using beveled-rim bowls and low-sided trays and perhaps by the majority of sheep/goat identified in the faunal remains). All of the above aspects of material culture are new in southeastern Iran, save for elements of the Uruk settlements in Kerman, and shared with Proto-Elamite settlements located in the western half of Iran. This tends to indicate migration of

a Proto-Elamite community to Tepe Yahya which developed important connections with their local neighbors, rather than adoption of the Proto-Elamite culture by locals. The latter, less realistic, hypothesis indeed suggests that these locals surprisingly almost instantaneously incorporated and mastered a quite broad variety of objects, technology and relationships. The Proto-Elamites settled at Tepe Yahya were influential in the region in that they were well-connected with peoples from separate cultural spheres, although as indicated above, the nature of the contacts, well-attested by the ceramics, needs to be clarified in each case (trade/imports of contents, migrations of a population or of a part of a population (partial migration through matrimonial exchanges), booty, or tribute?).

8.3 Tepe Yahya, the Daulatabad Plain, and the Halil Rud Valley

C. C. Lamberg-Karlovsky suggested that the complex of Tepe Yahya Period IVC may represent the seasonal occupation of populations who migrated from the Halil Rud in the summer. The summers in the lower valley of the Halil Rud (600–700 m) are particularly hot, while the Soghun Valley at a height of 1,500 m offers cooler temperatures. The Halil Rud Valley is located approximately 90 km from Tepe Yahya. The Daulatabad Plain is 25 km distant from Tepe Yahya and at a height of around 1,000 m.

The complementary system of seasonal settlement suggested by C. C. Lamberg-Karlovsky was also mentioned in the case of Mehrgarh located in the Kachi Plain, around 160 m in altitude, and the Quetta area at 1,600–1,700 m, located at ca. 100 km apart. In J.-F. Jarrige's opinion seasonal migrations maintained cultural cohesion between the highlands and the lowlands (Jarrige 1990:160, 162). In Kerman, this model implies that people migrating back and forth from the Halil Rud Valley left a part of their material inventory at Tepe Yahya. The series of superimposed floors distinguished in the building complex might be interpreted as representing seasonal occupations. The concentrations of artifacts and the fact that tablets were found in Room 1 show that this room, especially its northern half was an active working area connected to Area C which was also rich in objects including tablets. Only one jar sealing and no door sealings are reported from Room 1. On the other hand, Room 5 provided tablets, blank tablets, one door sealing, several slab (opening) sealings, but fewer concentrations of artifacts than recovered from Room 1. The storerooms 3–4 provide numerous jar sealings and one or two door sealings. One may imagine that the door sealings were not used when the inhabitants of the complex needed to access Rooms 5 and 3–4. As likely the complex, or parts of the complex, would be "locked" when the inhabitants were not around. The same may be suggested for the sealings on mobile containers (jars and baskets/bags). This evidence agrees with C. C. Lamberg-Karlovsky's proposal and elements of the scenario proposed by J. Alden (2013) in the case of the Proto-Elamite Tal-i Malyan. He suggests that "in spring, they ["tribal leaders"] arrived with the herds after a long journey from lowland areas like the Susiana Plain or Ram Hormuz near the Persian Gulf. They greeted relatives who had been left to watch over the winter crops and closed-up buildings at Tal-e Malyan, unsealed the locked doors and closed jars, and checked the contents of their storerooms against the numbers recorded on their tablets. Then, they settled in for the summer. Wheat and barley were harvested; kilns filled and fired. When locally available grazing grew scarce, the herds were moved to pastures further up the valley of the Kur River and further into the highlands. (...) In the autumn (...) the fields were ploughed and planted with winter wheat and barley. Then, after provisioning themselves for the long journey, the majority of the city's residents closed their buildings, said farewell to their overwintering kin,

and left for the lowlands with their nomad kin and those kinsfolk's flocks . (...) And when the spring pastures of the lowlands began to turn brown, they set off with their flocks for the Kur River Basin." Regarding the jar sealings, one may also suggest that they were used to monitor provisions or goods transported back and forth to Tepe Yahya, perhaps during the summer/winter migrations, when it was necessary to keep track of the contents and their owners. The only information regarding the content of the jars from Tepe Yahya is provided by one example found in Room 4 containing an almond pit and a copper seal.

C. C. Lamberg-Karlovsky (1989:vi) noted that "the abundant materials, seemingly of high value, left upon the floors of the building suggest a sudden abandonment of the building complex." Regarding Rooms 5 and 3–4, one may interpret this episode as the departure of a part of the population of Tepe Yahya who locked these rooms and their containers and, for some unknown reasons, never returned to the site.[59]

This scenario implies a regionally-based system, based upon the seasonal exploitation of highland-lowland environments. J. Alden (2013) suggests that Susa, Tal-i Malyan and other areas in between were integrated within a system managed by "a handful of tribal lineages." The distance between Tepe Yahya and Tal-i Malyan is approximately the same as that between Tal-i Malyan and Susa. Was Tepe Yahya part of the system identified in Fars (through the Daulatabad Plain?) or part of an additional Proto-Elamite system centered in southeastern Iran? The important parallels attested by the material culture between sites of western Iran and sites located in Mesopotamia indicate the existence of a larger sphere of interaction. In Iran, beside the "cluster" of Proto-Elamite sites attested in Khuzistan and Fars, there are Proto-Elamite settlements in Kerman and Isfahan (Tepe Arisman and Tepe Sialk), as well as a large number of Proto-Elamite tablets and ceramics at Tepe Sofalin and Proto-Elamite evidence at Tepe Ozbaki in the Tehran Plain. Additionally, evidence for Proto-Elamite relations is observed at Shahr-i Sokhta. The questions regarding the place of Tepe Yahya within this interaction sphere may be posed for the other sites and areas as well. How were these sites and their regional systems articulated? How were they integrated within this larger sphere? How should we characterize this larger sphere termed here Proto-Elamite?

8.4 The Proto-Elamite Entity

8.4.1 Summary of the evidence

There are still doubts and controversies regarding the definition of the cultural characteristics of what is termed Proto-Elamite in Iran. In Chapter 1 we attempted to synthesize certain aspects of the occupations defined as Proto-Elamite. Although the attempt is neither exhaustive or systematic, it suggests the existence of a geographical zone dated to the late fourth millennium BC in which populations shared not only an administrative tool kit represented by the tablets and distinctive styles of cylinder seals, but also a series of ceramic categories which indicate shared spheres of activities; certain burial practices (burials in jars attested at Tepe Arisman, Tepe Sialk, and Tal-i Malyan); architectural principles; culinary practices (as indicated by beveled-rim bowls and low-sided trays); representations (political/religious); and, perhaps, specific rituals. The main ceramic sphere defined as Proto-Elamite seems to be centered on a northwest–southeast axis that includes the southern coast of the Caspian Sea, Isfahan, Khuzistan, Fars, and Kerman. This sphere does, however, not appear to be strictly homogeneous culturally; in spite of strong parallels, some differences can be observed between the material cultures of the different regions

that composed it. Tepe Yahya was clearly part of this sphere, although the assemblage from this site contains important quantities of ceramics connected to other cultural spheres. The settlements of the Proto-Elamite communities were not all contemporaneous within the bracket proposed for the Proto-Elamite period, but clearly many of the sites were occupied at the same time.

The relationship of the Proto-Elamite to Godin Tepe in the northwest is not clear (Figure 1.3). The occupation at Godin Tepe that contains these connections is dated to the very end of the Late Uruk or to a transitional phase immediately prior to the Proto-Elamite, while the radiocarbon determinations indicate contemporaneity with the Proto-Elamite phenomenon and certain categories of material have parallels within the Proto-Elamite sphere. To the northeast, Tepe Hissar in Period II is more connected to the sites of the Gorgan Plain, whereas there is rare evidence for contact with the Proto-Elamite sphere (Thornton 2009:100; Helwing 2006:44–46). There is no data regarding the Proto-Elamite presence located between Isfahan and Kerman provinces. In southeastern Iran, Tepe Yahya, Kerman in general, represents the southeasternmost fringe of the Proto-Elamite entity. Its ceramic assemblage indicates the penetration of other cultural spheres while relatively rare Proto-Elamite evidence is reported east of Tepe Yahya. Shahr-i Sokhta, in spite of its Proto-Elamite tablet and glyptic, and Miri Qalat which provided only five beveled-rim bowl fragments, are embedded within separate cultural spheres.

To the west, the situation is more ambivalent. Late Uruk and Jemdet-Nasr ceramic assemblages of Mesopotamian type illustrate aspects distinct from the Proto-Elamite assemblage, while some categories of vessels are shared (such as the beveled-rim bowls and low-sided trays) and influences in styles (decorated jars) are observed. A distinctive Proto-Elamite style of glyptic is found essentially in Iran, but the Proto-Elamite sites also share many glyptic styles with sites of Mesopotamia. The City Style impression identified at Konar Sandal (Pittman 2008:100), a style essentially found in southern Mesopotamia, further indicates that glyptic styles circulated widely between Iran and Mesopotamia. The Proto-Elamite tablets illustrate specific features, but are connected in their mathematical constructs and several signs to the Mesopotamian Proto-cuneiform. R. K. Englund writes (2004:140): "an apparently continuous administrative apparatus, and a highly adaptable bureaucracy, formed the basis for the development of the proto-Elamite writing system that on its surface seems very foreign, but that on closer inspection reflects much of its Babylonian heritage."

8.4.2 The last chapter of the Uruk Expansion?

There is ambiguity in the dating of a series of finds in Iran, especially sites surveyed, and to know whether they relate to the Proto-Elamite or the Uruk periods. Furthermore, radiocarbon determinations are not always coherent and recalibration of a long series of ^{14}C dates from Uruk sites (Wright and Rupley 2001) combined with recent dates from Iran provides us with overlaps between the two periods. There is however a clear older presence of Uruk-related materials in Iran, attested in all the provinces that were later concerned by the Proto-Elamite.

With the older exception of Susa, in the model proposed by G. Algaze (2005; World System Theory), Uruk materials began to be present in Iran essentially during the Late Uruk period as part of a wide and long expansion of the Uruk Civilization of southern Mesopotamia over northern Mesopotamia, Syria, southern Anatolia, and Iran. The Uruk settlements of Godin Tepe and Tepe Sialk are dated to the very

end of the Late Uruk and considered contemporary with the gap that intervened at Susa, Acropole I between Periods II and III (Algaze 2005:53-57, fig. 46). The model proposed by G. Algaze sees Uruk presence in Iran, in particular that evident at Godin Tepe and Tepe Sialk, as "outposts" established in order to control access to important highland routes and resources "exploited for the alluvial market." Copper sources are emphasized, but additional materials such as silver, lead, lapis lazuli, steatite/chlorite, and semi-precious stones are also part of the inventory exchanged toward Mesopotamia, from the Iranian Plateau or even from Afghanistan and India. In this model, G. Algaze envisions collaboration between the locals and the Uruk-related populations (Algaze 2005:63-71, 74-77). J.-D. Forest (1996:145-147) interpreted the Uruk presence far beyond southern Mesopotamia as the result of an expansion motivated by the southern Mesopotamian elites and their need in prestige items or materials. He however also underscored the possibility that this process helped reducing population increase in the populated southern cities, while being accompanied with processes of acculturations and imitations. As indicated above, the oval complex of Godin Tepe was considered a colony established by merchants from Susa (Weiss and Young 1975:2-3), although this interpretation is now challenged. In addition to Tepe Sialk, Godin Tepe, and Susa, Uruk presence is evident in Iran at several strategic locations according to G. Algaze's model. It is attested at Tepe Arisman in the region of Tepe Sialk, south of the Caspian Sea at Tepe Ghabrestan, in Kerman where it is known at Tal-i Iblis and now at Mahtoutabad, in Fars, and at Tal-i Ghazir (as indicated above and see also Helwing 2011a:219-220). In Fars, Uruk material is found from the Terminal Lapui and early Banesh periods. While J. Alden (1982a) sees Uruk presence in Fars as the result of colonization from Khuzistan, G. Algaze (2005:65) envisions it as the result of acculturation; at a minimum, he points out the long duration of contacts between Fars and Uruk-related Khuzistan and Mesopotamia.

G. Algaze's interpretation of the Uruk expansion has been challenged and criticized (see Algaze 2005:138, 145-149; see below). Beyond the debate that concerns this topic (see Butterlin 2003), the facts of interest here are the existence of pre-existing Uruk-related communities on the Iranian Plateau prior to the development of the Proto-Elamite and that a similar model (control over access to highland resources) was proposed for the Proto-Elamite expansion (Alden 1982a; see below). The picture that emerges is that important aspects of a culture are found in a large area seemingly representing an attempt of a complex organization to expand. C. C. Lamberg-Karlovsky (1978:116; 1996:112-113) envisages that the formation of the Proto-Elamite was in Susiana and then spread over Iran as the result of colonizations from Susiana evident at Tepe Sialk, Tal-i Malyan and Tepe Yahya. The same author recalls possible reasons explicative of the Proto-Elamite diffusion over Iran. They include (Lamberg-Karlovsky 1978:117; 1977:38; see also Alden 1982a:620-621): "1) an expansionist Proto-Elamite state impos[ing] a political hegemony over distant areas for control of both populations and resources; 2) Susian merchant colonies (...) established on all of these sites [on a model similar to that offered for Godin Tepe]; and 3) population fluctuations, leading to decreases such as around Yahya, weaken[ing] the productive strength of the indigenous agricultural communities and invit[ing] centrally organized over-populated areas such as Khuzistan (Susa, Chogha Mish, *et al.*) to fill the vacuum." J. Alden also favors migration of populations from Susiana into Fars in the Banesh period (Alden 1982a:620). In Fars, W. Sumner (2003:113) points out elements of local continuity in the process, from Lapui to Banesh/Proto-Elamite periods, and recalls the gap between Periods II Uruk-related and III Proto-Elamite at Susa, a gap that probably corresponds

to the very phase of development of the Proto-Elamite, considered by G. Algaze (2005:53-57) contemporary with Godin Tepe V. As P. Amiet did (1993:25), W. Sumner suggests that the origin of the Proto-Elamite is to be found in Fars and that it later spread to Susa in Period III (Sumner 2003:113).

Besides the problem of possible chronological overlap between the Late Uruk and Proto-Elamite periods, important relations between them are evident in their cultures. An Uruk background, prior to the Proto-Elamite period is attested and already discussed in all the areas where the Proto-Elamite later developed. Following the appearance of Uruk-related materials they subsequently represent an important component of the later Proto-Elamite assemblage. With the exception of Khuzistan, Uruk-related elements appear in Iran within local or regional assemblages. The transition between the two periods is lacking at Susa (Level "17X"), but Uruk is well-attested at this site. In addition to Fars, between the Lapui and the Proto-Elamite/Middle Banesh periods, Uruk-related evidence is attested in Kerman at Tal-i Iblis during the Aliabad period and after at Mahtoutabad. An Uruk presence is evident at Tepe Ghabrestan south of the Caspian Sea as well as Tepe Sialk and Tepe Arisman in the Sialk III-related Period. Interesting remarks are provided by B. Helwing regarding the transition between Sialk III (Uruk-connected) and Sialk IV (Proto-Elamite) pottery. She notes (Helwing 2011a:219-220): "by the Late Uruk (...) although the pottery traditions are influenced by Uruk prototypes, such as nose-lugged jars and beveled rim bowls, the highland sites nevertheless developed a distinct and typical set of shapes and decorations (...). The existence of transitional forms (...) observed in both Sialk and Arisman (...) ultimately indicates that the formation of the Proto-Elamite pottery tradition represents an indigenous development rooted in the earlier local Sialk III tradition." In addition to this, although this represents only a small portion of the Proto-Elamite assemblage, one can note that a certain type of decoration attested in Sialk III-related Period at Tepe Arisman consists of friezes filled with solid-black hourglasses and vertical lines (see Boroffka and Parzinger 2011:fig. 32, n°206, fig. 28, n°158) and is also observed on decorated jars from the same site in the Sialk IV-related Period (see Helwing 2011a:fig. 6, n° 75-76, fig. 21, n°75-76, fig. 26, n°107) and at Tepe Yahya IVC (Yahya 1170). B. Helwing does not write that the origin of the Proto-Elamite type ceramic assemblage was in the Isfahan province, but her remark substantially challenges, in terms of genesis, the other possible cores for the development of the Proto-Elamites, namely Khuzistan and Fars. It also corroborates the fact that some elements related to, but older than, the Proto-Elamites were present in the areas where the Proto-Elamites later developed, a situation that would include Kerman.

In summary, it appears that the development of the Proto-Elamite "crystallized" elements of the previous period on the Iranian Plateau. This is illustrated by the links with the local ceramic tradition observed at Tepe Arisman and this is particularly evident also with the Uruk material component, not always at the sites where Proto-Elamite elements later occurred, but in the same regions, save for Shahr-i Sokhta in Seistan and Miri Qalat in Pakistan where Proto-Elamite but no Uruk-related element is observed. One should also recall that the areas were the Proto-Elamite later developed were included within separate cultural spheres, but that these areas had in common that they incorporated new-settlers from Mesopotamia. As seen in the material culture, including the tools to control transactions, the Proto-Elamite developed, partly, on the basis of elements related to the Uruk, and this includes also continuation of networks of exchanges set up in the Uruk period (see below). Overall, although it has differences, the Proto-Elamite appears closely connected to the Uruk in

important aspects of its material culture, which implies shared practices (probably at least in the spheres of administration, culinary practice, representations and rituals). It seems legitimate to assume continuity of links established during the previous period, perhaps such as J. Alden's (1982a:628) "social, religious, and ethnic relationships between highlands and lowlands," and visible also in the exchanges between the highlands and Mesopotamia, and to consider that the Uruk tradition and their bearers already present in Iran had something to do with, or even facilitated, the development of the Proto-Elamite. This would include a phase of acculturation, of transitional forms of ceramics (as observed in Fars and Isfahan), within the local communities, before its development.

It has been suggested that the Proto-Elamite settlement at Tepe Yahya was established by people from Khuzistan who were in search of new lands at the end of the Aliabad period in a context of settlement decline and increased nomadism in several areas of Kerman (Lamberg-Karlovsky 1977:39; 1978:116; 1989:viii–ix). J. Alden (1982a:621) sees the Proto-Elamite settlement at Tepe Yahya as well as those of Tal-i Iblis and Tepe Sialk as the result of migrations from the Iranian highlands. In addition to these proposals, one should recall the local Uruk background in Kerman seen at Tal-i Iblis to the north and Mahtoutabad to the east and that it possibly had something to do with the settlement at Tepe Yahya. Regarding the Uruk and Proto-Elamite models based on trade, the material and texts found in the building complex do not support that Tepe Yahya was a merchant-colony (see Lamberg-Karlovsky, 1977:38–39); other reasons or processes probably motivated this settlement.

8.4.3 The Proto-Elamite system

If one considers the distance between Tepe Ozbaki and Tepe Yahya Proto-Elamite materials extend over ca. 1,000 km from northwest to southeast and over 550,000 km^2 in total. What was the system that sustained this distribution? As synthesized by C. C. Lamberg-Karlovsky (2001a:271), the Proto-Elamite interaction sphere is interpreted as either: 1) a system with a center located at one site, Susa or Malyan; 2) a system including "a series of regionally-based centers" such as Susa, Malyan, Shahdad, and Shahr-i Sokhta; and 3) as the sum of "numerous, loosely structured, decentralized, tribal configurations." Shahr-i Sokhta in Seistan can be excluded from the list of potential Proto-Elamite center(s). In spite of the glyptic and tablet fragment recovered from this site, the rest of the occupation is totally different from the Proto-Elamite inventory. Elements contemporary and related to the Late Uruk and Jemdet-Nasr periods are mentioned at Shahdad in Kerman, but they are not illustrated and no occupation related to the Proto-Elamite has been excavated.

The main areas and sites with Proto-Elamite elements are the following:

1) Tepe Arisman and Tepe Sialk in the northeast;
2) Tepe Ozbaki and Tepe Sofalin in the north;
3) Tal-i Malyan, the Kur River Basin, and the Mamasani district in the south;
4) Susa and Tal-i Ghazir in the southwest;
5) And Kerman, including Tepe Yahya, the Bardsir Plain, possible evidence near the coast, and in the Halil Rud Valley (?) in the southeast.

What characterizes them can be summarized as follows:

1) Tepe Arisman appears as an isolated site in its region, its closest neighbour being Tepe Sialk, located

60 km apart; Population was concentrated in this settlement with urban planning aspects; Copper objects were produced on a large scale on the site, likely in order to be traded to sites located in the Hamrin basin and northern Mesopotamia (Helwing 2011d:529–531).

2) Numerous Proto-Elamite tablets and ceramics were found at Tepe Sofalin.
3) Tal-i Malyan appears as the largest site of the Proto-Elamite entity, an important isolated center that gathered the population of the Kur River Basin; "Governmental administration was the primary function of the southern end of the TUV mound" (Nicholas 1990:129); "Operation ABC at Malyan produced the largest exposure of Banesh or contemporary high status residences or public buildings excavated in Iran to date. (...) craft production activities are well-represented by (...) imported and local mineral raw materials (...) and cupriferous slags (Sumner 2003:2–3); As indicated above, the structure of Tal-i Malyan incorporated seasonal occupations by a portion of the population (Alden 2013).
4) Susa, at the time, appears as a major site; The occupation of Susa was probably not as restricted as certain scholars suggest; The largest number of Proto-Elamite tablets and glyptic imagery are recovered from this site; The tablets report a large scale centralized control of resources and a large scale production of goods; Its location makes it a favorable place for contacts with Mesopotamia, and perhaps a "port-of-trade" between the highlands and Mesopotamia (Alden 1982a:624).
5) The building complex of Tepe Yahya IVC is situated at the mouth of the only pass that provides access to the Soghun Valley and is the single mound within the valley; It is well-located on a route connecting the Daulatabad Plain to the Halil Rud Valley and the Bampur Valley; Kerman is rich in mineral resources, yet no clear evidence for craft production (save for the manufacture of chlorite bowls in Period IVB) has been identified at Tepe Yahya; The Proto-Elamite occupation at Tepe Yahya was probably included within a larger regional system that included seasonal migrations, while the material culture indicates contacts with separate cultural spheres located to the east and north.

A commonly observed aspect is the relative isolation of the Proto-Elamite sites. In some areas, like the Sialk-Arisman area, Tal-i Malyan, and Tepe Yahya, the Proto-Elamite settlements appear as isolated centers. Nevertheless, when taken as a whole, the example of southwestern Iran shows a certain consistency in the distribution of the Proto-Elamite occupations. Between Susa and Tal-i Malyan, Proto-Elamite vestiges are known from the Izeh Plain in Khuzistan, ca. 160 km east–southeast of Susa; at Tal-i Ghazir, ca. 140 km southeast of Susa and ca. 70 km southwest of the Izeh Plain; in the Mamasani region, ca. 230 km southeast of Tal-i Ghazir; and at Tal-i Malyan, ca. 90 km southeast of the Mamasani region. In the north, Tepe Sofalin is located at less than 200 km from Tepe Arisman and around 130 km apart from Tepe Ozbaki. Thus, it appears that besides the important cores of Proto-Elamite settlement known so far, with more investigation, one may expect a denser Proto-Elamite occupation in which a network of temporary settlements existed as in the model proposed for Fars and Khuzistan by W. Sumner and J. Alden, and Kerman (Tepe Yahya-Halil Rud) by C. C. Lamberg-Karlovsky.

Clearly many more settlements existed within the Proto-Elamite entity, while to date most of the available data concerns five main areas, including a limited number of excavated sites. Available information indicates that some of these areas, although they shared important aspects, also had distinct extraregional and "non-Proto-Elamite" cultural relationships. Tepe Arisman illustrates the existence of

exchanges of copper objects between the copper-rich area and production center of the Isfahan province and populations settled in the Hamrin Basin and northern Mesopotamia. These exchanges are already attested in the Uruk period (Algaze 2005:64, 75). Tepe Yahya in Period IVC does not indicate clear evidence for specialization in the production of objects, however only a limited portion of a larger Proto-Elamite system that must have characterized Kerman is known. It has already been noted that the populations inhabiting the Proto-Elamite settlement at Tepe Yahya experienced a process of acculturation (Lamberg-Karlovsky 2001a:270). The southeastern fringe of the Proto-Elamites in Kerman were in contact with Shahr-i Sokhta in Seistan, a site that represents an important cross-road of cultural interactions between the Proto-Elamite sphere, the Western Balochistan Ceramic Complex, and other cultures of Pakistan, Turkmenistan and northern Iran. The presence of Proto-Elamite elements at Shahr-i Sokhta may have something to do with the location of this site, "en route" to the mineral resources of Central Asia (Alden 1982a:621). In southwestern Iran, in addition to the evidence for governmental administration, high status residences or public buildings and craft production activities observed at Tal-i Malyan, J. Alden (2013) envisions a system that integrated the areas located from Fars (Tal-i Malyan) to Khuzistan (Susa) in which the residents of Malyan seasonally left the city for the lowlands. There, at Susa and in encampments on the Susiana and other scattered plains and valleys near the edges of the Persian Gulf, they settled in for the winter and began the business of trading their sheep and goats for goods produced by the urban societies of Mesopotamia." J. Dahl (2005b:113) underscored the importance of dairy products and wool in the tablets from Susa and interpreted two signs as representations of butter-oil and dry cheese. The range of Mesopotamian exports to Iran are not known, but H. E. W. Crawford mentions the "invisible" exports of textiles and cereals referred to in the texts of the third millennium BC (Crawford 1973). R. K. Englund notes that "(...) during the last Late Uruk period of numero-ideographic tablets, c. 3300 BC, flat and rectangular-shaped sealed clay tablets were impressed with styli to record numerical notations and one, or at most two, ideograms. All ideograms represented the objects of the transaction, including sheep and goats and products derived from them, above all textiles and dairy oils" (Englund 1998b:214–215; 2004:122).

If this scenario is correct, to what extent was the system of trade and exchange centralized in the Susa-to-Malyan area? To what extent did the tribes and khans mentioned by J. Alden (2013) and W. Sumner (1985:160) control this system? How many other areas were included within the system interpreted in southwestern Iran? Was there a larger agenda that not only concerned southwestern Iran, but also populations of the Tehran Plain and Isfahan and Kerman provinces? Were they all controlled by a structure situated at a higher level of authority, a coalition of tribal lineages and their khans, whose names were mentioned on the tablets? Ties within the Proto-Elamite sphere are attested by important aspects of shared material culture; the "exotic" materials found at Tal-i Malyan (such as obsidian from Turkey and lapis lazuli); the copper from Tepe Yahya and Susa that is thought to have originated from the Isfahan province; the ceramics from Tal-i Malyan dated to the Late Banesh period and analyzed by INAA thought to come from the area of Tal-i Ghazir (Alden 2013); all indicate that networks of exchange existed between the Proto-Elamite sites. Additionally, identical signs that are signifiers of owners, or households (or lineages), are found at distant sites, i.e. Susa and Tepe Yahya. Meanwhile, the Proto-Elamite settlements appear as autonomous entities in the production of their

agriculture and aspects of their material culture. The separate connections attested in Isfahan (to northern and central Mesopotamia), southwestern Iran (likely to (southern) Mesopotamia), and Kerman (to the Indo-Iranian Borderlands and likely to northern Iran) tend to indicate that these areas developed their own interests while maintaining relations within the Proto-Elamite sphere. Furthermore, specific regional interests were not necessarily those of, or oriented explicitly to, the Proto-Elamite entity. The question as to whether the Proto-Elamite entity was controlled from one core, by a coalition of regional tribal lineages, or by the sum of independent regions controlled by tribes cannot be adequately answered. In other words, we have little ability to distinguish and/or identify the Proto-Elamite phenomenon as a state, a tribal confederation, or distinctive tribes sharing a material culture. Which ever it was it did not endure. The hypothesis of a dominant "center" should not be ruled out, but one may call attention to the importance and independence of the regional and local systems and of their separate interests and relations to neighbors settled outside of the Proto-Elamite sphere.

8.4.4 Tepe Yahya

In this context the Proto-Elamite settlement at Tepe Yahya shows a specific situation characterized by the important degree of integration of its residents within various cultural spheres distinct from the Proto-Elamite. These people are Proto-Elamite in their architecture, in another part of their ceramic inventory, the tablets and glyptic including specific images, and in their connections as seen by the copper from Isfahan province, a source for Susa as well, and by items paralleled in the Proto-Elamite sphere. Meanwhile, these people lack of certain categories of Proto-Elamite ceramics while having vessels from separate cultural traditions. This brief definition of Tepe Yahya is in agreement with that proposed by G. Algaze (2005:129) for intrusive settlements in the Uruk period, including presence of local aspects although one would not retain here the economic implication. One should however underscore again the large amount of indigenous materials at Tepe Yahya IVC, which suggests that the residents were influential in the region, but not necessarily dominant, in that they were well-connected to separate cultural spheres and incorporated these connections in their material culture (although the nature of these connections needs more investigation).

From this point of view, the situation seen at Tepe Yahya seems to be different from that observed in the western portion of the Proto-Elamite sphere at Tepe Arisman and Tal-i Malyan, although one may envision more additional separate "local" or "regional" components in the western assemblages of the Proto-Elamite sphere. An important different aspect seen in the west is also the relations to Mesopotamia evident at Tepe Arisman, Susa, and in Fars according to the model indicated above. Relations to Mesopotamia are important factors in the genesis of the Proto-Elamite as seen above, and continuation of these relations was probably a key factor too for its sustainability as seen with the evidence for exchanges and in the models based on trade. Continuation of these relations probably also had an effect on the sustainability of other aspects of the Proto-Elamite tradition shared with Mesopotamians.

Although it is suggested that Proto-Elamite sites were more numerous than they are reported and that current evidence was probably complemented by a network of seasonal migrations and settlements, Tepe Yahya is located at 470 km from Tal-i Malyan in Fars; more than 900 km from Susa in Khuzistan; and more than 770 km from Tepe Arisman in Isfahan. Tepe Yahya probably represented

one of the southeasternmost and most remote settlements of the Proto-Elamite sphere. This is demonstrated by comparative Proto-Elamite evidence in the west, data in the east essentially illustrating separate cultural spheres, and the mixed character of the assemblage of this site. Shahr-i Sokhta in the east incorporates only one, administrative, aspect of the Proto-Elamite, while Proto-Elamite evidence at Miri Qalat (five beveled-rim bowl fragments) may represent the adoption of a culinary practice (bread making). Tepe Yahya probably illustrates a problem already underscored that is the geographical expanse of the Proto-Elamite and the capacity of maintaining control over such a wide area (Lamberg-Karlovsky 1989:xi–xii). With regard to this, circulation on the Iranian Plateau was essentially made by foot while bones of ass found at Tepe Arisman and Tal-i Malyan indicate that asses may have been used for transport. Additionally, wheeled carts existed (see Petrie 2013a; Sherratt 1997; H. T. Wright 2001). G. Stein (1999) developed the "distance-parity model" for the Uruk period on the basis of the same distance-based argument. This model suggests that relationships were symmetrical in the periphery of the Uruk expansion as the result of inability of the core to maintain control in the periphery. At a minimum, G. Stein exemplified this at Hacinebi in Turkey. This site and the period are not the same but the distance-based configuration appears similar at Tepe Yahya.

One may add that the ability to maintain a system (whether or not this system is an attempt to control) is also dependent on the neighbors. A stressed by P. Kohl (1987) the "cultural evolution of any society is dependent upon relations with other societies." In the case of the Uruk, *contra* G. Algaze's World Systems Theory, it is argued that the social organizations of the communities located in the periphery of Mesopotamia were not less complex in degree and scale than that of the Uruk (see Algaze 2005:138) and that, at a minimum, they were not surpassed by the Uruk in "extractive, productive, or transportation technologies" (see Algaze 2005:146; Kohl 1987; Lamberg-Karlovsky 1996:92; Stein 1999). This last remark may probably be applied to the southeastern neighbors of the Proto-Elamites.

8.5 The Southeastern Neighbors of the Proto-Elamites

There is no sign of major Proto-Elamite "expansion" east of Kerman, while the impact of the neighbors is evident at Tepe Yahya (as seen in the ceramics; Figure 3.120). The Proto-Elamites at Tepe Yahya had to face three main neighbors. Although we have little information concerning them, it may be argued that they were not surpassed by the Proto-Elamites in their technologies. Although administrative tools similar to those observed in the Mesopotamian-Proto-Elamite world is not attested in the neighbors' inventory, they had the ability to maintain elements of systems over geographically wide spheres of interaction. Little information is known regarding the settlement of the areas located east of Kerman, but one may note that more sites are attested in Kech-Makran in Period IIIa compared to the previous period, Shahr-i Sokhta is founded in Seistan, and sites contemporary with Tepe Yahya IVC are attested in Iranian Balochistan province, while Proto-Elamite settlements are so far limited to Tepe Yahya, Tal-i Iblis and perhaps elements to the south and a decline in settlement is observed at that time in the Soghun Valley, the Daulatabad Plain and the Bardsir Plain.

These neighbors are defined essentially on the basis of their ceramic assemblages. They are:

1) The Western Balochistan Ceramic Complex;
2) A hypothetical ceramic complex centered on Kerman;
3) And a ceramic complex related to northern Iran.

8.5.1 Western Balochistan

Although the definition of the Western Balochistan Ceramic Complex clearly needs further investigation, it is possible to say that the same types of very fine, painted ceramics were found in Kech-Makran, at Shahr-i Sokhta, in the Bampur Valley, and at Tepe Yahya. Seistan, Kech-Makran, and Tepe Yahya provided the majority of evidence, but these sites and areas appear located at the margins of the Western Balochistan Ceramic sphere; no evidence is found west of Tepe Yahya (perhaps in the Daulatabad Plain) and east of Shahr-i Sokhta in Seistan and Kech-Makran in Pakistan. East of Kerman, in the area of the Western Balochistan Ceramic Complex, the Proto-Elamite is represented by a few objects at Shahr-i Sokhta and a few beveled-rim bowl fragments at Miri Qalat.

The Western Balochistan Ceramic Complex represents an evolution of the ceramic tradition that started to develop in Kech-Makran and in the Bampur Valley in the early-mid fourth millennium BC (Kech-Makran Period II and Early Period IIIa). Remains of Period II consist of architectural levels of farming-village based communities, while those of Early Period IIIa are burials. The communities of these periods produced a very fine, painted ceramic production. They were connected to the coast for the procurement of fish and the production of shell objects and had access to multiple sources of objects or raw materials as seen in their material culture, which includes objects in copper (including appearance of compartmented seals in Early Period IIIa), ornaments in steatite, lapis lazuli, citrine, carnelian, and gold, and vessels and objects in stone (including alabaster and steatite). Distribution of the ceramics indicates relationships between Kech-Makran and the Bampur Valley (Mutin 2013), while one should recall again more distant connections attested by the shell bangles, very similar to those found in Kech-Makran, of Sarazm in Tajikistan (Besenval 2005:fig. 12). All of the above elements indicate a society diverse in its technologies and capable of integrating several networks of exchanges and relations. The ceramics of Early Period IIIa indicate continuity with changes in the local ceramic tradition of Period II, while those of Late Period IIIa, the Western Balochistan Ceramic Complex, show continuation with changes of Early Period IIIa material. The distribution/production sphere of these vessels, in comparison to the previous period, was more extensive as they are found in Seistan and Kerman. Evidence for this period and type of ceramics mostly comes from burials excavated in Kech-Makran and at Shahr-i Sokhta, although elements were found in architectural contexts such as at Tepe Yahya and indications of pottery production are attested in the Dasht Plain in Kech-Makran.

It is evident that the Western Balochistan Ceramic Complex did not consist of potters and pots only. What was the structure that sustained the production and distribution of ceramics with the same style (but with regional differences) in this area of the Southeastern Iranian Plateau? Behind the pots, one may envision a structure in which certain aspects of economic integration and cultural exchange integrated regional networks of communication. The fact that groups of individuals buried their dead with vessels decorated in the same way some hundreds of kilometers apart from Kech-Makran at Shahr-i Sokhta is of particular significance. M. Tosi (1970:10) suggests that the Damin Valley in Iranian Balochistan represents an important axis, "a real corridor easing communication between the Bampur Valley and Sistan." To the west, the Bampur Valley represents a corridor to Kerman. Late Period IIIa material found in the coast in Kech-Makran indicates that connections to the maritime resources continued in this period in the southeastern portion of the ceramic complex.

As noted above, the sherds found in architectural contexts at Shahr-i Sokhta, Tepe Yahya, and Miri Qalat of the same period were associated with other ceramic traditions, indicating contact with other cultural spheres. At Shahr-i Sokhta, they are in contact with the cultures of southern Turkmenistan and eastern Pakistani Balochistan, while at Miri Qalat, the eastern Pakistani Balochistan-related Togau (C/D) ware appears in quantities slightly before and partially contemporaneously with the Western Balochistan Ceramic style (see below).

8.5.2 Kerman

The existence of a distinctive ceramic polity centered in Kerman remains a hypothesis. It may be suggested by a series of vessels, including painted and plain productions discovered at Tepe Yahya IVC.[60] Some of the painted ceramics (vessels of Yahya SEIP Group B) show connections to the Western Balochistan Ceramics, while others have no clear parallels except for links with the previous Chalcolithic productions (Yahya Period VA-related ceramics) reported from Tepe Yahya, Tal-i Iblis and many other sites in southeastern Iran. There is no relation with the previous Aliabad ware. On the other hand, it would be interesting to investigate the Mashiz ware from Tal-i Iblis and the Bardsir Plain and the fine, painted ware found with Uruk-related materials from Mahtoutabad and their relation to the materials of Tepe Yahya IVC.

8.5.3 Northern Iran

Burnished ware from Tepe Yahya IVC appears best connected to the ceramic production of northern Iran. In Period II Tepe Hissar is defined as a "prosperous trading town filled with craftsmen smelting copper and working exotic materials ((...) lapis lazuli, carnelian, turquoise, alabaster, etc.)" (Dyson 1987:655). In Period II the site is connected to the sites of the Gorgan Plain and was similarly a site of importance for trade toward those regions and southern Turkmenistan (Thornton 2009:100; Helwing 2006:44–46). Evidence for contact with the Proto-Elamite is rare at Tepe Hissar, while Burnished ceramics are well-represented both north and east of this site, in the Gorgan Plain and beyond (see Cleuziou 1986; Arne 1945). To the south evidence for burnished ceramics is rare and is limited to burnished sherds found at Shahr-i Sokhta, perhaps Tal-i Iblis, and Tepe Yahya. The presence of such major sites as Tepe Hissar and the sites in the Gorgan Plain are all suggestive of a separate polity in northern Iran in which the burnished surface treatment of grey/black ceramics appears as a dominant marker, and with distant relations extending toward the north and east to southern Turkmenistan. S. Cleuziou noted that (1986:232): "the Gorgan plain experienced (...) the same changes which took place elsewhere, like the rise of urbanization accompanied with economic and technological advances during the Namazga III Period in Turkmenistan." Burnished ware found at Tepe Yahya indicates contact with this northern sphere while the quantities reported of this type of production are not insignificant.

8.6 A Dynamic Picture of Middle Asia around 3000 BC

8.6.1 Polities and interactions in eastern Middle Asia

In addition to their southeastern neighbors, these and the Proto-Elamites of Tepe Yahya faced other polities and networks of relationships to the east.

As noted in Chapter 1, the vestiges of the mid-late fourth millennium BC in Pakistan and southern Afghanistan illustrate new organizations and urban-like characters in the occupations, new administrative tools (stamp-seals more evident in the third millennium BC), technological developments in metallurgy, pottery, the transformation of several types of raw materials, large-scale craft production, and evidence for long-range networks of relationships integrating areas located from Sarazm in Tajikistan and to the Indian Ocean. The ceramics allow us to delineate several spheres of interactions, with apparently more frequency of Early Quetta ware and related vessels in northeastern Pakistani Balochistan, southern Afghanistan, and at Shahr-i Sokhta, and a probable origin of Nal ware and prevalent distribution of this ware in the southern half of Pakistani Balochistan (Figure 8-1). The distribution areas of these wares however overlapped, as seen for example by Nal ware or related type which is attested at Shahr-i Sokhta, southern Afghanistan and even at Tepe Yahya, but the cores of production/distribution of those ceramics and the related dynamics are essentially located in Pakistan. An important dynamic of this area is illustrated by the older and perhaps partly contemporary Togau C/D ceramic style which spread over a large portion of southern Pakistani Balochistan, including Kech-Makran, in the mid-late fourth millennium BC. Togau style has not been identified so far west of the Iranian border.

Little is known regarding the social structure of the communities living in the Indo-Iranian Borderlands around 3000 BC. As mentioned above, in J.-F. Jarrige's opinion (1990), the cultural cohesion in some areas of Pakistan, with perhaps a distinction between the northern and southern regions in terms of ceramic styles, was likely based on a system including seasonal mobility between the lowlands and the highlands as it is attested between the Kachi Plain and the Quetta Valley. One may expect variation in the system in the south, especially along the coast, where the presence of the ocean and its resources may have affected differently the populations settled there. In addition to local and regional dynamics, with probably numerous variations in detail, the communities of Pakistan integrated larger relationships that included an area extended from Tajikistan beyond the Hindu Kush[61] to the Indian Ocean and the Indus Valley to the eastern border of Iran in this period. A degree of sociopolitical complexity is evident and an aspect of it, "increasing status differentiation and ethnic diversity," may be reflected by "the diversity of hair styles and ornaments on the figurines" found in northeastern Pakistani Balochistan in Mehrgarh Periods VI–VII (Kenoyer 2002). The coordination of both internal dynamics and external interests in this area probably required some forms of political organization. It is not known how they compared to the system of the Proto-Elamites.

Data is essentially lacking in the vast region that separates the sites located southeast of the Caspian Sea and southern Turkmenistan from those of Seistan and Kerman. The ceramics of southern Turkmenistan, in the late fourth millennium BC (Namazga III), are different from those of the Iranian Plateau. Beyond the ceramic sphere of southern Turkmenistan (that includes several styles), evidence for relations is found in the area of Sabzevar (Tepe Damghani) (Francfort, pers. comm.) and on another site in the area of Nishapur (Hiebert 2002:36). Parallels for Turkmen-type ceramics are noted more than 700 km apart to the south at Shahr-i Sokhta and more than 500 or 600 km to the northeast at Sarazm. The Turkmen-like component of the material culture at Sarazm suggests that this site was a colony established in the late Namazga II Period by people from the Kopet Dag area, although a local origin is also proposed for the ceramics from this site that led to this hypothesis (see Hiebert 2002:36;

Lyonnet 1996:64–65; Isakov and Lyonnet 1998:44–45). The fact that Sarazm is located within reach of the Zeravshan Valley, a mineral-rich area, is likely to have something to do with the foundation of the site (Besenval and Isakov 1989:18). As noted above, the assemblages from this site, Shahr-i Sokhta, Mundigak and from northern Pakistan share important aspects and illustrate an additional set of interactions located east of the Iranian Plateau.

8.6.2 A global game of peer polity interactions

C. C. Lamberg-Karlovsky wrote (1978:119–120): "At the end of the fourth millennium Mesopotamia and the disparate cultures of the Iranian Plateau were united in a pattern of communication entailing economic, political, and social interaction" (...), a "late fourth-millennium internationalism which linked Mesopotamia, the Persian Gulf and the Iranian Plateau." In this context, the discoveries made at Tepe Yahya have allowed to connect several regional archaeological sequences. In extending the connections to the east, it is shown above and in Chapter 1 that important polities and related dynamics complemented the picture of Middle Asia around 3000 BC, delineated in the west by the Proto-Elamites and their relations to Mesopotamia.

In the west, it is generally thought that at the end of the Late Uruk period in Mesopotamia, the distribution of Uruk settlements found in Syria, Anatolia, and eastern Iran retracted. Uruk sites on the Euphrates were abandoned, and in northern Mesopotamia were succeeded by the Ninevite 5 culture (Nineveh, Tell Brak, Ghagar Bazar, Tell Billa, Tepe Gawra, Telul-eth-Thalathat, Tell V, Tell Leilan, and in the Eski Mosul region; Schwartz 1987:94; 1985) and in southern Mesopotamia by the Jemdet-Nasr culture (Pittman 1994:41–42; Matthews 1992a, 1992b). G. M. Schwartz opposes several traits of the Ninevite 5 to those of the southern Mesopotamian sites such as the absence of large-size settlements, of monumental architecture and of a writing system; poor evidence for social differentiation in the tombs; a smaller scale of ceramic production; and a separate ceramic style and material culture with the exception of a glyptic style reported in southern Mesopotamia and on Proto-Elamite occupations (Schwartz 1987:94, 97; 1985). Presence of a centralized storage system monitored by cylinder seals of this style led G. M. Schwartz to define the "existence [in Ninevite 5 Culture] of an elite mobilizing and controlling agricultural resources with a sophisticated administrative technology [which] suggests a relatively high level of socio-political complexity" (Schwartz 1987:98). In the south, R. J. Matthews (1992a) defines the Jemdet-Nasr culture and period as essentially located in southern Mesopotamia, although he acknowledges on the basis of the discoveries of Jemdet-Nasr-related types of ceramics at Tell Brak that sites in northern Mesopotamia had contacts with the south (Matthews 1992a:27). The assemblage from Jemdet-Nasr site includes economic texts from about 215 tablets connected to those found at Uruk Eanna III, posterior to the proto-cuneiform texts of Uruk Eanna IV, and that deal "with a range of goods and services, grain foodstuffs, textiles, animals, land allotments and labor forces? such as we would expect from the day to day running of a large administrative institution with control over a labor force and over the exploitation of the local countryside." (Matthews 1992a:5; see Nissen 1986; Englund and Grégoire 1991). The ceramics defined as Jemdet-Nasr seem to have been mostly produced/distributed in southern Mesopotamia at Uruk, Ur, Nippur, Fara, and Uqair, although they were present to the north, at Khafadjeh, at Hamrin sites and up to Tell Brak. Beside the types specific to the Jemdet-Nasr, the assemblage incorporates certain types reminiscent of the Late Uruk and with general

connections to the Proto-Elamite sphere (such as the low-sided trays and the overall parallels between the lugged jars from southern Mesopotamia and the Proto-Elamite ones) (Matthews 1992a:5-17). Roughly in the same chronological bracket (and/or in the Early Dynastic I), the glyptic of southern Mesopotamia includes the city seals style which is essentially known from Ur in southern Mesopotamia, with evidence at Uruk, Jemdet-Nasr, Fara, al Hiba, and Susa (Pittman 1994:67). In this style are the names of Mesopotamian cities, such as Ur, Larsa, Nippur, Uruk, Kesh, Zabala and Urum, which R. J. Matthews conceives as the sign of "federative activity of a now obscure nature" (Matthews 1992a:19). Important similarities between the Proto-Elamite sites and sites of Mesopotamia (ceramics, writing systems, sealings systems, and architecture) are noted above as well as the trade of copper objects between Tepe Arisman and central and northern Mesopotamia and the possible trade of husbandry by-products between Fars-to-Khuzistan and southern Mesopotamia. Although important links (glyptic) are attested with the Ninevite 5 culture of northern Mesopotamia, it seems that more similarities are observed between the (Late Uruk/) Jemdet-Nasr and Proto-Elamite occupations.

Another sphere, located in the northwestern boundary of the Proto-Elamite sphere (Figure 8-1), is represented by the elements with connections to assemblages of a Transcaucasian origin, named Kura-Araxes, which start to spread toward the south roughly in the same bracket, the late fourth millennium BC (from the Late Period V at Godin Tepe: 3100-2900 BC and during the following Period IV: Badler 2002:83). According to J. Alden (1982a:622-624; see Weiss and Young 1975:15), these peoples "blocked the Khorasan Road and Susian access to the highlands (...) and the flow of trade across northern Iran was broken." With regard to this, it can be recalled that the "face pots" found at Tepe Yahya share similarities with Kura Araxes materials.

The map of Middle Asia presented in Figure 8.1 is a rough sketch map of the situation at the end of the fourth and the beginning of the third millennia BC. There are still important gaps in evidence in Afghanistan and northeastern Iran, which are key-sectors for a full understanding of the polities of Middle Asia and their relations. One should also add that the definitions of some of the cultural spheres in the eastern half of Middle Asia are based on the limited evidence of ceramic styles' distributions, although in several cases, the distributions of other aspects of the material cultures, burial practices, and architectural principles appear to match the distributions of the ceramics. In detail, there were probably more regional variations and other ceramic cultures, still unknown and related or not to those discussed above. One may expect that environmental aspects likely influenced and created variations in the cultural and economic traits of each region considered here. The regions concerned here include northern Mesopotamia where dry agriculture was possible; southern Mesopotamia with necessary irrigation; fluvial navigation and connection to the Persian Gulf for Mesopotamia and Khuzistan and to the Indian Ocean for the Indus Valley; coastal areas and the exploitation of maritime resources (with evidence in Kech-Makran and Balakot in Pakistan); the highlands/lowlands complementarity (on the Iranian Plateau and in Pakistan); high altitudes climate (Hindu Kush); and the desert irrigated regions of Central Asia. Finally, although these polities and ceramic complexes may be dated to around 3000 BC, chronological refinement is necessary in certain cases and to date important aspects of their relationships.

8.6.2.1 Relations

Communities of Middle Asia participated in larger spheres of relationships exceeding their boundaries

and local and regional networks of exchanges, as defined by their material cultures and often the ceramics. This probably did not concern all segments of the communities and all the communities, but this is well-attested by material assemblages recovered from many occupations.

An important aspect of these relationships seems to have been trade as suggested by J. Alden for the Proto-Elamite and G. Algaze for the Uruk. It is important to recall that the quantities of "exotic" materials or objects are variable and include little evidence at certain sites such as Tepe Yahya. The notion of long-distance trade proposed for the Uruk and its "greater periphery" in the Uruk period was disapproved (Weiss 1989). It is however evident that some raw materials and products circulated over long-distances and that certain remote (viewed from Mesopotamia) sources of minerals were exploited. The location of these sources (see Chapter 4) and distributions of materials and objects indicate the existence of routes of interactions that eventually step-by-step connected areas located in Tajikistan, Afghanistan and Pakistan to Mesopotamia (such as illustrated in Tosi and Piperno 1973: map p. 16–17). The distribution of ceramics attests exchanges. The distribution of shells and shell objects indicate that the coast was integrated within the dynamics of Middle Asia. There is a set of additional products that were exchanged mentioned in Proto-Elamite texts; the products and by-products of agriculture and husbandry, such as textiles, oil and others. On some of those routes, there is evidence for more intensive exchanges as seen between Tepe Arisman and Mesopotamia (for the copper objects) and perhaps between southwestern Iran and Mesopotamia (for the husbandry by-products). Trade was probably one of the underlying reasons for the vast distribution of certain glyptic styles between Mesopotamia and the Iranian Plateau. Similar styles of glyptic and a Proto-Elamite tablet were used at Shahr-i Sokhta in Period I. In the following periods, "large quantities of lapis lazuli, carnelian, alabaster and turquoise were found together with the instruments to work them, testifying to the presence of an active market for these products" (Lamberg-Karlovsky and Tosi 1973:27). D. T. Potts provides nuances for the model that shows Shahr-i Sokhta as a production center for exportation of lapis lazuli items. He however notes that the various cultural connections observed in these periods suggest that the site was a sort of caravanserai (Potts 2012:600). Less evidence for manufacture of objects is attested in the foundation Period I, but important and various cultural relationships are observed in this period and may indicate a similar interpretation. As seen above, the populations of eastern Middle Asia also participated in the acquisition and transformation of many types of materials, using a wide range of technologies, and including materials (copper, many types of stones and semi-precious stones) similar to those observed within the Proto-Elamite sphere. In addition to Shahr-i Sokhta as a caravanserai, the example of Sarazm, which incorporates significant evidence for relations with Turkmenistan and Afghanistan/Pakistan, may illustrate this.

Besides economic relations, it is evident that the polities defined above shared other important aspects illustrated by similarities in the development of technologies (especially pyrotechnologies: ceramic, metal, glazed steatite) and styles, while one may assume that symbolic aspects (perhaps religious/political) and culinary practices (?) were shared as well. Similarities may also be seen in the development of certain forms of organization of the territories (including irrigation systems and urban-like layout of some occupations) and increasing specialization in the production of objects in several regions of Middle Asia. These similarities may have resulted from independent developments or interactions. Interaction in the form of technological transfers is exemplified by the case of the grey ware of Pakistan

and Iran (R. P. Wright 1984, 1989) and stylistic influences are seen with the similarities between the Jemdet-Nasr and Proto-Elamite jars of southern Mesopotamia and Iran. Diffusion of a culinary practice may be seen in the distribution of beveled-rim bowls until southwestern Pakistan. Interaction processes may have been multiple, various, and combined; they may have included migrations and colonizations, partial migrations (matrimonial exchanges, migrations of classes of artisans), emulation/imitations, circulation and trade of objects and their contents, and others. Meanwhile, at this larger level, the distributions of certain important aspects tend to show marked cultural boundaries.

8.6.2.2 Competition and Emulation

It is evident that all the societies of Middle Asia around 3000 BC did not follow the exact same trajectories. Meanwhile, it is apparent that several of their aspects, such as those listed above, were shared, and one may suppose that a number of them resulted from contacts. G. Algaze wrote (2005:142): "as Colin Renfrew and his colleagues have repeatedly argued (Renfrew and Cherry 1986), the long-term presence of multiple polities within relatively short distances of each other invariably engenders important processes of competition, exchange, emulation, and technological innovation. The social evolutionary impact of these mutually reinforcing processes has been explained by Robert Wright (2000:165–168), who notes that in situations where antagonistic but mutually communicative polities exist, social and economic innovations that prove maladaptive in any one society are likely to be weeded out more quickly than in less competitive settings. Conversely, innovations that prove advantageous are more likely to spread quickly across the various polities in competition, thus accelerating the overall pace of change of the system as a whole."

Middle Asia is a wide territory and there is a lack of systematic surveys in many areas. Nevertheless, seen at a macro-level the remarks above seem consistent with many data in Middle Asia around 3000 BC and relations between its polities or segments of its polities. In sum, Middle Asia around 3000 BC appears as an interconnected chain of polities. This is not the first time in its History, but the patterns of relationships seem increasing in scale and more intricate at that time. There is now important evidence that shows the existence of a variety of cultural territories (although their definitions need refinement). We have not always information regarding their socio-political organizations, whether they were states, complex chiefdoms or tribal confederations, but socio-political complexity is apparent as well as are the dynamics of the Middle Asian communities. In sum, around 3000 BC, the problem of the Proto-Elamite is not limited to its relationships to Mesopotamia; both are part of a wider sphere of dynamics that concerned Middle Asia as a whole.

J. Alden (1982a:628) "emphasized the antithesis between Mesopotamia and Iran, using the idea of competition as a device for explicating the Proto-Elamite phenomenon." While there are elements indicating existence of cooperation at least at some point between areas of Mesopotamia and Iran, J. Alden (1982a:628) noted that "when Proto-Elamite control of overland trade increased the costs and threatened the supply of Sumerian imports, the riskier maritime route was utilized." As stressed by him, economic interests represent only a part of the relations, and one should add aspects such as "social, religious, and ethnic relationships." The situation of exchange/competition and then conflicts in economic interests proposed by J. Alden between some areas of Mesopotamia and of the Proto-Elamite sphere is complemented to the east by a large set of additional dynamics which were included within separate

dynamics. Same technologies were known and same minerals were exploited by the communities located in the east, who also probably used and controlled in some cases sources similar to those used to supply the Proto-Elamites and Mesopotamia (such as the lapis lazuli from Afghanistan). The connections between each polity of Middle Asia may have resulted from separate and various processes, which could be neutral, cooperative, or with conflict.

The Proto-Elamite sphere, whether it consisted of a polity or regional polities, spread over ca. 1,000 km from north to southeast, and one may expect that along this distance, whether these relations were cooperative, with conflict, both, or neutral, the people settled on the Proto-Elamite sites had to deal with their neighbors, and elements of the traditions of both parties (certain beliefs, culinary practices, certain vessels related to this, certain fashions, technologies, and others) may have well been transmitted in addition or not to trade. Although the socio-political system that developed in Mesopotamia in the Uruk period and that of the Proto-Elamite in Iran probably had important impacts on their neighbors (as suggested by G. Algaze 2005:143-144), the peer polity interaction suggested for Mesopotamia and the highlands Iran[62] was not limited to these areas but extended to the different polities of Middle Asia and was included within a larger interconnected system.

8.6.2.3 Polities and conflicts

J. Alden noted regarding Mesopotamia and Iran in the Proto-Elamite period (1982a:628): "within the sphere of economic activity, controlling elites attempt to control the supply and minimize procurement costs for the items and materials that their societies require. The development of a sea trade route by Sumerians is evidence for such efforts. When Proto-Elamite control of overland trade increased the costs and threatened the supply of Sumerian imports, the riskier maritime route was utilized." He also added that (Alden 1982a:628): "(...) conflicting economic interests do not tell the whole story; questions about the social, religious, and ethnic relationships between highlands and lowlands remain".

What was the scale of the conflicts? In the case of economic interests, this question relates to that of who was in charge of the trade. J. Alden (2013) suggests that the areas located from Fars to Khuzistan were integrated within a regional system including mobile groups responsible for transactions within the region and beyond. We do not know whether such system existed in each area of the Proto-Elamite sphere (such as in Isfahan and Kerman) and beyond, and we do not know to which extent the regional systems were connected together and integrated within a larger collective (centralized or not) enterprise. It is evident that the Proto-Elamite sphere was in many ways connected internally and it is possible that mobile groups, and their heads, such as those mentioned in southwestern Iran, had an important role as middle-men in securing and controlling the transactions within the Proto-Elamite sphere. One knows little about the structures that supported the internal and external dynamics of the polities defined in eastern half of Middle Asia around 3000 BC and it is not possible to conclude firmly on the question of the scale - local, regional, and/or supra-regional - these systems were primarily coordinated. Exchanges are established between some of the polities present in Middle Asia around 3000 BC, which suggests the existence of agreements between the parties involved, but one does not know who exactly controlled these exchanges and if, for example, individual enterprise as suggested for later periods (see Lamberg-Karlovsky 2009) was part of the exchanges-system.

Economic aspects and others may have been sources of both agreements and disagreements, and one may also admit that there is not necessarily a rational reason to explain why some rulers or groups of populations do not agree on some topics and relations. When discussing the Proto-Elamite phenomenon and its breakdown apparent in the early third millennium BC, the question of the scale of the coordination of the Proto-Elamite sphere and how the local and regional dynamics and their coordination compared to the larger sphere do not appear as minor issues and is all the more important as this sphere had to face not only the Sumerians to the west, but also neighbors to the east while being embedded within a complex set of relations across Middle Asia, all of these relations having the potential of cooperation but also conflict.

Some texts found in Mesopotamia dated to the late third millennium BC provide mentions of dynasties, with names of rulers, their lineages, and mentions of alliances and conflicts between polities. Although the location of some of the polities mentioned in the texts is still discussed, it is apparent that some were located in Middle Asia (see Steinkeller 1982; Francfort and Tremblay 2010; Lamberg-Karlovsky 2001a:279–280). One thousand years represent only 20 to 35 generations if one estimates the average mortality age between 30 to 50 years (roughly based on the lowest estimates of current life expectancy at birth provided by the United Nations and Global Burden of Disease in 2010 and the CIA World Fact Book in 2011). Although it is probably not appropriate to compare elements of several centuries younger and although these comparisons cannot be applied directly to the situation observed around 3000 BC in Middle Asia (see Algaze 1989 and comments), one may wonder how these aspects compare to this situation. What do the ceramics with relations to the Western Balochistan Ceramic Complex found at Tepe Yahya indicate? Do they represent punctual contacts or trickle trade? Could they represent elements of alliance and gift exchange or, conversely, elements of booty? How should we interpret the Burnished ware, more numerous than the Western Balochistan Ceramics, at Tepe Yahya? Why did the Proto-Elamites abandon or never return to Tepe Yahya?

Elements that may indicate conflicts are rare, but not absent in the fourth and early third millennia BC. Conflicts may indirectly be illustrated by the production of certain categories of objects in copper in the fourth millennium BC that may have been used as weapons (see Matthews and Fazeli 2004), some representations on the Mesopotamian glyptic (prisoners and combats; Amiet 1980:pl. 47, n°660–661), and slingballs whose examples found in large numbers at Godin Tepe are considered weapons (Badler 2002).[63] As indicated above, slingballs are attested at Shahr-i Sokhta from Period I, they are at Deh Morasi Ghundai in Afghanistan, while sling bullets are reported from Tell Hamoukar in Syria dated to the mid-fourth millennium BC (Lawler 2006). One may add the signs of fortifications in the shape of circular towers and buttressed curtain walls, which appear to have been defending, mentioned at several sites in the Geoksyur region (see Hiebert 2002:36) as well as the wall of Tal-i Malyan in the Late Banesh period. It is also suggested that the Uruk-related settlement of Godin Tepe was pushed out by newcomers from northern Iran (Weiss and Young 1975; see Lamberg-Karlovsky 1978:118).

The polities of the late fourth and early third millennia BC in Middle Asia require better definitions with regard to their territories and organizational systems. There is no mention available of rulers and dynasties as seen in the late third millennium BC, although the possible names inscribed on the Proto-Elamite tablets may include those of influential personages or lineages. Nevertheless, it would not be surprising that elements of the situation described in the Mesopotamian texts of the later

part of the third millennium BC had parallels less than 20 to 35 generations before between the polities of Middle Asia around 3000 BC.

As noted above, J. Alden (1982a:628) assumes that conflicting economic interests between the Sumerians and the Proto-Elamites may have led the Sumerians to develop a route into the Persian Gulf. The event noted by J. Alden is illustrated by the jars of Jemdet-Nasr and Early Dynastic styles found in the Persian Gulf. On the other hand, evidence for relations between Middle Asia and the areas located beyond the Persian Gulf in the period contemporary with Tepe Yahya IVC is essentially absent, while some were attested before in Periods V and VI at Tepe Yahya.[64] One may remind the presence of a burnished jar found at Ra's al-Hamra in Oman, dated to the late fourth millennium BC (Didier and Méry 2012). This vessel seems, however, best paralleled in Mesopotamia. Relations between Middle Asia and the Persian Gulf are on the other hand a lot more attested starting in the period following the Proto-Elamite period in Middle Asia.

8.7 Tepe Yahya Period IVB

The end of the Proto-Elamite is not clarified and the story of the Proto-Elamite decline does not appear similar in every case. As stressed by C. Petrie (2013a; see also below regarding Fars), while the Proto-Elamite writing disappeared and Tepe Yahya was abandoned (at a minimum in the areas excavated), continuity of occupation is observed at many sites. The causes for the decline of the Proto-Elamite may have included conflicting economic interests as emphasized by J. Alden, but a large set of additional potential reasons, internal and external, various, and probably combined, may also be considered.

8.7.1 The decline of the Proto-Elamite

One may first attempt to find answers by examining the internal structure of the Proto-Elamite sphere, although as noted above, this topic remains challenging and equivocal. On one hand, relationships defined as Proto-Elamite are illustrated across a large portion of Iran. They are significant as they are identified by a large number of items in some cases and evident in various types of remains (including architecture; productions of containers, ornaments, and administrative tools; mathematical system; religious/political imagery; culinary practices; and funerary practices). On the other hand, there are questions regarding the chronology of the Proto-Elamite occupation, although one may consider that many of the sites were occupied at the same time. There is also variability in the remains found, with sites bearing a large Proto-Elamite inventory and sites with isolated evidence of it, including assemblages with little or abundant material related to other cultural spheres. Furthermore, some of the activities contained within the Proto-Elamite occupations are distinct from one site to another. In relation to this, the environments and potentially exploitable resources of the regions of the Proto-Elamite sphere are diverse. Efforts focus on dissimilar types of productions while disparate networks of interregional exchanges are observed from one region to another of the Proto-Elamite sphere. In other words, it is not possible to completely discard the possibility that the Proto-Elamite sphere was a well-consolidated polity, although the above elements tend to demonstrate a relative independence in the regional and local systems. This also agrees with the fact that it was probably difficult to maintain a uniform control over the main Proto-Elamite sphere, if such attempt to maintain control existed. Indeed, this sphere measured more than 550,000 km^2 (from Susa to Kerman and from the

Caspian Sea to Fars) and the modes of transport were essentially limited to foot, although asses were used and wheeled-carts existed at that time. On the basis of this, one may suspect a lack of firm consolidation of the Proto-Elamite sphere, which, already present in its structure at its foundation or as a result, has logically the potential for precipitating its breakdown.

Reasons for the collapse of the Proto-Elamite may have included external causes as well. The ability to maintain a system is also dependent on its neighbors. C. C. Lamberg-Karlovsky notes (2001b:221) that he has "long wondered why people of the periphery did not assimilate the complexity evident in the south [(i.e. southern Mesopotamia)]. Once exposed to writing, as they assuredly were throughout the century-long Uruk and later Proto-Elamite expansions, why did virtually every distinctive community on the periphery reject the use of writing? With so many different archaeological cultures exposed to the complexity of southern Mesopotamia, one could argue that the rejection of complexity was a conscious act. What was the reason for it?" The Proto-Elamite writing system was mostly not adopted outside of the Proto-Elamite sphere at the time it was in use and did not lead (as far as we know) to the development of later writing systems in the peripheries. C. Petrie (2013a) writes that with the end of the Proto-Elamite writing, texts disappeared for around 800 years on the Iranian Plateau. No "technology of social control (writing, seals, sealings, and standard units of measure)" (Lamberg-Karlovsky 2001b:220) such as those identified in Mesopotamia and Iran in the Uruk and Proto-Elamite spheres was found in the areas located east of these spheres. It was not until the mid-third millennium BC that a form of script (still debated, see Wells 2011) appeared in eastern Middle Asia with the Indus Civilization. C. C. Lamberg-Karlovsky (2001b:221) writes regarding the Uruk and its neighbors: "Perhaps, far from being intellectually less qualified to deal with complexity [in this case, state-complexity], the peripheral peoples were smart enough to avoid its oppressive command structure. (...) In every instance the periphery initially rejected the adoption of complexity even after exposure to it. (...) The people on the periphery chose to avoid complexity and, in so doing, avoided the cage of the state for another half-millennium." Before this, C. C. Lamberg-Karlovsky (2001b:220-221) emphasizes the role of religion in the coercive structure of the emerging state of southern Mesopotamia and refers to M. Sahlins' work in Polynesia who writes (Sahlins 1974:68 in Lamberg-Karlovsky 2001b:220): "Had the Polynesian gods been more demanding, temple building might well have generated new social and political roles here as it did in Sumeria; but for one reason or another they were too complacent. One suspects that they were too complacent precisely because a perfectly satisfactory tribal system existed (...)." C. C. Lamberg-Karlovsky also writes (2001b:221): "[p]erhaps the gods of the north [of Mesopotamia] were, like the Polynesian gods referred to by Sahlins, simply less demanding."

These remarks echo P. Clastres' study of Indian societies of South America, in which the nature of power is a central topic (Clastres 1974, 1987). It is useful to review elements of this study. P. Clastres writes: 1) (1987:22-23) "Societies cannot be divided into two groups: societies with power and societies without power. On the contrary, it is our view (in complete uniformity with ethnographic data) that political power is universal, immanent to social reality (whether the social is defined by 'blood ties' or social classes); and that it manifests itself in two primary modes: coercive power and non-coercive power. (...) The political can be conceived apart from violence; the social cannot be conceived without the political. In other words, there are no societies without power."; 2) (1987:154) "In primitive societies, in societies

without a State, power is not found on the side of the chief: it follows that his word cannot be the word of power, authority, or command. An order? Now there is something the chief would be unable to give: that is the kind of fullness his speech is denied. A chief forgetful of his duty who attempted such a thing as an order would be met by a sure refusal of obedience, and a denial of recognition would not be far behind. The chief crazy enough to dream not so much of the abuse of a power he does not possess, as of the use of power, the chief who tries to act as chief, is abandoned. Primitive society is the place where separate power is refused, because the society itself, and not the chief, is the real locus of power." (...) It is in the nature of primitive society to know that violence is the essence of power. Deeply rooted in that knowledge is the concern to constantly keep power apart from the institution of power, command apart from the chief "; 3) (1987:177) "Writing is on the side of the law; the law lives in writing; and knowing the one means that unfamiliarity with the other is no longer possible. Hence all law is written; all writing is an index of law. Even the quipu of the Incas can be regarded as a type of writing. Far from being merely mnemotechnic instruments of accountancy, the knotted cords were primarily and of necessity a writing that asserted the legitimacy of the imperial law and terror it was intended to inspire."; 4) (1987:198) "When, in a primitive society, the economic dynamic lends itself to definition as a distinct and autonomous domain, when the activity of production becomes alienated, accountable labor, levied by men who will enjoy the fruits of that labor, what has come to pass is that society has been divided into rulers and ruled, masters and subjects – it has ceased to exorcise the thing that will be its ruin: power and respect for power. Society major's division, the division that is the basis for all the others, including no doubt the division of labor, is the new vertical ordering of things between a base and a summit; it is the great political cleavage between those who hold the force, be it military or religious, and those subject to force. The political relation of power precedes and founds the economic relation of exploitation. Alienation is political before it is economic; power precedes labor; the economic derives from the political; the emergence of the State determines the advent of classes."; 5) and with regard to the Tupi-Guarani at the end of the fifteenth century (1987:217-218), "Armed only with their Word, the prophets were able to bring about a 'mobilization' of the Indians; they were able to accomplish that impossible thing in primitive society: to unify, in the religious migration, the multifarious variety of the tribes. They managed to carry out the whole 'program' of the chiefs with a single stroke". (...) "In the discourse of the prophets there may lie the seeds of the discourse of power, and beneath the exalted features of the mover of men, the one who tells them to desire, the silent figure of the Despot may be hiding. Prophetic speech, the power of that speech: might this be the place where power tout court originated, the beginning of the State in the World? Prophets who were soul-winners before they were masters of men? Perhaps. But (...) what the Savages exhibit is the continual effort to prevent chiefs from being chiefs, the refusal of unification, the endeavor to exorcise the (...) State."

These considerations taken from other times and spaces are provided here as an illustration of societal models different from that of the state organization, including a different, non-coercive idea of political power. These echo elements of the discussion provided by C. C. Lamberg-Karlovsky (2001b) on the topic of the emerging state-complexity observed in Mesopotamia and Iran, and their relationships with their peripheries. As P. Clastres demonstrates (1974, 1987), this does not mean that the societies he studied were less complex or organized and it does not mean that one considers that the societies that existed in Middle Asia in the peripheries of the Uruk and the Proto-Elamite were

structured the same way as those studied by P. Clastres. As discussed above and in Chapter 1, one knows little about their structures but their remains suggest important degrees of socio-political complexity and integration (not unavoidably that of the State) and suggest the existence of coordinating structures. With regard to this, and closer to Tepe Yahya, the Proto-Elamite, and its southeastern neighbors, P. Eltsov (2011:82) tests "ideas and theories [of ancient Indian socio-political thought] against archaeological data [from the Indus Civilization]," considering "the indigenous models of thinking," but not implying "any direct ethnolinguistic or religious correlations." His study (Eltsov 2011:77) "addresses the issue of the state in the context of Harappan archaeology and ancient Indian sociopolitical thought. It argues that the concept of the state and the related neo-evolutionary models of culture change are unable to create an adequate picture of the Harappan sociopolitical organization. It proposes that some of the ancient Indian sociopolitical ideas provide a better option for explaining the historical uniqueness of Harappan society." P. Eltsov (2011:83-84) points out several of these ideas and it is useful to recap them: 1) "the pre-dominance of heterarchical rather than hierarchical relations in the organization of the society"; 2) "the primary role in the formation of social groups and other identities is played by ideational (non-economical) factors"; 3) "the concept of authority in ancient Indian sociopolitical thought has a limited and semi-contractual nature. Neither absolutism of European monarchies, nor the unconditional power of the Egyptian pharaohs has obvious parallels in ancient India"; 4) "Most expressions of sociopolitical thinking in ancient India are circumscribed by ethical norms. (...) it is the king's obligation to protect his people"; 5) "the relationship between [secular and religious powers] is among the themes that had occupied the minds of ancient Indian theologians and social thinkers from the earliest times"; 6) "The concept of the polity in ancient Indian texts is inseparable from the teaching of polity interaction. (...) for despite having developed an idealistic concept of world conquest, the ancient Indian texts did not have a clear theory of the unitary and imperial state. What the archaeologist Colin Renfrew has termed 'peer-polity interaction' seems to have dominated ancient Indian sociopolitical thinking"; 7) "orality has played an extremely important role not only in the transmission and preservation of sacred information, but also in the transmission and preservation of legal information. (...) orality in the South Asian context can be seen (...) as a conceptual framework. Long after writing was invented and began to be utilized for various purposes, orality continued to play a crucial role in almost every aspect of life in South Asia."

In addition to the fact that some elements of the ancient Indian thought may be reflected by the Indus Civilization society (see Eltsov 2011:84), they offer additional insights on sociopolitical power which are different than the "traditional" State-related ones, from societies with no less complexity and integration than the State. The socio-political thought of the neighbors of the Uruk and the Proto-Elamite is not known, nor is the totality of the socio-political aspects of the Uruk and of the Proto-Elamite. Nevertheless, as noted above, there are evident differences between the vestiges of the Proto-Elamite and those of the communities that lived in southeastern Iran and Pakistan. These differences, including the lack of "technology of social control" (Lamberg-Karlovsky 2001b:220) in the latter areas, suggest differences in socio-political organization. The images which may convey political/religious meanings are different in the east from those of the Proto-Elamite sphere. The time jump is certainly inappropriate but one should mention that the swastika motif which was apparently a recurrent painted motive on ceramics of the southeastern Iranian Plateau around 3000 BC

was then present during the Indus Civilization, before it became a preeminent auspicious symbol in Hinduism, Buddhism, and Jainism.

Why did the Proto-Elamite phenomenon decline? Did the Proto-Elamites attempt to impose a violent, coercive, State-system on their neighbors? Was the socio-political thought of the southeastern neighbors of the Proto-Elamite somehow similar in some aspects to those described by P. Clastres and P. Eltsov, including, importantly, a non-coercive idea of political power? Are these the fundamental reasons, more than economic ones, for the rejection of the complexity embodied in the Uruk/Proto-Elamite system suggested by C. C. Lamberg-Karlovsky? It is possible.

8.7.2 Tepe Yahya Period IVB

The date of the phases that followed Period IVC at Tepe Yahya remains a fundamental problem. It is suggested here that Period IVB started around the mid-third millennium BC (around 2600–2400 BC). At Tepe Yahya we lack indication on what happened in the period immediately posterior to the abandon of the IVC building and the decline of the Proto-Elamite. On the southeastern Iranian Plateau, elements are observed in the Halil Rud Valley (with deposits at Konar Sandal dated to between ca. 2800 and 2600 BC), at Shahr-i Sokhta (Period II) and in Kech-Makran in Period IIIb (beginning around 2800 BC). In Fars there is a regionalization in the ceramic style during the Late Banesh period dated to between 2900 and 2700/2600 BC. The cartography of the later part of the third millennium BC in Middle Asia is then different than that of the polities of the period around 3000 BC illustrated in Figure 8.1. C. C. Lamberg-Karlovsky (2001a:279) notes that at the time of Yahya Period IVB a dozen of kingdoms spread over Middle Asia, from the Indus Valley to Mesopotamia and from the Persian Gulf to Central Asia, in what G. Possehl defined as the Middle Asian Interaction Sphere (MAIS) (Possehl 2002, 2007).

A new civilization emerged on the southeastern Iranian Plateau, perhaps the one named Marhashi in the Mesopotamian texts (see Lamberg-Karlovsky 2001a:279-280; Steinkeller 1982; Francfort and Tremblay 2010 with an alternate hypothesis). It was apparently essentially centered on the Kerman province, with evidence in the Halil Rud Valley, at Tepe Yahya, Shahdad, and in the Bampur Valley. Several connections are observed in the material culture with Shahr-i Sokhta in Seistan and Kech-Makran in southwestern Pakistan, while the latter also shares elements with Tepe Bampur and other sites in the Bampur Valley. It, however, seems that Seistan and the Bampur Valley/Kech-Makran area were also part of different spheres, with Seistan connected to northeastern Pakistani Balochistan and southern Afghanistan, and the Bampur Valley and Kech-Makran mostly connected together. Contrary to the times of Period IVC at Tepe Yahya exchanges of materials and influences between the southeastern Iranian Plateau and the areas located beyond the Persian Gulf are then well-attested, both on the Iranian and southwestern Pakistani sides, while Mesopotamian material and material related to the Indus Civilization are found in the Arabian Peninsula as well. It is evident that the areas of the Persian Gulf attracted at the time, more than before, elements of various cultures. To the east, in addition to the Indus Civilization and its domains of the second half of the third millennium BC, the Kulli culture (Possehl 1986; Jarrige *et al.* 2011b) that developed east of the Kolwa Plain in southern Pakistan, also in the third millennium BC, adds more complexity to the general picture of southern Middle Asia. To the west, in Fars, it has long been thought that a hiatus existed

after the Late Banesh period at Tal-i Malyan and in the Kur River Basin. This hiatus is thought to continue until the late third millennium BC when deposits and ceramics of the Kaftari period (2200–1600 BC: Petrie *et al.* 2005:55-56, 73) start to indicate renewed occupation. Recent investigation at Tal-i Malyan Operation H1 has contradicted this scenario and confirmed "the proposal by N. F. Miller and W. Sumner (2004:87) that the transition from Banesh to Kaftari ceramics was gradual and more or less continuous rather than the sharply discontinuous break indicated in the ABC operation (Sumner 2003:17; Miller and Sumner 2004:77)" (Alden *et al.* 2005:39, 42). A phase of the Kaftari period, characterized by higher proportions of Red-Slipped ware over Painted Buff ware and apparently "significantly" earlier than the traditional date of 2200 BC for the beginning of the Kaftari period was defined (Alden *et al.* 2005:42). Certain ceramic relations are mentioned between materials of this phase and Late Banesh vessels. According to J. Alden *et al.* (2005:42), although there is no "evidence of an unbroken stratigraphic and stylistic transition from Banesh to Kaftari ceramics (...)" so that the transitional phase, stricto sensu, has to be found, "(...) there was no major hiatus in occupation between the Banesh (3200–2700 BC) and Kaftari (2200–1500 BC) periods" and "there is a considerable degree of continuity, at least in the Kur River Basin, from the proto-Elamite society of the Banesh Period to the historically known Elamite era."

The impact of the Proto-Elamite on the local culture of southeastern Iran was probably important around 3000 BC. On the other hand, its impact on the following cultures of the third millennium BC is not directly evident at Tepe Yahya as the transitional phase is not observed at this site. It is hoped that future fieldwork in southeastern Iran and analysis of related material will shed light on this important phase that included the development of a new civilization apparently centered on Kerman and of new relationships that involved the Persian Gulf, and on how this civilization compares to the Proto-Elamite and its ca. 3000 BC southeastern neighbors.

Endnotes

1. With the exception of the synthesis offered in 1970 by C. C. Lamberg-Karlovsky and the publications of the glyptic art by H. Pittman (2001) and the chlorite artifacts by P. Kohl (2001), Period IVA has not been fully published yet. The contexts and materials of this period are, however, analyzed by D. T. Potts in his Ph.D. dissertation (1980).
2. In Fars the beginning of Lapui ware from the early fourth millennium BC and the existence of a transitional Lapui/Banesh phase have been confirmed recently by radiocarbon dating from samples from Tol-e Spid (Potts and Roustaei 2006:124).
3. Radiocarbon dates from Tal-i Iblis do not exactly agree with this as they are mostly situated in the fifth millennium BC.
4. These sherds may also have come from the Persian Gulf; see Mutin 2012b.
5. One may, however, suggest that limestone could have come from other sources located in Iran, Pakistan, or Afghanistan.
6. The emergence of Uruk-related assemblages in Kerman is, however, not totally clear. It is thought that Uruk-related materials are associated with Aliabad ware at Tal-i Iblis from Period IV, whereas they appear posterior to this type of ceramic production at Mahtoutabad, a site located in the Halil Rud Valley (Cortesi ***et al.*** 2008:8–9; Vidale and Desset 2013). Also, as discussed below, Periods IV to VI at Tal-i Iblis lack of reliable excavated archaeological contexts.
7. F. Vallat dates the first attestation of the name Elam to around 2650 BC (Vallat 1998).
8. See an element of the demonstration regarding the technique in Nissen 1987:612.
9. As it has been illustrated recently by the investigations in the Mamasani district in Fars (Potts and Roustaei 2006) and at Tepe Arisman in Isfahan (Vatandoust ***et al.*** 2011).
10. The evidence at Tepe Arisman mostly consists of remains of metallurgical activities. In comparison, metal objects are relatively rare.
11. J. Dahl, however, mentions "two possible metro-mathematical school texts" (Dahl 2009:24 note 8). R. K. Englund (1998b:214–15) notes that all the ideograms on the numero-ideographic tablets of the last Late Uruk period "represented the objects of the transaction, including sheep and goats and products derived from them, above all textiles and dairy oils."
12. Another representation of bovine, also labeled as Proto-Elamite, although its context is not known, consists of a small silver bull pendant, with the bull presented upright and one shell inlay preserved in one eye (Aruz 2002). As for the lion represented with joined fists observed on certain Proto-Elamite seal impressions (Amiet 1980:pl. 37 n°580), it has a direct counterpart in statuary with a lioness from a private collection, probably made in magnesite (Porada 1950; Amiet 1980:pl. 37 n°579). A gazelle made in silver (Aruz 2002:5–8, fig. 7) and a silver goat (held by the Museum of Fine Arts, Boston, USA) were also labeled as Proto-Elamite. Contrary to the bull and lion, the gazelle and the goat are represented in a naturalistic manner, but ibex may be represented in human activities on seal impressions (Amiet 1980:pl. 37 n°568). Another "personage" that appears to be part of the Proto-Elamite imagery is the "hunter," "walker," or "striding horned demon" illustrated by a copper statuette of an unknown provenience, held by the MET (http://www.metmuseum.org/toah/works-of-art/2007.280). This bearded personage is represented with a hat with horns of ibex, wings of a bird around his shoulders, a belt, and characteristic curved shoes. Similar curved shoes are observed on a seal impression from Susa (Amiet 1980:pl. 35 n°553).
13. Such as the monumental constructions of Tal-i Malyan in the Middle Banesh period, the wall that enclosed this site in the Late Banesh period, and the layout of the houses excavated at Tepe Arisman. W. Sumner (1985:159) noted with the wall of Tal-i Malyan: "(...) we see that a construction crew of 1,000 men could make the bricks and raise the walls in about 140 working days in one summer. (...) it is clear that local authority was sufficient to direct planning, to assert eminent domain over the required land, to procure materials, to mobilize labour, and to oversee construction."
14. These tablets may, however, be Old Babylonian, not Proto-Elamite (C. C. Lamberg-Karlovsky, pers. comm.).
15. One can, however, expect a gradual transition between Early and Late Period IIIa. In detail, a few ceramics that one would assign to Early Period IIIa bear swastika-like motifs, but these vessels are extremely rare in this context, and

the motifs are not designed in the same maneer as those of Late Period IIIa. Also, the exact date of the end of Aliabad-related material is not clearly defined on the Kech-Makran sequence.

16. After Fairservis 1956, 1959.
17. The definition of these styles has been challenged by recent excavations conducted at Sohr Damb/Nal by U. Franke. She found at this site both Togau A–D and Kechi-Beg ceramics in Period I. The scheme presented here seems, however, still roughly valid. U. Franke places Period I between 4000/3800 and 3200 BC, which overlaps the mid-fourth millennium BC (Görsdorf and Franke-Vogt 2007:704).
18. As noted above, Togau ware was found in great quantities at Miri Qalat in Period IIIa. It is also reported from survey collection.
19. U. Franke distinguishes typical Quetta ware as observed at Mehrgarh Period VI and Sohr Damb Period II (a few sherds) from a later style characterized by simple lines and bracket motives found in Mehrgarh Period VII/Nausharo IA–C and Sohr Damb Period III (Franke 2008:660–661), dated to the second quarter of the third millennium BC.
20. V. Sarianidi compared the burials from Mundigak III and those from Turkmenistan in Periods Namazga III and IV.
21. Continuation is attested by manufacture techniques: Vandiver 1995:651; R. P. Wright 1995:666.
22. A recent reappraisal of the ceramic manufacturing techniques from Ulug-Depe shows that rotating devices were used but only for the finishing process (Dupont-Delaleuf 2010).
23. It is, however, clear that the contexts and extraregional comparisons simultaneously helped characterizing the material.
24. The Period IVB assemblage is, nonetheless, only partly described here, as the totality of the materials for this period was not considered. The Period IVB materials found in Phases IVC2–IVB6 contexts included in the present analysis (124 sherds) represent a limited selection of materials of this period recovered from Phases IVC2–IVB6; additional materials were observed in the collection. The types selected here, however, provide information regarding cultural connections and chronology.
25. As noted above, "secondary contexts" correspond to archaeological deposits that were not assigned a phase in the monograph published by D. T. Potts in 2001. As seen hereafter, a large number of them appear connected to Phases IVC2–IVB6.
26. See Van der Leeuw 1976; Rye 1981; Balfet 1991; Courty and Roux 1995; Méry 2000; Bernbeck 2010.
27. Group 1 corresponds to Wentworth scale's category "Very fine sand"; Group 2 corresponds to "Fine sand" and "Medium sand"; Group 3 corresponds to "Coarse sand"; and Group 4 corresponds to "Very coarse sand" and coarser categories of Wentworth's scale.
28. Style refers to R. P. Wright's definition (1984:353–354).
29. When these small finds were not assigned a number, they have been registered with an "ad" meaning "additional" small find, preceding the number (for example: ad-0001).
30. For a full description of these periods, see Lamberg-Karlovsky and Beale 1986.
31. The Trenches B–BW North section was already published (Lamberg-Karlovsky 1970:figs 7, 12; Potts 2001:fig. 3.1; and Magee 2004:fig. 2.1).
32. Ca. 0.50 meter when one considers the height of the building only; ca. 1 meter when Potts's Phases IVC2 to IVB6 are considered.
33. As noted before, the definition of Phase IVC1 made by D. T. Potts is not the same as that offered before by C. C. Lamberg-Karlovsky. Also, while in C. C. Lamberg-Karlovsky's opinion Phase IVC1 is slightly later than Phase IVC2, D. T. Potts envisages it as a much more recent phase.
34. Pit 4 might be the same as Pit 14, and Pit 4 and Pit 9 are noted as dug from Period IVB levels (Lamberg-Karlovsky and Beale 1986:136, 147 fig. 6.26, 149).
35. Evidence from Mahtoutabad tends to show that Uruk-related materials appeared after Aliabad ware.
36. One can notice a mineral-tempered painted ceramic from the ABC Operation of Tal-i Malyan with a 26 cm rim diameter that has a similar profile (Sumner 2003:48–49, fig. 26 b).
37. Concerning the low-sided trays, complete profile corresponds to vessels with a portion preserved from the rim to the base.
38. Although R. J. Matthews has reported a single tray only, and they seem rare at Abu Salabikh.

39. One could add sherds from Susa, Acropole I Level 14A (Le Brun 1971:fig. 65 n°11–12).
40. And, as indicated above, some of the sherds bearing slip and paint only may have been part of jars with appliqué decoration.
41. As suggested by D. S. Whitcomb which he referred to as Proto-Elamite (1971:60).
42. The bowl with a swastika motif from Khurab (Lamberg-Karlovsky and Schmandt-Besserat 1977:fig. 6 n°14) seems more connected to Kech-Makran Period IIIb than to Period IIIa; the swastika is made using lines instead of hatched branches.
43. A small series of sherds discussed below within Groups B–D might also be considered imitations of Group A ceramics.
44. Yahya 0248 was reconstructed with eight sherds from context CW.73.1.5 and two sherds from context CW.73.T1.4.1. The latter context was assigned to Phase IVC2, Area G, while no information was obtained regarding the former.
45. As noted in Chapter 1, the Uruk occupation of Godin Tepe is considered belonging to the very end of the Late Uruk period and included within a transitional phase just prior to the Proto-Elamite period (see also Algaze 2005:57).
46. This ceramic was assigned to Period IVC (Lamberg-Karlovsky 1972:fig. 3F) and then to Period IVB (Lamberg-Karlovsky and Tosi 1973:fig. 126 B).
47. D. T. Potts (2009) provides an updated inventory of the presence of beveled-rim bowls in Iran.
48. See also Lamberg-Karlovsky and Tosi 1973:figs. 124–125 for additional illustrations of copper objects assigned to Period IVC.
49. P. Damerow and R. K. Englund (1989:62 note 167) note that these objects have length and width similar to the inscribed tablets, but not always the same thickness. They were locally made (Lamberg-Karlovsky and Tosi 1989:107).
50. The same parameters have recently been used at Tepe Arisman (Görsdorf 2011).
51. Previously noted as IVB6–5 contaminated (Prickett 1986a:tab. 3.4).
52. However, M. Prickett (1986b:218) noted at the same time that eight scatter sites with ceramics of the previous period – Iblis IV/V – continued "into Yahya Period IVC with a few diagnostic sherds. These scatter sites do not have the large number or full range of Yahya IVC diagnostic ceramics that would indicate a substantial Yahya IVC population."
53. The monochrome ware shares aspects with a ceramic product, Miri ware, dated to the first half of the fourth millennium BC in Kech-Makran (Period II) (see Lamberg-Karlovsky and Beale 1986:88; Lamberg-Karlovsky and Schmandt-Besserat 1977; Mutin 2013).
54. Twenty-one sites with material dating to the second half of the fourth millennium BC are, however, reported in Sajjadi 1987:fig. 12.
55. By "elements" we mean individual parallels of specific material types within a distinctive material culture.
56. This chronological bracket is in southern Mesopotamia mostly posterior to Nippur Levels XVI–XV and Uruk Eanna Levels V–IV in the Late Uruk period, and includes Nippur Levels XIV–XII, Jemdet-Nasr, and Sin Temple Levels II–III in the Jemdet-Nasr period; and Nippur Level XI and Sin Temple Level IV in the early Early Dynastic I (Pittman 1994:208–210).
57. The basin fund in Area B and the drainage system identified across the building complex may indicate that rain water was collected and used in the complex. Water sources in the vicinity of Tepe Yahya were used at that time as mentioned by M. Prickett (see Chapter 7).
58. The amounts of beveled-rim bowl sherds found at the site are not *so* negligible and they seem to have been used as "disposable products."
59. This, however, would mean that if an additional Proto-Elamite occupation occurred after the abandonment of the building (in Phases IVC1–IVB6), it occurred after a gap.
60. It is, however, important to remind that the chronological contemporaneity of the ceramics included in this polity needs to be further demonstrated by the excavation of additional well-preserved stratigraphic contexts.
61. Although there is an important gap in evidence in Afghanistan.
62. Renfrew and Cherry 1986:1; "Peer polity interaction designates the full range of interchanges taking place (including imitation and emulation, competition, warfare, and the exchange of material goods and of information) between

autonomous (i.e. self-governing and in that sense politically independent) socio-political units which are situated beside or close to each other within a single geographical region, or in some cases more widely."

63. M. Rothman and V. Badler (2011:99) consider that because they were found iwth a metal spear and a macehead in room 22, they were probably used as weapons.
64. A certain type of stone found in Period V was thought to have been imported from Oman to Tepe Yahya (Lamberg-Karlovsky and Beale 1986:266). Connections to the Oman Peninsula at Tepe Yahya may be illustrated by the sherds of Ubaid style found in Period VI. Instead of being from Mesopotamia, because of the fact that increasing quantities of Ubaid-related materials are found beyond the Persian Gulf up to the Straits of Hormuz and that Tepe Yahya is located ca. 130 km from the coast, it does not seem unreasonable to consider that these sherds came from the Persian Gulf.

List of References

Abdi, K.

1999 The Beveled-Rim Bowl: Function and Distribution. In *The Iranian World: Essays on Iranian Art and Archaeology presented to Ezat O. Negahban*, edited by A. Alizadeh, Y. Madjidzadeh, and S. M. Shahmirzadi, pp. 64-85. Iran University Press, Tehran.

Alden, J. R.

1979 Regional Economic Organization in Banesh Period Iran. Ph.D. dissertation, Department of Anthropology, University of Michigan.

1982a Trade and Politics in Proto-Elamite Iran. *Current Anthropology* 23(6):613-640.

1982b Marketplace Exchange as Indirect Distribution: An Iranian Example. In *Contexts for Prehistoric Exchange*, edited by J. E. Ericson and T. K. Earle, pp. 83-101. Academic Press, New York.

2003 Excavations at Tal-e Kureh. In *Early urban life in the land of Anshan: Excavations at Tal-e Malyan in the highlands of Iran*, edited by W. M. Sumner, pp. 187-198. Malyan Excavation Reports 3. University Museum Monograph 117. Philadelphia.

2013 The Kur River Basin in the *Proto-Elamite* era - surface survey, settlement patterns, and the appearance of full-time transhuman pastoral nomadism. In *Ancient Iran and its neighbours - Local developments and long-range interactions in the 4th Millennium BC*, edited by C. A. Petrie. British Institute for Persian Studies Archaeological Monographs. Oxbow Books, Oxford.

Alden, J. R., K. Abdi, A. Azadi, G. Beckman, and H. Pittman

2005 Fars Archaeological Project 2004: excavation at Tal-e Malyan. *Iran* 43:39-47.

Algaze, G.

1989 The Uruk Expansion: Cross-cultural Exchange in Early Mesopotamian Civilization. *Current Anthropology* 30(5):571-608.

2005 *The Uruk World System. The Dynamics of Expansion of Early Mesopotamian Civilization, 2nd Edition.* The University of Chicago Press, Chicago.

Alizadeh, A.

2006 *The Origins of State Organizations in Prehistoric Highlands Fars, Southern Iran. Excavations at Tall-e Bakun.* Oriental Institute Publications 128. Oriental Institute of the University of Chicago, Chicago.

Amiet, P.

1979 Les sceaux de Shahr-i Sokhta. In *South Asian Archaeology*, 1975, edited by J. E. van Lohuizen-de Leeuw, pp. 3-6. Brill, Leiden.

1980 *La glyptique mésopotamienne archaïque.* Éditions du CNRS, Paris.

1983 The Archaic Glyptic at Shahr-i Sokhta (Period I). In *Prehistoric Sistan 1*, edited by M. Tosi, pp. 199-210. IsMEO Reports and Memoirs 19(1). Rome.

1993 The Period of Irano-Mesopotamian Contacts 3500-1600 BC. In *Early Mesopotamia and Iran: Contact and Conflict 3500-1600 BC*, edited by J. E. Curtis, pp. 23-30. British Museum Press, London.

Amiet, P., and M. Tosi

1978 Phase 10 at Shahr-i Sokhta. Excavations in square XDV and the late 4th Millennium B.C. assemblage of Sistan. *East and West* 28(1-4):9-31.

Arne, T. J.

1945 *Excavations at Shah Tepe, Iran.* Elanders Boktryckeri Aktiebolag, Stockholm.

Aruz, J.

2002 Power and protection: A Little Proto-Elamite Silver Bull Pendant. In *Leaving no stones unturned: essays on the ancient Near East and Egypt in honor of Donald P. Hansen*, edited by E. Ehrenberg, pp. 1-14. Eisenbrauns, Winona Lake.

Audouze, F., and C. Jarrige

1979 A Third Millennium Pottery-Firing Structure at Mehrgarh and its Economic Implications. In *South Asian Archaeology, 1977*, edited by M. Taddei M., pp. 213-221. Istituto Universitario Orientale, Naples.

Badler, V. R.

2002 A Chronology of Uruk Artifacts from Godin Tepe in Central Western Iran and Implications for the Interrelationships between the Local and Foreign Cultures. In *Artefacts of Complexity: Tracking the Uruk in the Near East*, edited by J. N. Postgate, pp. 79-97. British School of Archaeology in Iraq, Archaeological Reports Volume 5. Aris and Phillips, Warminster.

Balfet, H.

1980 À propos du métier de l'argile: Exemple de dialogue entre ethnologie et archéologie. In *L'archéologie de l'Iraq du début de l'époque néolithique à 333 avant notre ère*, edited by M.-L. Barrelet, pp. 71-82. Éditions du CNRS, Paris.

1991 Chaîne opératoire et organisation sociale du travail: quatre exemples de façonnage de la poterie au Maghreb. In *Observer l'action technique, des chaînes opératoires, pour quoi faire?*, edited by H. Balfet, pp. 87-96. Éditions du CNRS, Paris.

Balfet, H., M.-F. Fauvet-Berthelot, and S. Monzon

1983 *Pour la normalisation de la description des poteries.* Éditions du CNRS, Paris.

Barth, F.

1969 *Ethnic Groups and Boundaries. The social organization of culture difference.* Universitetsforlaget, Oslo.

Beale, T. W.

1978 Bevelled Rim Bowls and Their Implications for Change and Economic Organization in the Later Fourth Millennium B.C. *Journal of Near Eastern Studies* 37(4):289-313.

Beale, T. W., and S. M. Carter

1983 On the Track of the Yahya Large Kuš: Evidence for Architectural Planning in the Period IVC Complex at Tepe Yahya. *Paléorient* 9(1):81-88.

Beaulieu, P. A.

2007 Mesopotamia. In *Ancient Religions*, edited by S. I. Johnson, pp. 165-172. The Belknap Press of Harvard University Press, Cambridge.

Benecke, N.

2011 Faunal remains from Arisman. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 376-382. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

Benoit, A.

2004 Susa. In *Persiens Antike Pracht. Katalog der Ausstellung des Deutschen Bergbau-Museums Bochum vom 28. November bis 29. Mai 2005*, edited by T. Stöllner, R. Slotta, and A. Vatandoust, pp. 178-193. Veröffentlichungen aus dem Deutschen Bergbau-Museum Bochum 128. Deutsches Bergbau-Museum, Bochum.

Bernbeck, R.

2010 The Neolithic pottery. In *The 2003 Excavations at Tol-e Bashi, Iran. Social Life in a Neolithic Village*, edited by S. Pollock, R. Bernbeck, and K. Abdi, pp. 65-151. Archäologie in Iran und Turan 10. Philipp von Zabern, Mainz.

Berthoud, T., R. Besenval, and S. Cleuziou

1976 Recherches sur les Sources du Cuivre dans l'Iran Ancien: Premiers Travaux. *Iran* 14:150-151.

Berthoud, T., S. Cleuziou, L. P. Hurtel, M. Menu, and C. Volfovsky

1982 Cuivres et alliages en Iran, Afghanistan, Oman au cours des IVe et IIIe millénaires. *Paléorient* 8(2):39-54.

Besenval, R.

1992 Recent archaeological surveys in Pakistani Makran. In *South Asian Archaeology, 1989*, edited by C. Jarrige, pp. 25-35. Monographs in World Archaeology 14. Madison, Wisconsin.

1997a The Chronology of Ancient occupation in Makran: Results of the 1994 Season at Miri Qalat, Pakistani Makran. In *South Asian Archaeology, 1995*, edited by B. Allchin and R. Allchin, pp. 199-216. Oxford and IBH, New Delhi.

1997b Entre le Sud-Est iranien et la plaine de l'Indus: le Kech-Makran. Recherches archéologiques sur le peuplement ancien d'une marche des confins indo-iraniens. *Arts Asiatiques* 52:5-36.

2005 Chronology of Protohistoric Kech-Makran. In *South Asian Archaeology, 2001*, edited by C. Jarrige and V. Lefèvre, pp. 1-9. ERC, Paris.

Besenval, R., and A. Isakov

1989 Sarazm et les débuts du peuplement agricole dans la région de Samarkand. *Arts Asiatiques* 44:5-20.

Bibby, T. G.

1966 Arabiens arkæologi. Dansk arkæologisk ekspeditions 11. kampagne, 1965. *Kuml*:75-95.

Biscione, R.

1974 Relative chronology and pottery connections between Shahr-i Sokhta and Mundigak, Eastern Iran. In *Studi di Paletnologia, Paleoantropologia, Paleontologia e Geologia del Quaternario*, pp. 131-145. Memorie dell' Istituto Italiano di Paleontologia Umana 2. Istituto Italiano di Paleontologia Umana, Rome.

1984 Baluchistan presence in the ceramic assemblage of Period I at Shahr-i Sokhta. In *South Asian Archaeology, 1981*, edited by B. Allchin, pp. 69-84. Cambridge University Press, Cambridge.

Biscione, R., S. Salvatori, and M. Tosi

1977 Shahr-i Sokhta: The protohistoric settlement and the chronological sequence. In *La Citta bruciata del deserto salato*, edited by G. Tucci, pp. 77-113. Erizzo, Venice.

Boroffka, N., N. N. Chegini, and H. Parzinger

2011 Excavations at Arisman, Area B. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 28-39. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

Boroffka, N., and H. Parzinger

2011 Sialk III pottery from Area B. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 100-195. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

Buccellati, G.

1990 Salt at the Dawn of History: The Case of the Bevelled-Rim Bowls. In *Resurrecting the Past: A Joint Tribute to Adnan Bounni*, edited by P. Matthiae, M. van Loon, and H. Weiss, pp. 17-40. Uitgaven van het Nederlands Historisch-Archaeologisch Instituut te Istanbul, Leiden.

Buchanan, B.

1967 The Prehistoric Stamp Seal: A Reconsideration of Some Old Excavations. *Journal of the American Oriental Society* 87:525-40.

Burney, C. A.

1961 Excavations at Yanik Tepe. *Iraq* 23(2):138-153.

Burton Brown, T.

1946 *Studies in Third Millennium History*. Luzac, London.

1981 *Barlekin*. Wootton, Woodstock.

Butteilin, P.

2003 *Les temps proto-urbains de Mésopotamie. Contracts et acculturation à l'époque d'Uruk au Moyen-Orient*. CNRS Editions, Paris.

Caldwell, J. R.

1964 Interaction Spheres in Prehistory. In *Hopewellian Studies*, edited by J. R. Caldwell and R. Hall, pp. 134-149. Illinois State Museum Scientific Papers 12. Illinois State Museum Society, Springfield.

1967 *Investigations at Tal-i Iblis*. Illinois State Museum Preliminary Reports 9. Illinois State Museum Society, Springfield.

1968 Pottery and Cultural History on the Iranian Plateau. *Journal of Near Eastern Studies* 27(3):178-183.

Carter, E.

1978 Suse Ville Royale. *Paléorient* 4:197-211.

1979 The Susa Sequence-3000-2000 B.C.: Susa, Ville Royale I. *American Journal of Archaeology* 83(4):451-454.

1980 Excavations in Ville Royale I at Susa: The Third Millennium B.C. Occupation. *Cahiers de la Délégation archéologique française en Iran* 11:11-134.

1984 Archaeology. In *Elam: Surveys of Political History and Archaeology*, edited by E. Carter and M. W. Stolper, pp. 103-313. Near Eastern Studies 25. University of California Press, Berkeley.

Casal, J.-M.

1961 *Fouilles de Mundigak*. Mémoires de la Délégation Archéologique Française en Afghanistan 17. Klincksieck, Paris.

1964 *Fouilles d'Amri. Publication de la Commission des fouilles archéologiques*. Fouilles du Pakistan. Klincksieck, Paris.

1966 Nindowari: a Chalcolithic site in South Baluchistan. *Pakistan Archaeology* 3:10-21.

Chazan, M., and M. Lehner

1990 An Ancient Analogy: Pot Baked Bread in Ancient Egypt and Mesopotamia. *Paléorient* 16:21-35.

Chegini, N. N., H. Fahimi, H., and B. Helwing

2011 Excavations at Arisman, Area C. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 40-68. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

Clastres, P.

1974 *La Société contre l'État. Recherches d'Anthropologie Politique*. Les Éditions de Minuit, Paris.

1987 *Society Against the State. Essays in Political Anthropology.* Zone Books, New York.

Cleuziou, S.

1986 Tureng Tepe and the Burnished Gray Ware. *Oriens Antiquus* 25(3-4):221-256.

Cleuziou, S., and B. Vogt

1985 Tomb A at Hili North (United Arab Emirates) and its Material Connections to Southeast Iran and the Greater Indus Valley. In *South Asian Archaeology, 1983*, edited by J. Schostmans and M. Taddei, pp. 249-277. Istituto Universitario Orientale, Series Minor 23. Naples.

Cortesi, E., M. Tosi, A. Lazzari, and M. Vidale

2008 Cultural relationships beyond the Iranian Plateau: The Helmand Civilization, Baluchistan and the Indus Valley in the 3rd millennium BCE. *Paléorient* 34(2):5-35.

Courty, M. A., and V. Roux

1995 Identification of wheel throwing on the basis of ceramic surface features and microfabrics. *Journal of Archaeological Science* 22:17-50.

Crawford, H. E. W.

1973 Mesopotamia's Invisible Exports in The Third Millennium B.C. *World Archaeology* 5(2):232-241.

Dahl, J.

2002 Proto-Elamite Sign Frequencies. *Cuneiform Digital Library Bulletin* 2002(1).

2005a Complex Graphemes in Proto-Elamite. *Cuneiform Digital Library Journal* 2005(3).

2005b Animal Husbandry in Susa during the Proto-Elamite period. *Studi Micenei ed Egeo-Anatolici* 47:81-134.

2006 Proto-Elamite Sign List (2006, June 28). Available at http://cdli.ucla.edu/tools/cdlifiles/prE_signlist.zip.

2009 Early writing in Iran, A Reappraisal. *Iran* 47:23-31.

Dahl, J., C. A. Petrie, and D. T. Potts

2013 Chronological parameters of the earliest writing system in Iran. In *Ancient Iran and its neighbours - Local developments and long-range interactions in the 4th Millennium BC*, edited by C. A. Petrie. British Institute for Persian Studies Archaeological Monographs. Oxbow Books, Oxford.

Dales, G. F.

1962a Harappan Outposts on the Makran Coast. *Antiquity* 36:86-92.

1962b A Search for Ancient Seaports. *Expedition* 4(2):2-10.

1972 Prehistoric Research in Southern Afghan Seistan. *Afghanistan* 25(4):14-40.

1974 Excavations at Balakot, Pakistan, 1973. *Journal of Field Archaeology* 1(1-2):3-22.

1979 The Balakot Project:Summary of Four Years Excavations in Pakistan. In *South Asian Archaeology, 1977*, edited by M. Taddei M., pp. 241-274. Istituto Universitario Orientale, Naples.

Dales, G. F., and C. P. Lipo

1992 *Explorations on the Makran Coast, Pakistan. A Search for Paradise*. Contributions of the Archaeological Research Facility 50. University of California, Berkeley.

Damerow, P., and R. K. Englund

1989 *The Proto-Elamite Texts from Tepe Yahya*. American School of Prehistoric Research Bulletin 39. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Dani, A. H.

1970 Excavations in the Gomal Valley. *Ancient Pakistan* 5:1-177.

Danti, M. D.

2006 The Sialk regional archaeological survey 2005 Sialk Reconsideration Project. In *The Fishermen of Sialk. Sialk Reconsideration Project, Report 4*, edited by S. M. Shahmirzadi, pp. 67-78. Archaeological Report Monograph Series 7. Tehran.

De Cardi, B.

1965 Excavations and reconnaissance in Kalat, West Pakistan. The prehistoric sequence in the Surab region. *Pakistan Archaeology* 2:86-182.

1970 E*xcavations at Bampur, A third millennium settlement in Persian Baluchistan, 1966*. Anthropological Papers of the American Museum of Natural History 51(3). New York.

1983 *Archaeological Surveys in Baluchistan, 1948 and 1957*. Institute of Archaeology Occasional Publication 8. University of London, London.

Delougaz, P.

1952 *Pottery from the Diyala Region*. Oriental Institute Publications 63. Oriental Institute of the University of Chicago, Chicago.

Delougaz, P., and H. J. Kantor (edited by A. Alizadeh)

1996 *Chogha Mish I. The First Five Seasons of Excavations, 1961-1971*. Oriental Institute Publications 101. Oriental Institute of the University of Chicago, Chicago.

Demoule, J.-P.

1994 La céramique comme marqueur social: variabilité spatiale et chronologique. In T*erre cuite et Société. La céramique, document technique, économique, culturel*, edited by F. Audouze and D. Binder, pp. 473-492. Actes des XIVe rencontres internationales d'archéologie et d'histoire d'Antibes. Éditions APDCA, Juan-les-Pins.

Didier, A.

2007 Archéologie des confins indo-iraniens: Étude de la production céramique du Kech-Makran (Pakistan) dans la première moitié du IIIe millénaire av. J.-C. Ph.D. dissertation, Université de Paris I Panthéon-Sorbonne.

Didier, A., and B. Mutin

2013 La production céramique protohistorique du Makran pakistanais dans la compréhension des relations indo-iraniennes. In *Archéologie française en Asie centrale post-soviétique. Un enjeu sociopolitique et culturel*, edited by J. Bendezu-Sarmiento. Cahiers d'Asie centrale 21-22. Éditions IFEAC-Complexe, Paris.

Didier, A., and S. Méry

2012 Les premières céramiques fines grises d'Asie moyenne aux IVe et IIIe Millénaires av. J.-C. In *Orientalismes. De l'archéologie au musée. Mélanges offerts à Jean-François Jarrige*, edited by V. Lefèvre, pp. 177-192. INDPL 9. Brepols, Turnhout.

Dietler, M., and I. Herbich

1994 Ceramics an Ethnic Identity: Ethnoarchaeological observations on the distribution of pottery styles and the relationship between the social contexts of production and consumption. In *Terre cuite et Société. La céramique, document technique, économique, culturel*, edited by F. Audouze and D. Binder, pp. 459-472. Actes des XIVe rencontres internationales d'archéologie et d'histoire d'Antibes. Éditions APDCA, Juan-les-Pins.

Dittman, R.

1986a Susa in the Proto-Elamite Period and Annotations on the Painted Pottery of Proto-Elamite Khuzestan. In *Gamdat Nasr: Period or Regional Style?*, edited by U. Finkbeiner and W. Röllig, pp. 171-196. Tübinger Atlas des Vorderen Orients Beiheft B62. Dr Ludwig Reichert Verlag, Wiesbaden.

1986b Seals, Sealings, and Tablets: Thoughts on the Changing Pattern of Administrative Control from the Late Uruk to the Proto-Elamite Period at Susa. In *Gamdat Nasr: Period or Regional Style?*, edited by U. Finkbeiner and W. Röllig, pp. 332-366. Tübinger Atlas des Vorderen Orients Beiheft B62. Dr Ludwig Reichert Verlag, Wiesbaden.

Dupont-Delaleuf, A.

2010 Les chaînes opératoires de la céramique d'Ulug-Dépé (Turkmenistan). Du Chalcolithique moyen à la période achéménide. *Les Nouvelles de l'Archéologie* 119:47-51.

Dupree, L.

1963 *Deh Morasi Ghundai: a chalcolithic site in south-central Afghanistan*. Anthropological Papers of the American Museum of Natural History 50(2). New York.

During Casper, E. C. L.

1970 A note on the carved stone vases and incised grayware. In *Excavations at Bampur, A third millennium settlement in Persian Baluchistan*, 1966, edited by B. De Cardi, pp. 319-325. Anthropological Papers of the American Museum of Natural History 51(3). New York.

Dyson, R. H.

1965 Problems in the Relative Chronology of Iran, 6,000-2,000 B.C. In *Chronologies in Old World Archaeology*, edited by R. W. Ehrich, pp. 215-256. University of Chicago Press, Chicago.

1987 The Relative and Absolute Chronology of Hissar II and the Proto-Elamite Horizon of Northern Iran. In *Chronologies du Proche Orient*, edited by A. Aurenche, J. Evin, and F. Hours, pp. 647-478. Bar International Series 379. BAR, Oxford.

2009 Tepe Hissar (Tappa Hesar), prehistoric site located just south of Damgan in northeastern Persia. *Encyclopedia Iranica*, Online Edition, 20 July 2009, available at http://www.iranicaonline.org/articles/tepe-hissar.

Dyson, R. H., and W. C. S. Remsen

1989 Observations on Architecture and Stratigraphy at Tappeh Hesar. In *Tappeh Hesar. Reports on the Restudy Project, 1976*, edited by R. H. Dyson and S. M. Howard, pp. 69-109. Case editrice le lettere, Firenze.

Eltsov, P. A.

2011 Rejecting the State: Reflections on Ancient Indian Thought and the Organization of Harappan Society. In *South Asian Archaeology*, 2007, edited by D. Frenez and M. Tosi, pp. 77-87. Bar International Series 2208. BAR, Oxford.

Englund, R. K.

1998a Elam iii. Proto-Elamite. *Encyclopedia Iranica*, Online Edition, 15 December 1998, available at http://www.iranicaonline.org/articles/elam-iii.

1998b Texts From the Late Uruk Period. In *Mesopotamien 1: Späturuk-Zeit und Frühdynastische Zeit*, edited by J. Bauer, R. K. Englund, and M. Krebernik, pp. 15-233. OBO 160-1. Universitätsverlag and Vandenhoeck & Ruprecht, Freiburg and Göttingen.

2004 The State of Decipherment of Proto-Elamite. In *The First Writing: Script Invention as History and Process*, edited by S. Houston, pp. 100-149. Cambridge University Press, Cambridge.

Englund, R. K., and J.-P. Grégoire

1991 *The proto-cuneiform texts from Jemdet Nasr. 1: copies, transliterations and glossary*. Materialien zu den frühen Schriftzeugnissen des Vorderen Orients 1. Gebr. Mann., Berlin.

Fairservis, W. A.

1952 Preliminary report on the prehistoric archaeology of the Afghan-Baluchi areas. *American Museum novitates* 1587.

1956 Excavations in the Quetta Valley, West Pakistan. *Anthropological Papers of the American Museum of Natural History* 45(2). New York.

1959 Archaeological Surveys in the Zhob and Loralaï Districts, West Pakistan. *Anthropological Papers of the American Museum of Natural History* 47(2). New York.

1961 Archaeological Studies in the Seistan Basin of South-Western Afghanistan and Eastern Iran. *Anthropological Papers of the American Museum of Natural History* 48(1). New York.

1967 The Origin, Character and Decline of an Early Civilization. *American Museum novitates* 2302.

1971 *The Roots of Ancient India*. University of Chicago Press, Chicago. 2nd edition revised 1975.

Forest, J.-D.

1987 Les bevelled rim bowls, nouvelle tentative d'interprétation. *Akkadica* 53:1-24.

1996 *Mésopotamie: L'apparition de l'État, VIIe-IIIe Millénaires*. Paris-Méditerranée, Paris.

Francfort, H.-P. , and X. Tremblay

2010 Marhasi et la Civilisation de l'Oxus. *Iranica Antiqua* 45:51-224.

Franckfort, H.

1936 *Tell Asmar, Khafadje and Khorsabad*. Oriental Institute Communications 16. The University of Chicago Press, Chicago.

Franke, U.

2008 Baluchistan and the Borderlands. *Encyclopedia of Archaeology* 2008(1):651-670.

Franke-Vogt, U.

2000 *The Archaeology of Southeastern Balochistan*. Harappa.com, Online Edition, available at http://www.harappa.com/baluch.

2005a Excavations at Sohr Damb/Nal: Results of the 2002 and 2004 seasons. In *South Asian Archaeology, 2003*, edited by U. Franke-Vogt and H.-J. Weisshaar, pp. 63-76. Forschungen zur Archäologie Außereuropäischer Kulturen 1. Linden Soft, Aachen.

2005b Sohr Damb/Nal, Baluchistan, Pakistan Ergebnisse der Grabungen 2001, 2002 und 2004. *Archäologische Mitteilungen aus Iran und Turan* 35-36:83-141.

2005c Balakot Period I: A Review of its Stratigraphy, Cultural Sequence and Date. In *South Asian Archaeology, 2001*, edited by C. Jarrige and V. Lefèvre, pp. 95-103. ERC, Paris.

Frifelt, K.

1975 On Prehistoric Settlement and Chronology of the Oman Peninsula. *East and West* 25:359-424.

1991 *The Island of Umm an-Nar. The Third Millennium Graves*. Jutland Archaeological Society Publications 26(1). Aarhus, Denmark.

Ghirshman, R.

1935 Rapport préliminaire sur les fouilles de Tépé Sialk, près de Kashan (Iran). *Syria* 16(3):229-246.

1938 *Fouilles de Sialk*. Musée du Louvre, Département des antiquités orientales, Série Archéologique 4. Geuthner, Paris.

Görsdorf, J.

2005 Radiocarbon Dates from Sohr Damb/Nal, Balochistan. In *South Asian Archaeology, 2003*, edited by U. Franke-Vogt and H.-J. Weisshaar, pp. 77-80. Forschungen zur Archäologie Außereuropäischer Kulturen 1. Linden Soft, Aachen.

2011 Radiocarbon datings. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian–German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 370-374. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

Görsdorf, J., and U. Franke-Vogt

2007 Implication of radiocarbon dates from Sohr Damb/Nal, Balochistan. *Radiocarbon* 49(2):703-712.

Goulder, J.

2010 Administrators' bread: an experiment-based re-assessment of the functional and cultural role of the Uruk bevel-rim bowl. *Antiquity* 84:351-362.

Hakemi, A.

1976 Découverte d'une civilisation préhistorique à Shahdad au bord Ouest du Lut, Kerman. In *Memorial Volume of the Sixth International Congress of Iranian Art and Archaeology, Oxford, September 11-16, 1972*, edited by M. Y. Kiani, pp. 131-149. Iranian Center for Archaeological Research, Tehran.

1997 *Shahdad. Archaeological Excavations of a Bronze Age Center in Iran*. Translated by P. Amiet and a postscript by S. Salvatori and M. Tosi. IsMEO Reports and Memoirs 27. Oxford and IBH, Rome.

Hansen, D. P.

1965 The Relative Chronology of Mesopotamia, Part. II. The pottery sequence at Nippur from the Middle Uruk to the end of the Old Babylonian period (3400-1600 B.C.). In *Chronologies in Old World Archaeology*, edited by R.W. Ehrich, pp. 201-13. University of Chicago Press, Chicago.

1970 A Proto-Elamite Silver Figurine in the Metropolitan Museum of Art. *Metropolitan Museum Journal* 3:5-24.

Hardin, M. A.

1970 Design structure and social interaction: archaeological implications of an ethnographic analysis. *American Antiquity* 35(3):332-343.

Hargreaves, H.

1929 *Excavations in Baluchistan 1925, Sampur Mound, Mastung and Sohr Damb, Nal.* Memoirs of the Archaeological Survey of India 35. New Delhi.

Helwing, B.

2004 Tracking the Proto-Elamite on the Central Iranian Plateau. In *The potters of Sialk*, 3, edited by M. S. Shahmirzadi, pp. 45-58. Tehran.

2005 Long-Distance Relations of the Iranian Highland Sites during the Late Chalcolithic Period: New Evidence from the Joint Iranian-German Excavations at Arisman, Prov. Isfahan, Iran. In *South Asian Archaeology, 2003*, edited by U. Franke-Vogt and H.-J. Weisshaar, pp. 171-178. Forschungen zur Archäologie Außereuropäischer Kulturen 1. Linden Soft, Aachen.

2006 The rise and fall of Bronze Age centers around the Central IranianDesert - a comparison of Tappe Hesar II and Arisman. *Archäologische Mitteilungen aus Iran und Turan* 38:35-48.

2011a Proto-Elamite pottery from Areas A, C, D, and E. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 196-253. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

2011b The small finds from Arisman. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 254-327. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

2011c Archaeological comments on the radiocarbon datings. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 374-375. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

2011d Conclusions: The Arisman copper production in a wider context. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 523-531. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

2013 Some thoughts on the mode of culture change in the fourth millennium BC Iranian highlands. In *Ancient Iran and its neighbours - Local developments and long-range interactions in the 4th Millennium BC*, edited by C. A. Petrie. British Institute for Persian Studies Archaeological Monographs. Oxbow Books, Oxford.

Henrickson, R .C.

1997 Economy ii. in the Pre-Achaemenid Period. *Encyclopaedia Iranica*, Online Edition, 15 December 1997, available at http://www.iranicaonline.org/articles/economy-ii.

Heskel, D., and C. C. Lamberg-Karlovsky

1980 An Alternative Sequence for the Development of Metallurgy: Tepe Yahya, Iran. In T*he Coming of the Age of Iron*, edited by T. A. Wartime and J. D. Muhly, pp. 229-266. Yale University Press, New Haven.

1986 Metallurgical technology. In *Excavations at Tepe Yahya, Iran 1967-1975. The Early Periods*, edited by C. C. Lamberg-Karlovsky and T. W. Beale, pp. 207-214. American School of Prehistoric Research Bulletin 38. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Hessari, M.

2011 New Evidence of the Emergence of Comlex Societies Discovered on the Central Iranian Plateau. *Iranian Journal of Archaeological Studies* 1(2):35-48.

Hiebert, F. T.

2002 The Kopet Dag Sequence of Early Villages in Central Asia. *Paléorient* 28(2):25-41.

Isakov, A. I.

1991 *Sarazm*. Donish, Douchanbe.

Isakov, A. I., P. Kohl, C. C. Lamberg-Karlovsky, and R. Maddin

1987 Metallurgical analysis from Sarazm, Tadjikistan SSR. *Archaeometry* 29:90-102.

Isakov, A. I., and B. Lyonnet

1988 Céramiques de Sarazm (Tadjikistan, URSS): problèmes d'échanges et de peuplement à la fin du Chalcolithique et au début de l'Âge du Bronze. *Paléorient* 14(1):31-47.

Jarrige, C.

1987 Die Terrakottafigurinen aus Mehrgarh. In *Vergessene Städte am Indus*, pp. 95-101. Philipp von Zabern, Mainz.

Jarrige, C., and F. Audouze

1980 Étude d'une aire de cuisson de jarres au IIIe millénaire: comparaisons avec les techniques contemporaines de la plaine de Kachi, Baluchistan. In *L'archéologie de l'Iraq du début de l'époque néolithique à 333 avant notre ère*, edited by M.-L. Barrelet, pp. 85-94. Éditions du CNRS, Paris.

Jarrige, C., J.-F. Jarrige, R. H. Meadow, and G. Quivron

1995 *Mehrgarh. Field Reports 1974-1985. From Neolithic times to the Indus Civilization.* Department of Culture and Tourism of Sindh (Pakistan) in Collaboration with the French Ministry of Foreign Affairs, Karachi.

Jarrige, J.-F.

1981 Economy and Society in the Early Chalcolithic/Bronze Age of Baluchistan: New Perspectives from Recent Excavations at Mehrgarh. In *South Asian Archaeology, 1979*, edited by H. Härtel, pp. 93-114. Dietrich Reimer, Berlin.

1987 Une jarre polychrome à tenon perforé de Mundigak. In *Orientalia Iosephi Tucci Memoriae Dicata*, edited by G. Gnoli and L. Lanciotti, pp. 661-666. IsMEO, Rome.

1990 Sédentarité et semi-nomadisme dans la plaine de Kachi du 7ème au 2ème millénaire avant notre ère. In *Nomades et sédentaires en Asie Centrale. Apports de l'archéologie et de l'ethnologie*, edited by H.-P. Francfort, pp. 157-168. Éditions du CNRS, Paris.

Jarrige, J.-F., A. Didier, and G. Quivron

2011a Shahr-i Sokhta and the chronology of the Indo-Iranian regions. *Paléorient* 37(2):7-34.

Jarrige, J.-F., G. Quivron, and C. Jarrige

2011b *Nindowari. Pakistan. The Kulli Culture. Its origins and its relations with the Indus Civilization.* Ginkgo, Paris.

Jarrige, J.-F., M. Santoni, and J.-F. Enault

1979 *Fouilles de Pirak (Volumes 1 and 2).* Publications de la Commission des fouilles archéologiques 2. Diffusion De Boccard, Paris.

Johnson, G. A.

1973 *Local Exchange and Early State Development in Southwestern Iran.* Archaeological Papers 51. University of Michigan, Museum of Anthropology, Ann Arbor.

Karlsbeck, J.

1980 La céramique de série du Djebel Aruda. *Akkadica* 20:1-11.

Kemp, B.J.

1987 *Ancient Egypt: Anatomy of a Civilization.* Routledge and Paul Kegan, London.

Kenoyer, J. M.

2002 *Early Developments of Art, Symbol and Technology in the Indus Valley Tradition.* Harappa.com, Online Edition, available at http://www.harappa.com/indus3/e3.html.

Kohl, P. L.

1975 Carved Chlorite Vessels: A Trade in Finished Commodities in the Mid-Third Millennium B.C. *Expedition* 18(1):18-31.

1977 A Note on Chlorite Artifacts from Shahr-i Sokhta. *East and West* 27(1-4):111-127.

1978 The Balance of Trade in Southwestern Asia in the Mid-Third Millennium B.C. *Current Anthropology* 19(3):463-492.

1979 The "World Economy" of West Asia in the Third Millennium B.C. In *South Asian Archaeology, 1977*, edited by M. Taddei, pp. 55-85. Istituto Universitario Orientale, Naples.

1984 *Central Asia: Palaeolithic beginnings to the Iron Age.* Synthèse 14. ERC, Paris.

1986 The Lands of Dilmun: Changing Cultural and Economic Relations during the Third to Early Second Millennia B.C. In *Bahrain through the Ages: the Archaeology*, edited by S. H. Ali Al Khalifa and M. Rice, pp. 367-375. Routledge and Paul Kegan, London.

1987 The Use and Abuse of World Systems Theory: The Case of the Pristine West Asian State. In *Advances in Archaeological Methods and Theory 11*, edited by M. B. Schiffer, pp. 1-36. Academic Press, San Diego.

2001 Reflections on the Production of Chlorite at Tepe Yahya: 25 years later. In *Excavations at Tepe Yahya, Iran 1967-1975. The Third Millennium*, edited by C. C. Lamberg-Karlovsky and D. T. Potts, pp. 209-230. American School of Prehistoric Research Bulletin 45. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Kramer, C.

1977 Pots and Peoples. In *Mountains and Lowlands: Essays in the Archaeology of Greater Mesopotamia*, edited by L. D. Levine and T. C. Young Jr., pp. 91-112. Bibliotheca Mesopotamica 7. Undena Publications, Malibu.

1985 Ceramic Ethnoarchaeology. *Annual Review of Anthropology* 14:77-102.

Lamberg-Karlovsky, C. C.

1968 Survey and Excavations in the Kirman Area. *Iran* 6:167-168.

1970 *Excavations at Tepe Yahya, Iran, 1967-1969.* American School of Prehistoric Research Bulletin 27. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

1971 The Proto-Elamite Settlement at Tepe Yahya. *Iran* 9:87-96.

1972 Tepe Yahya 1971: Mesopotamia and the Indo-Iranian Borderlands. *Iran* 10:89-100.

1977 Foreign Relations in the Third Millennium at Tepe Yahya. In *Le Plateau iranien et l'Asie Centrale des origines à la conquête islamique*, edited by J. Deshayes, pp. 33-48. Éditions du CNRS, Paris.

1984 An Idea or Pot Luck? In *Frontiers of the Indus Civilization*, edited by B. B. Lal and S. P. Gupta, pp. 347-351. Books and Books, New Delhi.

1986 Third Millennium Structure and Process. From the Euphrates to the Indus and the Oxus to the Indian Ocean. *Oriens Antiquus* 25:189-219.

1988 The "Intercultural Style" Carved vessels. *Iranica Antiqua* 23:45-95.

1989 Introduction. In *The Proto-Elamite Texts from Tepe Yahya*, edited by P. Damerow and R. K. Englund, pp. v-xiv. American School of Prehistoric Research Bulletin 39. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

1996 *Beyond the Tigris and Euphrates: Bronze Age Civilizations*. Beer-Sheva 9. Jerusalem.

2001a Foreword; Afterword: excavations at Tepe Yahya: reconstruction the past. In *Excavations at Tepe Yahya, Iran 1967-1975. The Third Millennium*, edited by C. C. Lamberg-Karlovsky and D. T. Potts, pp. xix-xli, 269-280. American School of Prehistoric Research Bulletin 45. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

2001b Comment. In Intitial Social Complexity in Southwestern Asia: The Mesopotamian Advantage, G. Algaze. *Current Anthropology* 42(2):199-233.

2009 Structure, Agency and Commerce in the Ancient Near East. *Iranica Antiqua* 44:47-88.

Lamberg-Karlovsky, C. C., and T. W. Beale

1986 *Excavations at Tepe Yahya, Iran 1967-1975. The Early Periods*. American School of Prehistoric Research Bulletin 38. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Lamberg-Karlovsky, C. C., and D. T. Potts

2001 *Excavations at Tepe Yahya, Iran 1967-1975*. The Third Millennium. American School of Prehistoric Research Bulletin 45. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Lamberg-Karlovsky, C. C., and D. Schmandt-Besserat

1977 An Evaluation of the Bampur, Khurab and Chah Husseini Collections in the Peabody Museum and Relations with Tepe Yahya. In *Mountains and Lowlands: Essays in the Archaeology of Greater Mesopotamia*, edited by L. Levine and T. C. Young, pp. 113-134. Bibliotheca Mesopotamica 7. Undena Publications, Malibu.

Lamberg-Karlovsky, C. C., and M. Tosi

1973 Shahr-i Sokhta and Tepe Yahya: Tracks on the Earliest History of the Iranian Plateau. *East and West* 23(1-2):21-58.

Law, R.

Indus Google Earth Gazetteer Gaz.08.08.KMZ; available online at https://mywebspace.wisc.edu/rwlaw/.

Lawler, A.

2006 North Versus South, Mesopotamian Style. *Science* 312:1458-1463.

Le Brun, A.

1971 Recherches stratigraphiques à l'Acropole de Suse (1969-1971). *Cahiers de la Délégation Archéologique Française en Iran* 1:163-216.

1978 Suse, chantier Acropole I. *Paléorient* 4:177-192.

1980 Les écuelles grossières: État de la question. In *L'archéologie de l'Iraq du début de l'époque néolithique à 333 avant notre ère*, edited by M.-L. Barrelet, pp. 50-70. Éditions du CNRS, Paris.

Le Brun, A., and F. Vallat

1978 L'origine de l'écriture à Suse. *Cahiers de la Délégation Archéologique Française en Iran* 8:11-59.

Lemonnier, P. (editor)

1993 *Technological Choices: Transformations in Material Cultures since the Neolithic*. Routledge, London.

Lloyd, S., and F. Safar

1943 Tell Uqair: excavations by the Iraq Government Directorate of Antiquities in 1940 and 1941. *Journal of Near Eastern Studies* 2:131-58.

Lyonnet, B.

1996 *Sarazm (Tadjikistan). Céramiques (Chalcolithique et Bronze Ancien).* Mémoires de la Mission Archéologique Française en Asie Centrale 7. Éditions de Boccard, Paris.

Madjidzadeh, Y.

1981 Sialk III and the Pottery Sequence at Tepe Gabristan. *Iran* 19:141-146.

2001 Les fouilles d'Ozbaki (Iran). Campagnes 1998-2000. *Paléorient* 27(1):141-145.

2008 Excavations at Konar Sandal in the Region of Jiroft in the Halil Rud Basin: First Preliminary Report (2002-2008). *Iran* 46:69-103.

Magee, P.

2004 *Excavations at Tepe Yahya, Iran, 1967-1975: The Iron Age Settlement.* American School of Prehistoric Research Bulletin 46. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Marucheck, J. T.

1976 A Survey of Seasonal Occupation Sites in Northern Balucestan. In *Proceedings of the Fourth Annual Symposium on Archaeological Research in Iran*, edited by F. Bagherzadeh, pp. 272-283. Iranian Center for Archaeological Research, Tehran.

Masson, V. M., and V. I. Sarianidi

1969 Afghanistan in the Ancient East. *Afghanistan* 22(2):7-19.

Matthews, R. J.

1990 Excavations at Jemdet Nasr, 1989. *Iraq* 52:25-39.

1992a Defining the Style of the Period: Jemdet Nasr 1926-28. *Iraq* 54:1-34.

1992b Jemdet Nasr: The Site and the Period. *The Biblical Archaeologist* 55(4):196-203.

Matthews, R. J., and H. Fazeli

2004 Copper and Complexity: Iran and Mesopotamia in the Fourth Millennium B.C. *Iran* 42:61-75.

McCown, D.

1942 *The Comparative Stratigraphy of Early Iran.* Studies in Ancient Oriental Civilization 23. Oriental Institute of the University of Chicago, Chicago.

McFarlane, A.

1977 *Reconstructing historical communities.* Cambridge University Press, Cambridge.

McIntosh, J. R.

2005 *Ancient Mesopotamia: New Perspectives*. ABC-CLIO, Santa Barbara.

Meadow, R. H.

1973 A chronology for the Indo-Iranian borderlands and southern Baluchistan 4000-2000 BC. In *Radiocarbon and Indian Archaeology*, edited by D. P. Agrawal and A. Gosh, pp. 190-204. Tata Institute of Fundamental Research, Bombay.

1986 The Geographical and Palaeoenvironmental setting of Tepe Yahya. In *Excavations at Tepe Yahya, Iran 1967-1975. The Early Periods*, edited by C. C. Lamberg-Karlovsky, and T. W. Beale, pp. 21-38. American School of Prehistoric Research Bulletin 38. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Mecquenem, R. de

1943 *Fouilles de Suse, 1933-1939*. Mémoires de la Mission Archéologique de Perse 29:3-161.

Méry, S.

2000 *Les céramiques d'Oman et l'Asie moyenne. Une archéologie des échanges à l'Age du Bronze.* CRA Monographies 23. Éditions du CNRS, Paris.

Méry, S., and G. Schneider

2001 De l'île de Dalma au Ra's al-Jinz: les céramiques mésopotamiennes dans la Péninsule d'Oman aux Ve-IIIe Millénaires. In *Études mésopotamiennes. Recueil de textes offert à Jean-Louis Huot*, edited by C. Breniquet, and C. Kepinski, pp. 363-375. ERC, Paris.

Méry, S., R. Besenval, J. M. Blackman, and A. Didier

2012 The origin of the 3rd millennium BC fine grey wares found in eastern Arabia: new evidence from archaeometry. *Proceedings of the Seminar for Arabian Studies* 42:95-104.

Millard, A. R.

1988 The Bevelled-Rim Bowls: Their Purpose and Significance. *Iraq* 50:49-57.

Mille, B., R. Besenval, and D. Bourgarit

2004 Frühes Giessen in verlorener Form in Baluchistan (Pakistan): das "Leoparden-Gewicht" aus Shahi-Tump. In *Persiens Antike Pracht. Katalog der Ausstellung des Deutschen Bergbau-Museums Bochum vom 28. November bis 29. Mai 2005*, edited by T. Stöllner, R. Slotta, and A. Vatandoust, pp. 274-280. Veröffentlichungen aus dem Deutschen Bergbau-Museum Bochum 128. Deutsches Bergbau-Museum, Bochum.

Miller, A.

1981 Straw Tempered Ware. In A*n Early Town on the Deh Luran Plain: Excavations at Tepe Farukhabad*, edited by H. T. Wright, pp. 126-130. Museum of Anthropology Memoir 13. Ann Arbor.

Miller, N. F., and W. M. Sumner

2004 The Banesh-Kaftari Interface, The View from Operation H5, Malyan. *Iran* 42:77-89.

Miragliuolo, J.

1979 Non-urban sites and mobile settlement patterns: a survey of an unknown corner of Baluchistan. Ph.D. dissertation, The American University, Washington DC.

Miroschedji, P. de

1973 Prospections archéologiques dans les vallées de Fasa et de Darab. In *Proceedings of the First Annual Symposium on Archaeological Research in Iran, 1972*, edited by F. Bagherzadeh, pp. 1-7. Iranian Center for Archaeological Research, Tehran.

1976 Un four de potier du IVe millénaire sur le Tell de l'Apadana. *Cahiers de la Délégation Archéologique Française en Iran* 6:13-45.

Mughal, M. R.

1972 Excavations and Explorations in Pakistan. *Pakistan Archaeology* 8:114-158.

Mutin, B.

2007 Contribution à l'étude du peuplement des confins indo-iraniens au Chalcolithique: Caractérisation de la production céramique des Périodes II et IIIa du Makran pakistanais (4ème millénaire av. J.-C.). Ph.D dissertation, Université de Paris I Panthéon-Sorbonne.

2012a Interactions céramiques en Asie moyenne autour de 3000 av. J.-C.: quel(s) modèle(s)? In *Orientalismes. De l'archéologie au musée. Mélanges offerts à Jean-François Jarrige*, edited by V. Lefèvre, pp. 263-278. INDPL 9. Brepols, Turnhout.

2012b Cultural Dynamics in southern Middle Asia in the fifth and fourth millennia B.C.: A reconstruction based on ceramic traditions. *Paléorient* 38(1-2):161-186.

2013 Ceramic Traditions and Interactions on the Southeastern Iranian Plateau during the fourth Millennium BC. In *Ancient Iran and its neighbours - Local developments and long-range interactions in the 4th Millennium BC*, edited by C.A. Petrie. British Institute for Persian Studies Archaeological Monographs. Oxbow Books, Oxford.

Nicholas, I. M.

1987 The Function of Bevelled-Rim Bowls: A Case of Study at the TUV Mound, Tal-e Malyan, Iran. *Paléorient 13*(2):61-72.

1990 *The Proto-elamite Settlement at TUV. Malyan Excavation Reports 3*. University Museum Monograph 69. Philadelphia.

Nissen, H. J.

1970 Uruk/Warka: Grabung in den Quadraten K/L XII. *Baghdader Mitteilungen* 5:101-191.

1986 The development of writing and of glyptic art. In *Gamdat Nasr: Period or Regional Style?*, edited by U. Finkbeiner and W. Röllig, pp. 316-331. Tübinger Atlas des Vorderen Orients Beiheft B62. Dr Ludwig Reichert Verlag, Wiesbaden.

1987 The chronology of the Proto- and Early historic periods in Mesopotamia and Susiana. In *Chronologies in the Near East. Relative Chronologies and Absolute Chronology 16,000-4,000 BP*, edited by O. Aurenche, J. Evin, and F. Hours, pp. 607-614. Bar International Series 379. BAR, Oxford.

Oates, J.

1985 Tell Brak: Uruk Pottery from the 1984 Season. *Iraq* 47:175-186.

1986 Tell Brak: The Uruk/Early Dynastic Sequence. In *Gamdat Nasr: Period or Regional Style?*, edited by U. Finkbeiner and W. Röllig, pp. 245-273. Tübinger Atlas des Vorderen Orients Beiheft B62. Dr Ludwig Reichert Verlag, Wiesbaden.

Palumbi, G.

2008 *The Red and Black. Social and Cultural Interaction between the Upper Euphrates and the Southern Caucasus. Communities in the Fourth and Third Millennium BC*. Studi di Prehistoria Orientale (SPO) 2. Rome.

Parpola, A.

2011 Motifs of early Iranian, Mesopotamian and Harappan art (and script) reflecting contacts and ideology. In *Cultural Relations between the Indus and the Iranian Plateau during the Third Millennium BCE*, edited by T. Osada and M. Witzel, pp. 271-357. Harvard Oriental Series, Opera Minora. Department of South Asian Studies, Harvard University, Cambridge.

Pernicka, E., M. Momenzadeh, A. Vatandoust, K. Adam, M. Böhme, Z. Hezarkhani, N. Nezafati, M. Schreiner, and B. Winterholler

2011 Archaeometallurgical research on the western Central Iranian Plateau. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 633-687. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

Petrie, C. A.

2013a Ancient Iran and its neighbours: The state of play. In *Ancient Iran and Its Neighbours - Local Developments and Long-Range Interactions in the 4th Millennium BC*, edited by C. A. Petrie. British Institute for Persian Studies Archaeological Monographs. Oxbow Books, Oxford.

2013b Iran and Uruk Mesopotamia: Chronologies and connections in the 4th millenium BC. In *Preludes to Urbanism: Studies in the Late Chalcolithic of Meopotamia in Honour of Joan Oates*, edited by A. McMahon, H. Crawford, and J. N. Postgate. McDonald Institute Monographs, Cambridge.

Petrie, C. A., A. A. Chaverdi, and M. Seyedin

2005 From Anshan to Dilmun and Magan: The spatial and temporal distribution of Kaftari and Kaftari-related ceramic vessels. *Iran* 43:49-86.

Piggott, S.

1947 A New Prehistoric Ceramic from Baluchistan. *Ancient India* 3:131-142.

1950 *Prehistoric India*. Penguin Books, Baltimore.

Piperno, M.

1973 The Lithic Industry of Tepe Yahya: A Preliminary Typological Analysis. *East and West* 23(1-2):59-74.

Piperno, M., and S. Salvatori

2007 *The Shahr-i Sokhta Graveyard (Sistan, Iran). Excavation Campaigns 1972-1978*. IsIAO Reports and Memoirs New Series 6. Rome.

Pittman, H.

1994 *The Glazed Steatite Glyptic Style: The Structure and Function of an Image System*. Berliner Beiträge zum Vorderen Orient 16. Dietrich Reimer Verlag, Berlin.

2001 Glyptic Art of Period IV. In *Excavations at Tepe Yahya, Iran 1967-1975. The Third Millennium*, edited by C. C. Lamberg-Karlovsky and D. T. Potts, pp. 231-268. American School of Prehistoric Research Bulletin 45. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

2008 Glyptic Art. In *Excavations at Konar Sandal in the Region of Jiroft in the Halil Rud Basin: First Preliminary Report (2002-2008)*, Madjidzadeh, Y. *Iran* 46:69-103

Plog, S.

1980 *Stylistic variation in Prehistoric Ceramics: Design Analysis in the American Southwest*. Cambridge University Press, New York.

Pollock, S.

1990 Political economy as viewed from the garbage dump: Jemdet Nasr occupation at the Uruk Mound, Abu Salabikh. *Paléorient* 16:57-75.

Pongratz-Leisten, B.

1988 Keramik der frühdynastischen Zeit aus den Grabungen in Uruk-Warka. *Baghdader Mitteilungen* 19:177-319.

Porada, E.

1950 A Leonine Figure of the Protoliterate Period of Mesopotamia. *Journal of the American Oriental Society* 70(4):223-226.

Possehl, G. L.

1986 *Kulli. An Exploration of Ancient Civilization in Asia*. Carolina Academic Press, Durham, NC.

2002 *The Indus Civilization: A Contemporary Perspective*. AltaMira, Walnut Creek.

2007 The Middle Asian Interaction Sphere. Trade and Contact in the 3rd Millennium BC. *Expedition* 49(1):40-42.

Potts, D. T.

1980 Tradition and Transformation: Tepe Yahya and the Iranian Plateau during the Third Millennium B.C. Ph.D. dissertation, Department of Anthropology, Harvard University.

1999 *The Archaeology of Elam: Formation and Transformation of an Ancient Iranian State.* Cambridge University Press, Cambridge.

2001 Introduction; Phase IVC2; Phase IVC1; Phase IVB6; Phase IVB5; Phases IVB4, IVB3, and IVB2; Phase IVB1; Context BW.69.T5.5-7; Situating Tepe Yahya in time and space; Appendices A, B, C, D, and E. In *Excavations at Tepe Yahya, Iran 1967-1975. The Third Millennium*, edited by C. C. Lamberg-Karlovsky, and D. T. Potts, pp. xlv, 1-207. American School of Prehistoric Research Bulletin 45. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

2009 Bevel-rim bowls and bakeries evidence and explanations from Iran and the Indo-Iranian Borderlands. *Journal of Cuneiform Studies* 61:1-23.

2012 *A Companion to the Archaeology of the Ancient Near East.* Blackwell Publishing.

Potts, D. T., and K. Roustaei (editors)

2006 *The Mamasani Archaeological Project Stage One. A report on the first two seasons of the ICAR - University of Sydney expedition to the Mamasani District, Fars Province, Iran.* Archaeological Report Monograph Series 10. Iranian Center for Archaeological Research, Tehran.

Prickett, M. E.

1986a Man, Land and Ware: Settlement Distribution and the Development of Irrigation Agriculture in the Upper Rud-i Gushk Drainage, Southeastern-Iran. Ph.D. dissertation, Department of Anthropology, Harvard University.

1986b Settlement during the Early Periods. In *Excavations at Tepe Yahya, Iran 1967-1975. The Early Periods*, edited by C. C. Lamberg-Karlovsky, and T. W. Beale, pp. 215-246. American School of Prehistoric Research Bulletin 38. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Quivron, G.

1980 Les marques incisées sur les poteries de Mehrgarh au Baluchistan, du milieu du 4ème millénaire à la première moitié du 3ème millénaire. *Paléorient* 6:269-280.

Reindell, I., and J. Riederer

1978 Infrarotspektralanalytische Untersuchungen von Farberden aus persischen Ausgrabungen. *Berliner Beiträge zur Archäometrie* 3:123-134.

Renfrew, C., and J. F. Cherry

1986 *Peer Polity Interaction and Socio-Political Change.* Cambridge University Press, Cambridge.

Rothman, M. S.

2003 Ripples in the Stream: Transcaucasia-Anatolian Interaction in the Murat/Euphrates Basin at the Beginning of the Third Millennium BC. In *Archeology in the Borderlands. Investigations in Caucasia and Beyond*, edited by A. T. Smith and K. S. Rubinson, pp. 95-110. Cotsen Institute of Archaeology Monograph 47. University of California, Los Angeles.

Rothman, M. S., and V. Badler

2011 Contact and development in Godin Period VI. In *On the High Road: The History of Godin Tepe, Iran*, edited by H. Gopnik and M. S. Rothman, pp. 67-137. Royal Ontario Museum/Mazda Press, Toronto.

Rye, O. S.

1981 *Pottery Technology: principles and reconstruction*. Manuals on Archaeology 4. Taraxacum, Washington DC.

Safar, M., M. A. Mustafa, and S. Lloyd

1981 *Eridu*. Baghdad Ministry of Culture and Information.

Sahlins, M.

1974 *Stone Age Economics*. Tavistock, London.

Sajjadi, S. M. S.

1987 Prehistoric Settlements in the Bardsir Plain, South-Eastern Iran. *East and West* 37(1-4):11-130.

2005 *Bampur Tepe. The First Season of Excavation at Bampur Tepe*. Archaeological Report Monograph Series 6. Iranian Center for Archaeological Research, Tehran.

Sajjadi, S. M. S., F. Foruzanfar, R. Shirazi, and S. Baghestani

2003 Excavations at Shahr-i Sokhta. First Preliminary Report on the Excavations of the Graveyard, 1997-2000. *Iran* 41:21-97.

Salvatori, S., and M. Tosi

2005 Shahr-i Sokhta Revised Sequence. In *South Asian Archaeology, 2001*, edited by C. Jarrige and V. Lefèvre, pp. 281-292. ERC, Paris.

Salvatori, S., and M. Vidale

1982 A Brief Surface Survey of the Proto-historic Site of Shahdad (Kerman) Iran. *Rivista di Archeologia* 6:5-10.

1997 *Shahr-i Sokhta 1975-1978: Central quarters excavations. Preliminary report*. IsIAO Reports and Memoirs, Serie Minor 1. Rome.

Santoni, M.

1989 Potters and Pottery at Mehrgarh during the 3rd Millennium BC (Periods VI and VII). In *South Asian Archaeology, 1985*, edited by K. Frifelt, and P. Sorensen, pp. 176-185. Curzon Press, London.

Sarianidi, V. I.

1983 The pottery of Shahr-i Sokhta I and its southern Turkmenian connections. In *Prehistoric Sistan 1*, edited by M. Tosi, pp. 183-198. IsMEO Reports and Memoirs 19(1). Rome.

Sarraf, M. R.

1981 *Die Keramik von Tell-i Iblis und Ihre zeitliche und raümliche Beziehungen zu den anderen iranischen und mesopotamischen Kuulturen*. Archäologische Mitteilungen aus Iran, Ergänzungsband 7. Dietrich ReimerVerlag, Berlin.

Scheil, V.

1905 *Documents en écriture proto-élamite*. Mémoires de la Mission archéologique de Perse 6. Leroux, Paris.

1923 *Textes de comptabilité proto-élamites*. Mémoires de la Mission archéologique de Perse 17. Leroux, Paris.

Schmidt, E. F.

1933 Tepe Hissar Excavations 1931. *The Museum Journal* 23:323-483.

1937 *Excavations at Tepe Hissar, Damghan 1931-1933*. University of Pennsylvania Press for the University Museum, Philadelphia.

Schmidt, K.

1982 Zur Verwendung der mesopotamischen "Glockentöpfe." *Archäologisches Korrespondenzblatt* 12:317-19.

Schwartz, G. M.

1985 The Ninevite V Period and current research. *Paléorient* 11(1):53-70.

1987 The Ninevite V Period and the Development of Complex Society in Northern Mesopotamia. *Paléorient* 13(2):93-100.

Shaffer, J. G.

1971 Preliminary Field Report on Excavations at Said Qala Tepe. *Afghanistan* 24(2-3).

1978 *Prehistoric Baluchistan*. B. R. Publishing Corporation, Delhi.

1992 The Indus Valley, Baluchistan, and Helmand Traditions:Neolithic through Bronze Age. In *Chronologies in Old World Archeology*, edited by R. W. Ehrich, pp. 441-464 (vol. I), 425-446 (vol. II). The University of Chicago Press, Chicago.

Sherratt, A.

1997 *Economy and Society in Prehistoric Europe*. Edinburgh University Press, Edinburgh.

Stein, G.

1999 *Rethinking World Systems: Diasporas, Colonies, and Interaction in Uruk Mesopotamia*. University of Arizona Press, Tucson.

Stein, Sir M. A.

1928 *Innermost Asia. Detailed report of explorations in central Asia, Kan-Su and eastern Iran*. The Clarendon Press, Oxford.

1931 *An Archaeological Tour in Gedrosia*. Memoirs of the Archaeological Survey of India 43. Calcutta.

1936 An Archaeological Tour in the Ancient Persis. *Iraq* 3(2):111-225.

1937 *Archaeological Reconnaissances in the north-Western India and South-Eastern Iran*. McMillan and Co, London.

Steinkeller, P.

1982 The Question of Marhashi: A Contribution to the Historical Geography of Iran in the Third Millennium B.C. *Zeitschrift für Assyriologie* 72:237-265.

Steve, M.-J., and H. Gasche

1990 Le Tell de l'Apadana avant les Achéménides. Contribution à la topographie de Suse. In *Contribution à l'histoire de l'Iran. Mélanges offerts à Jean Perrot*, edited by F. Vallat, pp. 15-60. ERC, Paris.

Stöllner, T., M. Mireskandari, and K. Roustaei

2011 Mining Archaeology in Iran-Investigations at Vesnave. In *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian– German Research Project*, edited by A. Vatandoust, H. Parzinger, and B. Helwing, pp. 535-608. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

Stolper, M. W.

1976 Preliminary Report on Texts from Tal-e Malyan,1971-1974. In *Proceedings of the Fourth Annual Symposium on Archaeological Research in Iran*, edited by F. Bagherzadeh, pp. 89-100. Iranian Center for Archaeological Research, Tehran.

Stronach, D.

1972 Yarim Tepe In *Excavations in Iran: the British Contribution*, edited by P. R. S. Moorey, pp. 21-23. Organizing Committee of the Sixth International Congress of Iranian Art and Archaeology, Oxford.

Sumner, W. M.

1974 Excavations at Tall-i Malyan, 1971-72. *Iran* 12:155-180.

1976 Excavations at Tall-i Malyan (Anshan) 1974. *Iran* 14:103-115.

1977 Tal-e Malyan (Anshan). *Iran* 15:177-179.

1986 Proto-Elamite Civilization in Fars. In *Gamdat Nasr: Period or Regional Style?*, edited by U. Finkbeiner and W. Röllig, pp. 199-211. Tübinger Atlas des Vorderen Orients Beiheft B62. Dr Ludwig Reichert Verlag, Wiesbaden.

1985 The Proto-Elamite City Wall at Tal-i Malyan. *Iran* 23:153-161.

2003 *Early urban life in the land of Anshan: Excavations at Tal-e Malyan in the Highlands of Iran.* Malyan Excavation Reports 3. University Museum Monograph 117. Philadelphia.

2010 Ceramics vi. Uruk, Proto-Elamite, and Early Bronze Age in Southern Persia. *Encyclopaedia Iranica*, Online Edition, 11 October, 2011, available at http://www.iranicaonline.org/articles/search/page:3/keywords:dyson.

Thornton, C. P.

2009 The Chalcolithic and Early Bronze Age metallurgy of Tepe Hissar, Northeast Iran: A challenge to the "Levantine Paradigm." Ph.D. dissertation, Department of Anthropology, University of Pennsylvania.

Tosi, M.

1969 Excavations at Shahr-i Sokhta. Preliminary Report on the Second Campaign. *East and West* 19(3-4):283-386.

1970 A Tomb from Damin and the Problem of the Bampur Sequence in the Third Millennium B.C. *East and West* 20(1-2):9-50.

1983 *Prehistoric Sistan 1*. IsMEO Reports and Memoirs 19(1). Rome.

1986 The Emerging Picture of Prehistoric Arabia. *Annual Review of Anthropology* 15:461-490.

Tosi, M., and G. M. Bulgarelli

1989 The Stratigraphic Sequence of squares DF 88/89 on South Hill, Tappeh Hesar. In *Tappeh Hesar. Reports on the Restudy Project, 1976*, edited by R. H. Dyson and S. M. Howard, pp. 35-53. Case editrice le lettere, Firenze.

Tylecote, R. F., and H. McKerrell

1986 Note: Examination of copper alloy tools from Tepe Yahya. In *Excavations at Tepe Yahya, Iran 1967-1975. The Early Periods*, edited by C. C. Lamberg-Karlovksy and T. W. Beale, pp.. 213-214. American School of Prehistoric Research Bulletin 38. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Vallat, F.

1978 Le matériel épigraphique des couches 18 à 14 de l'Acropole. *Paléorient* 4:193-195.

1986 The Most Ancient Script of Iran: The Current Situation. *World Archaeology* 17:336-347.

1998 Elam i. The history of Elam. *Encyclopaedia Iranica*, Online Edition, 15 December 1998, available at http://www.iranicaonline.org/articles/elam-i.

2003 La civilisation proto-élamite 3100-2600. *Dossiers d'Archéologie* 287:88-91. Éditions Faton, Dijon.

Van der Leeuw, S. E.

1976 *Studies in the technology of Ancient pottery*. Organization for the advancement of Pure Research, Amsterdam.

Vandiver, P.

1986 The production technology of earthenware ceramics, 4900-2800 B.C. In *Excavations at Tepe Yahya, Iran 1967-1975*. The early periods, edited by C. C. Lamberg-Karlovsky, and T. W. Beale, pp. 91-100. American School of Prehistoric Research Bulletin 38. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

1995 The production technology of early pottery at Mehrgarh. In *Mehrgarh. Field Reports 1974-1985 from Neolithic times to the Indus Civilization*, edited by C. Jarrige, J.-F. Jarrige, R. H. Meadow, and G. Quivron, pp. 648-661. Department of Culture and Tourism of Sindh, Pakistan in Collaboration with the French Ministry of Foreign Affairs, Karachi.

Vatandoust, A., H. Parzinger, and B. Helwing

2011 *Early Mining and Metallurgy on the Central Iranian Plateau. Report on the First Five years of Research of the Joint Iranian – German Research Project*. Archaologie in Iran und Turan 9. Philipp von Zabern, Mainz.

Vidale, M.

2011 A vessel for building another vessel. A technical template of the late 4th millennium BCE in the central-eastern of the Iranian plateau? *Iranian Journal of Archaeological Studies* 1(2):9-16.

Vidale, M., and F. Desset

2013 Mahtoutabad I (Konar Sandal South, Jiroft): Preliminary evidence of occupation of a Halil Rud site in the early fourth millennium BCE. In *Ancient Iran and its neighbours - Local developments and long-range interactions in the 4th Millennium BC*, edited by C. A. Petrie. British Institute for Persian Studies Archaeological Monographs. Oxbow Books, Oxford.

Voigt, M. M.

1987 Relative and Absolute Chronologies for Iran between 6500 and 3500 cal BC. In *Chronologies du Proche Orient*, edited by O. Aurenche, J. Evin, and F. Hours, pp. 615-646. BAR International Series 379. BAR, Oxford.

Voigt, M. M., and R. H. Dyson

1992 The Chronology of Iran, ca. 8000-2000 B.C. In *Chronologies in Old World Archaeology, 3rd Edition*, edited by R.W. Ehrich, pp. 122-178. University of Chicago Press, Chicago.

Weiss, H.

1989 Comment. In The Uruk Expansion, Cross-cultural Exchange in Early Mesopotamian Civilization, Algaze, G. *Current Anthropology* 30(5):597-598.

Weiss, H., and T. C. Young

1975 The Merchants of Susa: Godin V and Plateau-Lowland Relations in the Late Fourth Millennium B.C. *Iran* 13:1-17.

Wells, B. K.

2011 *Epigraphic Approaches to Indus Writing*. American School of Prehistoric Research Monograph Series. Harvard University and Oxbow Books, Oxford, UK and Oakville, CT, USA.

Wheeler, Sir M.

1968 *The Indus Civilization. The Cambridge History of India*, Cambridge University Press, London.

Whitcomb, D. S.

1971 The Proto-Elamite Period at Tall-e Ghazir, Iran. B. A. Thesis, Emory University, Athens, GA.

Wilson, K. L.

1986 Nippur: the definition of a Mesopotamian Gamdat Nasr assemblage. In *Gamdat Nasr period or regional style?*, edited by U. Finkbeiner and W. Röllig, pp. 57-89. Ludwig Reichert, Wiesbaden.

Wobst, H. M.

1977 Stylistic behavior and information exchange. In *Papers for the Director: Research essays in Honor of J. B. Griffin*, edited by C.E. Cleland, pp. 317-342. Anthropology Papers 61. Museum of Anthropology, University of Michigan, Ann Arbor.

Woods, C.

2010 The earliest Mesopotamian Writing. In *Visible Language. Inventions of Writing in the Ancient Middle East and Beyond*, edited by C. Woods, pp. 33-84. Oriental Institute Museum Publications 32. The Oriental Institute of the University of Chicago, Chicago.

Woolley, C. L.

1955 *Ur Excavations IV. The early periods.* British Museum, London.

Wright, H. T.

1987 The Susiana Hinterlands during the Era of Primary State Formation. In *The Archaeology of Western Iran*, edited by F. Hole, pp. 141-156. Smithsonian Institution, Washington, D.C.

2001 Cultural action in the Uruk world. In *Uruk Mesopotamia and Its Neighbours: Cross Cultural Interaction and Its Consequences in the Era of State Formation*, edited by M. S. Rothman, pp. 123-147. School of American Rsearch Advanced Seminar Series, Santa Fe.

Wright, H. T., and G. A. Johnson

1985 Population, Exchange, and Early State Formation in Southwestern Iran. *American Anthropologist* 77:266-289.

Wright, H. T., and E. S. A. Rupley

2001 Calibrated radiocarbon age determinations of Uruk-related assemblages. In *Uruk Mesopotamia and its neighbors: Cross-Cultural Interaction and its Consequences in the Era of State Formation*, edited by M. S. Rothman, pp. 85-122. School of American Research Advanced Seminar Series, Santa Fe.

Wright, R.

2000 *Nonzero: The Logic of Human Destiny*. Pantheon Books, New York.

Wright, R. P.

1984 Technology, Style and Craft Specialization: Spheres of Interaction and Exchange in the Indo-Iranian Borderlands, Third Millennium B.C. Ph.D. dissertation, Department of Anthropology, Harvard University.

1989 New tracks on ancient frontiers: ceramic technology on the Indo-Iranian Borderlands. In *Archaeological Thought in America*, edited by C. C. Lamberg-Karlovsky, pp. 268-279. Cambridge University Press, Cambridge.

1995 Fine ware traditions at Mehrgarh. In *Mehrgarh. Field Reports 1974-1985 from Neolithic times to the Indus Civilization*, edited by C. Jarrige, J.-F. Jarrige, R. H. Meadow, and G. Quivron, pp. 662-671. Department of Culture and Tourism of Sindh, Pakistan in Collaboration with the French Ministry of Foreign Affairs, Karachi.

2002 Revisiting Interaction Spheres - Social Boundaries and Technologies on Inner and Outermost Frontiers. *Iranica Antiqua* 37:403-417.

Wulsin, F. R.

1932 Excavations at Tureng Tepe near Asterabad. *Supplement to the Bulletin of the American Institute for Persian Art and Archaeology* 2(1). Philadelphia.

Young, T. C.

1969 *Excavations at Godin Tepe: First Progress Report.* Occasional Paper 17. Royal Ontario Museum of Art and Archaeology, Toronto.

1975 Kangavar Valley survey. *Iran* 13:191-193.

Young, T. C., and L. Levine

1974 *Excavations of the Godin Project: Second Progress Report.* Royal Ontario Museum Art and Archaeology Occasional Paper 26. Royal Ontario Museum, Toronto.

Catalogs

A. Catalog of the ceramics illustrated

Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.1									
3.1:1	0262	"Sec. cont."	CW	1973	1	8		Beveled-rim bowl	Buff/brown light-red
3.1:2	0263	"Sec. cont."	CW	1973	1	8		Beveled-rim bowl	Buff/brown light red
3.1:3	0100	Phase IVB6	B	1970		18		Beveled-rim bowl	Brown light-red
3.1:4	0226	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff-Brown light-red
3.1:5	0440	Phase IVB6	A	1975		10		Beveled-rim bowl	Buff
3.1:6	0211	"Sec. cont."	CW	1973		7		Beveled-rim bowl	Buff
3.1:7	0229	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff
3.1:8	0241	Phase IVC2	CW	1973		5		Beveled-rim bowl	Buff
3.1:9	0230	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff
3.1:10	0772	Phase IVC1	BW/CW	1971		6	1	Beveled-rim bowl	Buff/brown light-red
Figure 3.2									
3.2 Up	0031	Phase IVC1	B	1970		20		Beveled-rim bowl	Buff-Brown light-red
3.2 Low	0229	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff
Figure 3.3									
3.3:1	0175	"Sec. cont."	B-BW	1971		7		Beveled-rim bowl	Brown light-red/dark buff
3.3:2	0406	Phase IVC2	A	1975	7	11	3	Beveled-rim bowl	Buff
3.3:3	0230	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff
3.3:4	0229	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff
3.3:5	0204	"Sec. cont."	CW	1973	1	8		Beveled-rim bowl	Buff
3.3:6	0306	Phase IVC1	A	1975		11		Beveled-rim bowl	Buff/brown light-red
3.3:7	0309	Phase IVC1	A	1975		11		Beveled-rim bowl	Buff/brown light-red
3.3:8	0411	Phase IVC2	A	1975	7	11	2	Beveled-rim bowl	Buff
3.3:9	0308	Phase IVC1	A	1975		11		Beveled-rim bowl	Buff/brown light-red
3.3:10	0206	"Sec. cont."	CW	1973	1	8		Beveled-rim bowl	Brown light-red
3.3:11	0269	Phase IVC2	CW	1973		2	2	Beveled-rim bowl	Buff
3.3:12	0231	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff/brown light-red
3.3:13	0211	"Sec. cont."	CW	1973		7		Beveled-rim bowl	Buff
3.3:14	0274	"Sec. cont."	CW	1973		7		Beveled-rim bowl	Buff/brown light-red
3.3:15	0226	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff-Brown light-red

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.3:16	0401	"Sec. cont."	A	1975	7	10	5	Beveled-rim bowl	Buff-Brown light-red
3.3:17	0028	Phase IVC2	B	1970		20b		Beveled-rim bowl	Buff-Brown light-red
3.3:18	0100	Phase IVB6	B	1970		18		Beveled-rim bowl	Brown light-red
3.3:19	1273	Phase IVC1	B-C Balk	1971		28		Beveled-rim bowl	Buff
3.3:20	1274	Phase IVB6	A	1975		10b		Beveled-rim bowl	Buff
3.3:21	0203	"Sec. cont."	CW	1973	1	8		Beveled-rim bowl	Buff
3.3:22	0225	"Sec. cont."	CW	1973	1	Surf.		Beveled-rim bowl	Buff-Brown light-red
3.3:23	0031	Phase IVC1	B	1970		20		Beveled-rim bowl	Buff-Brown light-red
3.3:24	0440	Phase IVB6	A	1975		10		Beveled-rim bowl	Buff
3.3:25	0262	"Sec. cont."	CW	1973	1	8		Beveled-rim bowl	Buff/brown light-red
3.3:26	0428	Phase IVB5	A	1975		11	11	Beveled-rim bowl	Brown light-red/buff
3.3:27	0333	Phase IVC2	A	1975		11	7b	Beveled-rim bowl	Brown light-red/buff
3.3:28	0205	"Sec. cont."	CW	1973	1	8		Beveled-rim bowl	Brown light-red
3.3:29	0386	"Sec. cont."	A	1975	8	14		Beveled-rim bowl	Brown light-red/buff
3.3:30	0307	Phase IVC1	A	1975		11		Beveled-rim bowl	Buff/brown light-red
3.3:31	0296	Phase IVC1	A	1975		11		Beveled-rim bowl	Buff/brown light-red
3.3:32	0255	"Sec. cont."	CW	1973		7		Beveled-rim bowl	Buff/brown light-red
3.3:33	0268	Phase IVC2	CW	1973		2	2	Beveled-rim bowl	Buff
Figure 3.5									
3.5:1	0813	Phase IVB6	BM	1971		2	5	Low-sided tray	Buff
3.5:2	0109	"Sec. cont."	B	1971		6		Low-sided tray	Buff
3.5:3	0110	"Sec. cont."	B	1971		6		Low-sided tray	Buff
3.5:4	0937	Phase IVC1	BW/CW	1971		11	5	Low-sided tray	Brown light-red
3.5:5	0505	Phase IVC1	BW	1971	2	7		Low-sided tray	Brown light-red-Buff
3.5:6	0621	Phase IVB6	BW	1971	2	3a		Low-sided tray	Brown light-red
3.5:7	0600	Phase IVC1	BW	1971	2	5	3	Low-sided tray	Buff
3.5:8	0533	Phase IVB6	B	1971		7		Low-sided tray	Brown light-red/buff
3.5:9	0346	Phase IVB6	A	1975		10a		Low-sided tray	Brown light-red/grey

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.6									
3.6	0813	Phase IVB6	BM	1971		2	5	Low-sided tray	Buff
Figure 3.7									
3.7:1	0505	Phase IVC1	BW	1971	2	7		Low-sided tray	Brown light-red-Buff
3.7:2	0427	Phase IVB5	A	1975		11	11	Low-sided tray	Buff
3.7:3	0533	Phase IVB6	B	1971		7		Low-sided tray	Brown light-red/buff
3.7:4	0110	"Sec. cont."	B	1971		6		Low-sided tray	Buff
3.7:5	0937	Phase IVC1	BW/CW	1971		11	5	Low-sided tray	Brown light-red
3.7:6	0336	Phase IVC2	A	1975		11	8	Low-sided tray	Buff/brown light-red
3.7:7	0813	Phase IVB6	BM	1971		2	5	Low-sided tray	Buff
3.7:8	0045	Phase IVB5	B	1970		17, 10.2, 14	(10.2)	Low-sided tray	Buff
3.7:9	0305	Phase IVC1	A	1975		11		Low-sided tray	Buff
3.7:10	1146	Phase IVC2	A	1975		11	3	Low-sided tray	Light brown
3.7:11	0676	"Sec. cont."	BW/CW	1971		12--		Low-sided tray	Buff
3.7:12	0695	Phase IVC1	BW/CW	1971		9	2	Low-sided tray	Buff
3.7:13	0384	"Sec. cont."	A	1975	8	14		Low-sided tray	Buff
3.7:14	0346	Phase IVB6	A	1975		10a		Low-sided tray	Brown light-red/grey
3.7:15	0320	Phase IVC2	A	1975		11	5	Low-sided tray	Buff/brown light-red
3.7:16	0321	Phase IVC2	A	1975		11	5	Low-sided tray	Buff/brown light-red
3.7:17	0537	Phase IVB6	B	1971		7		Low-sided tray	Brown light-red
3.7:18	0600	Phase IVC1	BW	1971	2	5	3	Low-sided tray	Buff
3.7:19	0344	Phase IVB6	A	1975		10a		Low-sided tray	Buff
3.7:20	0299	Phase IVC2	A	1975		11	8	Low-sided tray	Buff
3.7:21	0304	Phase IVC1	A	1975		11		Low-sided tray	Buff
3.7:22	0265	"Sec. cont."	CW	1973		7		Low-sided tray	Brown light-red
3.7:23	1319	Phase IVC1	B	1970		20		Low-sided tray	Buff
3.7:24	0224	"Sec. cont."	CW	1973	1	Surf.		Low-sided tray	Buff
3.7:25	0325	Phase IVC2	A	1975		11	3a	Low-sided tray	Buff
3.7:26	0681	"Sec. cont."	BW/CW	1971		12		Low-sided tray	Brown light-red
3.7:27	0783	Phase IVC2	BW/CW	1971	4	1		Low-sided tray	Buff-Brown light-red
3.7:28	0672	Phase IVC1	BW/CW	1971		7	2	Low-sided tray	Buff

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.7:29	0109	"Sec. cont."	B	1971		6		Low-sided tray	Buff
3.7:30	0621	Phase IVB6	BW	1971	2	3a		Low-sided tray	Brown light-red
3.7:31	0345	Phase IVB6	A	1975		10b		Low-sided tray	Buff
3.7:32	0385	"Sec. cont."	A	1975	8	14		Low-sided tray	Buff
3.7:33	0662	Phase IVC2	BW/CW	1971		11	2	Low-sided tray	Buff/brown light-red
Figure 3.9									
3.9:1	0131	Phase IVC1	B	1971		12		Plain carinated bowl	Brown light-red
3.9:2	0337	Phase IVC2	A	1975		11	8	Plain carinated bowl	Brown light-red; white wash?
3.9:3	0626	Phase IVB6	BW	1971	2	3a		Plain carinated bowl	Brown light-red; red slip, white wash
3.9:4	0319	Phase IVC2	A	1975		11	3	Plain carinated bowl	Brown light-red
3.9:5	0596	Phase IVB6	BW	1971	2	5a		Plain carinated bowl	Brown light-red; red slip
3.9:6	0162	"Sec. cont."	B	1971		Clean.		Plain carinated bowl	Brown light-red
Figure 3.10									
3.10:1	1130	Phase IVC2	A	1975		11	7	Plain carinated bowl	Orange/buff
3.10:2	0131	Phase IVC1	B	1971		12		Plain carinated bowl	Brown light-red
3.10:3	0337	Phase IVC2	A	1975		11	8	Plain carinated bowl	Brown light-red; white wash?
3.10:4	0319	Phase IVC2	A	1975		11	3	Plain carinated bowl	Brown light-red
3.10:5	0162	"Sec. cont."	B	1971		Clean.		Plain carinated bowl	Brown light-red
3.10:6	1385	Phase IVC2	A	1975		11	8	Plain carinated bowl	Buff
3.10:7	1402	Phase IVC1	A	1975		11		Plain carinated bowl	Tan/buff
3.10:8	0626	Phase IVB6	BW	1971	2	3a		Plain carinated bowl	Brown light-red; red slip; white wash
3.10:9	0596	Phase IVB6	BW	1971	2	5a		Plain carinated bowl	Brown light-red; red slip
Figure 3.11									
3.11	0008	Phase IVC1	B	1970		20		Plain bowl	Buff-White
Figure 3.12									
3.12 L	0585	"Sec. cont."	BW	1971		5		Plain Goblet	Buff
3.12 R	0044	Phase IVB6	B	1970		17	2	Plain Goblet	Brown light-red

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.13									
3.13:1	1391	"Sec. cont."						Plain goblet	Buff
3.13:2	0585	"Sec. cont."	BW	1971		5		Plain Goblet	Buff
3.13:3	1390	"Sec. cont."						Plain goblet	Buff
3.13:4	0044	Phase IVB6	B	1970		17	2	Plain Goblet	Brown light-red
3.13:5	1131	Phase IVC2	A	1975		11	7a	Plain goblet	Tan
3.13:6	1392	"Sec. cont."						Plain goblet	Buff
Figure 3.14									
3.14:1	1164	Phase IVC2	A	1975		11	2	Spout	Tan/buff
3.14:2	1158	Phase IVC2	A	1975		11	2a	Spout	Brown; dark brown slip
3.14:3	0196	"Sec. cont."	B			18		Spout	Buff; black paint
3.14:4	0809	Phase IVC2	BM	1971		6		Spout	Brown light-red
3.14:5	0135	Phase IVB6	B	1971		7	4	Spout	Tan
3.14:6	0362	Phase IVC2	A	1975		11	8	Spout	Brown light-red
Figure 3.15									
3.15:1	0809	Phase IVC2	BM	1971		6		Spout	Brown light-red; red slip
3.15:2	0135	Phase IVB6	B	1971		7	4	Spout	Tan
Figure 3.16									
3.16:1	1170	Phase IVC2	B	1971		4	8	PE Decorated Jar	Buff; red-brown slip; white wash; black paint
3.16:2	1169	Phase IVC2	B	1971		4	8	PE Decorated Jar	Buff; brown slip; white wash; black paint
3.16:3	1207	Phase IVB6	BM	1971		2	5	PE Decorated Jar	Buff; buff slip; black and plum paint
3.16:4	1209	Phase IVB6	BW	1971	2	3a		PE Decorated Jar	Red; black paint
3.16:5	1201	Phase IVC1	A	1975		11		PE Decorated Jar	Buff; brown-red wash; black paint
3.16:6	1202	Phase IVC1	A	1975		11		PE Decorated Jar	Buff; light brown wash; black paint
3.16:7	1393	"Sec. cont."	BW		6	Surf.		PE Decorated Jar	Red
3.16:8	1271	"Sec. cont."	BW	1969	5	7		PE Decorated Jar	Red-brown

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.16:9	0627	Phase IVB6	BW	1971	2	3a		PE Decorated Jar	Brown light-red; brown-red slip/wash; black paint
3.16:10	1208	Phase IVB6	BW	1971	2	3a		PE Decorated Jar	Buff; red paint
3.16:11	0010	Phase IVC1	B	1970		20		PE Decorated Jar	Brown light-red; black paint
3.16:12	0949	Phase IVC2	CW	1971	1	S		PE Decorated Jar	Pink
3.16:13	0630	Phase IVB6	BW	1971	2	3a		PE Decorated Jar	Brown light-red; red slip; black and white paint
Figure 3.17									
3.17:1	0102	Phase IVC2	B	1970		20b		PE Decorated Jar	Brown light-red; red paint/wash; black paint
3.17:2	1154	Phase IVC2	A	1975		11	2b	PE Decorated Jar	Brown; yellow/white slip; black paint
3.17:3	0033	Phase IVC2	B	1970		20b		PE Decorated Jar	Brown light-red; red paint/wash; black paint
3.17:4	0185	Phase IVC2	A	1975		11	3a	PE Decorated Jar	Brown light-red; red paint/wash; black paint; white slip/paint
3.17:5	0184	Phase IVC2	A	1975		11	2c	PE Decorated Jar	Brown light-red; red paint/wash; black and white paint
3.17:6	0188	"Sec. cont."	B			1		PE Decorated Jar	Brown light-red/buff; red, black, and white paint
3.17:7	0182	"Sec. cont."	B	1973		2	6	PE Decorated Jar	Pink/brown light-red; red wash; black and white paint
3.17:8	0183	"Sec. cont."	BW	1971		7		PE Decorated Jar	Brown light-red; red wash; black and white paint
3.17:9	0210	"Sec. cont."	CW	1973	1	3		PE Decorated Jar	Buff; black and red paint
Figure 3.18									
3.18	1170	Phase IVC2	B	1971		4	8	PE Decorated Jar	Buff; red-brown slip; white wash; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.19									
3.19:1	0426	Phase IVB6	A	1975		10a		PE Decorated Jar	Red; red-brown wash; black paint
3.19:2	0315	Phase IVC2	A	1975		11	3	PE Decorated Jar	Pink/brown light-red; red-brown wash; black paint
3.19:3	0182	"Sec. cont."	B	1973		2	6	PE Decorated Jar	Pink/brown light-red; red wash; black and white paint
3.19:4	0805	Phase IVC2	BM	1971		3	1	PE Decorated Jar	Red-Grey; black, red, and white paint
3.19:5	0736	Phase IVC2	B	1971		3	1	PE Decorated Jar	Brown light-red, grey, buff; black, red, and white paint
3.19:6	0033	Phase IVC2	B	1970		20b		PE Decorated Jar	Brown light-red; red paint/wash; black paint
3.19:7	0371	Phase IVC2	A	1975		11	2b	PE Decorated Jar	Brown light-red; red paint/wash; black and white paint
3.19:8	0184	Phase IVC2	A	1975		11	2c	PE Decorated Jar	Brown light-red; red paint/wash; black and white paint
3.19:9	0762	"Sec. cont."	BW/CW	1971		7		PE Decorated Jar	Buff; brown paint
3.19:10	0563	"Sec. cont."	BW	1971		7	4	PE Decorated Jar	Brown light-red; red slip; black paint
3.19:11	0769	"Sec. cont."	BW/CW	1971		7	1	PE Decorated Jar	Brown light-red; brown slip; black-brown-red paint
3.19:12	0372	Phase IVC2	A	1975		11	2a	PE Decorated Jar	Pink; white slip; black paint
Figure 3.20									
3.20	0102	Phase IVC2	B	1970		20b		PE Decorated Jar	Brown light-red; red paint/wash; black paint
Figure 3.21									
3.21	0630	Phase IVB6	BW	1971	2	3a		PE Decorated Jar	Brown light-red; red slip; black and white paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.22									
3.22	0010	Phase IVC1	B	1970		20		PE Decorated Jar	Brown light-red; black paint
Figure 3.23									
3.23	0547	Phase IVB6	B	1971		3		PE Decorated Jar	Red; buff slip; brown paint
Figure 3.24									
3.24:1	0949	Phase IVC2	CW	1971	1	S		PE Decorated Jar	Pink
3.24:2	0617	Phase IVB6	BW	1971	2	3a		PE Decorated Jar	Brown light-red; brown-red slip
3.24:3	0627	Phase IVB6	BW	1971	2	3a		PE Decorated Jar	Brown light-red; brown-red slip/wash; black paint
Figure 3.25									
3.25	0606	Phase IVB6	BW	1971	2	2		PE Decorated Jar	Brown light-red; white-yellowish slip; black paint
Figure 3.26									
3.26	0606	Phase IVB6	BW	1971	2	2		PE Decorated Jar	Brown light-red; white-yellowish slip; black paint

Figure 3.28	
3.28:1	Jemdet-Nasr; Matthews 1992a:4:1
3.28:2	Jemdet-Nasr; Matthews 1992a:4:2
3.28:3	Jemdet-Nasr; Matthews 1992a:4:3
3.28:4	Jemdet-Nasr; Matthews 1992a:4:5
3.28:5	Jemdet-Nasr; Matthews 1992a:3:9
3.28:6	Jemdet-Nasr; Matthews 1992a:3:7
3.28:7	Jemdet-Nasr; Matthews 1992a:3:10
3.28:8	Jemdet-Nasr; Matthews 1992a:8:3
3.28:9	Jemdet-Nasr; Matthews 1992a:8:2
3.28:10	Abu Salabikh; Pollock 1990:8
3.28:11	Abu Salabikh; Pollock 1990:8

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.29									
3.29:1	Susa; Le Brun 1978:32:10								
3.29:2	Susa; Le Brun 1971:53:4								
3.29:3	Susa; Le Brun 1971:fig. 51:9								
3.29:4	Susa; Le Brun 1971:fig. 64:8								
Figure 3.30									
3.30:1	Godin Tepe; Badler 2002:fig. 9								
3.30:2	Godin Tepe; Badler 2002:fig. 9								
3.30:3	Godin Tepe; Badler 2002:fig. 12								
3.30:4	Godin Tepe; Badler 2002:fig. 11								
3.30:5	Godin Tepe; Badler 2002:fig. 12								
3.30:6	Godin Tepe; Badler 2002:fig. 17								
3.30:7	Godin Tepe; Badler 2002:fig. 17								
Figure 3.31									
3.31:1	Tal-i Malyan; Nicholas 1990:pl. 17 f								
3.31:2	Tal-i Malyan; Nicholas 1990:pl. 14 a-b								
3.31:3	Tal-i Malyan; Sumner 2003:fig. 25 j								
3.31:4	Tal-i Malyan; Sumner 2003:fig. 25 i								
3.31:5	Tal-i Malyan; Sumner 2003:pl. 18 c								
3.31:6	Tal-i Malyan; Sumner 1974:fig. 5 a								
3.31:7	Tal-i Malyan; Sumner 2003:fig. 28 a								
Figure 3.32									
3.32:1	Tal-i Ghazir; Whitcomb 1971:pl. I C								
3.32:2	Tal-i Ghazir; Whitcomb 1971:pl. I A								
3.32:3	Tal-i Ghazir; Whitcomb 1971:pl. III G								
3.32:4	Tal-i Ghazir; Whitcomb 1971:pl. III F								
3.32:5	Tal-i Ghazir; Whitcomb 1971:pl. I D								

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.33									
3.33:1	Tepe Arisman; Helwing 2011a:21:75								
3.33:2	Tepe Arisman; Helwing 2011a:fig. 21:74								
3.33:3	Tepe Arisman; Helwing 2011a:fig. 14:1								
Figure 3.34									
3.34 L	1128	Phase IVC2	A	1975		11	8	PE with sign	Brown light-red
3.34 R	0742	Phase IVC1	B-C balk	1971		28	1	PE with sign	Brown light-red
Figure 3.35									
3.35	1211	Phase IVB6	B	1970		18		PE with animal	Buff; brown slip
Figure 3.36									
3.36:1	0258	"Sec. cont."	B	1973		1		SEIP Group A	Brown light-red; red paint
3.36:2	0502	Phase IVC2	BW	1971		6		SEIP Group A	Brown light-red/grey; red paint
3.36:3	0030	Phase IVC1	B	1970		20		SEIP Group A	Grey; black and red paint
3.36:4	0557	"Sec. cont."	BW	1971		7	6	SEIP Group A	Grey; black and red paint
3.36:5	0947	"Sec. cont."	CW	1971	1			SEIP Group A	Grey; black paint
3.36:6	0968	"Sec. cont."	C	1968	7	1		SEIP Group A	Grey; black paint
3.36:7	0037	Phase IVB6	B	1970		11		SEIP Group A	Grey; black and red paint
3.36:8	0067	Phase IVB6	B	1971	1	2	1	SEIP Group A	Grey; black and red paint
3.36:9	0703	Phase IVC1	BW/CW	1971		9	2	SEIP Group A	Grey/brown; black-red paint
3.36:10	0313	Phase IVC2	A	1975		11	8	SEIP Group A	Grey; black paint
Figure 3.37									
3.37 L	0502	Phase IVC2	BW	1971		6		SEIP Group A	Brown light-red/grey; red paint
3.37 R	0030	Phase IVC1	B	1970		20		SEIP Group A	Grey; black and red paint
Figure 3.38									
3.38:1	0905	Phase IVB6	B	1970	3	3		SEIP Group A	Buff; black paint
3.38:2	0904	Phase IVC1	B	1971		11		SEIP Group A	Grey; black paint
3.38:3	0167	"Sec. cont."	B-BW	1971		7		SEIP Group A	Grey; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.38:4	0150	"Sec. cont."	B	1971		?		SEIP Group A	Grey; brown paint
3.38:5	0017	Phase IVB6	B	1970		18		SEIP Group A	Grey; black paint
3.38:6	0258	"Sec. cont."	B	1973		1		SEIP Group A	Brown light-red; red paint
3.38:7	0259	"Sec. cont."	B	1973		1		SEIP Group A	Grey; red paint
3.38:8	0947	"Sec. cont."	CW	1971	1			SEIP Group A	Grey; black paint
3.38:9	0539	"Sec. cont."	B	1971		6		SEIP Group A	Grey; black paint
3.38:10	0037	Phase IVB6	B	1970		11		SEIP Group A	Grey; black and red paint
3.38:11	0883	Phase IVC1	B-C balk	1971		28	1	SEIP Group A	Grey/brown light-red; red paint
3.38:12	0502	Phase IVC2	BW	1971		6		SEIP Group A	Brown light-red/grey; red paint
3.38:13	0908	Phase IVC1	BW	1971	1	2	1	SEIP Group A	Buff; black paint
3.38:14	0067	Phase IVB6	B	1971	1	2	1	SEIP Group A	Grey; black and red paint
3.38:15	0875	Phase IVC1	B-C balk	1971		28		SEIP Group A	Grey; black and red paint
3.38:16	1134	Phase IVC2	A	1975		11	3	SEIP Group A	Grey; black paint
3.38:17	0030	Phase IVC1	B	1970		20		SEIP Group A	Grey; black and red paint
3.38:18	0557	"Sec. cont."	BW	1971		7	6	SEIP Group A	Grey; black and red paint
3.38:19	1323	Phase IVC1	B	1970		20		SEIP Group A	Grey; black paint
3.38:20	1097	"Sec. cont."	B	1969	5	3	3	SEIP Group A	Grey; black-red paint
3.38:21	0703	Phase IVC1	BW/CW	1971		9	2	SEIP Group A	Grey/brown; black-red paint
3.38:22	0313	Phase IVC2	A	1975		11	8	SEIP Group A	Grey; black paint
3.38:23	0435	Phase IVC2	A	1975		11	3a	SEIP Group A	Grey; black paint
3.38:24	0525	"Sec. cont."	BW	1971		7		SEIP Group A	Grey; red paint
3.38:25	0860	Phase IVB5	B-BW	1971		1	2	SEIP Group A	Grey; black paint
3.38:26	0419	Phase IVC2	A	1975		11	3	SEIP Group A	Grey; black-red paint
3.38:27	0068	Phase IVB6	B	1971	1	2	1	SEIP Group A	Grey; red paint
3.38:28	0968	"Sec. cont."	C	1968	7	1		SEIP Group A	Grey; black paint

Figure 3.40

3.40:1	Miri Qalat; Besenval 1997a:fig. 16
3.40:2	Miri Qalat; Besenval 1997a:fig. 16
3.40:3	Bampur; De Cardi 1970:fig 22:141
3.40:4	Fanuch; PMAE; author's drawing
3.40:5	Khurab; PMAE; author's drawing

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.40:6	Shahr-i Sokhta; Palazzio Brancaccio, courtesy of M. Tosi								
3.40:7	Kech-Makran; © French Archaeological Mission in Makran								
3.40:8	Miri Qalat; © French Archaeological Mission in Makran								
3.40:9	Kech-Makran; © French Archaeological Mission in Makran								
3.40:10	Shahr-i Sokhta; Piperno and Salvatori 2007:773:8559								
3.40:11	Shahr-i Sokhta; Sajjadi *et al.* 2003:fig. 12:1713.7								
Figure 3.41									
3.41	Shahr-i Sokhta; Palazzio Brancaccio, courtesy of M. Tosi								
Figure 3.42									
3.42:1	0558	Phase IVB6	BW	1971	2	3a		SEIP Gr.A Imit.	Buff; black paint
3.42:2	0107	Phase IVB6	B	1971		4	3	SEIP Gr.A Imit.	Buff; black paint
3.42:3	0673	"Sec. cont."	BW/CW	1971				SEIP Gr.A Imit.	Buff; black paint
3.42:4	0933	"Sec. cont."	BW/CW	1971		7	1	SEIP Gr.A Imit.	Buff; black paint
3.42:5	0747	"Sec. cont."	BW/CW	1971	3	7		SEIP Gr.A Imit.	Buff; black paint
3.42:6	0092	"Sec. cont."	B	1971		15		SEIP Gr.A Imit.	Buff; black paint
3.42:7	0073	Phase IVC2	BW	1971		10		SEIP Gr.A Imit.	Buff; black paint
Figure 3.43									
3.43:1	0233	Phase IVC2	CW	1973		5		SEIP Gr.A Imit.	Brown light-red; black paint
3.43:2	0673	"Sec. cont."	BW/CW	1971				SEIP Gr.A Imit.	Buff; black paint
3.43:3	0558	Phase IVB6	BW	1971	2	3a		SEIP Gr.A Imit.	Buff; black paint
3.43:4	1408	"Sec. cont."	BW		5	10		SEIP Gr.A Imit.	Buff; black paint
3.43:5	0092	"Sec. cont."	B	1971		15		SEIP Gr.A Imit.	Buff; black paint
3.43:6	0747	"Sec. cont."	BW/CW	1971	3	7		SEIP Gr.A Imit.	Buff; black paint
3.43:7	0906	"Sec. cont."	BW/CW	1971		7	1	SEIP Gr.A Imit.	Buff; black paint
3.43:8	0806	Phase IVC2	BM	1971		6		SEIP Gr.A Imit.	Buff; black paint
3.43:9	1410	"Sec. cont."	BW		6	4		SEIP Gr.A Imit.	Buff; brown paint
3.43:10	0246	Phase IVC2	CW	1973		4		SEIP Gr.A Imit.	Brown light-red; black paint
3.43:11	0107	Phase IVB6	B	1971		4	3	SEIP Gr.A Imit.	Buff; black paint
3.43:12	0487	Phase IVC2	BW	1971		8	2	SEIP Gr.A Imit.	Pink/buff; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.43:13	0856	"Sec. cont."	B-BW	1971		2		SEIP Gr.A Imit.	Buff; black paint
3.43:14	0700	Phase IVC1	BW/CW	1971		9	2	SEIP Gr.A Imit.	Buff/brown light-red; black paint
3.43:15	0578	Phase IVC2	BW	1971		6		SEIP Gr.A Imit.	Buff/brown light-red; black paint
3.43:16	0909	"Sec. cont."	B	1973		4		SEIP Gr.A Imit.	Buff; black paint
3.43:17	0147	"Sec. cont."	B	1971		2		SEIP Gr.A Imit.	Buff; black paint
3.43:18	0536	Phase IVB6	B	1971		7	4	SEIP Gr.A Imit.	Cream-Buff; black paint
3.43:19	0073	Phase IVC2	BW	1971		10		SEIP Gr.A Imit.	Buff; black paint
3.43:20	0962	"Sec. cont."	C	1969		5		SEIP Gr.A Imit.	Buff/brown light-red; black paint
3.43:21	0958	"Sec. cont."	C	1969		1		SEIP Gr.A Imit.	Buff/brown light-red; black paint
3.43:22	0326	Phase IVC2	A	1975		11	3a	SEIP Gr.A Imit.	Buff/brown light-red; black paint
Figure 3.44									
3.44:1	0956	"Sec. cont."	C		6	6		SEIP Gr.A Imit.	Pink; black paint
3.44:2	0158	"Sec. cont."	B	1971		2	1	SEIP Gr.A Imit.	Brown light-red
3.44:3	0749	Phase IVC1	BW/CW	1971		7	7	SEIP Gr.A Imit.	Brown light-red; black paint
3.44:4	0734	"Sec. cont."	B-BW	1971		3		SEIP Gr.A Imit.	Brown light-red; black paint
3.44:5	0746	Phase IVC1	BW/CW	1971		7	6,2	SEIP Gr.A Imit.	Brown light-red; black paint
3.44:6	0046	Phase IVB6	B	1970		17, 10.2, 14	10.2	SEIP Gr.A Imit.	Brown light-red/pink; black paint
3.44:7	0755	Phase IVC1	BW/CW	1971		7	2	SEIP Gr.A Imit.	Brown light-red; black paint
Figure 3.45									
3.45	0956	"Sec. cont."	C		6	6		SEIP Gr.A Imit.	Pink; black paint
Figure 3.47									
3.47:1	0801	Phase IVB6	BM	1971		1	1	SEIP Group B1	Red-Brown light-red; black paint
3.47:2	0404	Phase IVC2	A	1975	7	11	3	SEIP Group B1	Red-Brown light-red; black paint
3.47:3	0341	Phase IVB6	A	1975		10a		SEIP Group B1	Buff/brown light-red; black paint
Figure 3.48									
3.48:1	0404	Phase IVC2	A	1975	7	11	3	SEIP Group B1	Red-Brown light-red; black paint
3.48:2	0801	Phase IVB6	BM	1971		1	1	SEIP Group B1	Red-Brown light-red; black paint
3.48:3	0341	Phase IVB6	A	1975		10a		SEIP Group B1	Buff/brown light-red; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.48:4	1411	"Sec. cont."	BW		6	2A		SEIP Group B1	Red; black paint
3.48:5	0711	Phase IVC1	BW/CW	1971		7	7	SEIP Group B1	Buff; black paint
Figure 3.49									
3.49:1	0119	Phase IVC2	B	1971		4	8	SEIP Group B1	Brown light-red/red-pink; black paint
3.49:2	0403	Phase IVC2	A	1975	7	11	3	SEIP Group B1	Pink; black paint
Figure 3.50									
3.50	0119	Phase IVC2	B	1971		4	8	SEIP Group B1	Brown light-red/red-pink; black paint
Figure 3.51									
3.51	0403	Phase IVC2	A	1975	7	11	3	SEIP Group B1	Pink; black paint
Figure 3.52									
3.52:1	0133	Phase IVC1	B	1971		4	8	SEIP Group B2	Buff/pink; black paint
3.52:2	0788	Phase IVB6	BM	1971		2	1	SEIP Group B2	Red; black paint
3.52:3	0593	Phase IVB6	BW	1971	2	4	2	SEIP Group B2	Red; black paint
3.52:4	0072	Phase IVC2	BW	1971		10		SEIP Group B2	Brown light-red; black paint
3.52:5	0750	Phase IVC1	BW/CW	1971		7	2	SEIP Group B2	Brown light-red; black paint
3.52:6	0929	"Sec. cont."	BW	1971		Clean.		SEIP Group B2	Buff-Grey/brown light-red; black paint
3.52:7	0589	Phase IVB6	BW	1971	2	2a		SEIP Group B2	Red; black paint
3.52:8	0232	Phase IVC2	CW	1973		5		SEIP Group B2	Brown light-red; black paint
Figure 3.53									
3.53:1	0127	Phase IVC2	B	1971		13		SEIP Group B2	Buff/brown light-red; black paint
3.53:2	0038	Phase IVB6	B	1970		11		SEIP Group B2	Buff; black paint
3.53:3	1329	Phase IVC1	B	1971		4	9	SEIP Group B2	Buff; black paint
3.53:4	0237	Phase IVC2	CW	1973		5		SEIP Group B2	Buff/brown light-red
3.53:5	0929	"Sec. cont."	BW	1971		Clean.		SEIP Group B2	Buff-Grey/brown light-red/grey; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.53:6	0664	Phase IVC2	BW/CW	1971		11	1	SEIP Group B2	Buff; black paint
3.53:7	0133	Phase IVC1	B	1971		4	8	SEIP Group B2	Buff/pink; black paint
3.53:8	0593	Phase IVB6	BW	1971	2	4	2	SEIP Group B2	Red; black paint
3.53:9	0788	Phase IVB6	BM	1971		2	1	SEIP Group B2	Red; black paint
3.53:10	1412	"Sec. cont."	B-BW	1971		3		SEIP Group B2	Red; black paint
3.53:11	0589	Phase IVB6	BW	1971	2	2a		SEIP Group B2	Red; black paint
3.53:12	0750	Phase IVC1	BW/CW	1971		7	2	SEIP Group B2	Brown light-red; black paint
3.53:13	0232	Phase IVC2	CW	1973		5		SEIP Group B2	Brown light-red; black paint
3.53:14	0506	Phase IVB6	BW	1971	2	5a		SEIP Group B2	Brown light-red; black paint
3.53:15	0072	Phase IVC2	BW	1971		10		SEIP Group B2	Brown light-red; black paint
3.53:16	0704	Phase IVC1	BW/CW	1971		9	2	SEIP Group B2	Red/brown light-red; black paint
3.53:17	0698	Phase IVC1	BW/CW	1971		9	2	SEIP Group B2	Buff-Whitish; black paint
Figure 3.55									
3.55:1	0257	Phase IVC2	CW	1973		2	1	SEIP Group B3	Buff/brown light-red/pink; black paint
3.55:2	0561	"Sec. cont."	BW	1971		7	4	SEIP Group B3	Buff/brown light-red/pink; brown paint
3.55:3	0569	Phase IVC2	BW	1971		6		SEIP Group B3	Buff; brown paint
3.55:4	0977	Phase IVC2	C	1968		4		SEIP Group B3	Buff; black paint
3.55:5	0584	"Sec. cont."	BW	1971		7	6	SEIP Group B3	Buff/brown light-red-Pink; brown paint
3.55:6	0564	"Sec. cont."	BW	1971		7	4	SEIP Group B3	Buff; black paint
3.55:7	0959	"Sec. cont."	C	1969	1	1		SEIP Group B3	Buff; black paint
3.55:8	0942	"Sec. cont."	CW	1971	1	5		SEIP Group B3	Red/brown light-red; black paint
3.55:9	0590	Phase IVB6	BW	1971	2	2a		SEIP Group B3	Brown light-red-Orange; black paint
3.55:10	0011	Phase IVC1	B	1970		20		SEIP Group B3	Brown light-red; black paint
3.55:11	0380	Phase IVB6	A	1975	7	10		SEIP Group B3	Brown light-red; black paint
3.55:12	0646	"Sec. cont."	BW	1971	1	6		SEIP Group B3	Brown light-red; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.56									
3.56:1	1376	Phase IVB6	BW	1971	2	3a		SEIP Group B3	Buff; black paint
3.56:2	0751	Phase IVC1	BW/CW	1971		7	7	SEIP Group B3	Buff/red; black paint
3.56:3	0759	Phase IVC1	BW/CW	1971		7	7	SEIP Group B3	Buff; black paint
3.56:4	0569	Phase IVC2	BW	1971		6		SEIP Group B3	Buff; brown paint
3.56:5	0011	Phase IVC1	B	1970		20		SEIP Group B3	Brown light-red; black paint
3.56:6	1153	Phase IVC2	A	1975		11	2b	SEIP Group B3	Buff; black paint
3.56:7	0564	"Sec. cont."	BW	1971		7	4	SEIP Group B3	Buff; black paint
3.56:8	0977	Phase IVC2	C	1968		4		SEIP Group B3	Buff; black paint
3.56:9	0590	Phase IVB6	BW	1971	2	2a		SEIP Group B3	Brown light-red-Orange; black paint
3.56:10	0646	"Sec. cont."	BW	1971	1	6		SEIP Group B3	Brown light-red; black paint
3.56:11	0177	"Sec. cont."	B-BW	1971		6		SEIP Group B3	Buff; black paint
3.56:12	0959	"Sec. cont."	C	1969	1	1		SEIP Group B3	Buff; black paint
3.56:13	0942	"Sec. cont."	CW	1971	1	5		SEIP Group B3	Red/brown light-red; black paint
3.56:14	0561	"Sec. cont."	BW	1971		7	4	SEIP Group B3	Buff/brown light-red/pink; brown paint
3.56:15	0257	Phase IVC2	CW	1973		2	1	SEIP Group B3	Buff/brown light-red/pink; black paint
3.56:16	1413	"Sec. cont."	BW		5	10		SEIP Group B3	Buff; black paint
3.56:17	0197	"Sec. cont."	B			18		SEIP Group B3	Brown light-red; black paint
3.56:18	0495	Phase IVC2	BW	1971		6		SEIP Group B3	Brown light-red; black paint
3.56:19	0584	"Sec. cont."	BW	1971		7	6	SEIP Group B3	Buff/brown light-red-Pink; brown paint
3.56:20	0380	Phase IVB6	A	1975	7	10		SEIP Group B3	Brown light-red; black paint
Figure 3.58									
3.58:1	0105	Phase IVC1	B	1971		4	10	SEIP Group B4	Brown light-red-Buff; black paint
3.58:2	0009	Phase IVC1	B	1970		20		SEIP Group B4	Brown light-red-Buff; white slip; black paint
3.58:3	0282	Phase IVC2	A	1975		11	3a	SEIP Group B4	Buff/brown light-red/pink; brown paint
3.58:4	0782	Phase IVC1	BW/CW	1971		7	3	SEIP Group B4	Buff; buff/white wash; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.58:5	0140	Phase IVB6	B	1971		4	1	SEIP Group B4	Buff/brown light-red/pink; buff/white wash; black paint
Figure 3.59									
3.59:1	0782	Phase IVC1	BW/CW	1971		7	3	SEIP Group B4	Buff; buff/white wash; black paint
3.59:2	0105	Phase IVC1	B	1971		4	10	SEIP Group B4	Brown light-red-Buff; black paint
3.59:3	0009	Phase IVC1	B	1970		20		SEIP Group B4	Brown light-red-Buff; white slip; black paint
3.59:4	0140	Phase IVB6	B	1971		4	1	SEIP Group B4	Buff/brown light-red/pink; buff/white wash; black paint
3.59:5	0282	Phase IVC2	A	1975		11	3a	SEIP Group B4	Buff; buff/white wash; black paint
3.59:6	0117	Phase IVC1	B	1971		11		SEIP Group B4	Buff; brown paint
Figure 3.60									
3.60:1	0887	Phase IVC1	B-C balk	1971		18		SEIP Group B5	Brown light-red; black paint
3.60:2	0410	Phase IVC1	A	1975	7	11	?/2	SEIP Group B5	Buff; whitish slip; black paint
3.60:3	0701	Phase IVC1	B-C balk	1971		28		SEIP Group B5	Brown light-red; black paint
3.60:4	0200	"Sec. cont."	CW	1973	1	8		SEIP Group B5	Buff; black paint
Figure 3.61									
3.61:1	1414	"Sec. cont."	BW		6	2A		SEIP Group B5	Red; black paint
3.61:2	0701	Phase IVC1	B-C balk	1971		28		SEIP Group B5	Brown light-red; black paint
3.61:3	0887	Phase IVC1	B-C balk	1971		18		SEIP Group B5	Brown light-red; black paint
3.61:4	0410	Phase IVC1	A	1975	7	11	?/2	SEIP Group B5	Buff; whitish slip; black paint
3.61:5	0200	"Sec. cont."	CW	1973	1	8		SEIP Group B5	Buff; black paint
3.61:6	1404	"Sec. cont."	XC	1971	2	5		SEIP Group B5	Buff; black paint
Figure 3.63									
3.63:1	0104	Phase IVC1	B	1971	1	1		SEIP Group B6	Buff, greenish hue; buff slip/wash; brown paint
3.63:2	0103	Phase IVC2	B	1971		4	8	SEIP Group B6	Buff; buff slip/wash; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
33.63:3	0554	"Sec. cont."	BW	1971		7	6	SEIP Group B6	Buff/brown light-red, greenish hue; buff slip/wash; black paint
3.63:4	0221	"Sec. cont."	CW	1973	1	Surf.		SEIP Group B6	Brown light-red-Buff; buff slip/wash; black paint
3.63:5	0483	Phase IVC2	BW	1971		8	2	SEIP Group B6	Buff/brown light-red; black paint
Figure 3.64									
3.64:1	0554	"Sec. cont."	BW	1971		7	6	SEIP Group B6	Buff/brown light-red, greenish hue; buff slip/wash; black paint
3.64:2	0605	Phase IVB6	BW	1971	2	2		SEIP Group B6	Buff/grey; buff slip/wash; black paint
3.64:3	0710	Phase IVC2	BW/CW	1971		11	1	SEIP Group B6	Brown light-red; black paint
3.64:4	0489	Phase IVC2	BW	1971		6		SEIP Group B6	Buff-greenish; black paint
3.64:5	0222	"Sec. cont."	CW	1973	1	Surf.		SEIP Group B6	Brown light-red-Buff, greenish hue; buff slip/wash; black-greenish paint
3.64:6	0104	Phase IVC1	B	1971	1	1		SEIP Group B6	Buff, greenish hue; buff slip/wash; brown paint
3.64:7	0103	Phase IVC2	B	1971		4	8	SEIP Group B6	Buff; buff slip/wash; black paint
3.64:8	0488	Phase IVC2	BW	1971		6		SEIP Group B6	Brown light-red; black paint
3.64:9	0591	Phase IVB6	BW	1971	2	2a		SEIP Group B6	Buff; black paint
3.64:10	0363	Phase IVC2	A	1975		11	8	SEIP Group B6	Buff; black paint
3.64:11	0221	"Sec. cont."	CW	1973	1	Surf.		SEIP Group B6	Brown light-red-Buff; buff slip/wash; black paint
3.64:12	0483	Phase IVC2	BW	1971		8	2	SEIP Group B6	Buff/brown light-red; black paint
Figure 3.65									
3.65	0591	Phase IVB6	BW	1971	2	2a		SEIP Group B6	Buff; black paint
Figure 3.66									
3.66	0817	"Sec. cont."	B-BW	1971		3		SEIP Group B6	Buff/brown light-red; buff slip/wash; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.67									
3.67:1	1416	"Sec. cont."	BW	1971		7	4	SEIP Group B6	Buff; black paint
3.67:2	0817	"Sec. cont."	B-BW	1971		3		SEIP Group B6	Buff/brown light-red; buff slip/wash; black paint
3.67:3	1415	"Sec. cont."	B-BW	1971		3		SEIP Group B6	Buff; black paint
3.67:4	0877	Phase IVC1	B-C balk	1971		28		SEIP Group B6	Buff/brown light-red; black paint
3.67:5	1165	Phase IVC2	A	1975		11	2	SEIP Group B6	Buff; brown paint
Figure 3.68									
3.68	0056	Phase IVB6	B	1970	4	2		SEIP Group B6	Brown light-red; black paint
Figure 3.70									
3.70	0588	Phase IVB6	BW	1971	2	2a		SEIP Group C	Pink/buff; black paint and red paint/wash
	0758	Phase IVC1	BW/CW	1971		7	2	SEIP Group C	Pink/brown light-red; black paint and red paint/wash
Figure 3.71									
3.71:1	1377	Phase IVC1	B	1971		4	10	SEIP Group C	Buff; black and red paint
3.71:2	0559	Phase IVB6	BW	1971	2	2a		SEIP Group C	Buff/brown light-red; black and red paint
3.71:3	0588	Phase IVB6	BW	1971	2	2a		SEIP Group C	Pink/buff; black paint and red paint/wash
3.71:4	0758	Phase IVC1	BW/CW	1971		7	2	SEIP Group C	Pink/brown light-red; black paint and red paint/wash
3.71:5	0686	Phase IVC2	BW/CW	1971		8	1	SEIP Group C	Brown light-red; white paint/wash; black paint and red paint/wash
Figure 3.72									
3.72	Chah Husaini; PMAE; author's drawing								
Figure 3.73									
g. 3-73:1	0790	Phase IVC2	BM	1971		3	1	SEIP Group D	Brown light-red; red slip; black paint
3.73:2	0029	Phase IVC2	B	1970		20b		SEIP Group D	Buff/brown light-red; red slip; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.73:3	0549	Phase IVC2	BM	1971		3	1	SEIP Group D	Brown light-red; red slip; black paint
3.73:4	0804	Phase IVC2	BM	1971		3	1	SEIP Group D	Brown light-red; red slip; black paint
Figure 3.74									
3.74:1	0790	Phase IVC2	BM	1971		3	1	SEIP Group D	Brown light-red; red slip; black paint
3.74:2	0029	Phase IVC2	B	1970		20b		SEIP Group D	Buff/brown light-red; red slip; black paint
3.74:3	0549	Phase IVC2	BM	1971		3	1	SEIP Group D	Brown light-red; red slip; black paint
3.74:4	0804	Phase IVC2	BM	1971		3	1	SEIP Group D	Brown light-red; red slip; black paint
Figure 3.75									
3.75:1	0677	"Sec. cont."	BW/CW	1971		12		Burnished ware	Grey
3.75:2	0002	Phase IVC1	B	1970		20		Burnished ware	Grey
3.75:3	0689	Phase IVC1	BW/CW	1971		9	2	Burnished ware	Grey
3.75:4	0022	Phase IVC2	B-BW	1970	4	3		Burnished ware	Grey
3.75:5	0001	Phase IVC1	B	1970		20		Burnished ware	Grey
3.75:6	0791	Phase IVC1	BM	1971		3		Burnished ware	Grey
3.75:7	0108	Phase IVC2	B	1971		13		Burnished ware	Dark grey
3.75:8	0161	"Sec. cont."	B	1971		?		Burnished ware	Brown light-red/red
3.75:9	0653	Phase IVC2	BW/CW	1971		11	2	Burnished ware	Grey/brown
3.75:10	0004	Phase IVC1	B	1970		20, 18		Burnished ware	Grey; red paint
3.75:11	0013	Phase IVC1	B	1970		20		Burnished ware	Grey
Figure 3.76									
3.76	0108	Phase IVC2	B	1971		13		Burnished ware	Dark grey
Figure 3.77									
3.77:1	0541	Phase IVC1	B-C balk	1971		28	1	Burnished ware	Grey
3.77:2	1334	Phase IVC1	B	1970		20		Burnished ware	Grey

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Group	Description
3.77:3	1132	Phase IVC2	A	1975		11	7	Burnished ware	Grey
3.77:4	0261	"Sec. cont."	CW	1973		1		Burnished ware	Grey/brown light-red
3.77:5	0795	Phase IVB6	BM	1971		1	1	Burnished ware	Buff/brown light-red
3.77:6	1156	Phase IVC2	A	1975		11	2a	Burnished ware	Grey
3.77:7	0470	Phase IVB6	A	1975		10		Burnished ware	Grey
3.77:8	0677	"Sec. cont."	BW/CW	1971		12		Burnished ware	Grey
3.77:9	0974	Phase IVC2	C	1968		4		Burnished ware	Grey
3.77:10	1332	Phase IVC1	B	1971		4	9	Burnished ware	Grey
3.77:11	0088	Phase IVC2	BW	1971		10		Burnished ware	Grey
3.77:12	0656	Phase IVC1	BW/CW	1971		11	4	Burnished ware	Grey
3.77:13	0535	Phase IVC1	B	1971		4	6	Burnished ware	Grey
3.77:14	0532	Phase IVC2	B	1971		7	5	Burnished ware	Grey
3.77:15	0122	Phase IVC1	B	1971		4	9	Burnished ware	Grey
3.77:16	0528	"Sec. cont."	BW	1971		7	4	Burnished ware	Grey
3.77:17	0964	"Sec. cont."	C	1969		5		Burnished ware	Grey
3.77:18	0361	Phase IVC2	A	1975		11	8a	Burnished ware	Brown
3.77:19	0484	Phase IVC2	BW	1971		8	2	Burnished ware	Grey
3.77:20	0527	"Sec. cont."	BW	1971		7	4	Burnished ware	Grey
3.77:21	0022	Phase IVC2	B-BW	1970	4	3		Burnished ware	Grey
3.77:22	0089	Phase IVC2	BW	1971		10		Burnished ware	Grey
3.77:23	0689	Phase IVC1	BW/CW	1971		9	2	Burnished ware	Grey
3.77:24	0260	"Sec. cont."	CW	1973		1		Burnished ware	Grey
3.77:25	0249	"Sec. cont."	CW	1973		1	5	Burnished ware	Grey
Figure 3.78									
3.78:1	0931	Phase IVB6	BW	1971	2	2a		Burnished ware	Grey
3.78:2	0340	Phase IVC2	A	1975		11	9	Burnished ware	Grey/dark buff
3.78:3	0324	Phase IVC2	A	1975		11	3a	Burnished ware	Grey
3.78:4	0002	Phase IVC1	B	1970		20		Burnished ware	Grey
3.78:5	1184	Phase IVC2	BW	1971		6		Burnished ware	Grey
3.78:6	0090	Phase IVC2	BW	1971		10		Burnished ware	Grey

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Group	Description
3.78:7	0005	Phase IVC1	B	1970		20		Burnished ware	Grey
3.78:8	1333	Phase IVC1	B	1970		20		Burnished ware	Black
3.78:9	0331	Phase IVC2	A	1975		11	7b	Burnished ware	Grey
3.78:10	0111	Phase IVC2	B	1971		4	8	Burnished ware	Brown light-red-Red
3.78:11	0890	"Sec. cont."	B-C balk	1971		20		Burnished ware	Grey
3.78:12	0954	Phase IVC2	C	?		4		Burnished ware	Grey
3.78:13	0161	"Sec. cont."	B	1971		?		Burnished ware	Brown light-red-Red
3.78:14	1196	"Sec. cont."	BW	1969	5	6		Burnished ware	Grey
3.78:15	1335	Phase IVC1	B-C Balk	1971		28	1	Burnished ware	Grey
3.78:16	0653	Phase IVC2	BW/CW	1971		11	2	Burnished ware	Grey/brown
3.78:17	1331	Phase IVC1	B-C Balk	1971		25	2	Burnished ware	Black
3.78:18	1105	"Sec. cont."	B	1969	5	1		Burnished ware	Grey
3.78:19	0001	Phase IVC1	B	1970		20		Burnished ware	Grey
Figure 3.79									
3.79:1	0685	"Sec. cont."	BW/CW	1971		8	3a	Burnished ware	Grey
3.79:2	0409	Phase IVC2	A	1975	7	11	2	Burnished ware	Grey
3.79:3	0752	Phase IVC1	BW/CW	1971		7	5	Burnished ware	Grey
3.79:4	0948	"Sec. cont."	CW	1971	1			Burnished ware	Grey
3.79:5	1330	Phase IVC1	A	1975	7	11		Burnished ware	Grey
3.79:6	0791	Phase IVC1	BM	1971		3		Burnished ware	Grey
3.79:7	0108	Phase IVC2	B	1971		13		Burnished ware	Dark grey
3.79:8	0397	"Sec. cont."	A	1975	8	12		Burnished ware	Grey
3.79:9	0383	Phase IVB6	A	1975	7	10		Burnished ware	Red/brown light-red
3.79:10	0342	Phase IVB6	A	1975		10a		Burnished ware	Grey
3.79:11	1147	Phase IVC2	A	1975		11	2b	Burnished ware	Grey
3.79:12	0655	Phase IVC2	BW/CW	1971		11	2	Burnished ware	Grey
Figure 3.80									
3.80:1	0087	Phase IVC2	BW	1971		10		Burnished ware	Grey
3.80:2	0004	Phase IVC1	B	1970		20, 18		Burnished ware	Grey; red paint
3.80:3	0013	Phase IVC1	B	1970		20		Burnished ware	Grey

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.80:4	0335	Phase IVC2	A	1975		11	8	Burnished ware	Grey
3.80:5	0654	Phase IVC1	BW/CW	1971		11	4	Burnished ware	Grey
3.80:6	0659	Phase IVC2	BW/CW	1971		11	2	Burnished ware	Grey
3.80:7	0657	Phase IVC2	BW/CW	1971		11	1	Burnished ware	Grey
3.80:8	0202	"Sec. cont."	CW	1973	1	8		Burnished ware	Grey
3.80:9	0548	Phase IVB6	B	1971		3		Burnished ware	Grey
3.80:10	0486	Phase IVC2	BW	1971		8	2	Burnished ware	Grey/dark brown
Figure 3.81									
3-81:1	0006	Phase IVC1	B	1970		20		Burnished ware	Grey
3.81:2	0658	Phase IVC1	BW/CW	1971		11	4	Burnished ware	Grey/brown
3.81:3	0091	Phase IVC2	BW	1971		10		Burnished ware	Grey
3.81:4	0437	Phase IVC2	A	1975		11	8	Burnished ware	Grey
3.81:5	0436	Phase IVC1	A	1975		11		Burnished ware	Grey
3.81:6	0066	"Sec. cont."	B	1970	1	10		Burnished ware	Grey
3.81:7	0965	"Sec. cont."	C	1969		5		Burnished ware	Grey
3.81:8	0003	Phase IVC2	B	1970		20b		Burnished ware	Grey
3.81:9	0723	Phase IVC1	BM	1971		4		Burnished ware	Grey
3.81:10	0142	Phase IVB6	B	1971		4	3	Burnished ware	Grey
3.81:11	0729	Phase IVC1	BM	1971		4		Burnished ware	Buff/brown light-red
3.81:12	0930	Phase IVB6	BW	1971	2	2a		Burnished ware	Grey
3.81:13	0731	Phase IVC1	B	1971	1	1		Burnished ware	Grey
3.81:14	0412	Phase IVC1	A	1975	7	11		Burnished ware	Grey
3.81:15	0678	"Sec. cont."	BW/CW	1971		12	1	Burnished ware	Grey

Figure 3.83

3.83:1	Tepe Hissar; Dyson and Remsen 1989:27c
3.83:2	Tepe Hissar; Dyson and Remsen 1989:16
3.83:3	Shahr-i Sokhta; Amiet and Tosi 1978:3
3.83:4	Shahr-i Sokhta; Amiet and Tosi 1978:3

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.84									
3.84:1	1395	"Sec. cont."	BW		6	2A		"Face pot"	Buff slip; red paint
3.84:2	1394	"Sec. cont."	BW		6	4	2A	"Face pot"	Black burnished
3.84:3	0407	Phase IVC2	A	1975	7	11	3	"Face pot"	Buff/dark grey burnished
Figure 3.85									
3.85	1210	Phase IVB6	A	1975		10a		Sialk III	Red; buff wash; black paint
Figure 3.86									
3.86 L	1405	Phase IVC2	C	1968	6	6		East Pakistan	Buff; orange-red and black paint
3.86 R	1406	"Sec. cont."	Surface					East Pakistan	Buff; black and red paint
Figure 3.87									
3.87:1	0293	Phase IVC2	A	1975		11	2	Plain ware	Buff
3.87:2	0663	Phase IVC2	BW/CW	1971		11	2	Plain ware	Brown light-red
3.87:3	0327	Phase IVC2	A	1975		11	3a	Plain ware	Brown light-red
3.87:4	0238	Phase IVC2	CW	1973		5		Plain ware	Buff (whitish)
3.87:5	0682	"Sec. cont."	BW/CW	1971		12		Plain ware	Buff/brown light-red
3.87:6	0378	Phase IVC2	A	1975		11	2b	Plain ware	Buff
3.87:7	0303	"Sec. cont."	A	1975		11		Plain ware	Buff
3.87:8	0121	"Sec. cont."	B	1971		4	9	Plain ware	Buff/pink
3.87:9	1141	Phase IVC2	A	1975		11	3	Plain ware	Orange
3.87:10	1125	Phase IVC2	A	1975		11	8	Plain ware	Red-Brown
3.87:11	1161	Phase IVC2	A	1975		11	2	Plain ware	Red-Brown
3.87:12	1183	Phase IVC2	BW	1971		6		Plain ware	Orange-Pink
3.87:13	1144	Phase IVC2	A	1975		11	3a	Plain ware	Yellow-Buff
3.87:14	1168	Phase IVC2	B	1971		9		Plain ware	Orange-Pink
3.87:15	1172	Phase IVC2	B	1973		1	6	Plain ware	Orange
3.87:16	1129	Phase IVC2	A	1975		11	9	Plain ware	Tan
3.87:17	0721	Phase IVC1	BW/CW	1971		9	2	Plain ware	Brown light-red/red

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.88									
3.88:1	1162	Phase IVC2	A	1975		11	2	Plain ware	Orange
3.88:2	0292	Phase IVC2	A	1975		11	5	Plain ware	Buff
3.88:3	0499	Phase IVC2	BW	1971		6		Plain ware	Buff
3.88:4	0012	Phase IVC1	B	1970		20		Plain ware	Red
3.88:5	0707	Phase IVC1	BW/CW	1971		9	2	Plain ware	Buff/brown light-red; white wash
3.88:6	0469	Phase IVB6	A	1975		10		Plain ware	Brown light-red/pinkish
3.88:7	0553	Phase IVC1	B	1971	1	1		Plain ware	Brown light-red
3.88:8	0318	Phase IVC2	A	1975		11	3	Plain ware	Brown light-red
3.88:9	0116	Phase IVC2	B	1971		5	1	Plain ware	Buff-Brown
3.88:10	0016	Phase IVC1	B	1970		20		Plain ware	Buff-Brown light-red
3.88:11	1173	Phase IVC2	B	1971		5	1	Plain ware	Tan
3.88:12	1159	Phase IVC2	A	1975		11	2a	Plain ware	Pinkish-Buff
3.88:13	0784	Phase IVC2	BW/CW	1971	4	1		Plain ware	Brown light-red
3.88:14	0069	Phase IVB6	B	1971	1	2	1	Plain ware	Brown light-red
3.88:15	0347	Phase IVB6	A	1975		10a		Plain ware	Buff
3.88:16	1155	Phase IVC2	A	1975		11	2a	Plain ware	Brown
3.88:17	0551	Phase IVC1	B	1971	2	2		Plain ware	Buff/red
3.88:18	1143	Phase IVC2	A	1975		11	3a	Plain ware	Brown
3.88:19	1123	Phase IVC2	A	1975		11	8	Plain ware	Buff
Figure 3.89									
3.89:1	0059	Phase IVB6	B	1970	4	2		Plain ware	Brown light-red-Buff
3.89:2	0616	Phase IVC1	BW	1971	2	6/4	?/1	Plain ware	Buff
3.89:3	0014	Phase IVC1	B	1970		20		Plain ware	Brown light-red-Buff
3.89:4	0115	Phase IVC2	B	1971		4	8	Plain ware	Brown light-red-Buff
3.89:5	1193	Phase IVC2	BW	1971		6		Plain ware	Buff
3.89:6	0675	"Sec. cont."	BW/CW	1971		12	1	Plain ware	Brown light-red/brown
3.89:7	1127	Phase IVC2	A	1975		11	8	Plain ware	Pink-Buff
3.89:8	0015	Phase IVC1	B	1970		20		Plain ware	Buff-Brown light-red
3.89:9	0113	"Sec. cont."	B	1971		6		Plain ware	Brown light-red-Buff
3.89:10	0322	Phase IVC2	A	1975		11	2a	Plain ware	Dark buff

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.89:11	0413	Phase IVC2	A	1975	7	11	2b	Plain ware	Brown light-red/buff
3.89:12	1126	Phase IVC2	A	1975		11	8	Plain ware	Tan
3.89:13	0615	"Sec. cont."	BW	1971		7	6	Plain ware	Red/buff
3.89:14	0567	"Sec. cont."	BW	1971		7	4	Plain ware	Buff/brown light-red
3.89:15	0120	Phase IVC1	B	1971		4	9	Plain ware	Buff-Brown light-red
3.89:16	1192	Phase IVC2	BW	1971		6		Plain ware	Tan
3.89:17	0329	Phase IVC2	A	1975		11	3b	Plain ware	Brown light-red/black
3.89:18	0552	Phase IVC1	B	1971		4	6	Plain ware	Buff/brown light-red; white wash; red paint?
3.89:19	0498	Phase IVC2	BW	1971		6		Plain ware	Brown light-red
3.89:20	0093	"Sec. cont."	B	1971		15		Plain ware	Brown light-red-Buff
3.89:21	0408	Phase IVC2	A	1975	7	11	3	Plain ware	Brown light-red
3.89:22	1151	Phase IVC2	A	1975		11	2b	Plain ware	Red
3.89:23	0294	Phase IVC2	A	1975		11	2c	Plain ware	Brown light-red
3.89:24	0114	Phase IVC1	B	1971		12		Plain ware	Dark grey
3.89:25	1177	"Sec. cont."	B	1971		4	8	Plain ware	Tan
3.89:26	0613	Phase IVB6	BW	1971	2	1		Plain ware	Red; white wash; red paint
3.89:27	1136	Phase IVC2	A	1975		11	3	Plain ware	Brown
Figure 3.90									
3.90 L	0433	"Sec. cont."	A	1975				Plain ware	Buff
3.90 R	1163	Phase IVC2	A	1975		11	2	Plain ware	Buff
Figure 3.91									
g. 3-91:1	0287	Phase IVC2	A	1975		11	2c	Textile impressed	Brown light-red/buff
3.91:2	0286	Phase IVC2	A	1975		11	2a	Textile impressed	Brown light-red/buff
3.91:3	0708	Phase IVC1	BW/CW	1971		7	3	Textile impressed	Brown light-red/grey
3.91:4	0192	Phase IVC2	A	1975		11	7	Mat impressed	Buff
Figure 3.92									
3.92:1	0939	Phase IVC1	BW/CW	1971		6	1	V Black-on-buff	Buff; black paint
3.92:2	0696	Phase IVC1	BW/CW	1971		9	2	V Black-on-buff	Buff/brown light-red; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.92:3	0494	Phase IVC2	BW	1971		6		V Black-on-buff	Buff/brown light-red; black paint
3.92:4	0803	Phase IVC2	BM	1971		3	4	V Black-on-buff	Buff; black paint
3.92:5	0943	"Sec. cont."	CW	1971	1	S or 5		V Black-on-buff	Buff; black paint
3.92:6	0280	"Sec. cont."	A	1975		8S		V Black-on-buff	Brown light-red/buff; black paint
3.92:7	0773	Phase IVC1	BW/CW	1971		6	1	V Black-on-buff	Buff; black paint
3.92:8	0674	"Sec. cont."		1971				V Black-on-buff	Buff; black paint
3.92:9	0697	Phase IVC1	BW/CW	1971		9	2	V Black-on-buff	Brown light-red; black paint
Figure 3.93									
3.93:1	1194	Phase IVC2	BW	1971		10		V Black-on-buff	Buff; black paint
3.93:2	1195	Phase IVC2	BW	1971		10		V Black-on-buff	Buff; black paint
Figure 3.94									
3.94:1	0936	"Sec. cont."	CW	1971		12	1	V Black-on-red	Red; black paint
3.94:2	0839	"Sec. cont."	B-BW	1971		3		V Black-on-red	Red/brown light-red; black paint
3.94:3	0278	"Sec. cont."	B	1973		1		V Black-on-red	Purple; black paint
3.94:4	0725	"Sec. cont."	B-BW	1971		3		V Black-on-red	Red; black paint
3.94:5	0726	"Sec. cont."	BW	1971		7	6	V Black-on-red	Red; black paint
Figure 3.95									
3.95	0027	Phase IVC2	B	1970		20a	1	Lapui	Red
Figure 3.96									
3.96:1	0441	Phase IVB6	A	1975		10		VA/IVC Transitional	Pink
3.96:2	0148	"Sec. cont."	B	1971		2		VA/IVC Transitional	Pink
Figure 3.97									
3.97	0441	Phase IVB6	A	1975		10		VA/IVC Transitional	Pink
Figure 3.98									
3.98:1	0441	Phase IVB6	A	1975		10		VA/IVC Transitional	Pink
3.98:2	0148	"Sec. cont."	B	1971		2		VA/IVC Transitional	Pink

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 3.99									
3.99:1	0295	Phase IVC2	A	1975		11	3	Slipped painted IVB paint	Brown light-red; red slip; black
3.99:2	0442	Phase IVB6	A	1975		10		Painted IVB	Brown light-red; black paint
3.99:3	0023	Phase IVC1	B	1970		20		Slipped painted IVB	Brown light-red; red slip; black paint
3.99:4	0330	Phase IVC2	A	1975		11	7b	Slipped painted IVB	Brown light-red; red slip; black paint
3.99:5	0368	Phase IVC2	A	1975		11	7a	Slipped painted IVB paint	Grey/brown; brown slip; black
3.99:6	0446	Phase IVB6	A	1975		10		Slipped painted IVB	Dark buff/brown light-red; dark buff slip; black paint
3.99:7	0914	Phase IVC1	B-C balk	1971		28		Painted IVB	Brown light-red; black paint
3.99:8	0300	Phase IVC2	A	1975		11	7	Slipped painted IVB	Buff/pinkish; red slip; black paint
3.99:9	0349	Phase IVB6	A	1975		10a		Slipped painted IVB	Buff/red; red slip; black paint
3.99:10	0797	Phase IVB6	BM	1971		7		Slipped painted IVB	Red; red slip; black paint
3.99:11	0355	Phase IVB6	A	1975		10a		Slipped painted IVB paint	Brown light-red; red slip; black
Figure 3.100									
3-100:1	0367	Phase IVC2	A	1975		11	7a	Painted IVB	Orange; black paint
3.100:2	0443	Phase IVB6	A	1975		10		Slipped painted IVB	Brown light-red; red slip; black paint
3.100:3	0036	Phase IVB6	B	1970		11		Slipped painted IVB	Brown light-red-Buff; red slip; black paint
3.100:4	0466	Phase IVB6	A	1975		10S		Slipped painted IVB	Buff; dark buff slip; black paint
3.100:5	0452	Phase IVB6	A	1975		10		Slipped painted IVB	Brown light-red; red slip; black paint
3.100:6	0453	Phase IVB6	A	1975		10		Slipped painted IVB	Red; red-dark brown slip; black paint
3.100:7	0544	Phase IVB6	B	1971		3		Slipped painted IVB	Brown/brown light-red; red-dark brown slip; black paint
3.100:8	0761	Phase IVC1	BW/CW	1971		7	3	Slipped painted IVB	Brown light-red; red slip; black paint

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.100:9	0365	Phase IVC2	A	1975		11	8	Slipped painted IVB	Orange; orange-red slip; black paint
3.100:10	0445	Phase IVB6	A	1975		10		Painted IVB	Brown light-red; black paint
3.100:11	0500	Phase IVC2	BW	1971		6		Painted IVB	Buff/cream; black paint
3.100:12	0571	Phase IVB6	A	1975		10c		Painted IVB	Brown light-red; black paint
3.100:13	0370	Phase IVB6	A	1975		10		Painted IVB	Brown light-red; black paint
3.100:14	0449	Phase IVB6	A	1975		10		Painted IVB	Buff; black paint
3.100:15	0810	Phase IVC1	BM	1971		5		Painted IVB	Orange-pink; black paint
3.100:16	0888	Phase IVC1	B-C balk	1971		18		Slipped painted IVB	Brown light-red; red slip; black paint
Figure 3.101									
g. 3-101:1	1213	Phase IVB5	A	1975		9	2	Slipped painted IVB	Buff; orange slip ; black paint
3.101:2	1198	Phase IVB6	B	1970		11		Painted IVB	Orange; black paint
3.101:3	1059	"Sec. cont."	BW	1968		8+11		Slipped painted IVB	Buff; red slip; black paint
3.101:4	0330	Phase IVC2	A	1975		11	7b	Slipped painted IVB	Brown light-red; red slip; black paint
3.101:5	1398	Phase IVB6	A	1975		10	2	Painted IVB	Orange; black paint
3.101:6	1237	Phase IVB5	A	1975		9		Painted IVB	Orange; black paint
3.101:7	0023	Phase IVC1	B	1970		20		Slipped painted IVB	Brown light-red; red slip; black paint
3.101:8	1212	Phase IVB5	A	1975		9		Painted IVB	Orange; black paint
3.101:9	0189	"Sec. cont."	B	1973		2	6	Slipped painted IVB	Brown light-red; red slip; black paint
3.101:10	0295	Phase IVC2	A	1975		11	3	Slipped painted IVB	Brown light-red; red slip; black paint
Figure 3.102									
3.102:1	1264	Phase IVB5	BW	1969	5	6		Slipped painted IVB	Tan; red slip; black paint
3.102:2	1266	Phase IVB5	BW	1969	5	6		Painted IVB	Buff; black paint
3.102:3	1265	Phase IVB5	BW	1969	5	6		Painted IVB	Buff; black paint
3.102:4	1247	Phase IVB4	B-BW	1970	3	4		Painted IVB	Buff; black paint
3.102:5	0149	"Sec. cont."	B	1971		2 or 5		Slipped painted IVB	Buff; pink slip; black paint
3.102:6	1399	"Sec. cont."	XCE		1	12e		Painted IVB	Brown; black paint
3.102:7	1400	"Sec. cont."	XC			7		Slipped painted IVB	Red; brown slip; black paint
Figure 3.103									
3.103:1	1252	"Sec. cont."	A	1975		7	1	Slipped painted IVB	Buff; red slip; black paint

A. Catalog of the ceramics illustrated

Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.103:2	0367	Phase IVC2	A	1975		11	7a	Painted IVB	Orange; black paint
3.103:3	0961	"Sec. cont."	C	1969		5		Slipped painted IVB	Red; red-pink slip; black paint
3.103:4	0960	"Sec. cont."	C	1969		5		Slipped painted IVB	Brown light-red; red slip; black paint
3.103:5	1215	Phase IVB1	A	1975				Painted IVB	Buff; black paint
3.103:6	1217	Phase IVB5	A	1975		9		Painted IVB	Orange; black paint
3.103:7	1216	Phase IVB5	A	1975		9	1	Slipped painted IVB	Orange; red slip; black paint
3.103:8	0955	Phase IVB2	BW	1969	5	5		Slipped painted IVB	Brown light-red; red slip; black paint
Figure 3.104									
3.104 Up	0181	Phase IVC2	BW	1971		10		"Scorpion-bowl" IVB	Buff; brown light-red slip
3.104 Low	0405	Phase IVB6	B	1971		7		"Scorpion-bowl" IVB	Red; red slip
Figure 3.105									
3.105 L	Tepe Yahya; Lamberg-Karlovsky 1972:3K; XCE TT1 12A; Orange slip over plain red								
3.105 R	Tepe Yahya; Lamberg-Karlovsky and Tosi 1973:107 upper left								
Figure 3.106									
3.106:1	Shahr-i Sokhta; Piperno and Salvatori 2007:683								
3.106:2	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 186 n°12								
3.106:3	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 186 n°13								
3.106:4	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 186 n°10								
3.106:5	Konar Sandal; Madjidzadeh 2008:fig. 24 upper left								
Figure 3.107									
3.107	0550	Phase IVB6	B	1971		3		Pedestal IVB	Red; red slip
Figure 3.108									
3.108	Tepe Yahya; Lamberg-Karlovsky 1972:fig. 3E; XCE TT1 12A; Black paint, orange slip Lamberg-Karlovsky and Tosi 1973:fig. 107 lower left								
Figure 3.109									
3.109:1	Shahr-i Sokhta; Piperno and Salvatori 2007:fig. 624								

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.109:2	Shahr-i Sokhta; Piperno and Salvatori 2007:fig. 569								
3.109:3	Shahr-i Sokhta; Piperno and Salvatori 2007:fig. 675								
3.109:4	Shahr-i Sokhta; Piperno and Salvatori 2007:fig. 569								
3.109:5	Shahr-i Sokhta; Piperno and Salvatori 2007:fig. 34								
3.109:6	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 191 n°9								
3.109:7	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 188 n°2								
3.109:8	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 187 n°5								
3.109:9	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 187 n°7								
3.109:10	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 187 n°9								
Figure 3.110									
3.110:1	0546	Phase IVB6	B	1971		3		Incised lid IVB	Buff/brown light-red
3.110:2	0343	Phase IVB6	A	1975		10a		Incised lid IVB	Buff/grey
3.110:3	0717	Phase IVC1	BW/CW	1971		9	2	Incised lid IVB	Buff
3.110:4	0050	Phase IVB6	B	1970	3	3		Incised lid IVB	Buff
3.110:5	0097	Phase IVB6	B	1971		3		Incised vessel IVB	Brown light-red-Pink
3.110:6	0642	Phase IVC1	BW	1971	1	2		Incised vessel IVB	Brown/grey
3.110:7	0639	Phase IVC1	BW	1971	1	4		Incised vessel IVB	Brown light-red
Figure 3.111									
3.111:1	1122	Phase IVB5	A	1975		11	11	Incised lid IVB	Brown
3.111:2	0636	"Sec. cont."	BW	1971	1	6		Incised lid IVB	Buff
3.111:3	0631	"Sec. cont."	BW	1971	1	6		Incised lid IVB	Buff
Figure 3.112									
3.112:1	1031	Phase IVB6	B	1970		11		Ridge IVB	Brown light-red
3.112:2	0637	Phase IVC1	BW	1971	1	5		Ridge IVB	Buff
3.112:3	0048	Phase IVB6	B	1970		17		Ridge IVB	Brown light-red
3.112:4	0096	Phase IVB6	B	1971		4	4	Ridge IVB	Brown light-red
3.112:5	0641	Phase IVC1	BW	1971	1	2		Ridge IVB	Buff/brown/brown light-red
3.112:6	0071	Phase IVB6	B	1971	1	1	1	Ridge IVB	Brown light-red
.112:7	0354	Phase IVB6	A	1975		10a		Ridge IVB	Brown light-red; black paint

A. Catalog of the ceramics illustrated

Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.112:8	0886	Phase IVC1	B-C balk	1971		28	1	Ridge IVB	Buff-Brown light-red
Figure 3.113									
3.113:1	Konar Sandal; Madjidzadeh 2008:fig. 22								
3.113:2	Konar Sandal; Madjidzadeh 2008:fig. 22								
3.113:3	Konar Sandal; Madjidzadeh 2008:fig. 22								
3.113:4	Konar Sandal; Madjidzadeh 2008:fig. 27								
Figure 3.114									
3.114:1	1421	Phase IVB6	B	1970	4	2		Painted IVB	Buff; black paint
3.114:2	1206	Phase IVB6	A	1975	7	10	1	Painted IVB	Buff; black paint
Figure 3.115									
3.115:1	1422	Phase IVB6	B/BW	1970	4	9		Painted IVB	Buff; black paint
3.115:2	1423	Phase IVB6	B	1970	4	2		Painted IVB	Red; black paint
3.115:3	1420	Phase IVB5	B	1970		10	2	Painted IVB	Red; black paint
3.115:4	Bampur; De Cardi 1970:fig. 18 n°22								
3.115:5	Bampur; De Cardi 1970:fig. 21 n°101								
3.115:6	Bampur; De Cardi 1970:fig. 21 n°107								
3.115:7	Bampur; De Cardi 1970:fig. 21 n°108								
3.115:8	Bampur; De Cardi 1970:fig. 18 n°35								
3.115:9	Bampur; De Cardi 1970:fig. 24 n°209								
3.115:10	Bampur; De Cardi 1970:fig. 24 n°212								
Figure 3.116									
3.116:1	1267	Phase IVB5	BW	1969	5	6		Painted IVB	Grey; black paint
3.116:2	0430	"Sec. cont."	A	1975		6	3	Painted IVB	Grey; black paint
3.116:3	1401	"Sec. cont."	XC			9		Painted IVB	Buff; black paint
3.116:4	Konar Sandal; Madjidzadeh 2008:fig. 24								
3.116:5	Konar Sandal; Madjidzadeh 2008:fig. 24								
3.116:6	Bampur; De Cardi 1970:fig. 25 n°258								
3.116:7	Bampur; De Cardi 1970:fig. 38 n°361								

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
3.116:8	Bampur; De Cardi 1970:fig. 38 n°363								
3.116:9	Bampur; De Cardi 1970:fig. 38 n°362								
3.116:10	Kech-Makran; Didier 2007:fig. 63								
3.116:11	Kech-Makran; Didier 2007:fig. 95								
3.116:12	Kech-Makran; Didier 2007:fig. 63, 95								
3.116:13	Shahr-i Sokhta; Piperno and Salvatori 2007:fig. 379								
3.116:14	Shahr-i Sokhta; Tosi 1969:fig. 33 e								
3.116:15	Shahr-i Sokhta; Tosi 1969:fig. 33 b								
Figure 3.117									
3.117:1	0248	Phase IVC2	CW	1973	0/1	1/4	5/1	Bardsir Buff painted	Brown light-red; black paint
3.117:2	0106	Phase IVC1	B	1971		4	10	Bardsir Buff painted	Brown light-red-Pink; black paint
3.117:3	0118	Phase IVC1	B	1971		4	9	Bardsir Buff painted	Buff-Brown light red; black paint
Figure 3.118									
3.118:1	0248	Phase IVC2	CW	1973	0/1	1/4	5/1	Bardsir Buff painted	Brown light-red; black paint
3.118:2	0106	Phase IVC1	B	1971		4	10	Bardsir Buff painted	Brown light-red-Pink; black paint
3.118:3	0118	Phase IVC1	B	1971		4	9	Bardsir Buff painted	Buff-Brown light red; black paint
Figure 3.119									
3.119:1	Tepe Yahya; Lamberg-Karlovsky 1972:fig. 3F; black paint on grey								
3.119:2	Shahr-i Sokhta; Piperno and Salvatori 2007:fig. 115								
3.119:3	Kech-Makran; Didier 2007:fig. 122								
3.119:4	Kech-Makran; Didier 2007:fig. 121								
3.119:5	Shahr-i Sokhta; Salvatori and Vidale 1997:fig. 189								
Figure 7.3									
7-3:1	Site R178; Prickett 1986a:fig. III.15 U								
7-3:2	Site R178; Prickett 1986a:fig. III.15 Q								
7-3:3	Site R178; Prickett 1986a:fig. III.15 X								
7-3:4	Site R178; Prickett 1986a:fig. III.15 V								
7-3:5	Site P9; Prickett 1986a:fig. III.15 R								
7-3:6	Site R178; Prickett 1986a:fig. III.15 T								

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
7-3:7	Site R178; Prickett 1986a:fig. III.16 H								
7-3:8	Site R178; Prickett 1986a:fig. III.16 D								
7-3:9	Site R178; Prickett 1986a:fig. III.16 F								
7-3:10	Site R178; Prickett 1986a:fig. III.16 E								
7-3:11	Site R178; Prickett 1986a:fig. III.16 X								
7-3:12	Site R178; Prickett 1986a:fig. III.16 L								
7-3:13	Site R178; Prickett 1986a:fig. III.16 G								
7-3:14	Site R178; Prickett 1986a:fig. III.16 Q								

B. Catalog of the small finds illustrated

Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 4.1									
4.1:1	z-564	IVC2	C	68	6	8		Vessel	Stone
4.1:2	2430	IVC1	B-C balk	71		22		Vessel	Stone
4.1:3	z-567	IVC1	B	71		11		Vessel	Stone
4.1:4	2424	IVB6	BW	71	2	3a		Vessel	Stone
4.1:5	2412	IVC1	BM	71		3		Vessel	Stone
4.1:6	1962	IVC2	C	68	1&2	8		Vessel	Stone
4.1:7	2399	IVC1	B	71		4	8	Vessel	Stone
Figure 4.2									
4.2:1	ad-0005	IVC2	A	75	7	11	3	Vessel	Stone
4.2:2	2252-53-54	IVB6	B	70		17	Vessel	Stone	
4.2:3	2400	IVC1	B	71		11		Vessel	Stone
4.2:4	z-725	IVC1	B-BW	71		3		Vessel	Stone
4.2:5	2256	IVC1	B	70		20		Vessel	Stone
4.2:6	z-722	IVB6	B	70		18		Vessel	Stone
4.2:7	2257	IVC1	B	70		20		Vessel	Stone
4.2:8	z-723	IVC1	B	71		4	10	Vessel	Stone
4.2:9	2426	IVC1	BW-CW	71		7	7	Vessel	Stone

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
Figure 4.3									
4.3:1	ad-0002	IVC1	A	75		11		Vessel	Stone
4.3:2	2430	IVC1	B-C balk	71		22		Vessel	Stone
4.3:3	ad-0001	IVC1	B	71		4	9	Vessel	Stone
4.3:4	2424	IVB6	BW	71	2	3a		Vessel	Stone
4.3:5	1962	IVC2	C	68	1&2	8		Vessel	Stone
4.3:6	ad-0003	IVC2	A	75		11	3a	Vessel	Stone
4.3:7	z-564	IVC2	C	68	6	8		Vessel	Stone
4.3:8	z-567	IVC1	B	71		11		Vessel	Stone
4.3:9	z-722	IVB6	B	70		18		Vessel	Stone
4.3:10	2412	IVC1	BM	71		3		Vessel	Stone
4.3:11	2256	IVC1	B	70		20		Vessel	Stone
4.3:12	z-725	IVC1	B-BW	71		3		Vessel	Stone
4.3:13	ad-0005	IVC2	A	75	7	11	3	Vessel	Stone
4.3:14	2252-53-54	IVB6	B	70		17		Vessel	Stone
4.3:15	2399	IVC1	B	71		4	8	Vessel	Stone
4.3:16	2257	IVC1	B	70		20		Vessel	Stone
4.3:17	2400	IVC1	B	71		11		Vessel	Stone
4.3:18	z-723	IVC1	B	71		4	10	Vessel	Stone
4.3:19	2426	IVC1	BW-CW	71		7	7	Vessel	Stone
Figure 4.5									
4.5:1	313	IVC1	B	70		20		Vessel	Chlorite
4.5:2	310	IVB6	B	70		19		Vessel	Chlorite
4.5:3	529	IVB6	B	71		3		Vessel	Chlorite
4.5:4	542	IVC1	B-BW	71		3		Vessel	Chlorite
4.5:5	528	IVB6	B	71		3		Vessel	Chlorite
4.5:6	527	IVB6	B	71		3		Vessel	Chlorite
4.5:7	307	IVB6	B	70		17		Vessel	Chlorite
Figure 4.6									
g. 4-6:1	310	IVB6	B	70		19		Vessel	Chlorite
4.6:2	542	IVC1	B-BW	71		3		Vessel	Chlorite

B. Catalog of the small finds illustrated

Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
4.6:3	307	IVB6	B	70		17		Vessel	Chlorite
4.6:4	529	IVB6	B	71		3		Vessel	Chlorite
4.6:5	313	IVC1	B	70		20		Vessel	Chlorite
4.6:6	528	IVB6	B	71		3		Vessel	Chlorite
4.6:7	527	IVB6	B	71		3		Vessel	Chlorite
Figure 4.8									
4.8:1	2118	IVC2	C	68		Surf		Disk	Stone
4.8:2	z-417	IVC2	BM	71		6		Pendant	Chlorite
4.8:3	z-348	IVC1	B	70		20		Pendant	Stone
4.8:4	308	IVB6	B	70		18		Pendant	Chlorite
4.8:5	z-522	IVC1	BW-CW	71		7	5	Needle	Serpentine
4.8:6	532	IVB6	B	71		7		Incised object	Chlorite
4.8:7	538	IVC1	B-BW	71		3		Bracelet	Chlorite
4.8:8	z-251	IVB6	B-BW	70	4	8		Ball	Stone
Figure 4.9									
4.9:1	309	IVB6	B	70		18		Shaft straightener	Chlorite
4.9:2	2422	IVC2	BW	71		10		Whetstone	Stone
4.9:3	z-547	IVB6	BW	71	2	2a		Perforated object	Stone
4.9:4	z-566	IVC1	B	71		4	8	Mortar	Stone
4.9:5	z-538	IVC1	B	71		4	10	Axe-Hoe	Stone
Figure 4.10									
4.10:1	2118	IVC2	C	68		Surf		Disk	Stone
4.10:2	3709	IVB6	A	75		10		Disk	Stone
4.10:3	3667	IVB6	A	75		10		Token	Chlorite
4.10:4	538	IVC1	B-BW	71		3		Bracelet	Chlorite
4.10:5	308	IVB6	B	70		18		Pendant	Chlorite
4.10:6	z-348	IVC1	B	70		20		Pendant	Stone
4.10:7	z-417	IVC2	BM	71		6		Pendant	Chlorite
4.10:8	z-251	IVB6	B-BW	70	4	8		Ball	Stone
4.10:9	532	IVB6	B	71		7		Incised object	Chlorite

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
4.10:10	z-522	IVC1	BW-CW	71		7	5	Needle	Serpentine
4.10:11	309	IVB6	B	70		18		Shaft straightener	Chlorite
4.10:12	3705	IVB6	A	75		10		Perforated object	Stone
4.10:13	z-547	IVB6	BW	71	2	2a		Perforated object	Stone
4.10:14	2422	IVC2	BW	71		10		Whetstone	Stone
4.10:15	2255	IVB6	B	70		18		Whetstone	Stone
4.10:16	3720b	IVC2	A	75	7	11	2b	Whetstone	Stone
4.10:17	3720c	IVC2	A	75	7	11	2b	Whetstone	Stone
4.10:18	3720d	IVC2	A	75	7	11	2b	Whetstone	Stone
4.10:19	z-538	IVC1	B	71		4	10	Axe-Hoe	Stone
4.10:20	z-566	IVC1	B	71		4	8	Mortar	Stone
Figure 4.13									
4.13:1	2505	IVC2	B	73		2		Bead	Turquoise
4.13:2	2990	IVC2	B	73		2		Bead	Turquoise
4.13:3	2941	IVB6	B	70		11		Fragment	Turquoise
4.13:4	z-614	IVC2	B	73		2		Bead	Black stone
4.13:5	3812a	IVC2	A	75		11	2b	Bead	Heulandite
	3812b	IVC2	A	75		11	2b	Bead	Heulandite
4.13:6	1697	IVC1	BM	71		3		Bead	Ivory
4.13:7	z-216	IVB6	B	70	4	2		Bead	Shell
4.13:8	1246	IVC2	B	73		2		Bead	Frit?
Figure 4.14									
4.14:1	z-614	IVC2	B	73		2		Bead	Black stone
4.14:2	2990	IVC2	B	73		2		Bead	Turquoise
4.14:3	2505	IVC2	B	73		2		Bead	Turquoise
4.14:4	1697	IVC1	BM	71		3		Bead	Ivory
4.14:5	z-216	IVB6	B	70	4	2		Bead	Shell
Figure 4.16									
4.16:1	Piperno 1973:fig. 1 j								
4.16:2	Piperno 1973:fig. 1 k								

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Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description	
4.16:3	Piperno 1973:fig. 2 o									
4.16:4	Piperno 1973:fig. 4 d									
4.16:5	Piperno 1973:fig. 4 e									
4.16:6	Piperno 1973:fig. 2 p									
4.16:7	Piperno 1973:fig. 5 l									
Figure 4.17										
4.17:1	z-593	IVC2	B	71		13	4	Fragment	Quartz	
4.17:2	z-408	IVB6	B	70		17		Fragment	Quartz	
4.17:3	z-328	IVB6	B	70		11		Fragment	Chalk	
4.17:4	z-409	IVB6	B	70		17		Fragment	Green stone	
4.17:5	z-570	IVB6	BW	71	2	4	1	Flake	Obsidianig. 4.17:6	3327
IVC1	B	70		20		Flake	Obsidian			
Figure 4.18										
4.18:1	z-280	IVC2	B-BW	70		4	3	Slingball	Clay	
4.18:2	z-449	IVB6	B	71		3		Slingball	Clay	
4.18:3	z-262	IVC1	B	70		20		Slingball	Clay	
4.18:4	z-263	IVC1	B	70		20		Slingball	Clay	
4.18:5	z-255	IVC1	B	70		20		Drilled ball	Clay	
4.18:6	1149	IVC2	B	71		6b		Whorl	Clay	
4.18:7	z-467	IVC1	BW-CW	71		11	5	Whorl	Clay	
4.18:8	z-436	IVC1	BW-CW	71		6		Bead	Clay	
4.18:9	ad-0009	IVB6	A	75		10a		Drilled ball	Clay	
4.18:10	1159	IVC1	B-C balk	71		18		Zoomorphic figurine	Clay	
4.18:11	1247	IVC1	B-C balk	71		18		Zoomorphic figurine	Clay	
4.18:12	z-718	IVC1	BW-CW	71		7	4	Zoomorphic figurine	Clay	
4.18:13	z-440	IVC2	BW	71		6		Zoomorphic figurine	Clay	
4.18:14	z-438	IVB6	BW	71	2	2a		Zoomorphic figurine	Clay	
4.18:15	ad-0010	IVC2	BW-CW	71		11	2	Figurine?	Clay	
Figure 4.19										
4.19:1	z-280	IVC2	B-BW	70		4	3	Slingball	Clay	

B. Catalog of the small finds illustrated

Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
4.19:2	z-449	IVB6	B	71		3		Slingball	Clay
4.19:3	z-263	IVC1	B	70		20		Slingball	Clay
4.19:4	z-262	IVC1	B	70		20		Slingball	Clay
4.19:5	z-255	IVC1	B	70		20		Drilled ball	Clay
4.19:6	z-467	IVC1	BW-CW	71		11	5	Whorl	Clay
4.19:7	1149	IVC2	B	71		6b		Whorl	Clay
4.19:8	z-436	IVC1	BW-CW	71		6		Bead	Clay
4.19:9	1147a	IVB6	B	70		3		Comb handle	Clay
	1147b	IVB6	B	70		3		Comb handle	Clay
Figure 4.20									
4.20:1	1159	IVC1	B-C balk	71		18		Zoomorphic figurine	Clay
4.20:2	1247	IVC1	B-C balk	71		18		Zoomorphic figurine	Clay
4.20:3	z-440	IVC2	BW	71		6		Zoomorphic figurine	Clay
4.20:4	z-718	IVC1	BW-CW	71		7	4	Zoomorphic figurine	Clay
4.20:5	z-438	IVB6	BW	71	2	2a		Zoomorphic figurine	Clay
4.20:6	ad-0010	IVC2	BW-CW	71		11	2	Figurine?	Clay
4.20:7	ad-0009	IVB6	A	75		10a		Drilled ball	Clay
Figure 4.21									
4.21	z-286		B-BW	70	2	12		Slingballs	Clay
Figure 4.22									
4.22	z-71		BW	69	5	4		Comb handle	Clay
Figure 4.23									
4.23	1228		XCE	71	1	10		Comb handle	Clay
Figure 4.25									
4.25:1	3765	IVC1	A	75		11		Pin	Copper alloy
4.25:2	ad-0011	IVC2	A	75	7	11	2b	Pin	Copper alloy
4.25:3	3759	IVC2	A	75	7	11	2b	Pin	Copper alloy
4.25:4	2728	IVC2	B-BW	70	4	3		Pin	Copper alloy
4.25:5	2783	IVC2	B	71		4	8	Disk	Copper alloy

B. Catalog of the small finds illustrated

Figure	Reg.#	Phase	Trench	Year	Test T.	Stratum	Feature	Object	Description
4.25:6	ad-0012	IVC2	A	75		11	3a	Spear point	Copper alloy
4.25:7	z-526	IVC2	B	71		4	8	Ore	Copper alloy
Figure 4.26									
4.26:1	2630	IVC2	C	68	6	9		Spatula	Copper alloy
4.26:2	2629	IVC2	C	68	6	9		Pin	Copper alloy
4.26:3	ad-0013	IVC2	BW-CW	71		12	1	Pin	Copper alloy
4.26:4	ad-0015	IVC2	C	69	1			Pin	Copper alloy
4.26:5	2728	IVC2	B-BW	70	4	3		Pin	Copper alloy
4.26:6	2723	IVC1	B	70		20		Pin	Copper alloy
4.26:7	ad-0016	"Sec. cont."	XC	70	1	7		Axe	Copper alloy
4.26:8	ad-0017	"Sec. cont."	XC	71	2	2	5	Nail	Copper alloy
4.26:9	ad-0014	"Sec. cont."	XBE	73	1	10		Bracelet	Copper alloy
4.26:10	2628	IVC2	C	68	6	7		Chisel	Copper alloy
Figure 4.28									
4.28	2880	IVB6	BM	71		1	1	Coil/ring?	Lead

Tables and Graphs

Table 1.1 Chrono-cultural sequence of Tepe Yahya (adapted after Lamberg-Karlovsky and Beale 1986:11-12; Pricket 1986b:217; Lamberg-Karlovsky 2001a:270). The dates for Periods IVC and IVB provided in this table are discussed in the present publication.

Periods			Dates
Early Yahya VII			5500 BC
Yahya VIID			
Yahya VIIC		*Neolithic*	5000-4500 BC
Yahya VIIB			
Yahya VIIA			
Yahya VIB			4500-4000 BC
Yahya VIA			
Yahya VC		*Chalcolithic*	
Yahya VB			4000-3500 BC
Yahya VA			
Yahya IVC	**IVC2** **IVC1**	*Early Bronze Age*	3100-2800 BC
			?
Yahya IVB	**IVB6** **IVB5** **IVB4** **IVB3** **IVB2** **IVB1**	*Bronze Age*	2500-2000 BC 2200-2000 BC
			?
Yahya IVA			1700-1400 BC
Yahya III		*Iron Age*	700-525 BC
Yahya II		*Achaemenian/Hellenistic*	475-275 BC
Yahya I		*Parthian-Sasanian*	200 BC-225 AD

Table 1.2 Chronological chart of Middle Asia. As some of the chronologies are still discussed, this chart should be considered a rough guide.

Date B.C.	Southern Mesopotamia	Susiana	Fars	Kerman	Seistan	Makran	Mehrgarh	Sohr Damb	Oman Peninsula
6000	Ubaid 0	Archaic Susiana 3	Mushki				Period IIA		
5500	Ubaid 1	Early Susiana	Jari	Muradabad					
5000	Ubaid 2	Early Middle Susiana	Shamsabad	Yahya VII			Period IIB		
4500	Ubaid 3	Late Middle Susiana	Bakun						
4000	Ubaid 4	Late Susiana 1		Yahya VI		Period I	Period III		
	(Ubaid 5)	Late Susiana 2 Susa I		Yahya VC					
3500	Uruk	Uruk Susa II	Lapui	Yahya VB		Period II			
		Gap (Susa Acropole I "17X")		Yahya VA					
3000	Jemdet-Nasr	Proto-Elamite Susa III	Banesh	Gap/Aliabad		Early Period IIIa	Period IV	Period I	
2500	ED I			Yahya IVC Proto-Elamite	Shahr-i Sokhta Period I	Late Period IIIa	Period V	Period II	
	ED II						Period VI VIIA-B		Hafit
	ED III	Susa IVA	Late Banesh/Kaftari Transitional?	Yahya IVB	Shahr-i Sokhta Period II	Period IIIb	Period VII/Nausharo	Period III	
	Akkad				Shahr-i Sokhta Periods III/IV	Period IIIc			Umm an-Nar
2000	Ur III	Susa V	Kaftari	Yahya IVA		Period IV Indus	Indus Period	Period IV	
									Wadi Suq

Table 1.3 Ceramic reconstructions from Tepe Yahya IVC-IVB contexts. The numbers refer to our own records

Phases	Reconst. Nb	Ceramic/fragment's Reg. #	Probable Reconst. Nb	Ceramic/fragment's Reg. #
IVC2-IVC1-IVB6	2	Yahya 0114, Yahya 0588		
IVC2-IVC1	1	Yahya 0659		
IVC2-IVB6	4	Yahya 0315-0353, Yahya 0311, Yahya 0630, Yahya 0004	3	Yahya 0186-0182, Yahya 0488, Yahya 0506-0232
IVC1-IVB6	2	Yahya 0606, Yahya 0104	1	Yahya 0906-0700-0933
IVC1-pit IVB	1	Yahya 0131		
IVB6-IVB5			1	Yahya 0597
IVC1-IVB5	1	Yahya 0914		
Total	**11**		**5**	**16**

Table 1.4 Corpus of the ceramic study of Tepe Yahya Period IVC (Phases IVC2-IVB6) sorted by phases. CP means Complete Profile and DF means Diagnostic Fragment.

	Phase IVB5	Phase IVB6	Phase IVC1	Phase IVC2	"Secondary contexts"	Total
Period IVC Assemblage						
Total Sherds	13	107	162	233	184	699
Total Rims/CP/DF	3	67	107	157	115	449
Periods V, V-IVC transitional, IVB Assemblages in Phases IVC2-IVB6						
Total Sherds		60	37	45	9	151
Total Rims/CP/DF		28	20	35	4	87
Total Sherds	**13**	**167**	**199**	**278**	**193**	**850**
Total Rims/CP/DF	**3**	**95**	**127**	**192**	**119**	**536**

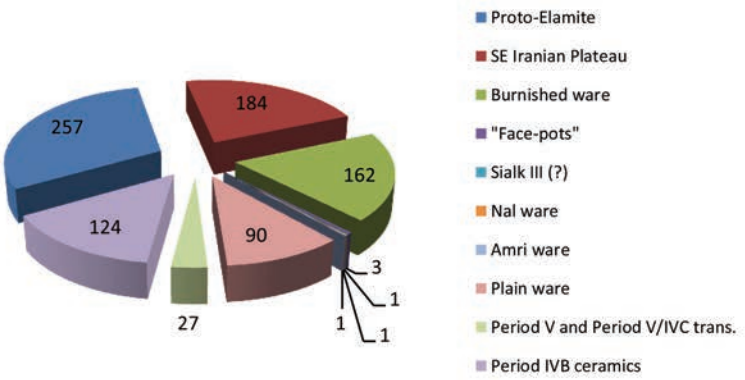
Table 1.5 Table showing the main metric criteria used to classify and describe the ceramic forms.

Criteria	Classes	Description	Functional names
Aperture	MaxD = RimD	Open	Tray, Bowl, Pot, Goblet
	RimD < MaxD	Close	Jar, Hole-mouth jar, Necked-jar
Proportions	MaxD/H < 0.85	Very deep	Deep goblet
	0.85 < MaxD/H < 1.2	Deep	Goblet
	1.2 < MaxD/H < 1.5	Wide	Deep bowl/Pot
	1.5 < MaxD/H < 2	Very Wide	Bowl
	2 < MaxD/H < 3	Shallow	Shallow bowl
	3 < MaxD/H < 3.5	Very Shallow	Very Shallow bowl
	3.5 < MaxD/H	Flat	Tray
Size = H (or MaxD if MaxD > H)	H < 10 cm	Miniature	
	10 cm < H < 15 cm	Small	
	15 cm < H < 20 cm	Medium	
	20 cm < H < 30 cm	Large	
	H > 30 cm	Very large	

Table 1.6 Table showing the main morphologic criteria used to classify and describe the ceramic forms.

Criteria	Description
Form Base	Flat
	Concave
	Convex
	Continuous
	Projecting
	Ring
	Pedestal/Foot
Orientation Lower body - Upper body - Rim	Inverted
	Everted
	Vertical
Form Lower body - Upper body - Rim	Concave
	Convex
	Straight
Form Lip	Rounded
	Tapering
	Thickened
	Flattened
	Protruding

Graph. 3.1 Corpus of the ceramic study of Tepe Yahya Period IVC: number of sherds sorted by main ceramic components.



Graph. 3.2 Quantities of Beveled-rim bowl fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

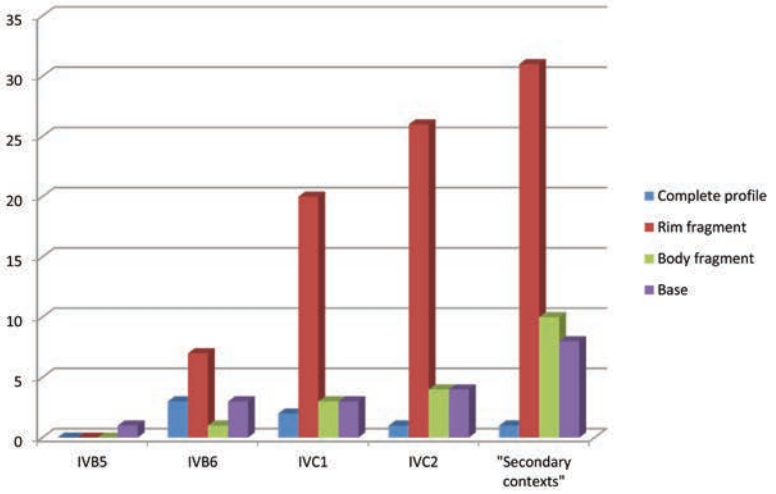


Table 3.1 Quantities of Beveled-rim bowl fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

BRB	IVB5	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Complete profile		3	2	1	1	7
Rim fragment		7	20	26	31	84
Body fragment		1	3	4	10	18
Base	1	3	3	4	8	19
Total	1	14	28	35	50	128
Percentage	0.78	10.94	21.88	27.34	39.06	100

Graph. 3.3 Quantities of Low-sided tray fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

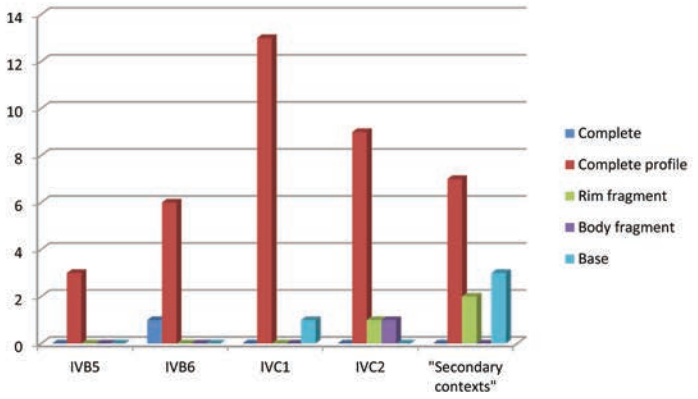


Table 3.2 Quantities of Low-sided tray fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

LST	IVB5	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Complete		1				1
Complete profile	3	6	13	9	7	38
Rim fragment				1	2	3
Body fragment				1		1
Base			1		3	4
Total	3	7	14	11	12	47
Percentage	6.38	14.89	29.79	23.4	25.53	100

Graph. 3.4 Quantities of decorated jar fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

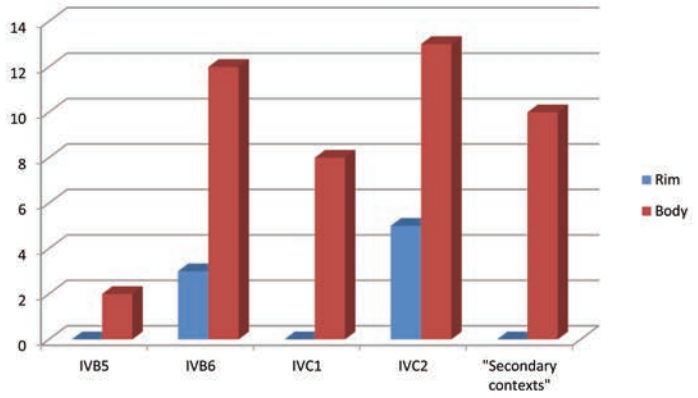


Table 3.3 Quantities of decorated jar fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

Decor. jars	IVB5	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Rim		3		5		8
Body	2	12	8	13	10	45
Total	2	15	8	18	10	53
Percentage	3.8	28.3	15.1	34	18.9	100

Graph. 3.5 Quantities of SEIP Group A fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

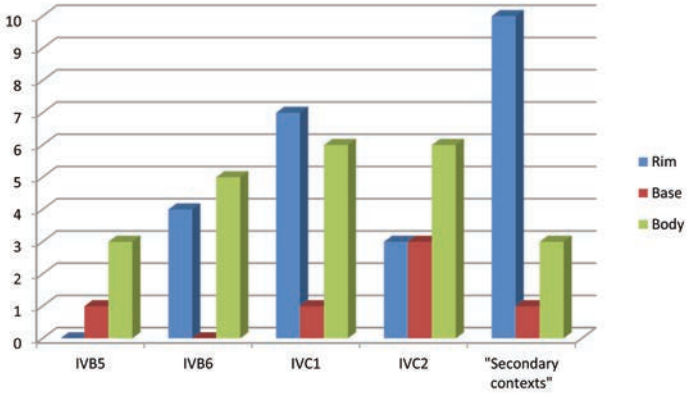


Table 3.4 Quantities of SEIP Group A fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

SEIP A	IVB5	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Rim		4	7	3	10	24
Base	1		1	3	1	6
Body	3	5	6	6	3	23
Total	4	9	14	12	14	53
Percentage	7.55	16.98	26.42	22.64	26.42	100

Graph. 3.6 Quantities of SEIP Group A imitation (?) fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

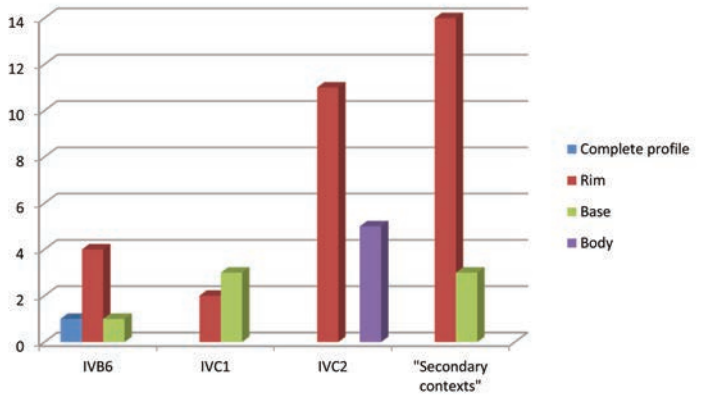


Table 3.5 Quantities of SEIP Group A imitation (?) fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

SEIP A imitation (?)	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Complete profile	1				1
Rim	4	2	11	14	31
Base	1	3		3	7
Body			5		5
Total	6	5	16	17	44
Percentage	13.64	11.36	36.36	38.64	100

Table 3.6 Quantities of SEIP Group B1 shallow bowl fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

SEIP B1	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Rim	3	1	3	1	8
Total	3	1	3	1	8
Percentage	37.5	12.5	37.5	12.5	100

Graph. 3.7 Quantities of Group B2 bowl fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

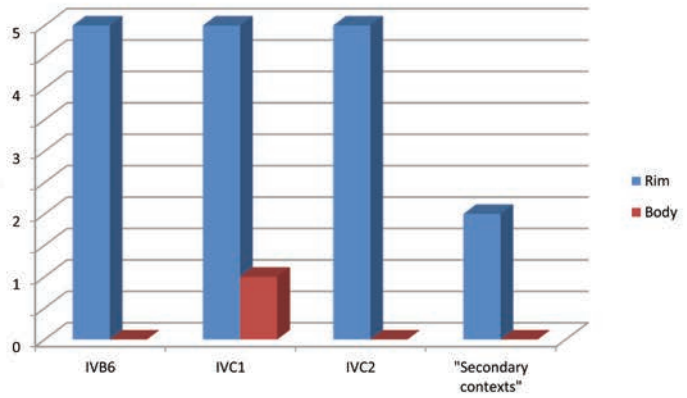


Table 3.7 Quantities of Group B2 bowl fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

SEIP B2	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Rim	5	5	5	2	17
Body		1			1
Total	5	6	5	2	18
Percentage	28	33	28	11	100

Graph. 3.8 Quantities of Group B3 deep bowl, pot, and goblet fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

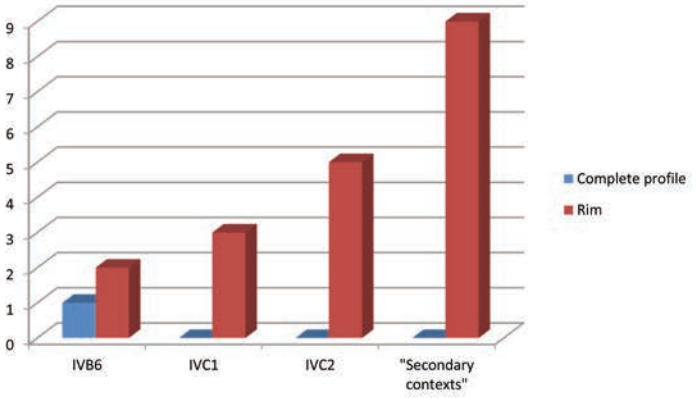


Table 3.8 Quantities of Group B3 deep bowl, pot, and goblet fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

SEIP B3	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Complete profile	1				1
Rim	2	3	5	9	19
Total	3	3	5	9	20
Percentage	15	15	25	45	100

Table 3.9 Quantities of Group B4 fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

SEIP B4	IVB6	IVC1	IVC2	Total
Rim	1	4	1	6
Total	1	4	1	6
Percentage	16.7	66.7	16.7	100

Table 3.10 Quantities of Group B5 fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

SEIP B5	IVC1	"Secondary contexts"	Total
Rim	3	3	6
Total	3	3	6
Percentage	50	50	100

Graph. 3.9 Quantities of Group B6 necked-jar fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

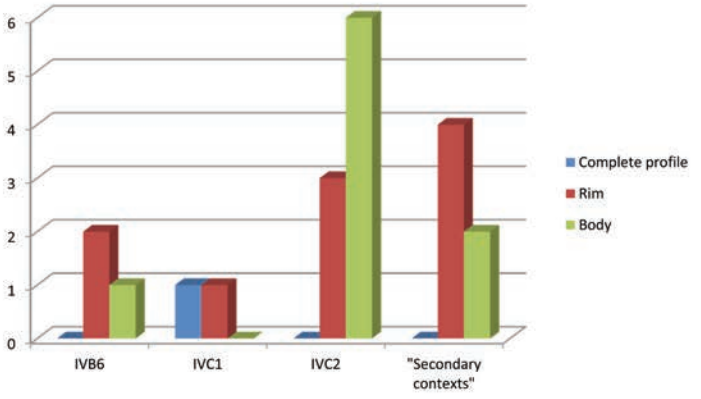


Table 3.11 Quantities of Group B6 necked-jar fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

SEIP B6	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Complete profile		1			1
Rim	2	1	3	4	10
Body	1		6	2	9
Total	3	2	9	6	20
Percentage	15	10	45	30	100

Graph. 3.10 Quantities of burnished ware fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

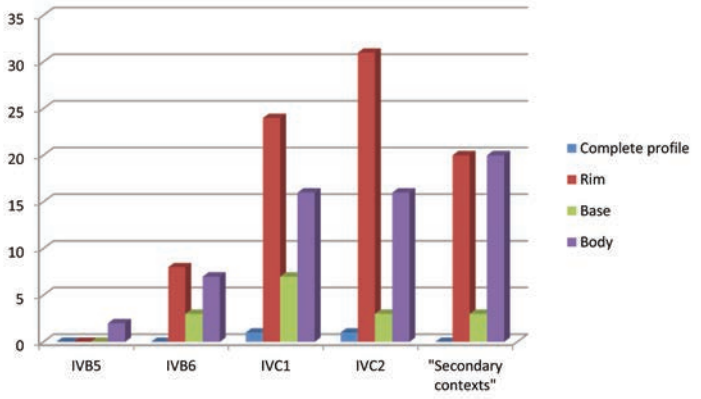


Table 3.12 Quantities of burnished ware fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

BW	IVB5	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Complete profile			1	1		2
Rim		8	24	31	20	83
Base		3	7	3	3	16
Body	2	7	16	16	20	61
Total	2	18	48	51	43	162
Percentage	1.23	11.11	29.63	31.48	26.54	100

Graph 3.11 Quantities of very fine and fine plain fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

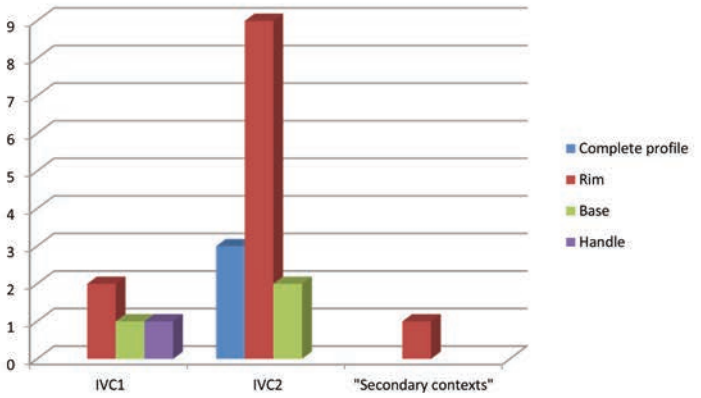


Table 3.13 Quantities of very fine and fine plain fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

Very fine/Fine Plain	IVC1	IVC2	"Secondary contexts"	Total
Complete profile		3		3
Rim	2	9	1	12
Base	1	2		3
Handle	1			1
Total	4	14	1	19
Percentage	21.05	73.68	5.26	100

Graph. 3.12 Quantities of medium and coarse plain ceramic fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

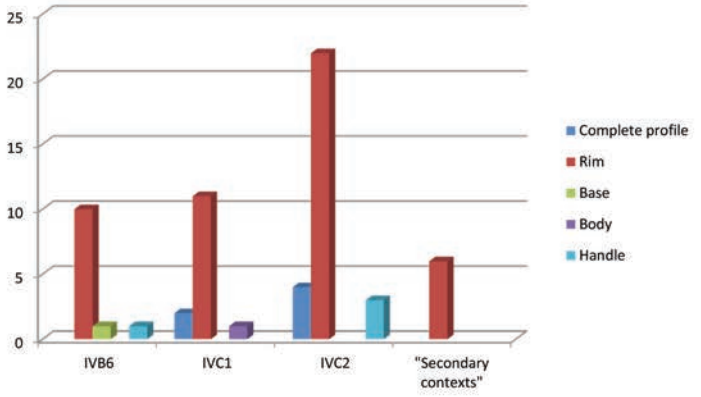


Table 3.14 Quantities of medium and coarse plain ceramic fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

Medium/Coarse Plain	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Complete profile		2	4		6
Rim	10	11	22	6	49
Base	1				1
Body		1			1
Handle	1		3		4
Total	12	14	29	6	61
Percentage	19.67	22.95	47.54	9.84	100

Graph. 3.13 Quantities of Period V fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

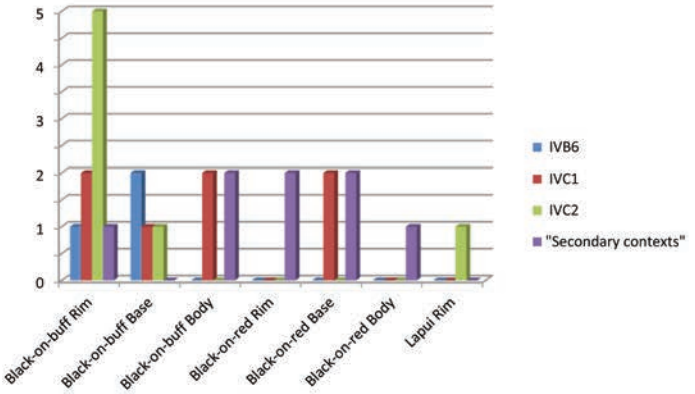


Table 3.15 Quantities of Period V fragments from Tepe Yahya recorded in the collection sorted by phases and preservation.

Period V ceramics	IVB6	IVC1	IVC2	"Secondary contexts"	Total
Black-on-buff Rim	1	2	5	1	9
Black-on-buff Base	2	1	1		4
Black-on-buff Body		2		2	4
Black-on-red Rim				2	2
Black-on-red Base		2		2	4
Black-on-red Body				1	1
Lapui Rim			1		1
Total	3	7	7	8	25
Percentage	12	28	28	32	100

Table 3.16 Quantities of Period IVB-related fragments from Tepe Yahya Phases IVC2-IVB6 recorded in the collection sorted by phases and preservation. CS means Close Shape and CP means Complete Profile.

IVB ceramics		IVB6	IVC1	IVC2	Total
Comp. 1	Painted ware Rim	5	1	1	7
	Painted ware Body	10	4	3	17
	Slipped painted ware Rim	7	3	7	17
	Slipped painted ware Body	16	7	7	30
	Slipped ware Rim		4	14	18
	Slipped ware Handle/Scorpion tail	1	1	1	3
	Slipped ware Base	1	1		2
	Incised ware CS Rim		1		1
	Incised ware CS Body	1	1		2
	Incised ware Lid	6	1	3	10
	Ridge/impressed Rim	1	2	1	4
	Ridge/impressed Body	4	2		6
Comp. 2	Very fine, painted buff ware Rim/CP	4			4
Comp. 3	Bahramjerd ware-related Rim		2	1	3
Total		56	30	38	124
Total Rims/CP/Lid fragments		24	15	28	67

Graph. 4.1 Quantities of small finds from Tepe Yahya Phases IVC2-IVB6 and "secondary contexts" of Period IVC sorted by types of raw materials.

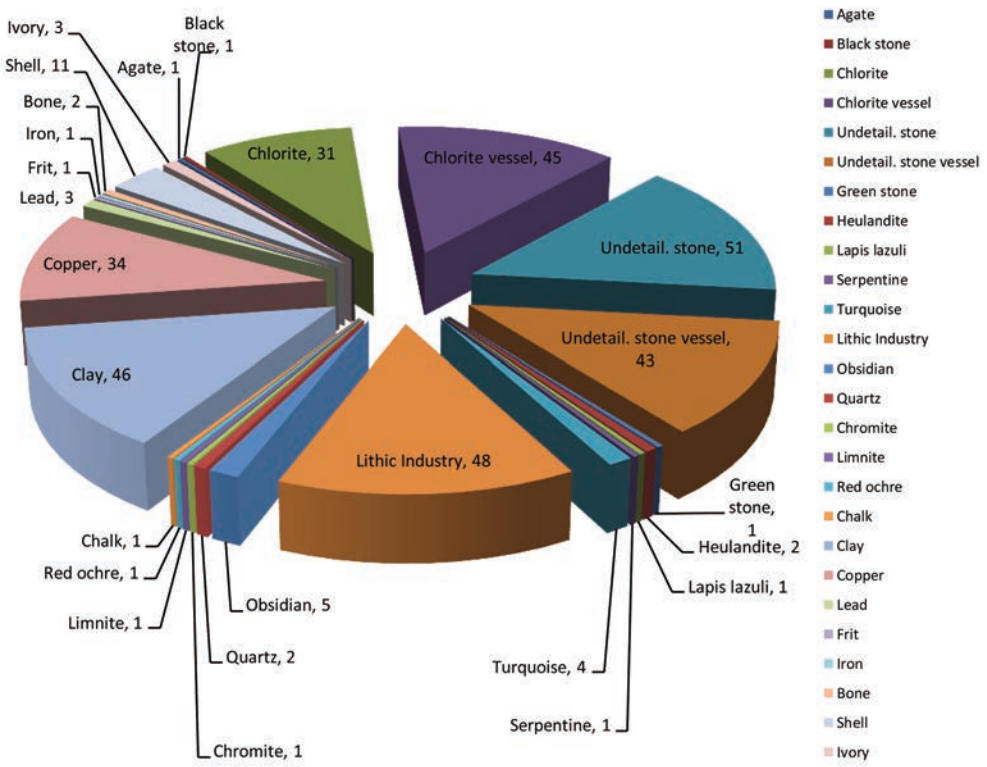


Table 4.1 Quantities of small finds from Tepe Yahya Phases IVC2-IVB6 and "secondary contexts" of Period IVC sorted by types of raw materials and phases.

Material	IVB6	IVC1	IVC2	"Secondary contexts"	Total	%
Agate		1			1	0.3
Black stone			1		1	0.3
Chlorite	15	6	8	2	31	9.1
Chlorite vessel	18	14	13		45	13.2
Undetail. stone	15	6	30		51	15
Undetail. stone vessel	9	18	16		43	12.6
Green stone	1				1	0.3
Heulandite			2		2	0.6
Lapis lazuli			1		1	0.3
Serpentine		1			1	0.3
Turquoise	1		3		4	1.2
Lithic Industry				48	48	14.1
Obsidian	2	2	1		5	1.5
Quartz	1		1		2	0.6
Chromite			1		1	0.3
Limnite			1		1	0.3
Red ochre			1		1	0.3
Chalk	1				1	0.3
Clay	12	21	13		46	13.5
Copper	11	4	16	3	34	10
Lead	1		2		3	0.9
Frit			1		1	0.3
Iron		1			1	0.3
Bone			2		2	0.6
Shell	4	2	5		11	3.2
Ivory		3			3	0.9
Total	91	79	118	53	341	
Percentage	26.69	23.17	34.6	15.54		100

Graph. 4.2 Quantities of stone vessel fragments from Tepe Yahya Phases IVC2-IVB6 sorted by phases and preservation.

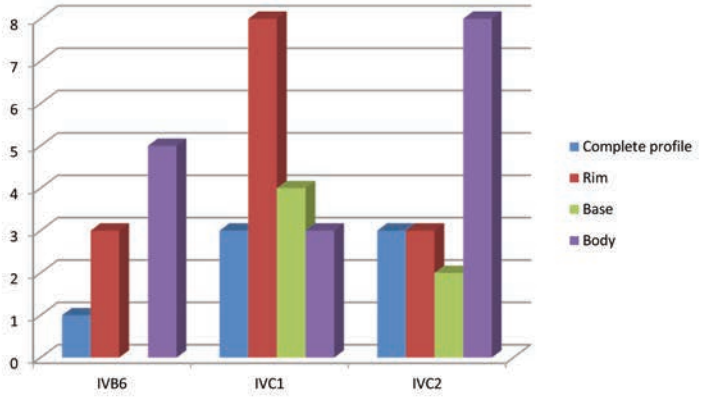


Table 4.2 Quantities of stone vessel fragments from Tepe Yahya Phases IVC2-IVB6 sorted by phases and preservation.

Stone vessels	IVB6	IVC1	IVC2	Total
Complete profile	1	3	3	7
Rim	3	8	3	14
Base		4	2	6
Body	5	3	8	16
Total	9	18	16	43
Percentage	20.93	41.86	37.21	100

Graph. 4.3 Quantities of chlorite vessel fragments from Tepe Yahya Phases IVC2-IVB6 sorted by phases and preservation.

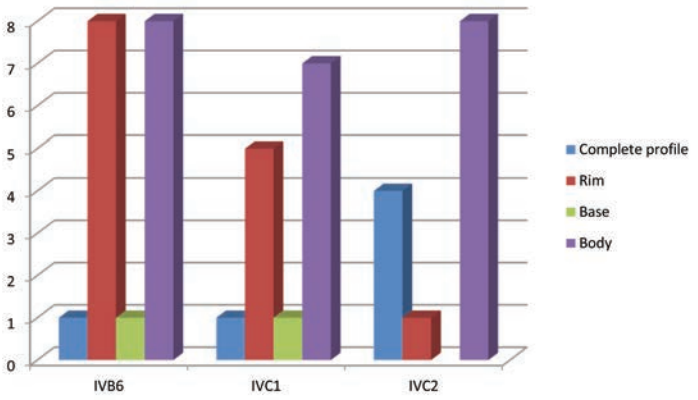


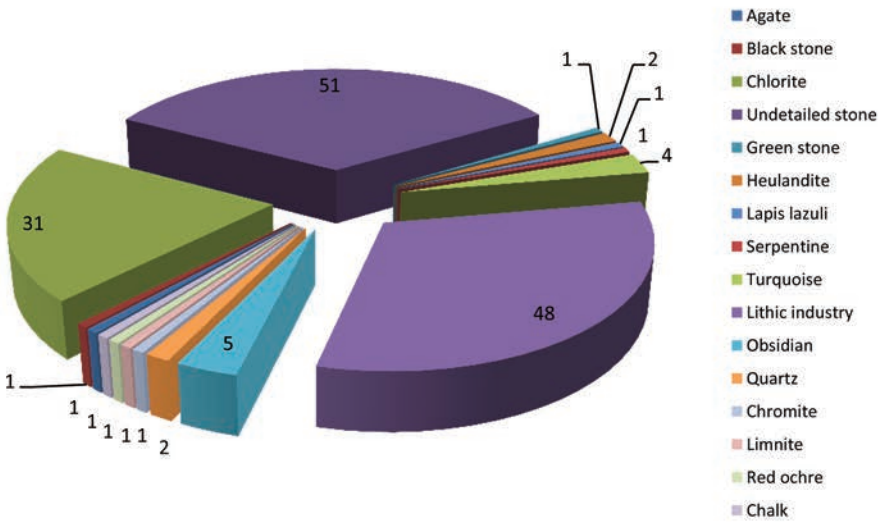
Table 4.3 Quantities of chlorite vessel fragments from Tepe Yahya Phases IVC2-IVB6 sorted by phases and preservation.

Chlorite vessels	IVB6	IVC1	IVC2	Total
Complete profile	1	1	4	6
Rim	8	5	1	14
Base	1	1		2
Body	8	7	8	23
Total	18	14	13	45
Percentage	40.00	31.11	28.89	100

Table 4.4 Quantities of stone objects and fragments from Tepe Yahya Phase IVC2-IVB6 and "secondary contexts" of Period IVC sorted by phases and types of raw material.

Stones	IVB6	IVC1	IVC2	"Secondary contexts"	Total	Percentage
Agate		1			1	0.66
Black stone			1		1	0.66
Chlorite	15	6	8	2	31	20.39
Undetailed stone	15	6	30		51	33.55
Green stone	1				1	0.66
Heulandite			2		2	1.32
Lapis lazuli			1		1	0.66
Serpentine		1			1	0.66
Turquoise	1		3		4	2.63
Lithic industry				48	48	31.58
Obsidian	2	2	1		5	3.29
Quartz	1		1		2	1.32
Chromite			1		1	0.66
Limnite			1		1	0.66
Red ochre			1		1	0.66
Chalk	1				1	0.66
Total	36	16	50	50	152	
Percentage	23.68	10.53	32.89	32.89		100

Graph. 4.4 Quantities of stone objects and fragments from Tepe Yahya Phase IVC2-IVB6 and "secondary contexts" of Period IVC sorted by types of raw material.



Graph. 4.5 Quantities of chlorite objects and fragments from Tepe Yahya Phase IVC2-IVB6 and "secondary contexts" of Period IVC sorted by categories of object and phases.

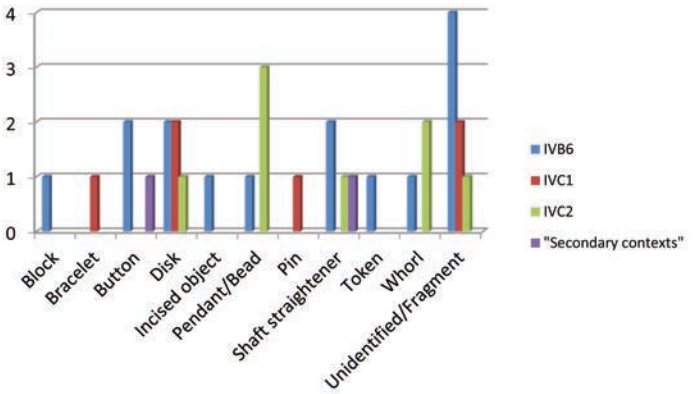


Table 4.5 Quantities of chlorite objects and fragments from Tepe Yahya Phase IVC2-IVB6 and "secondary contexts" of Period IVC sorted by categories of object and phases.

Chlorite	IVB6	IVC1	IVC2	"Secondary contexts"	Total	Percentage
Block	1				1	3.23
Bracelet		1			1	3.23
Button	2			1	3	9.68
Disk	2	2	1		5	16.13
Incised object	1				1	3.23
Pendant/Bead	1		3		4	12.90
Pin		1			1	3.23
Shaft straightener	2		1	1	4	12.90
Token	1				1	3.23
Whorl	1		2		3	9.68
Unidentified/Fragment	4	2	1		7	22.58
Total	15	6	8	2	31	100

Graph. 4.6 Quantities of objects and fragments of undetermined stone from Tepe Yahya Phase IVC2-IVB6 sorted by categories of objects and phases.

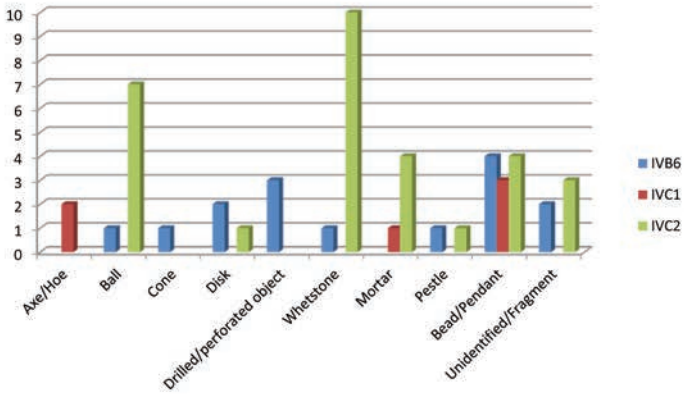


Table 4.6 Quantities of objects and fragments of unidentified stone from Tepe Yahya Phase IVC2-IVB6 sorted by categories of objects and phases.

Stone	IVB6	IVC1	IVC2	Total	Percentage
Axe/Hoe		2		2	3.92
Ball	1		7	8	15.69
Cone	1			1	1.96
Disk	2		1	3	5.88
Drilled/perforated object	3			3	5.88
Whetstone	1		10	11	21.57
Mortar		1	4	5	9.80
Pestle	1		1	2	3.92
Bead/Pendant	4	3	4	11	21.57
Unidentified/Fragment	2		3	5	9.80
Total	15	6	30	51	100

Table 4.7 Available information regarding the beads made of undetermined stone from Tepe Yahya Phases IVC2-IVB6.

Stone Beads	Phase	Location	Available information
SF 3707	IVB6	Trench A	1.4 cm in diameter
SF 3810	IVB6	Trench A	1.6 x 0.8 cm
SF 3811	IVB6	Trench A	1.7 x 0.8 cm
SF e2334	IVB6	Trench B	1.7 x 0.9 x 0.9 cm
SF 2425	IVC1	Areas F-G	1.2 x 1 x 0.2 cm
SF 3813	IVC2	Room 1	0.7 cm in diameter
SF 3814	IVC2	Room 1	0.2 cm in diameter
SF 3815	IVC2	Area C	1.1 x 1.2 x 0.4 cm
SF z-64	IVC2	Area H	0.2 cm in diameter

Graph. 4.7 Quantities of clay objects from Tepe Yahya Phases IVC2-IVB6 sorted by categories of objects and phases.

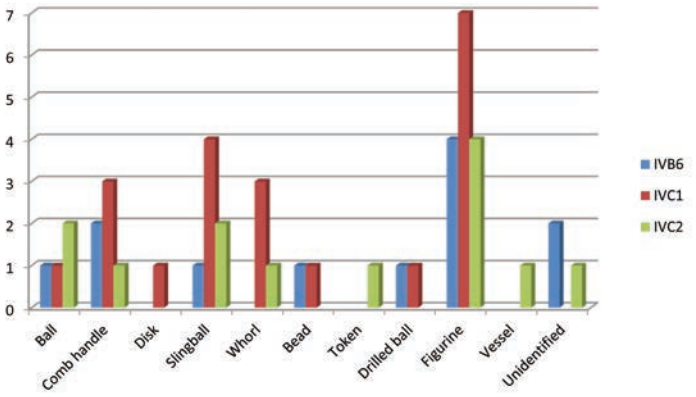


Table 4.8 Quantities of clay objects from Tepe Yahya Phases IVC2-IVB6 sorted by categories of objects and phases.

Objects	IVB6	IVC1	IVC2	Total	Percentage
Ball	1	1	2	4	8.7
Comb handle	2	3	1	6	13.04
Disk		1		1	2.17
Slingball	1	4	2	7	15.22
Whorl		3	1	4	8.7
Bead	1	1		2	4.35
Token			1	1	2.17
Drilled ball	1	1		2	4.35
Figurine	4	7	4	15	32.61
Vessel			1	1	2.17
Unidentified	2		1	3	6.52
Total	12	21	13	46	
Percentage	26.09	45.65	28.26	100	100

Graph. 4.8 Quantities of copper objects from Tepe Yahya Phases IVC2-IVB6 and "secondary contexts" of Period IVC sorted by categories of objects and phases.

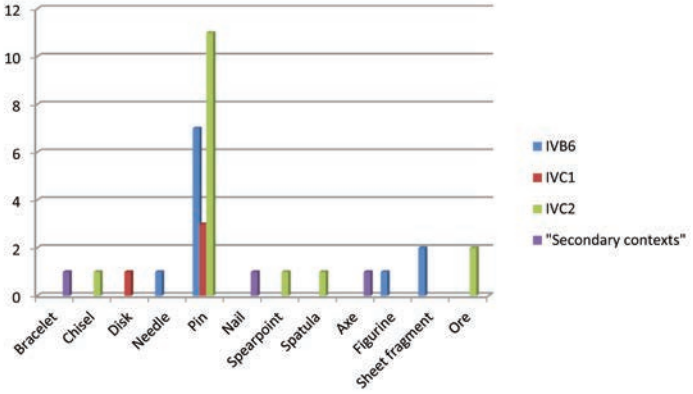


Table 4.9 Quantities of copper objects from Tepe Yahya Phases IVC2-IVB6 and "secondary contexts" of Period IVC sorted by categories of objects and phases.

Objects	IVB6	IVC1	IVC2	"Secondary contexts"	Total	Percentage
Bracelet				1	1	2.94
Chisel			1		1	2.94
Disk		1			1	2.94
Needle	1				1	2.94
Pin	7	3	11		21	61.76
Nail				1	1	2.94
Spearpoint			1		1	2.94
Spatula			1		1	2.94
Axe				1	1	2.94
Figurine	1				1	2.94
Sheet fragment	2				2	5.88
Ore			2		2	5.88
Total	11	4	16	3	34	
Percentage	32.35	11.76	47.06	8.82	100	100

Table 4.10 Copper objects from Tepe Yahya Phases IVC2-IVB6 and Trenches XBE and XC with compositional and technological information.

Object	Type	Compositional information	Technological information	References
SF 2628	Chisel	3.7% As; less than 0.01% Sn	Cast and hammered	Tylecote and McKerrell 1986: 213
SF 2629	Pin	0.3% As; less than 0.01% Sn	Head hammered	Tylecote and McKerrell 1986: 214
SF 2630	Spatula	1.7% As; less than 0.01% Sn	/	Tylecote and McKerrell 1986: 213
SF 2723	Pin	0.3% Ag; 0.4% Ni	Cast, hammered and annealed	Heskel and Lamberg-Karlovsky 1980: 245
SF ad-0013	Pin	1.35% As; 0.16% Ag	Cast, hammered and annealed	Heskel and Lamberg-Karlovsky 1980: 243-244
SF ad-0014	Bracelet	1.04% Pb; 0.9% Ag; 0.48% Ni	Cast, hammered and annealed	Heskel and Lamberg-Karlovsky 1980: 244-245
SF ad-0015	Pin	0.03% Ag	/	Heskel and Lamberg-Karlovsky 1980: 245
SF ad-0016	Axe	0.07% Ag	Cast in a single piece mold, hammered and annealed	Heskel and Lamberg-Karlovsky 1986: 210-211
SF ad-0017	Nail	/	Cast, hammered and annealed	Heskel and Lamberg-Karlovsky 1986: 210-211

Table 5.1 List of the Proto-Elamite tablets recovered from Tepe Yahya.

Reg. #	C.C.L.K.'s Phases	Potts's Phases	Context	Location
Tablet 1	IVC2	IVC2	B.70.20.1	Room 5
Tablet 2	IVC2	IVC2	B.70.20.1	Room 5
Tablet 3	IVC2	IVC2	B.70.20.1	Room 5
Tablet 4	IVC2	IVC2	B.70.20.1	Room 5
Tablet 5	IVC2	IVC2	B.70.20.1	Room 5
Tablet 6	IVC2	IVC2	B.70.20.1	Room 5
Tablet 7	IVC2	IVC2	BM.71.3.3	Room 1b
Tablet 8	IVC2	not listed	BM.71.4.8	Room 5
Tablet 9	IVC2	IVC2	BM.71.3.3	Room 1b
Tablet 10	IVC2	IVC2	BM.71.3.3	Room 1b
Tablet 11	IVC2	IVC2	A.75.11.2b	Room 1a
Tablet 12	Probably IVC1	IVC2	A.75.11.3a	Area C
Tablet 13	Probably IVC1	IVC2	A.75.11.3a	Area C
Tablet 14	IVC2	IVC2	A.75.11.2a	Room 1a
Tablet 15	IVC2	IVC2	A.75.11.2b	Room 1a
Tablet 16	Probably IVC1	IVC2	A.75.T7.11.3	Area C
Tablet 17	IVC2	IVC2	A.75.11.2a	Room 1a
Tablet 18	IVC2	not listed, probably IVC2	A.75.T7.11.2	Room 1a
Tablet 19	IVC2	not listed, probably IVC2	A.75.T7.11.2	Room 1a
Tablet 20	IVC2	IVC2	A.75.11.2b	Room 1a
Tablet 21	IVC2	IVC2	A.75.T7.11.2b	Room 1a
Tablet 22	IVC1	IVC2	A.75.T7.11.3	Area C
Tablet 23	IVC2	IVC2	A.75.11.3a	Area C
Tablet 24	IVC1	IVC2	A.75.11.3a	Area C
Tablet 25	IVC1	IVC2	A.75.11.7	Area B
Tablet 26	IVC1	IVC2	A.75.11.3a	Area C
Tablet 27	IVC1	?	Area B	Area B

Table 5.2 List of the cylinder seals and seal impressions recovered from Tepe Yahya (Phases IVC2-IVB6). The contexts marked with a star correspond to contexts that were likely erroneously noted previously as B.71.20 (see Pittman 2001). As the definition of Phases IVC2 and IVC1 have changed, both D.T. Potts's and H. Pittman's phases have been provided in this table. In the column labeled Pittman's phases the first letter and number (e.g. IVC2) correspond to the general classification of the items by phases provided by H. Pittman, while in parentheses is the information regarding the phase as detailed by item (see Pittman 2001:240-44).

Reg. #	Object	Context	Pittman's Phases	Potts's Phases	Location	Style
TY.17, Cat. 22	Cylinder seal	BW/CW.71.8.1	IVC2 (IVC2/IVC1)	IVC2	Area G	Glazed Steatite style
TY.16, Cat. 23	Cylinder seal	BW/CW.71.T3.2	IVC2 (unknown)	IVC1	Areas F-G	Wheelcut style
SF1162	Cylinder seal	BW/CW.71.7.2	Not listed	IVC1	Areas F-G	Not detailed
TY.6, Cat. 29	Impression: clay slab wall sealing	B.70.20	IVC1 (IVC1)	IVC1	Room 5	Glazed Steatite style
Y.11, Cat. 38	Impression: clay slab wall sealing?	Unknown	"No controlled Context Information"	?	?	Wheelcut style
Cat.40	Impression: clay slab wall sealing?	Unknown	"No controlled Context Information"	?	?	Wheelcut style
TY.13, Cat. 26	Impression: clay slab with wall plaster	B.70.20*	IVC1 (IVC1)	IVC1	Room 5	Classic style
TY.7-8-9-10-15-18, Cat. 27	Impression: clay slab with wall plaster	B.70.20*	IVC1 (IVC1)	IVC1	Room 5	Classic style
TY.4, Cat. 30	Impression: clay slab with wall plaster	B.70.20	IVC1 (IVC1)	IVC1	Room 5	Incised style
TY.11, Cat. 28	Impression: clay slab with wall plaster	B.70.20	IVC1 (IVC1)	IVC1	Room 5	Wheelcut style?
TY.12, Cat. 20	Impression: clay slab with wall plaster	B.?.7?	IVC2 (Period IVC)	?	Trench B	Classic style
TY.29, Cat. 7	Impression: door sealing	B.71.6(?)	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Classic style
Y.42, Cat. 10	Impression: door sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Glazed Steatite or Wheelcut style
Y.39, Cat. 24	Impression: door sealing	B.70.20*	IVC1 (IVC1)	IVC1	Room 5	Classic style
TY.22, Cat. 4	Impression: jar or bag sealing	B.71.6b	IVC2 (IVC2)	IVC2	Room 4	Stamp seal impression
Y.33, Cat. 39	Impression: jar sealing	Unknown	"No controlled Context Information"	?	?	Wheelcut style
TY.20, Cat. 3	Impression: jar sealing	A.75.11.2c	IVC2 (IVC2)	IVC2	Room 1	Wheelcut style
Y.34, Cat. 1	Impression: jar sealing	B.71.9	IVC2 (IVC2)	IVC2	Room 2	Classic style
Y.43, Cat. 6	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Classic style
Y.38, Cat. 8	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Classic style
Y.44, Cat. 11	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Glazed Steatite style
TY.31, Cat. 13	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Glazed Steatite style
Y.31, Cat. 14	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Glazed Steatite style
TY.23, Cat. 16	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Glazed Steatite style
Y.36, Cat. 15	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Incised style
Y.30, Cat. 18	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Incised style
TY.26, Cat. 19	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Incised style
TY.27, Cat. 9	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Wheelcut style
TY.25, Cat. 17	Impression: jar sealing	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Wheelcut style
TY.14, Cat. 25	Impression: jar sealing	B.70.20*	IVC1 (IVC1)	IVC1	Room 5	Classic style
Y.22, Cat. 2	Impression: jar sealing	B.71?.13.2	IVC2 (IVC2)	IVC2?	Room 6	Glazed Steatite style
Y.35, Cat. 37	Impression: jar sealing	B.70.4.10	IVB2 (IVB2)	Not listed	Trench B	Classic style
Y.7, Cat. 35	Impression: jar sealing	B.71.1	IVB6 (IVB6)	Not listed	Trench B	Glazed Steatite style
TY.1, Cat. 34	Impression: jar sealing	BW.71.T2.2	IVB6 (IVB6)	IVB6	Trench BW	Glazed Steatite style
Cat.33	Impression: jar sealing?	Unknown	IVC1 (IVC1?)	?	?	Glazed Steatite style
TY.19, Cat. 5	Impression: tablet	A.75.11.3a	IVC2 (IVC2)	IVC2	Area C	Classic style
TY.27, Cat. 31	Impression: tablet	B.70.20	IVC1 (IVC1/IVC2)	IVC1	Room 5	Classic style
Cat.41	Impression: uncertain function	Unknown	"No controlled Context Information"	?	?	Classic style
Cat.42	Impression: uncertain function	Unknown	"No controlled Context Information"	?	?	Glazed Steatite style
Cat.45	Impression: uncertain function	Unknown	"No controlled Context Information"	?	?	Illegible
Cat.43	Impression: uncertain function	Unknown	"No controlled Context Information"	?	?	Wheelcut style
Cat.44	Impression: uncertain function	Unknown	"No controlled Context Information"	?	?	Wheelcut style
TY.24, Cat. 21	Impression: uncertain function	BW/CW.71.8.1	IVC2 (IVC2/IVC1)	IVC2	Area G	Glazed Steatite style
TY.3, Cat. 32	Impression: uncertain function	BW/CW.71.7.2	IVC1 (IVC1)	IVC1	Areas F-G	Glazed Steatite style
TY.30, Cat. 12	Impression: uncertain function	B.71.6	IVC2 (IVC2/IVC1)	IVC2/IVC1?	Room 3/4?	Glazed Steatite style
TY.2, Cat. 36	Impression: uncertain function	B.71.7	IVB6 (IVB6)	IVB6	Trench B	Glazed Steatite style

Table 6.1 Radiocarbon dates from Tepe Yahya (WSU 872 to Beta 6475, after Prickett 1986a: Table 3.4; New series 1 to 9, after Lamberg-Karlovsky 2001a: Table A.1).

Lab. No.	Original Period/Phase attribution	Potts's 2001 Period/Phase attribution	Location	Context and material	Years BP (5568)	Years BC (5730)	Range BC 1 SD (5730)	Range BC 2 SD (5730)	Source
WSU 872	VA.1	/	/	C.68.T7.1	5580+/-280	3797+/-290	4087-3507	4377-3217	P 1986a: Table 3.4
Beta 6560	VA.1N	/	/	XCE.71.14B.39	5060+/-110	3262+/-110	3372-3152	3482-3042	P 1986a: Table 3.4
Beta 6483	VA.1N	/	/	XCE.71.T2.14.30	4060+/-80	2232+/-80	2312-2152	2392-2072	P 1986a: Table 3.4
Beta 6469	IVC	IVC2	Area B	A.75.11.4	4650+/-230	2840+/-240	3000-2600	3320-2360	P 1986a: Table 3.4
GX 1730	IVC	IVC2	Area H	C.68.T6.6	4590+/-180	2778+/-190	2968-2588	3158-2398	P 1986a: Table 3.4
GX 5160	IVC1 (? IVB5-6 contam.)	IVC1	Areas F-G	BW-CW.71.7.7 wall	4150+/-275	2324+/-280	2604-2044	2884-1764	P 1986a: Table 3.4
GX 5159	IVC1 (? IVB5-6 contam.)	IVC1	Room 5	B.70.20a	4310+/-195	2489+/-200	2689-2289	2889-2089	P 1986a: Table 3.4
GX 5161	IVC2 (? IVB1 pit contam.)	IVC2	Area B	A.75.11.4 Pit, ? top missed	3720+/-175	1882+/-180	2062-1702	2242-1522	P 1986a: Table 3.4
Beta 6472	IVB6 (? IVB1 pit contam.)	IVB6	Not mentioned	B.71.3	3560+/-140	1717+/-140	1857-1577	1997-1577	P 1986a: Table 3.4
TUNC 37	IVB6-5 (? IVC contam.)	Not mentioned	Not mentioned	B.71.1	4725+/-115	2917+/-120	3032-2802	3147-2687	P 1986a: Table 3.4
GX 1727	IVB5	IVB	Trench BW	BW.69.T5.7	4430+/-360	2613+/-370	2983-2243	3353-1873	P 1986a: Table 3.4
TF 1143	IVB5	IVB5	SE of the Persian Gulf room	B.70.8.1.1	4150+/-130	2325+/-130	2455-2195	2585-2065	P 1986a: Table 3.4
GX 1726	IVB5	Not mentioned	Trench BW	BW.69.T5.8 (grain)	2595+/-120	723+/-120	893-603	963-483	P 1986a: Table 3.4
Beta 6475	IVB5	IVB5	Persian Gulf room floor	B-BW.70.T4.7.1 (grain)	2950+/-60	1088+/-60	1148-1028	1208-968	P 1986a: Table 3.4
New series 1	IVB5	IVB5	Persian Gulf room floor	B-BW.70.T4.7.1 (seeds)	3800+/-135		2460-2420	2592-1877	LK 2001: Table A.1
New series 2	IVB5	IVB4	Not mentioned	B-BW.70.T6.4 (seeds)	3665+/-140		2211-1878	2456-1736	LK 2001: Table A.1
New series 3	IVB5	IVB5	SE of the Persian Gulf room	B.70.8.1 (charcoal)	3690+/-55		2141-2015	2206-1915	LK 2001: Table A.1
New series 4	IVB5	Not mentioned	Trench B-BW	B-BW.69.T5.8A (charcoal)	3835+/-55		2350-2200	2461-2190	LK 2001: Table A.1
New series 5	IVB2	Not mentioned	Trench B-BW	B-BW.69.T5.9 (charcoal)	3675+/-55		2137-2010	2200-1909	LK 2001: Table A.1
New series 6	IVB5	Not mentioned	N of the Persian Gulf room?	B-BW.70.T4.5.1 (charcoal)	3790+/-55		2301-2137	2360-2111	LK 2001: Table A.1
New series 7	IVB5?	IVB5	Trench A ovens	A.75.9.3 (charcoal)	3690+/-65		2143-2008	2211-1891	LK 2001: Table A.1
New series 8	IVB5	IVB	Trench BW	BW.69.T5.6 (charcoal)	3715+/-90		2207-2007	2355-1881	LK 2001: Table A.1
New series 9	IVB5	Not mentioned	Not mentioned	B-BW.69.T5.5 (charcoal)	3675+/-110		2200-1896	2349-1784	LK 2001: Table A.1

Graph. 6.1 Radiocarbon dates from Tepe Yahya Phases VA.1N to IVB5 and two additional samples from Phases IVB4 and IVB2. Calibration of the dating results with the program OxCal 4.10 and the IntCal04 calibration curve.

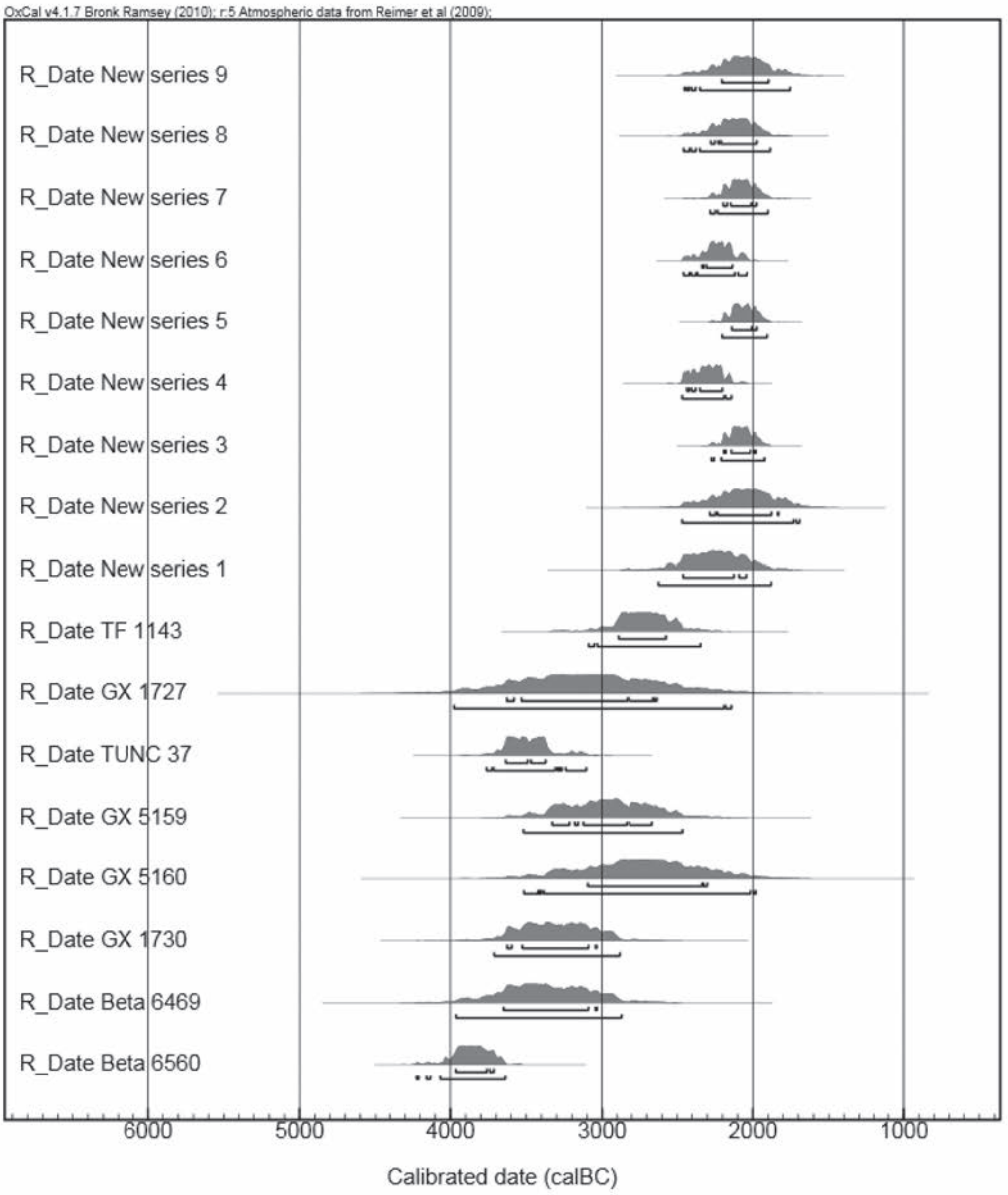


Table 6.2 Radiocarbon dates from Miri Qalat, after Besenval 1997b: 35 note n°50 (upper rows). Calibration of the dating results with the program OxCal 4.10 and the IntCal04 calibration curve (lower rows).

Lab. Nb	Context	Years BP (5568)	Calibrated BC		Source
Gif-10055	Trench IX, Level VI	4560 +/- 60	3500-3041		Besenval 1997b : 35 note n° 50
Gif-10058	Trench IX, Level V	4795 +/- 50	3692-3380		Besenval 1997b : 35 note n° 50
Gif-10062	Trench IX, Level V	4410 +/- 65	3331-2899		Besenval 1997b : 35 note n° 50
Gif-10059	Trench IX, Level III	4530 +/- 50	3365-3042		Besenval 1997b : 35 note n° 50
			1 sigma (68.2%)	2 sigma (95.4%)	
Gif-10055	Trench IX, Level VI	4560 +/- 60	3486-3110	3505-3031	Calibration OxCal 4.10
Gif-10058	Trench IX, Level V	4795 +/- 50	3643-3525	3692-3380	Calibration OxCal 4.10
Gif-10062	Trench IX, Level V	4410 +/- 65	3309-2918	3336-2906	Calibration OxCal 4.10
Gif-10059	Trench IX, Level III	4530 +/- 50	3357-3111	3483-3031	Calibration OxCal 4.10

Graph. 6.2 Radiocarbon dates from Miri Qalat recalibrated using OxCal 4.10.

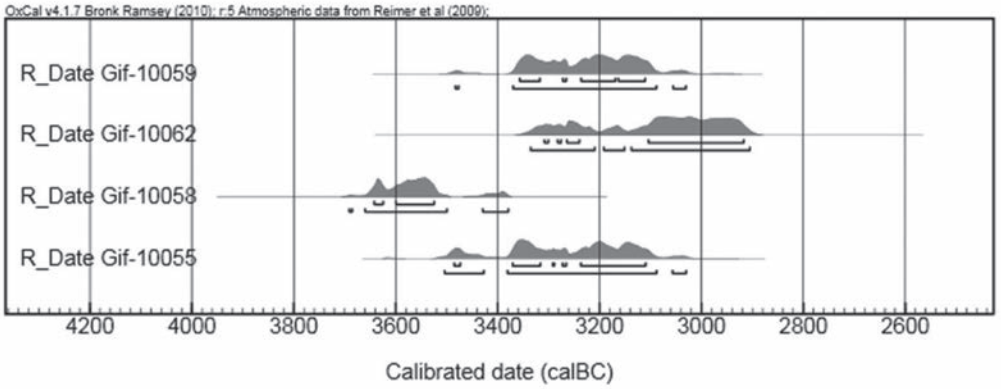


Table 7.1 List of the sites of the Southeastern Iranian Plateau discussed in Chapter 7 and placed on the map of Figure 7.1.

Area	Site	Period(s)	Additional information
Soghun Valley area	Tepe Yahya	Yahya IVC-IVB	
Soghun Valley area	Site 1	Yahya IVC-IVB	
Soghun Valley area	Site 15	Yahya IVC-IVB	
Soghun Valley area	Site 15A	Yahya IVC	
Soghun Valley area	Site 22	Yahya IVC-IVB	
Soghun Valley area	Site 23	Yahya IVC-IVB	
Soghun Valley area	Site 25	Yahya IVC-IVB	
Soghun Valley area	SU 70-9	Yahya IVC-IVB	
Soghun Valley area	SU 70-67	Yahya IVC-IVB	
Daulatabad Plain area	R22	Yahya IVC-IVB	
Daulatabad Plain area	R160A	Yahya IVC-IVB	
Daulatabad Plain area	R178	Yahya IVC-IVB	Presence of Yahya SEIP Group A?, a Proto-Elamite jar fragment?
Daulatabad Plain area	R179	Yahya IVC-IVB	
Daulatabad Plain area	Dih-i Sard	Yahya IVB	
Daulatabad Plain area	R314-321	Iblis IV/V	
Daulatabad Plain area	R50	Iblis IV/V	
Halil Rud Valley	Konar Sandal South	Iblis IV/V, Yahya IVC-IVB	Presence of a seal dated to ca. 2900 BC
Halil Rud Valley	Konar Sandal North	Yahya IVB	
Halil Rud Valley	Mahtoutabad	Iblis IV/V, Uruk	
Halil Rud Valley	Surveys	5th mill. BC - Islamic period, large number of 3rd mill. BC sites	
Southern Kerman - Hormozgan	Tepe Nurabad	Yahya IVC-IVB	Presence of elements of Yahya VA
Southern Kerman - Hormozgan	Daruyi	Yahya IVC-IVB	
Southern Kerman - Hormozgan	Jamalabad	Yahya IVC-IVB	
Southern Kerman - Hormozgan	Tump-i Surkh Qalat	Yahya IVC-IVB, Iblis IV/V?	
Southern Kerman - Hormozgan	Takkul A	Iblis IV/V, Yahya IVC-IVB	Presence of Yahya SEIP Group A
Southern Kerman - Hormozgan	Takkul B	Iblis IV/V	
Southern Kerman - Hormozgan	Takkul C	Iblis IV/V, Yahya IVC-IVB	
Southern Kerman - Hormozgan	Tepe Sultan Miri	Yahya IVC-IVB	Presence of a Proto-Elamite jar fragment
Southern Kerman - Hormozgan	Tepe Mauru	Yahya IVC-IVB	
Southern Kerman - Hormozgan	Tump-i Chiraghabad	Iblis IV/V, Yahya VA, Yahya IVC-IVB	
Southern Kerman - Hormozgan	Chiraghabad	Iblis IV/V	

Southern Kerman - Hormozgan	Tepe Ziyarat	Iblis IV/V	
Southern Kerman - Hormozgan	Qal'a Jagin	Yahya IVC	
Southern Kerman - Hormozgan	3rd mill. BC Cemetery north of Minab	Third millennium BC	
Southern Kerman - Hormozgan	K14	Yahya IVC	
Balochistan	Tump-i Chah Ghulam	Yahya IVC-IVB	
Balochistan	Chah Husaini	Yahya VB-VA, IVC-IVB	
Balochistan	Bahistabad	Yahya IVC-IVB	
Balochistan	Tump-i Zarbadast	Yahya IVC-IVB	
Balochistan	Chah Sardu	Iblis IV/V, Yahya IVC-IVB	
Balochistan	Tump-i Qasimabad	Iblis IV/V, Yahya IVC-IVB	
Balochistan	Deh-i Qadi	Yahya IVC-IVB	
Balochistan	Tepe Bampur	Yahya IVC-IVB	Presence of Yahya SEIP Group A
Balochistan	Dambian	Yahya IVC-IVB	
Balochistan	Gwarghust/Maula?	Yahya IVC-IVB	
Balochistan	Khurab	Yahya IVC-IVB	Presence of Yahya SEIP Group A
Balochistan	Shahr Daraz	Yahya IVC-IVB	
Balochistan	Katukan	Yahya IVC-IVB	Presence of Yahya SEIP Group A
Balochistan	Damin	Yahya IVC-IVB	
Balochistan	Gabro Maro	Yahya IVC-IVB	
Balochistan	Robahok	Yahya IVC-IVB	
Balochistan	Kash sites	Iblis IV/V, Yahya IVC-IVB	
Balochistan	Shandala	Yahya IVC-IVB	
Balochistan	Dahnag	Yahya IVC-IVB	
Balochistan	Fanuch	Yahya IVC-IVB	Presence of Yahya SEIP Group A
Balochistan	Sadaich	Yahya IVC-IVB	
Balochistan	Site GZ	Yahya IVC-IVB	
Balochistan	Damba Koh	Yahya IVC-IVB	
Balochistan	Qalat-e Jamshid	Yahya IVC-IVB	
Balochistan	Konarak	Iblis IV/V, IVC-IVB	
Balochistan	Saiyyidabad	Yahya IVC-IVB	
Kech-Makran	Shahi-Tump, Miri Qalat, surveys	Iblis IV/V, Yahya IVC-IVB	Presence of Yahya SEIP Group A
Seistan	Shahr-i Sokhta, surveys	Yahya IVC-IVB	Presence of Yahya SEIP Group A
Bardsir Plain area	Tal-i Iblis (Site 133)	Iblis IV/V/VI, Yahya IVC	
Bardsir Plain area	Site 001	Iblis IV/V	
Bardsir Plain area	Site 002	Iblis IV/V	

Bardsir Plain area	Site 004	Yahya IVB/Bardsir Bahramjerd horizon	
Bardsir Plain area	Site 005	Yahya IVB/Bardsir Bahramjerd horizon	
Bardsir Plain area	Site 015	Iblis IV	
Bardsir Plain area	Site 020	Iblis IV/V	
Bardsir Plain area	Site 021	Iblis IV	
Bardsir Plain area	Site 027	Iblis V	
Bardsir Plain area	Site 036	Iblis V	
Bardsir Plain area	Site 037	Yahya IVB/Bardsir Bahramjerd horizon	
Bardsir Plain area	Site 062	Iblis V	
Bardsir Plain area	Site 064	Iblis V	
Bardsir Plain area	Site 081	Iblis IV	
Bardsir Plain area	Site 094	Iblis V	
Bardsir Plain area	Site 106	Iblis IV/V/VI	
Bardsir Plain area	Site 121	Iblis IV/V/VI	
Bardsir Plain area	Site 122	Iblis IV	
Bardsir Plain area	Site 134	Iblis IV	
Bardsir Plain area	Site 135	Iblis IV	
Bardsir Plain area	Site 136	Iblis IV	
Bardsir Plain area	Site 137	Iblis IV	
Bardsir Plain area	Site 138	Iblis V	
Bardsir Plain area	Site 139	Iblis IV/V	
Bardsir Plain area	Tepe Langar	Iblis IV/V	
North of Bardsir Plain area	Tepe Atash	Iblis IV/V	
Takab Plain	Shahdad	Yahya VA, Iblis IV/V/VI, Yahya IVC-IVB	

Figures

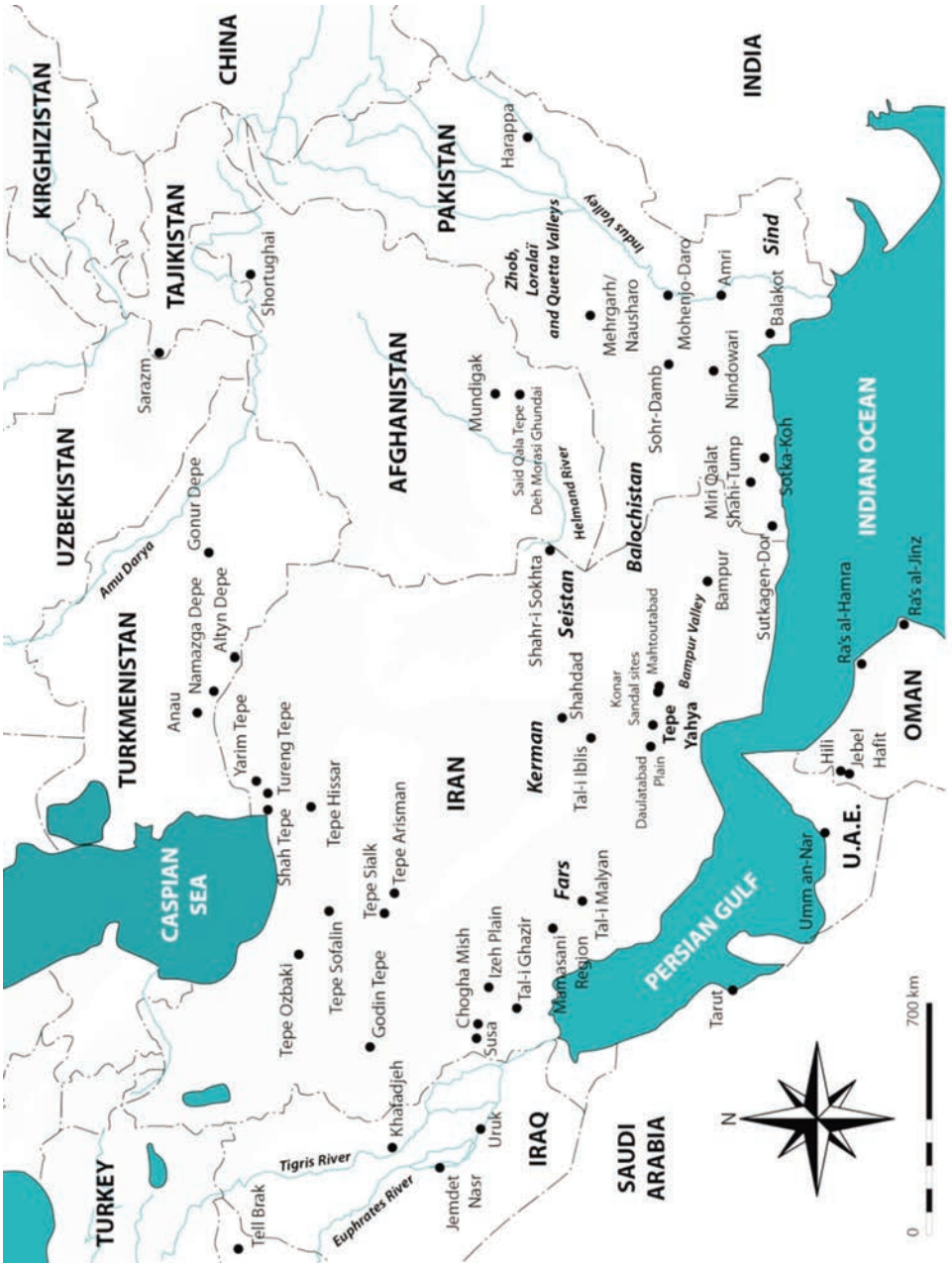


Figure 0.1 Map of Middle Asia with the main sites mentioned in the text.

Figure 1.1 View of the Daulatabad Plain, the Soghun Valley, and the Halil Rud Valley, with the locations of Tepe Yahya and Konar Sandal sites. The bold dashed line indicates the placement of passes that connect these three areas (© 2010 Google; © 2011 Cnes/Spot Image; Image © 2011GeoEye; Image © 2011DigitalGlobe).

Figure 1.2 Satellite view of the Soghun Valley with the location of Tepe Yahya (© 2011 Google; © 2011 Cnes/Spot Image; Image © 2011 DigitalGlobe).

Figure 1.3 Location of the main Proto-Elamite sphere (dashed circle), including Godin Tepe and Chogha Mish (Late Uruk).

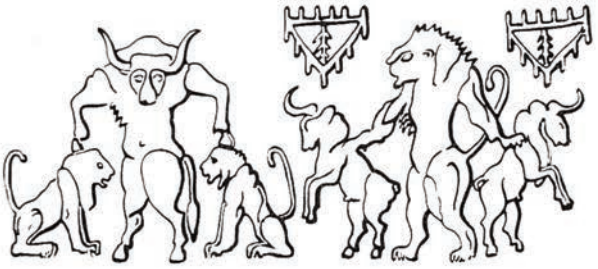


Figure 1.4 Proto-Elamite glyptic impression from Susa, after Amiet 1980: Pl. 38, n°585.

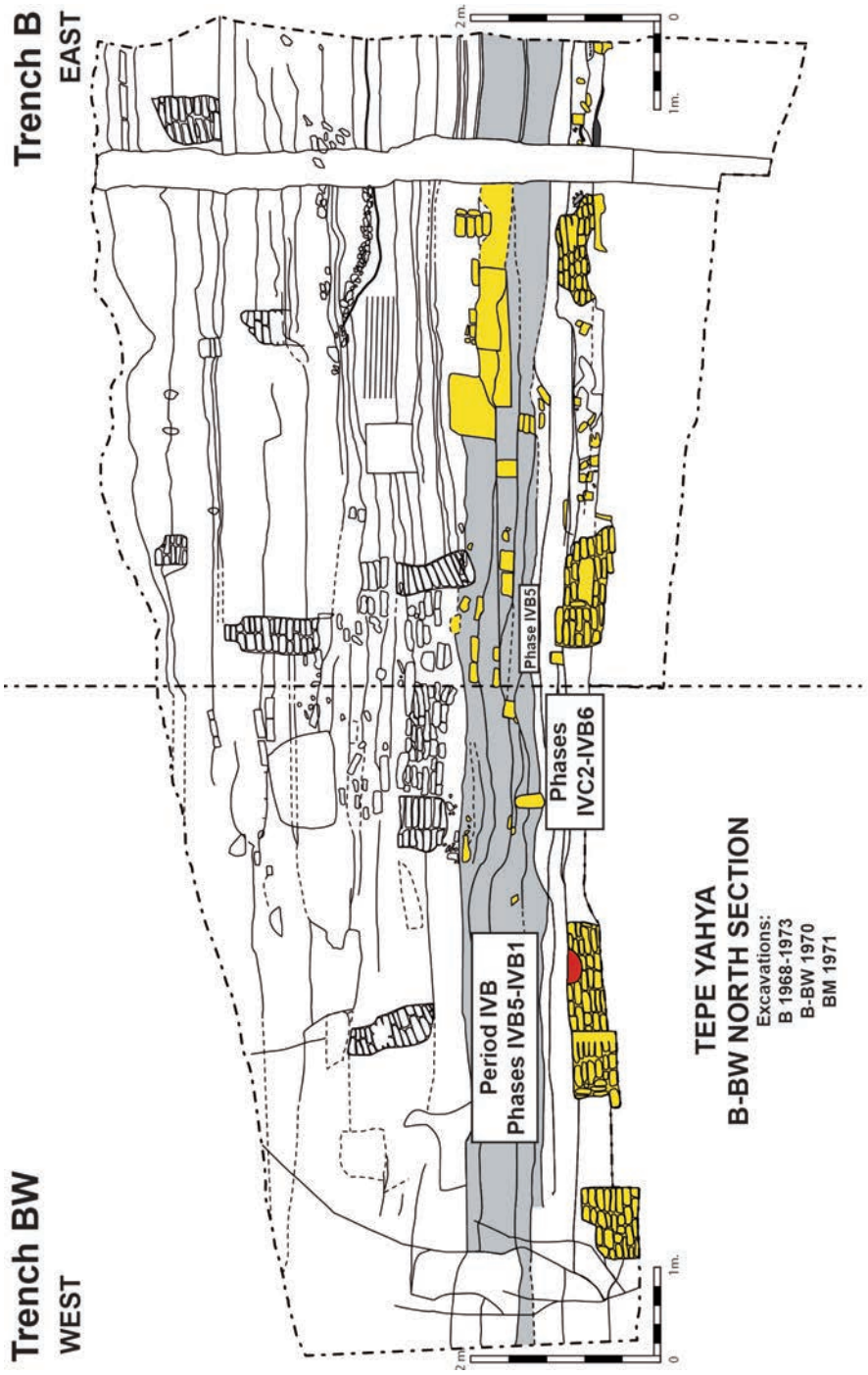


Figure 2.1 Tepe Yahya Trenches B-BW North section.

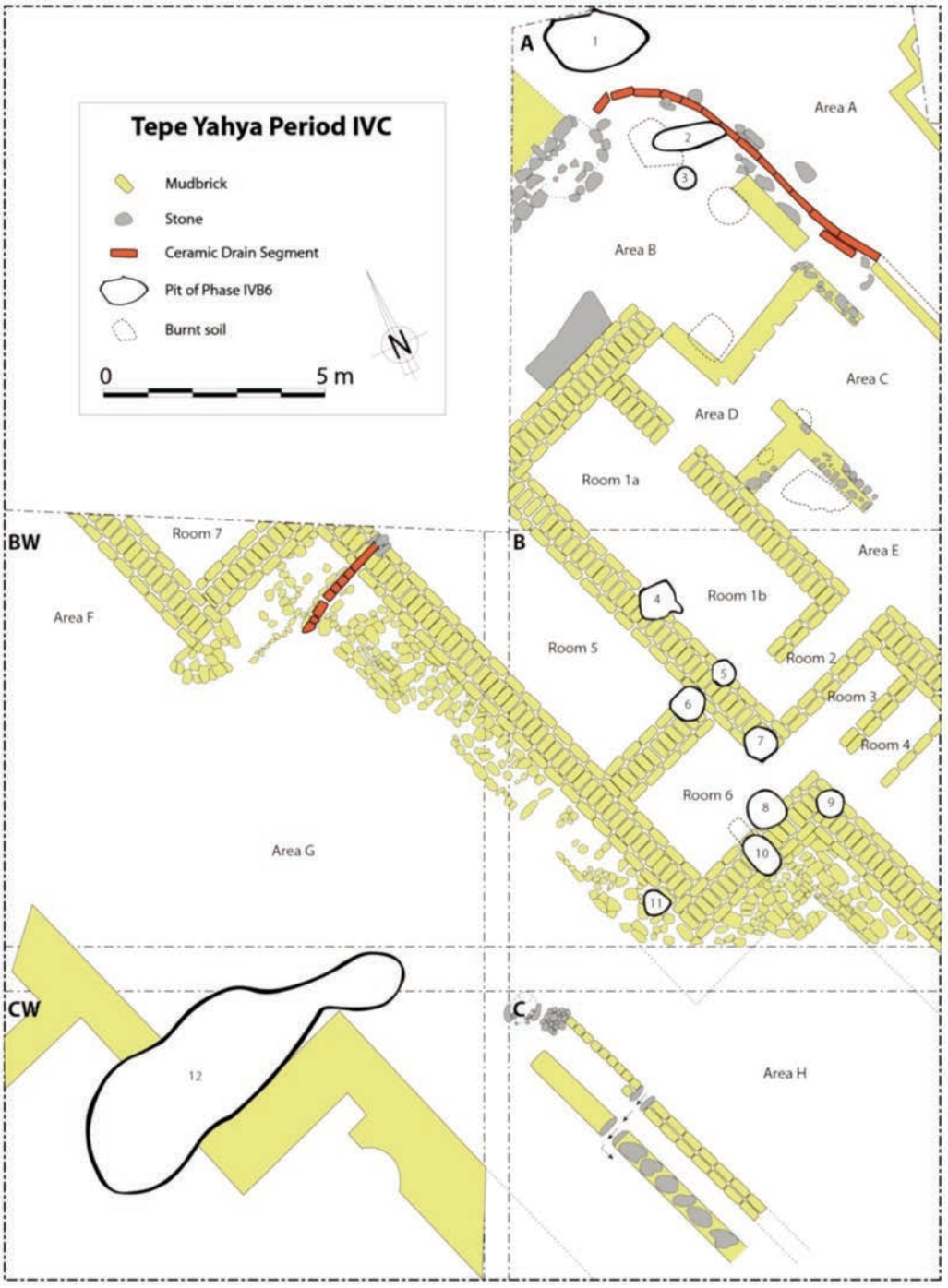


Figure 2.2 Tepe Yahya, map of the Period IVC building complex with indications of the pits of Phase IVB6.

Figure 3.1 Beveled rim bowls from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

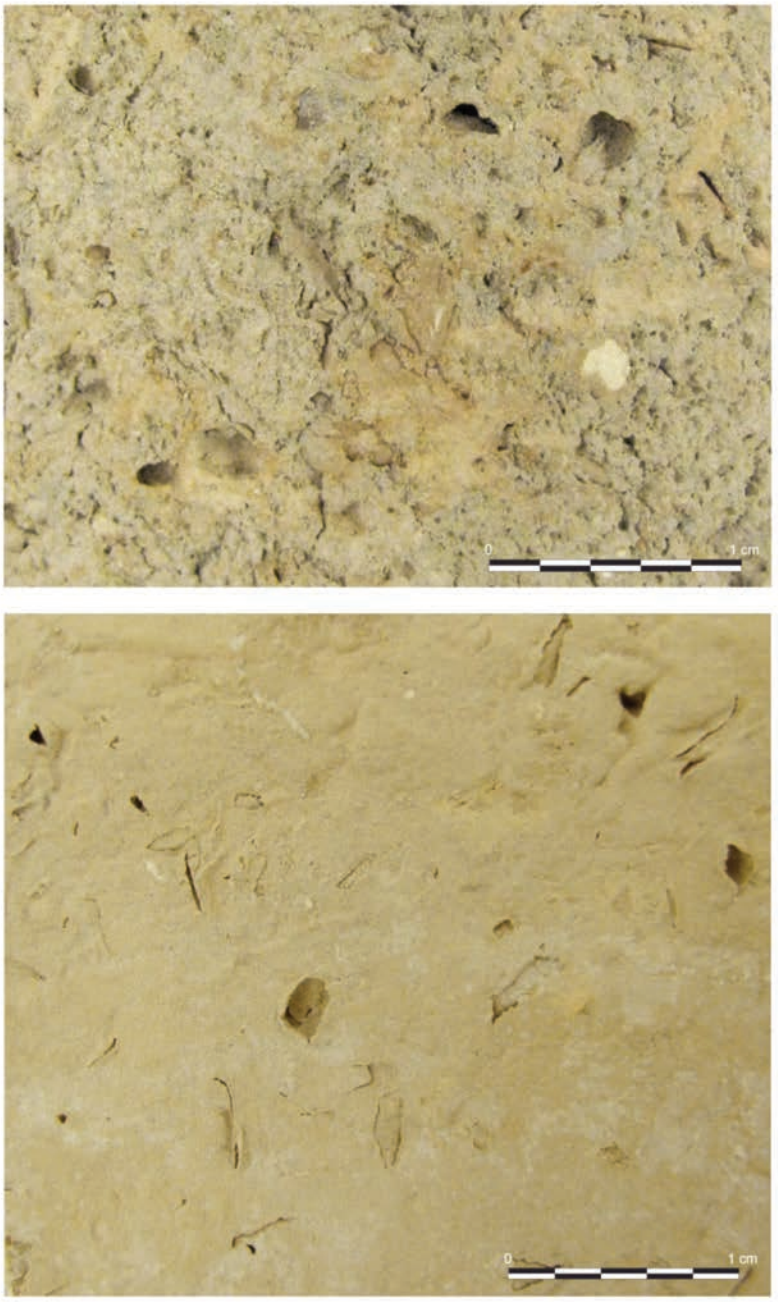


Figure 3.2 Beveled-rim bowl fabrics from Tepe Yahya: Outside surface of 0031 (upper); inside surface of 0229 (lower). Collection of the PMAE, 986-7-60/16086, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

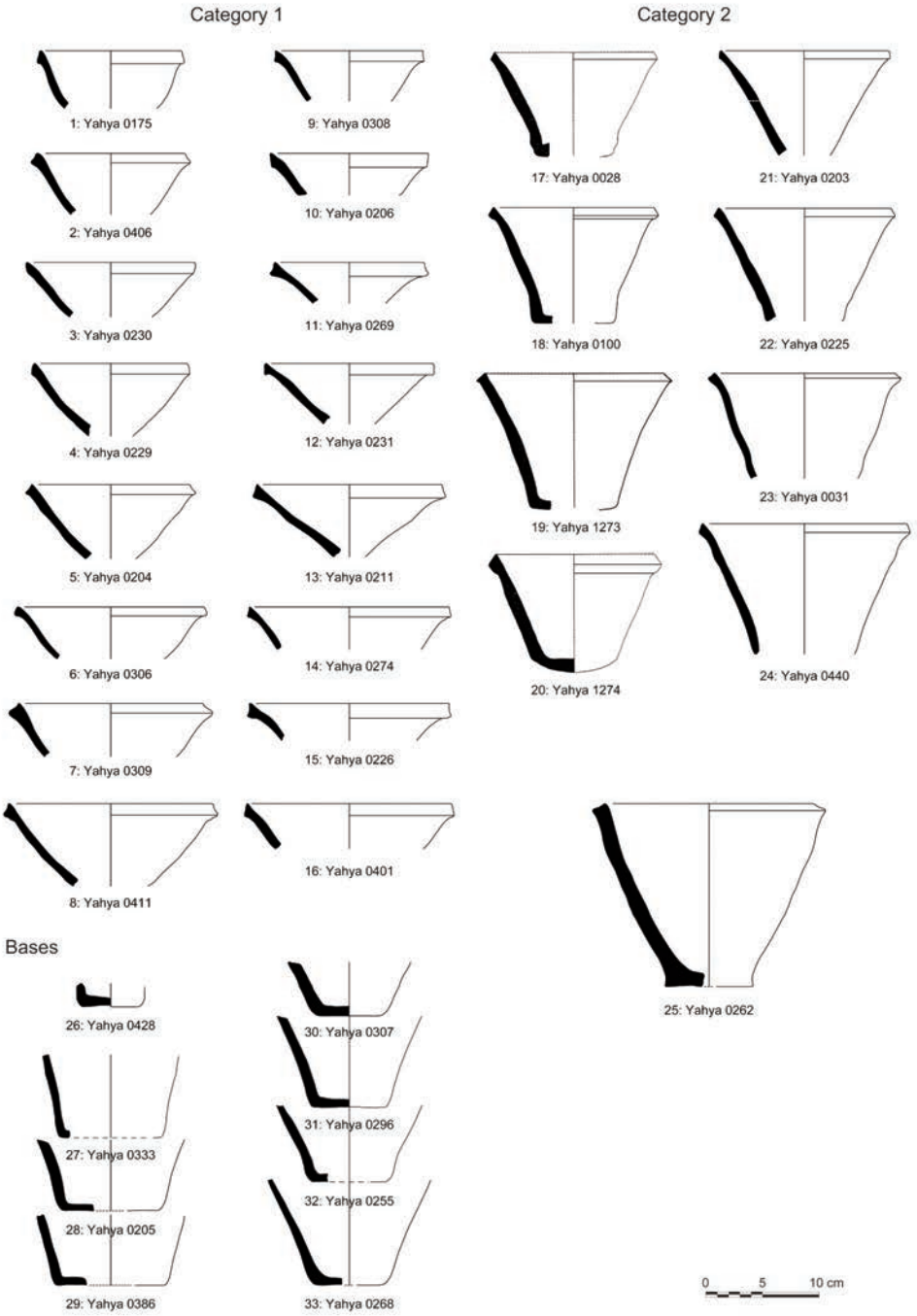


Figure 3.3 Beveled-rim bowls from Tepe Yahya.

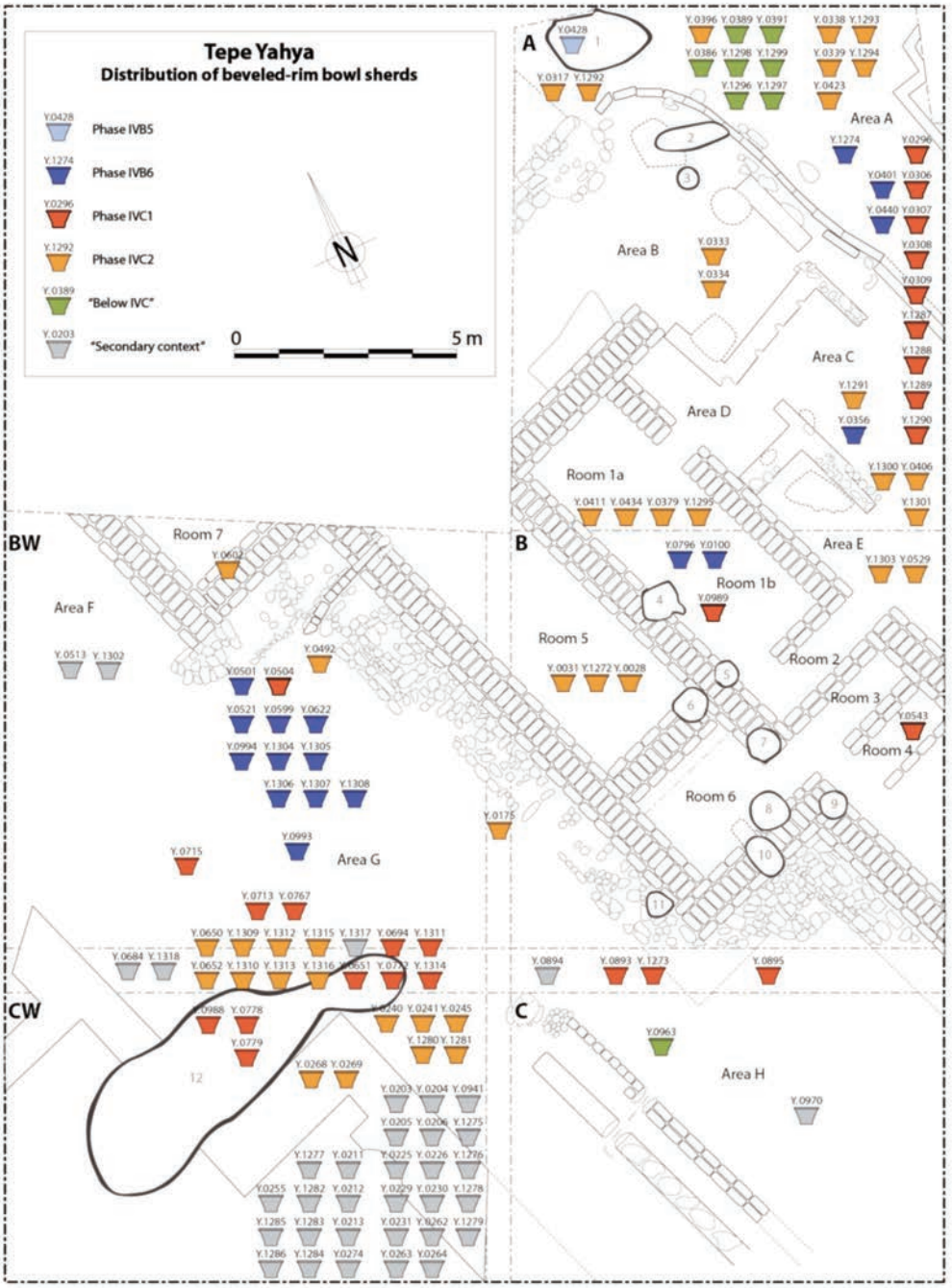


Figure 3.4 Distribution of beveled-rim bowl fragments in the complex of Tepe Yahya IVC (Phases IV2-IVB5).

Figure 3.5 Low-sided trays from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin.

Figure 3.6 Low-sided trays from Tepe Yahya 0813. Collection of the PMAE, 9999.0.3427, Harvard University, photograph by B. Mutin.© 2013 President and Fellows of Harvard College.

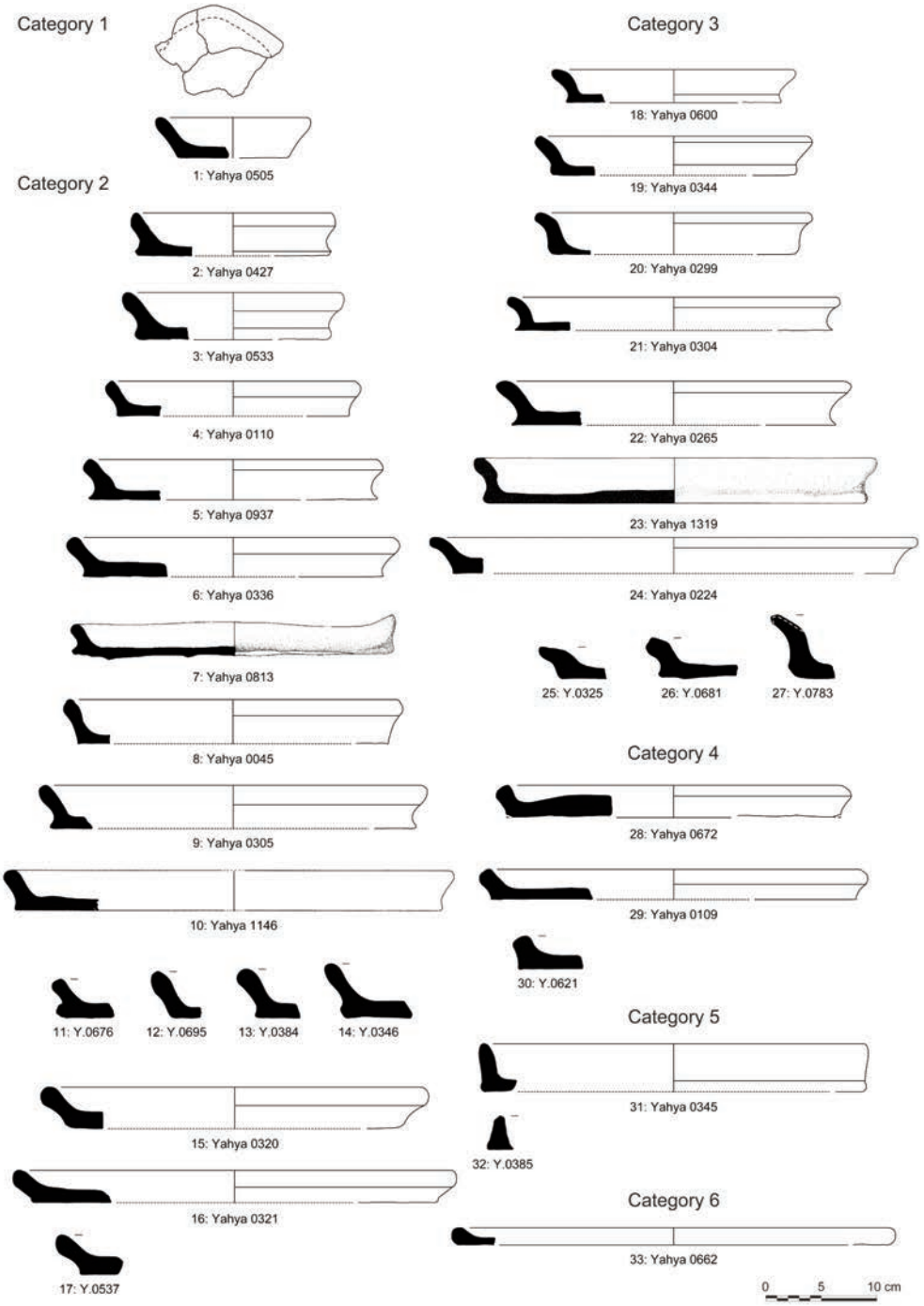


Figure 3.7 Low-sided trays from Tepe Yahya.

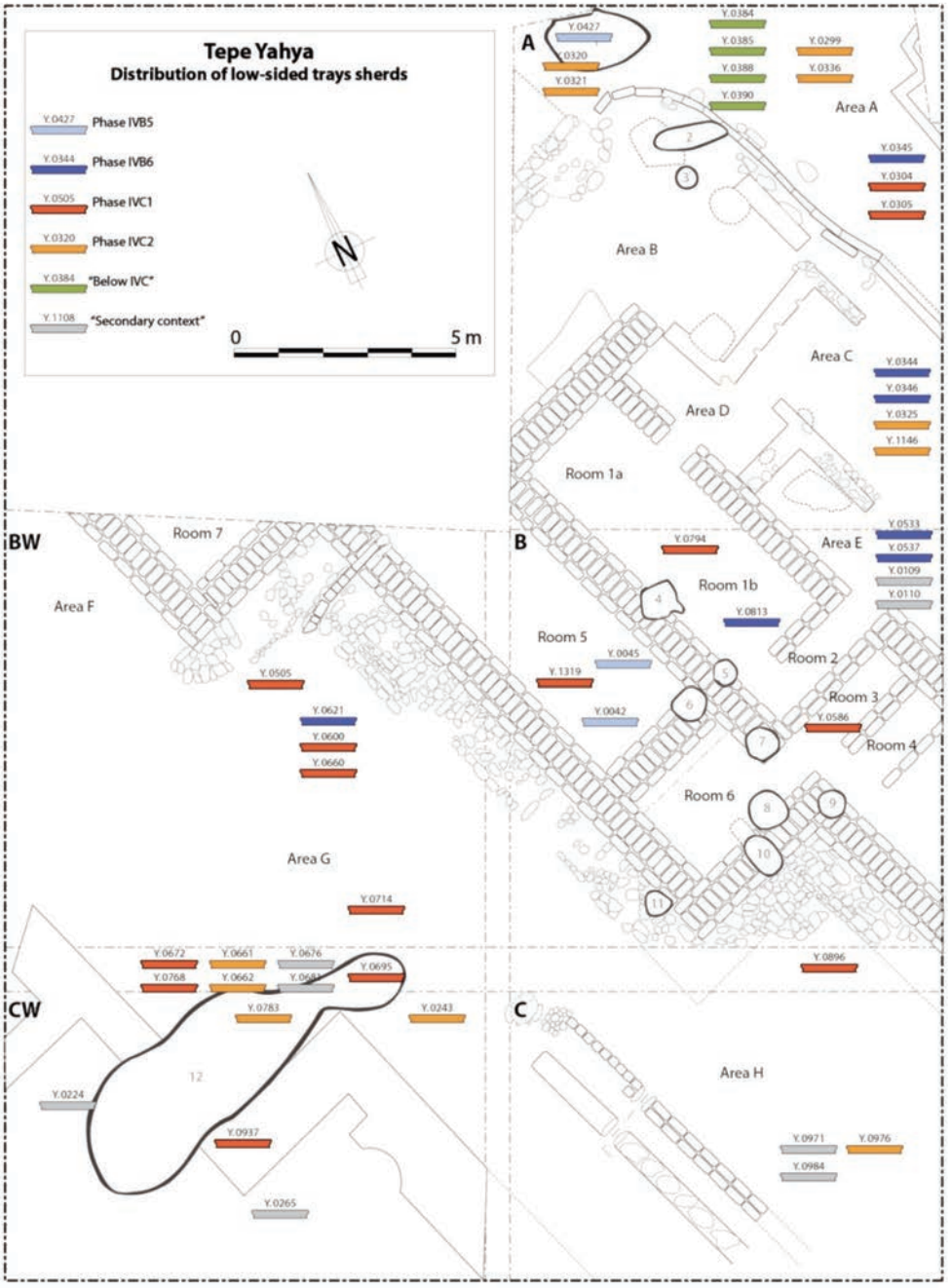


Figure 3.8 Distribution of low-sided tray fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB5).

Figure 3.9 Carinated bowls from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

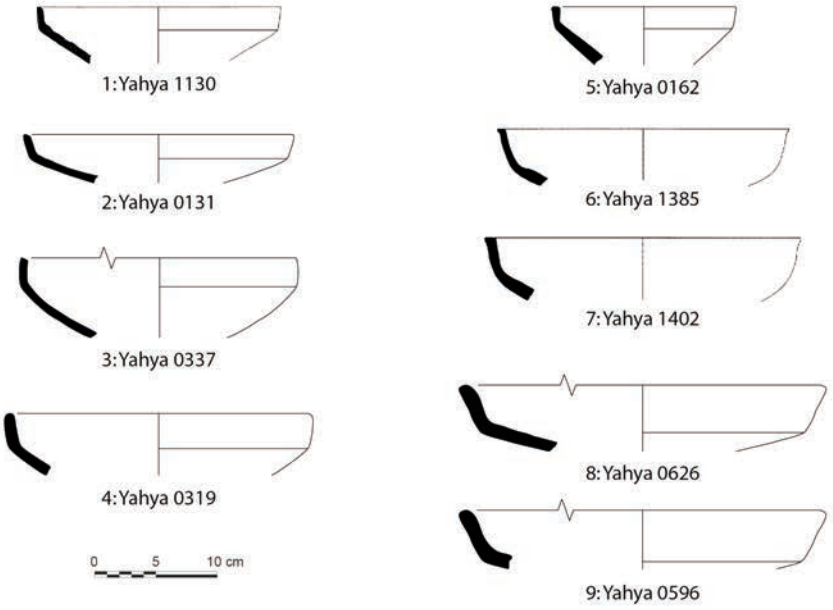


Figure 3.10 Carinated bowls from Tepe Yahya. After Lamberg-Karlovsky and Potts 2001:fig. 1.13B.

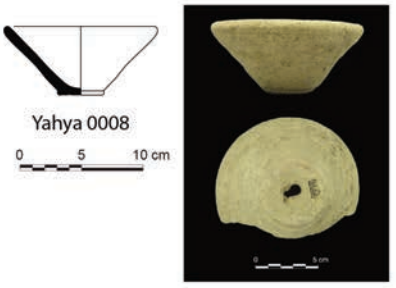


Figure 3.11 Plain bowl from Tepe Yahya: Yahya 0008. Collection of the PMAE, Harvard University, drawing and photograph by B. Mutin. Photo © 2013 President and Fellows of Harvard College.

Figure 3.12 Pedestal-based goblets from Tepe Yahya. Collection of the PMAE, Harvard University, photographs by B. Mutin. © 2013 President and Fellows of Harvard College.

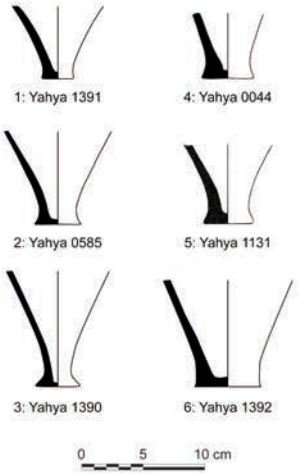


Figure 3.13 Pedestal-based goblets from Tepe Yahya: N°1, 3, 6 after Lamberg-Karlovsky and Tosi 1973:fig. 104C; n°5 after Lamberg-Karlovsky and Potts 2001:fig. 1.13C. N°2, 4 collection of the PMAE, Harvard University, drawings by B. Mutin, © 2013 President and Fellows of Harvard College.

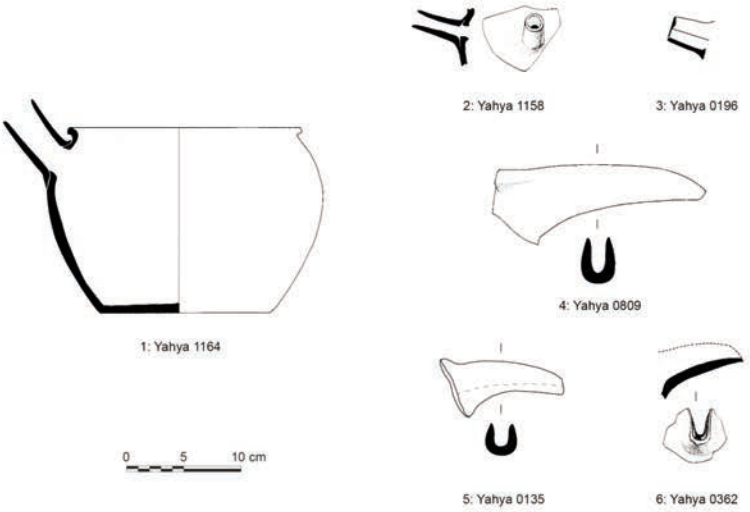


Figure 3.14 Spouted vessel and spouts from Tepe Yahya: N°1, 3, 6 after Lamberg-Karlovsky and Tosi 1973:fig. 104C; n°5 after Lamberg-Karlovsky and Potts 2001:fig. 1.13C. N°2, 4 Collection of the PMAE, Harvard University, drawings by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.15 Spouts from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

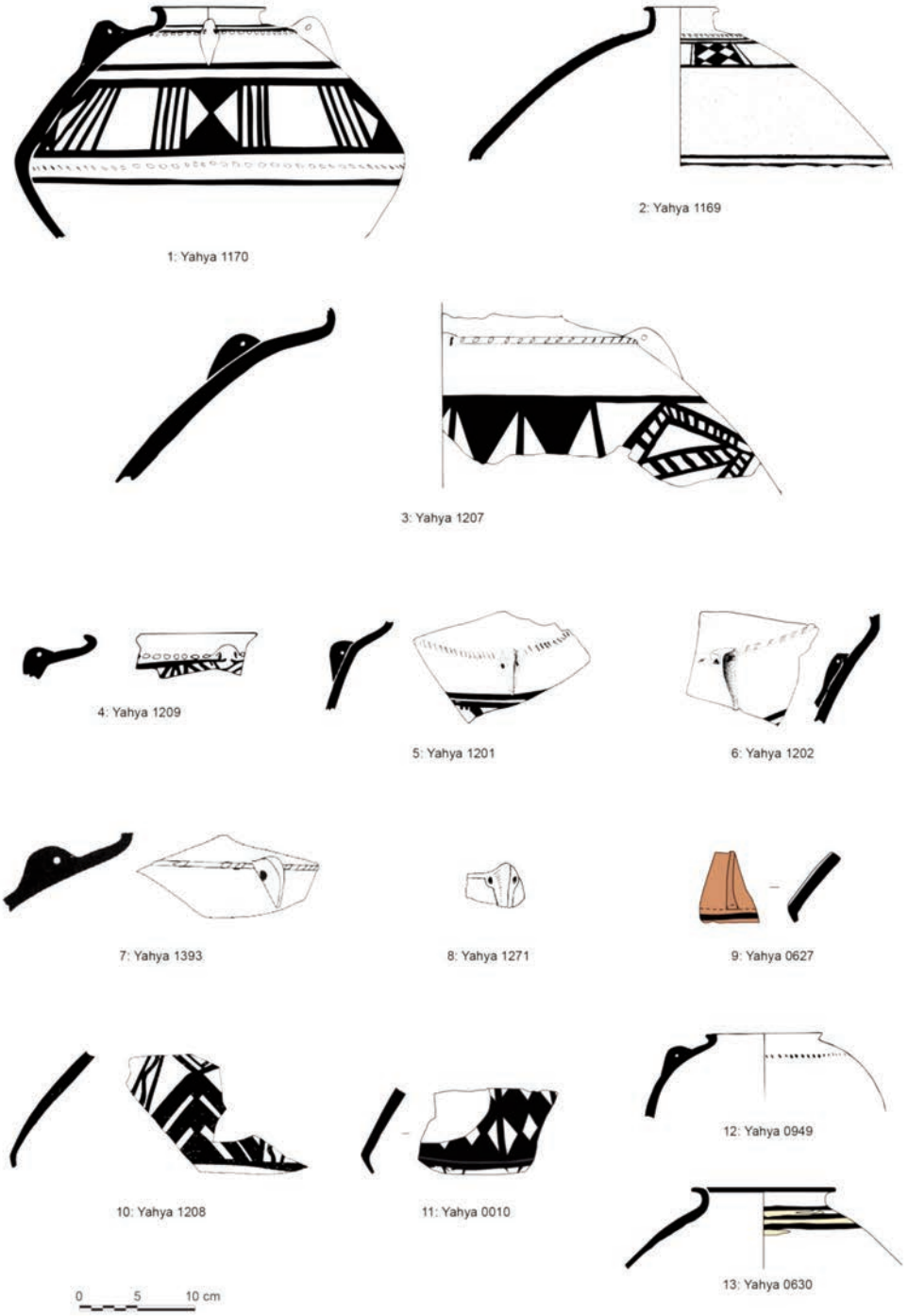


Figure 3.16 Jars from Tepe Yahya.

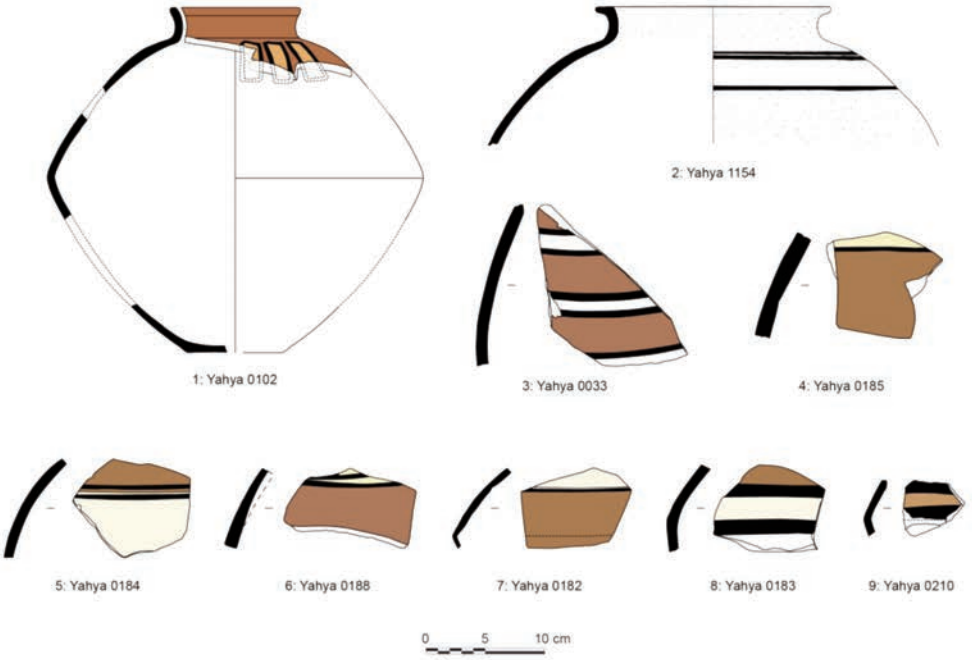


Figure 3.17 Jars from Tepe Yahya.

Figure 3.18 Jar from Tepe Yahya. Collection of the PMAE, 972-2-60/16145.1, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.19 Jar from Tepe Yahya. Collection of the PMAE, 986-7-60/16126, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.20 Jar fragments from Tepe Yahya 0102. Collection of the PMAE, 9999.0.3501, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.21 Jar fragment from Tepe Yahya 0630. Collection of the PMAE, 972-2-60/16103.1, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.22 Jar fragment from Tepe Yahya: 0010. Collection of the PMAE, 9999.0.3501, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

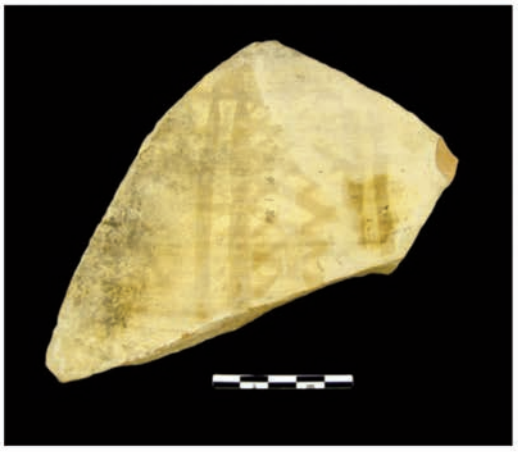


Figure 3.23 Jar fragment from Tepe Yahya: 0547. Collection of the PMAE, 9999.0.3450, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.24 Jar fragments from Tepe Yahya. Collection of the PMAE, 972-2-60/16138, 972-2-60/16103, 972-2-60/16103, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

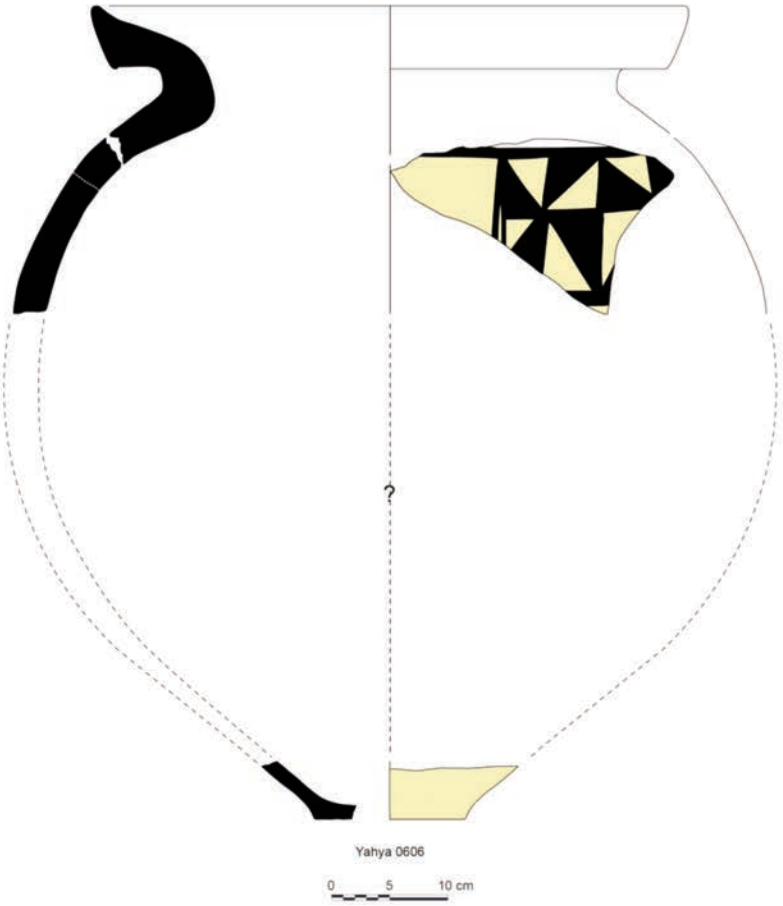


Figure 3.25 Jar fragments from Tepe Yahya 0606. Collection of the PMAE, Harvard University, drawing by B. Mutin.

Figure 3.26 Jar fragments from Tepe Yahya 0606. Collection of the PMAE, 9999.0.3418, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

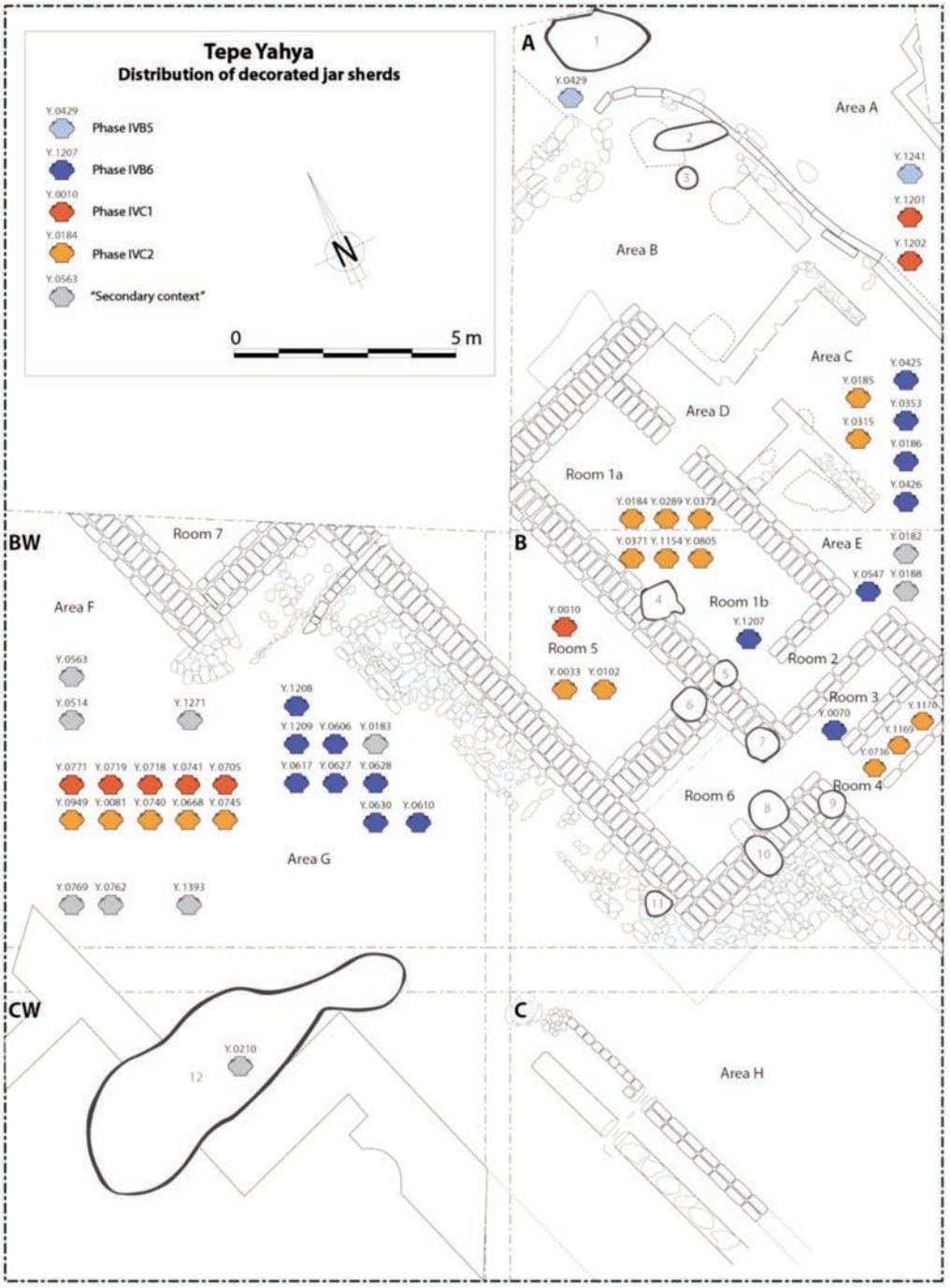


Figure 3.27 Distribution of decorated jar fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB5).

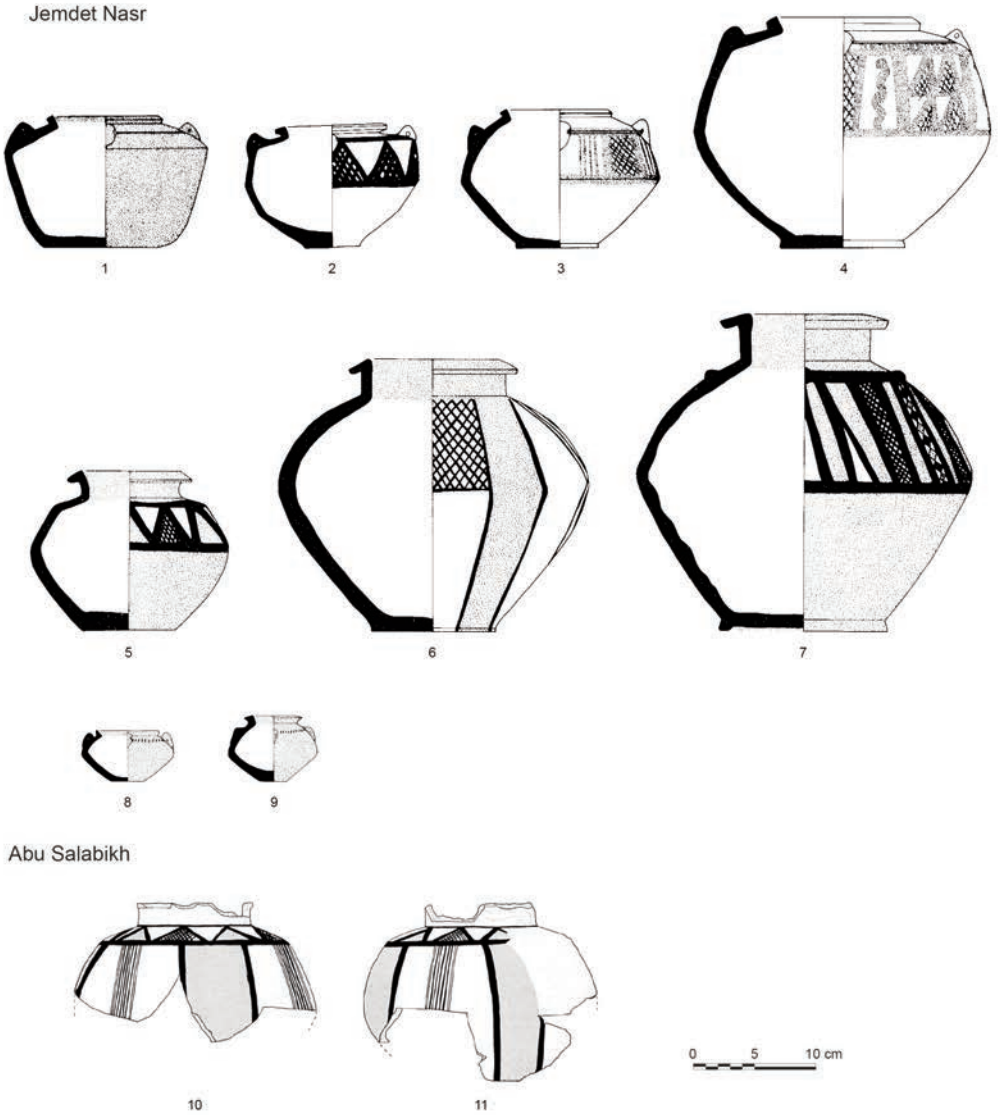


Figure 3.28 Jars from Jemdet-Nasr and Abu Salabikh, after Matthews 1992a (Jemdet-Nasr); Pollock 1990 (Abu Salabikh).

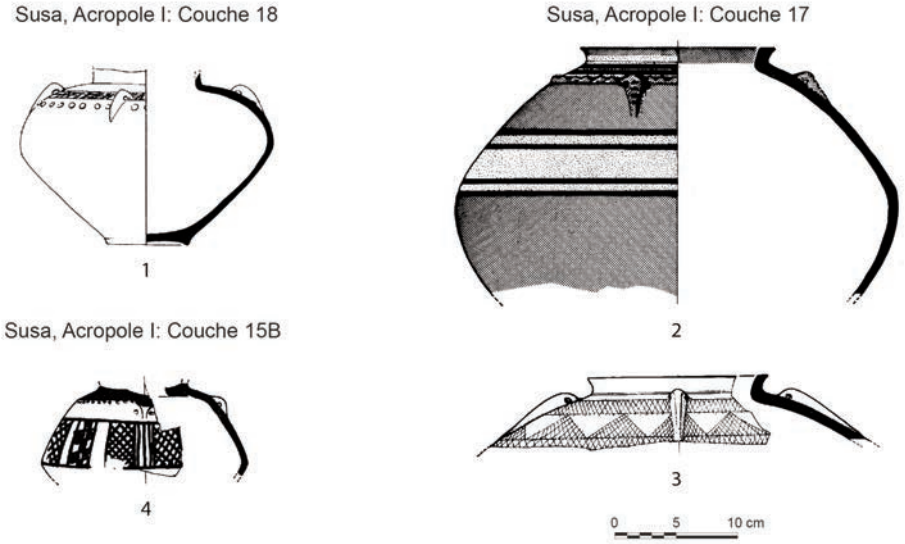


Figure 3.29 Jars from Susa, after LeBrun 1971, 1978.

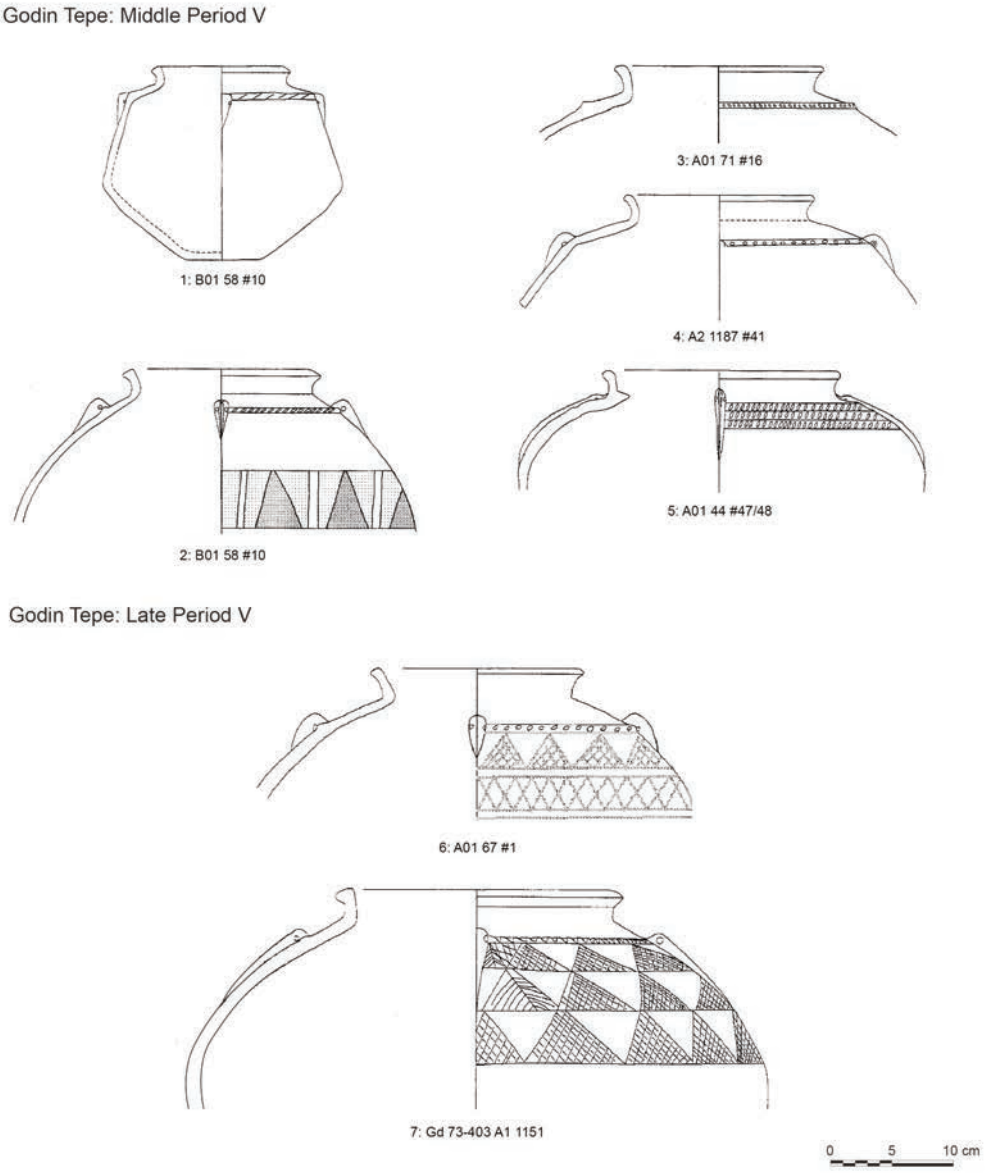


Figure 3.30 Jars from Godin Tepe, after Badler 2002.

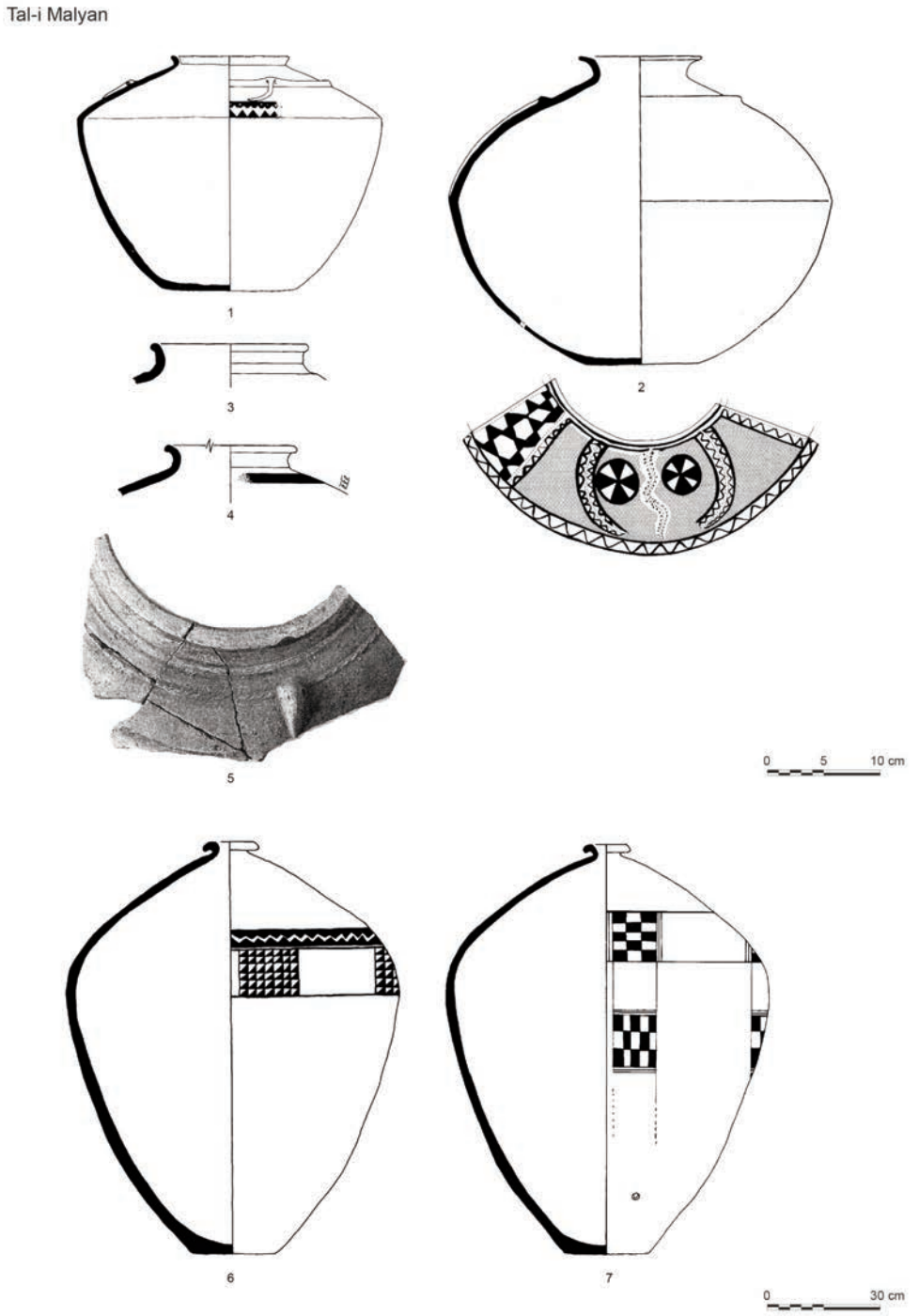


Figure 3.31 Jars from Tali-i Malyan, after Nicholas 1990; Sumner 1974, 2003.

Tal-i Ghazir

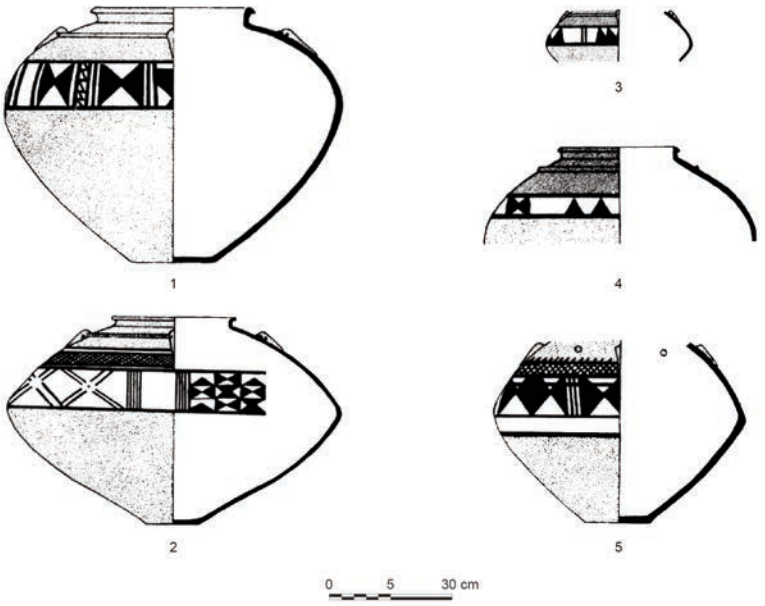


Figure 3.32 Jars from Tali-I Ghazir, after Whitcomb 1971.

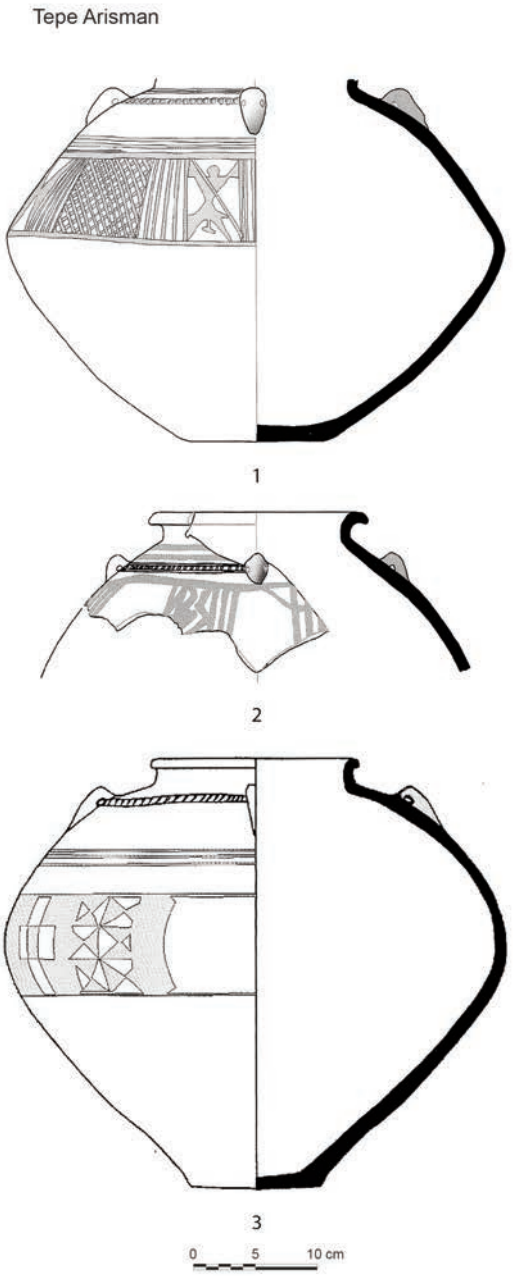


Figure 3.33 Jars from Tepe Arisman, after Helwing 2011a.

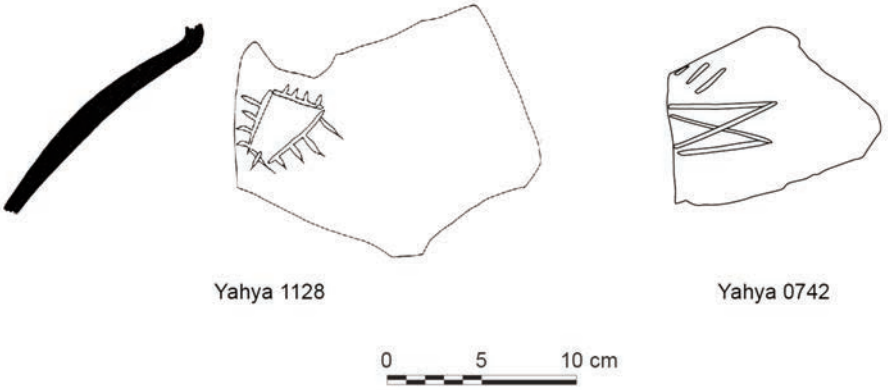


Figure 3.34 Fragments of ceramics with incised signs from Tepe Yahya 1128 and 0742.

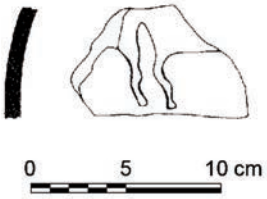


Figure 3.35 Fragments of ceramic with and incised animal decoration from Tepe Yahya 1121.

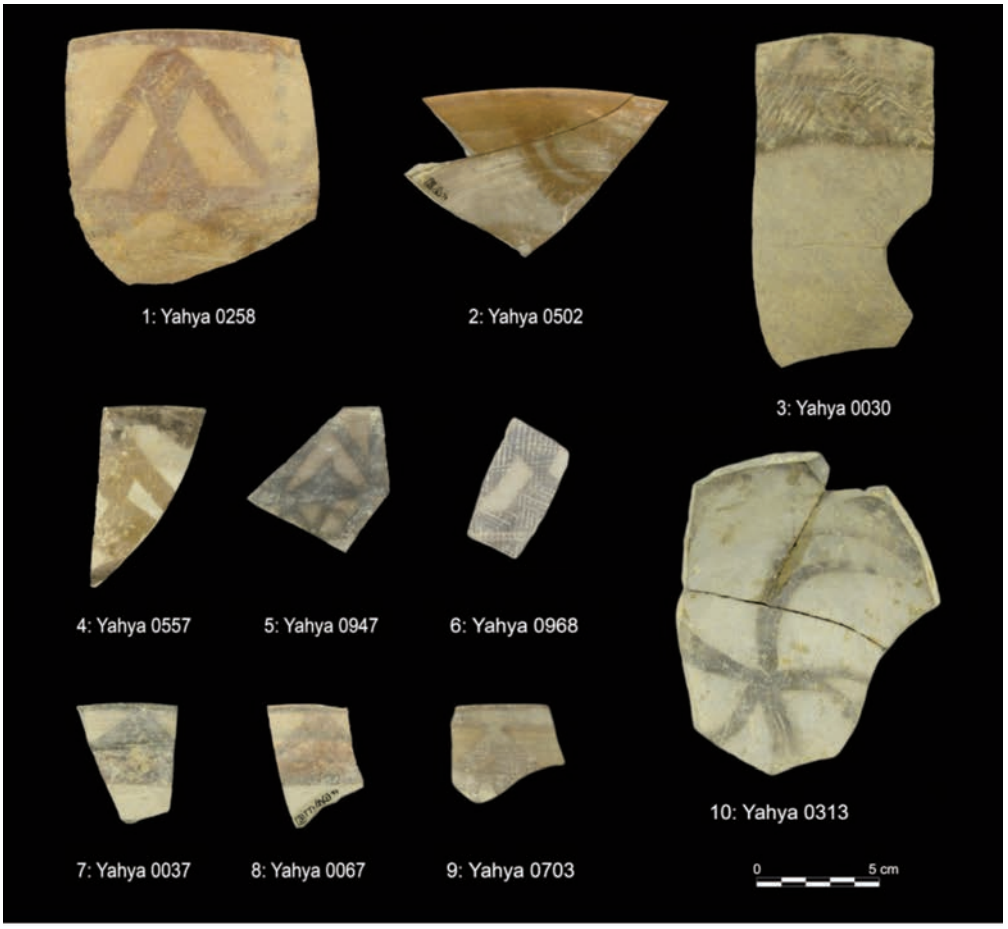


Figure 3.36 Ceramics of SEIP Group A from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. ©2013 President and Fellows of Harvard College.

Figure 3.37 Ceramics of SEIP Group A from Tepe Yahya: Details of the outside surfaces of Yahya 0502 (left) and 0030 (right). Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

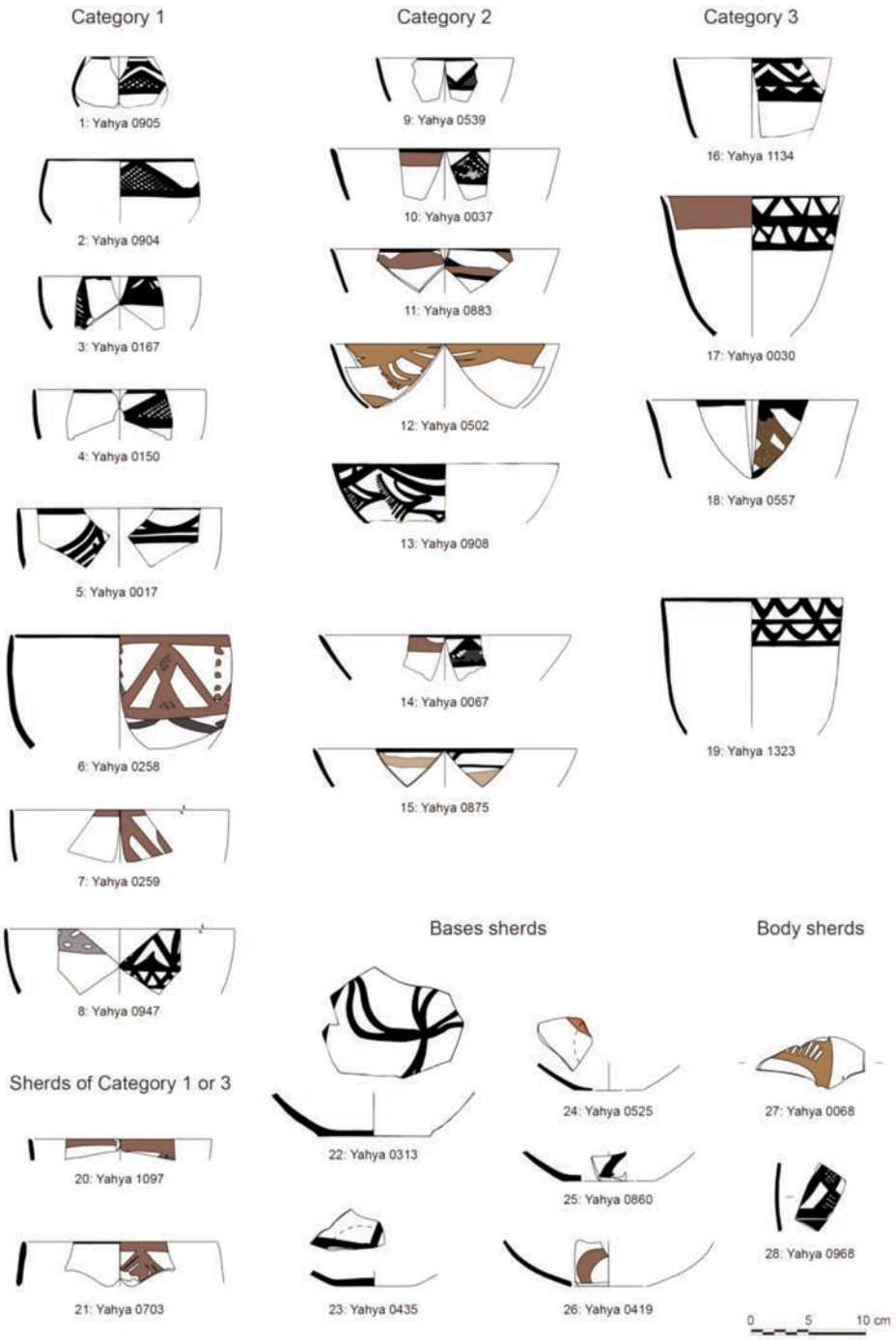


Figure 3.38 Ceramics of SEIP Group A from Tepe Yahya.

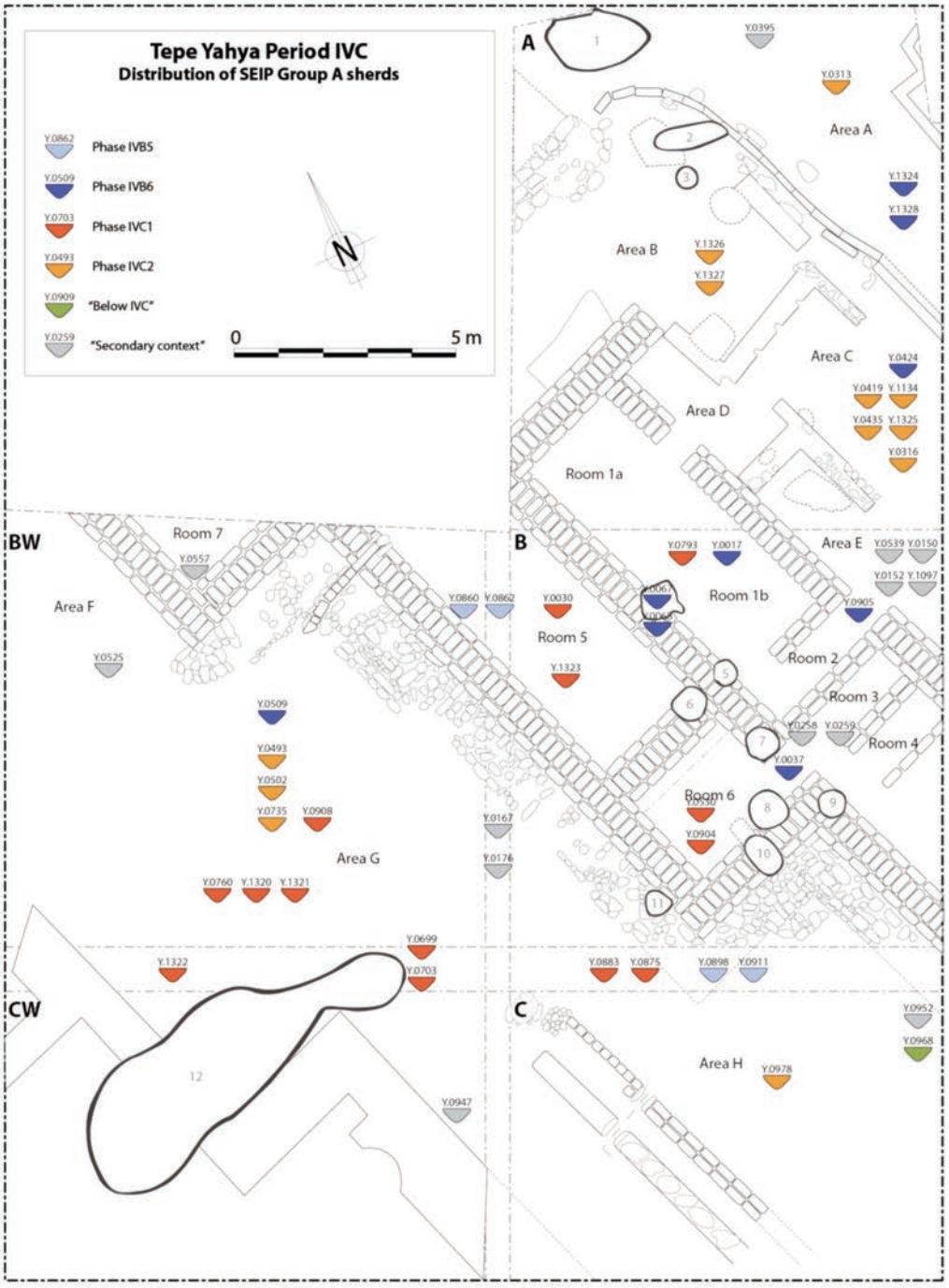


Figure 3.39 Distribution of SEIP Group A fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB5).

Figure 3.40 Western Balochistan Ceramics from the Southeastern Iranian Plateau, after Besenval 1997a, French Archaeological Mission in Makran; DeCardi 1970; collection of the PMAE; M. Tosi, collection of the Palazzio Brancaccio, Rome; Piperno and Salvatori 2007; Sajjadi et al. 2003.

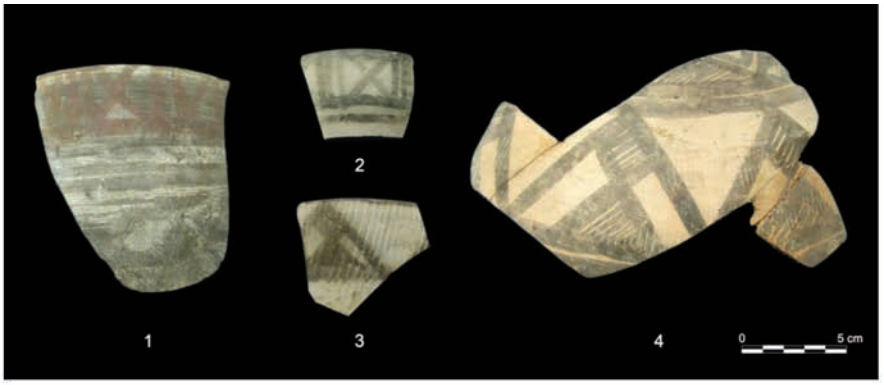


Figure 3.41 Western Balochistan Ceramics from Shahr-I Sokhta, courtesy of M. Tosi, collection of the Palazzio Brancaccio, Rome.

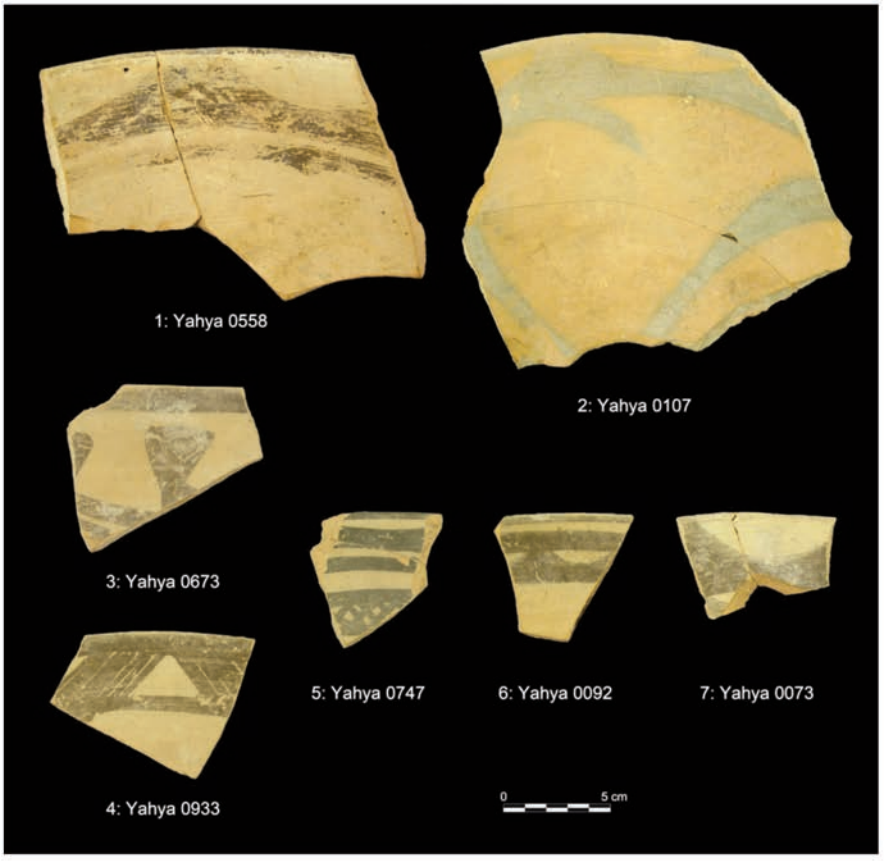


Figure 3.42 Western Balochistan Ceramic imitations(?) from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

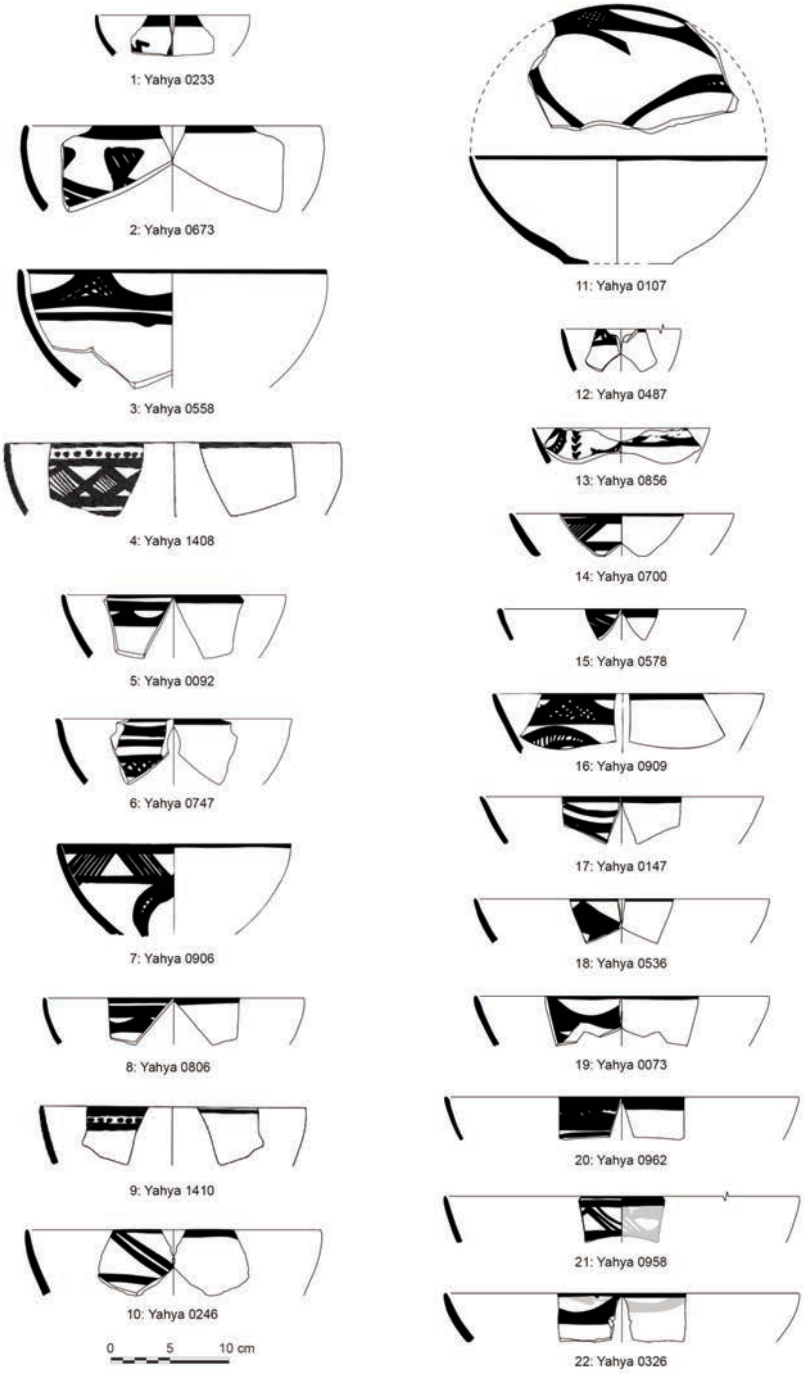


Figure 3.43 Western Balochistan Ceramic imitations(?) from Tepe Yahya.

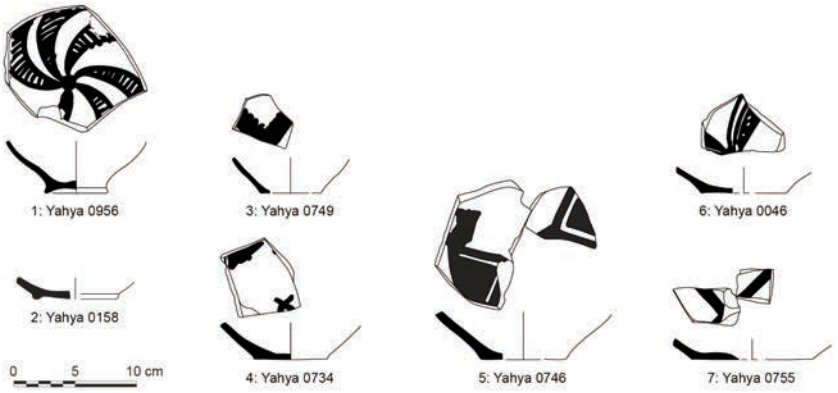


Figure 3.44 Western Balochistan Ceramic imitations(?) from Tepe Yahya bases.

Figure 3.45 Western Balochistan Ceramic imitations(?) from Tepe Yahya 0956. Collection of the PMAE, 9999.0.3518, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

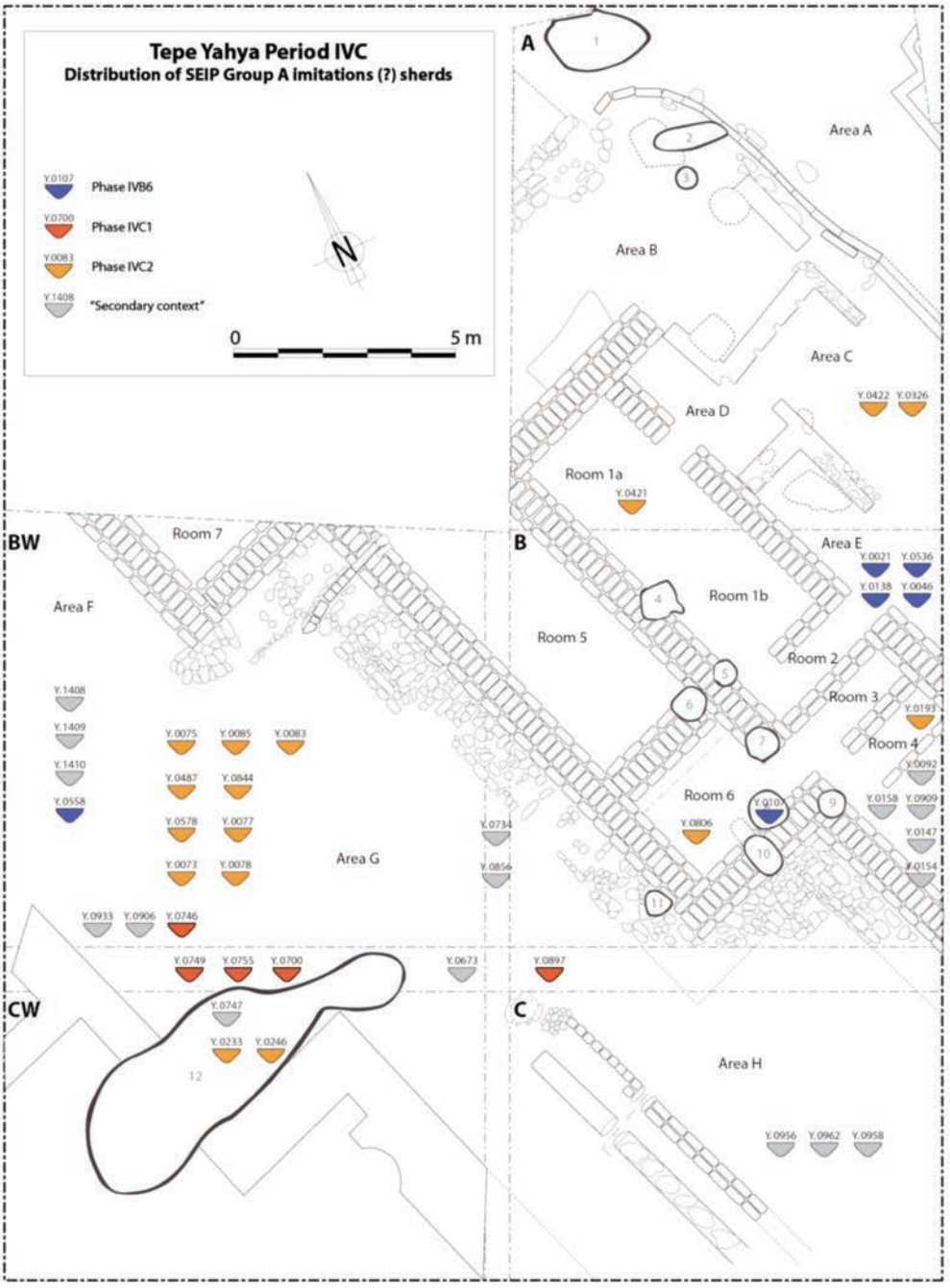


Figure 3.46 Western Balochistan Ceramic imitations(?) fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

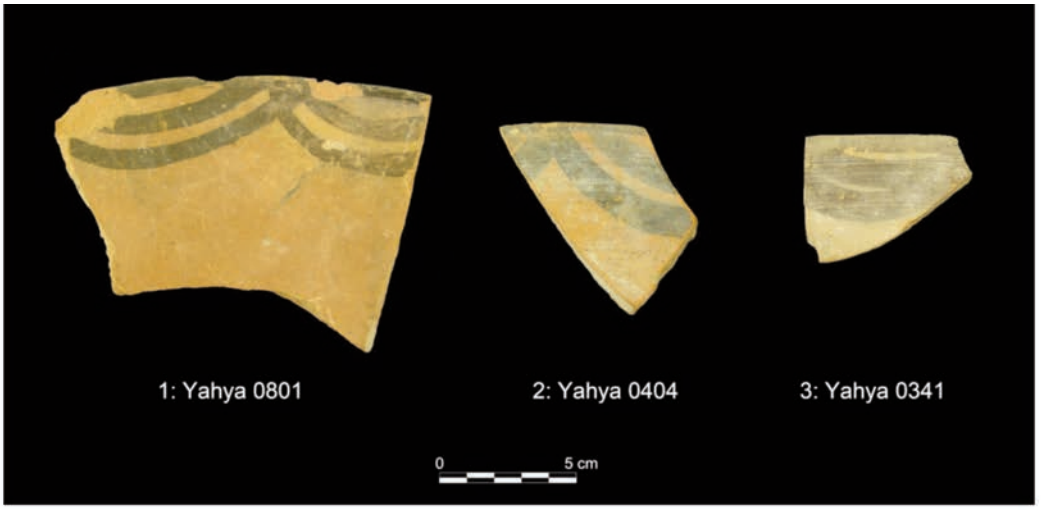


Figure 3.47 Ceramics of SEIP Group B1 from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.48 Ceramics of SEIP Group B1 from Tepe Yahya.

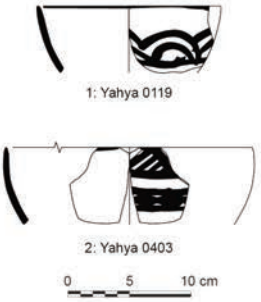


Figure 3.49 Ceramics of SEIP Group B1 from Tepe Yahya: Yahya 0403 and 0119.

Figure 3.50 Ceramic of SEIP Group B1 from Tepe Yahya: Yahya 0119. Collection of the PMAE, 9999.0.3406, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.51 Ceramic of SEIP Group B1 from Tepe Yahya: Yahya 0403. Collection of the PMAE, 9999.0.3625, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.52 Ceramic of SEIP Group B2 from Tepe Yahya: Yahya 0403. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

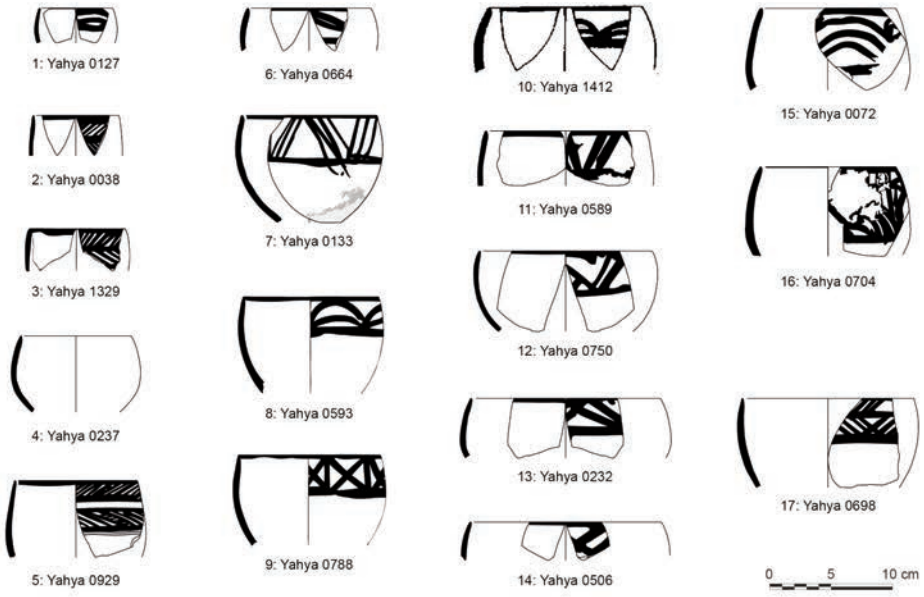


Figure 3.53 Ceramic of SEIP Group B2 from Tepe Yahya.

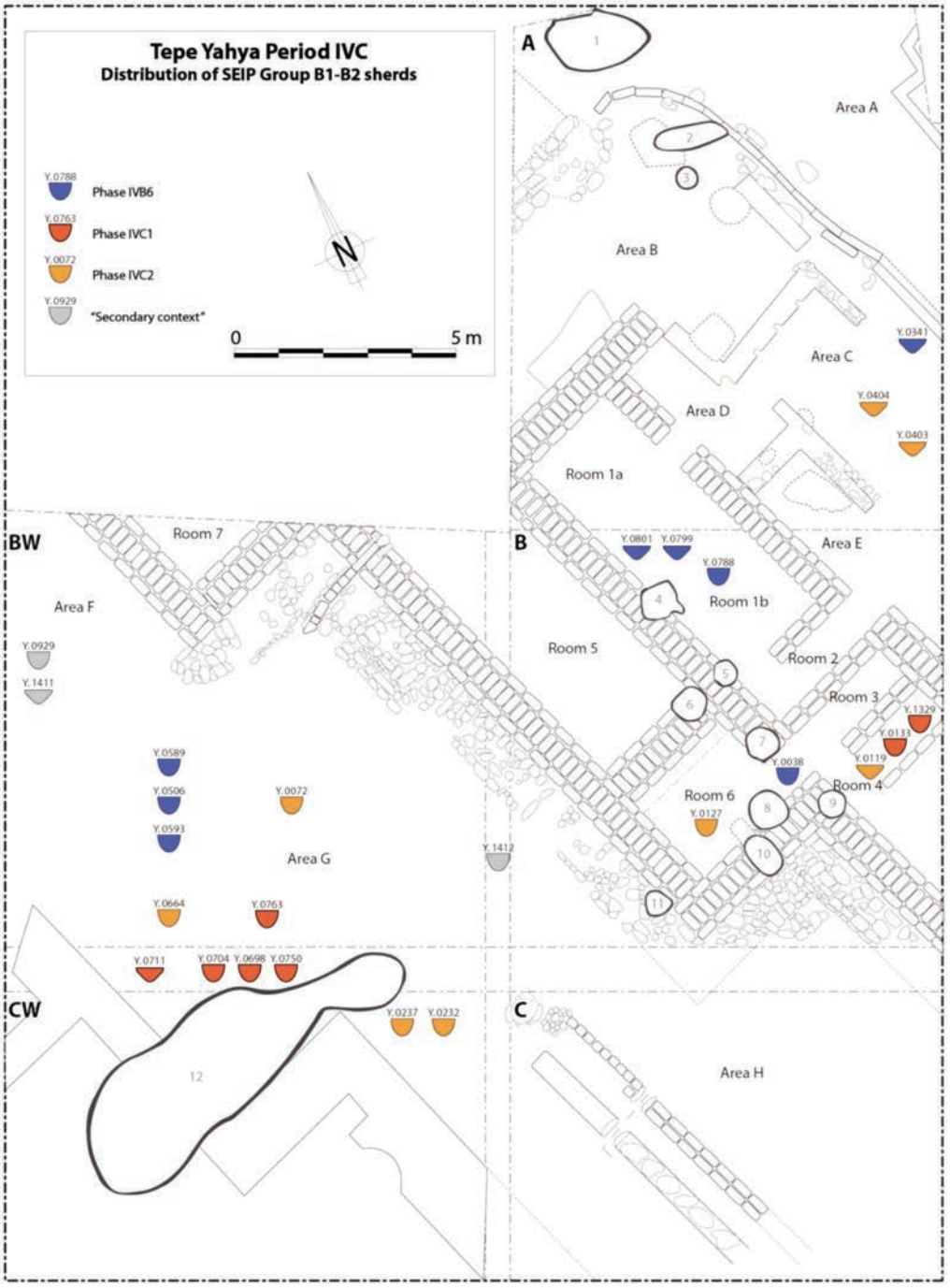


Figure 3.54 Distribution of SEIP Groups B1 and B2 fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

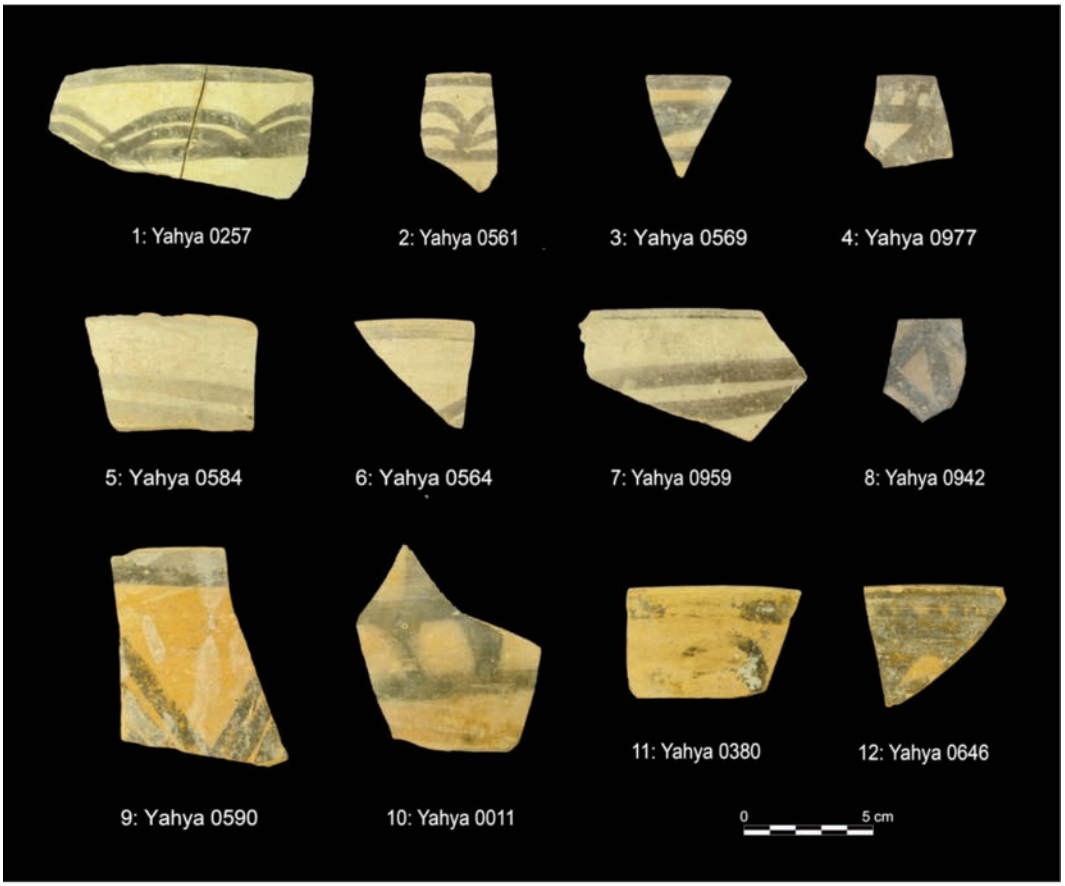


Figure 3.55 Ceramics of SEIP Group B3 from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

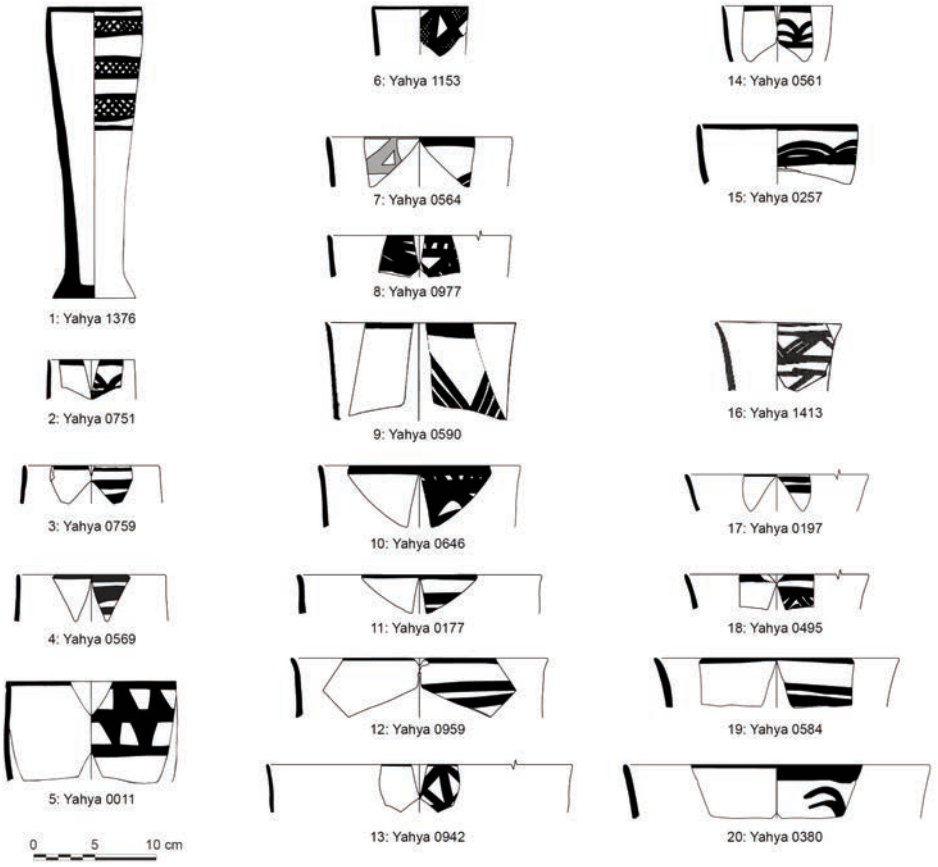


Figure 3.56 Ceramics of SEIP Group B3 from Tepe Yahya.

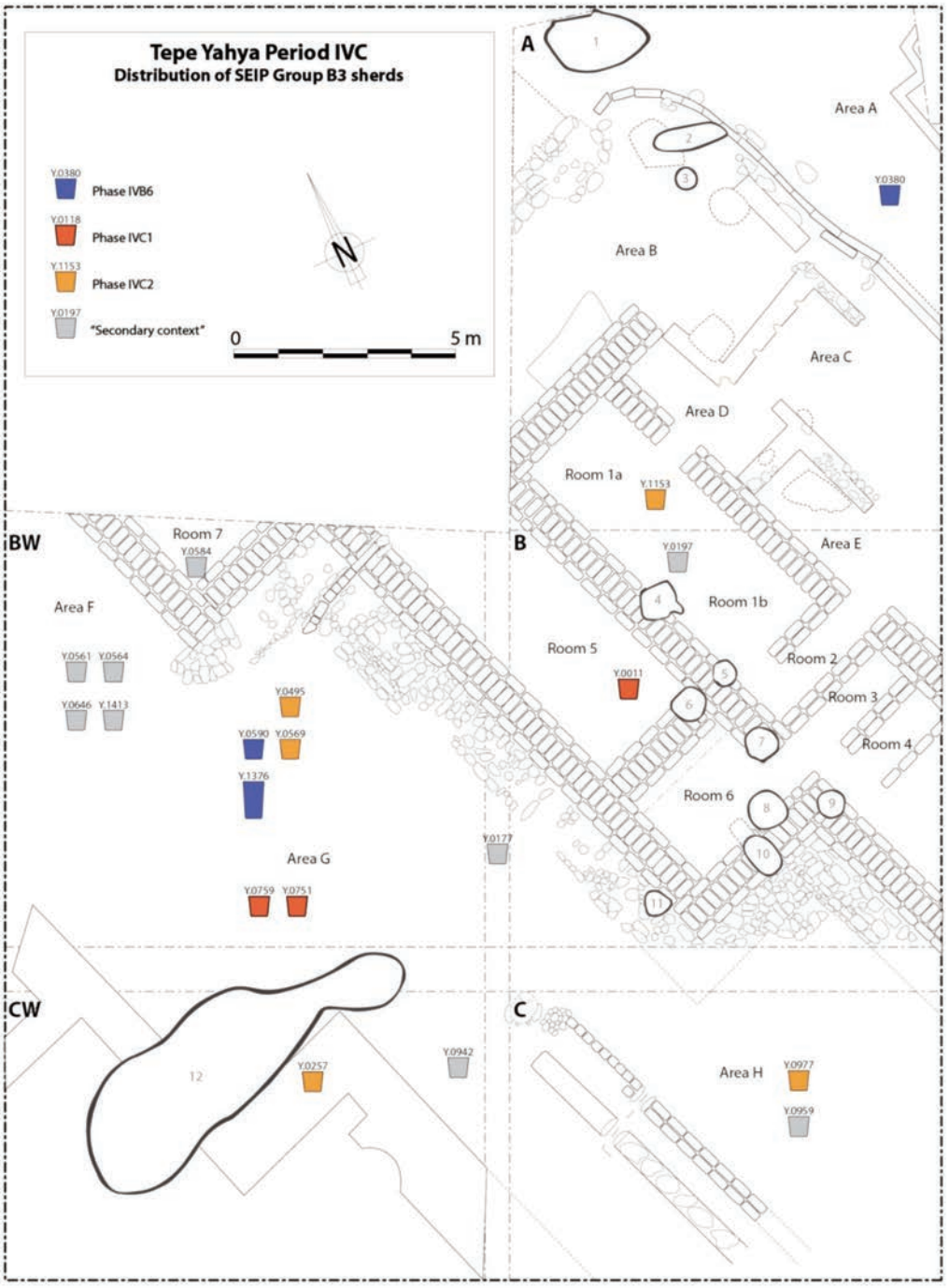


Figure 3.57 Distribution of SEIP Group B3 fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

Figure 3.58 Ceramics of SEIP Group B4 from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

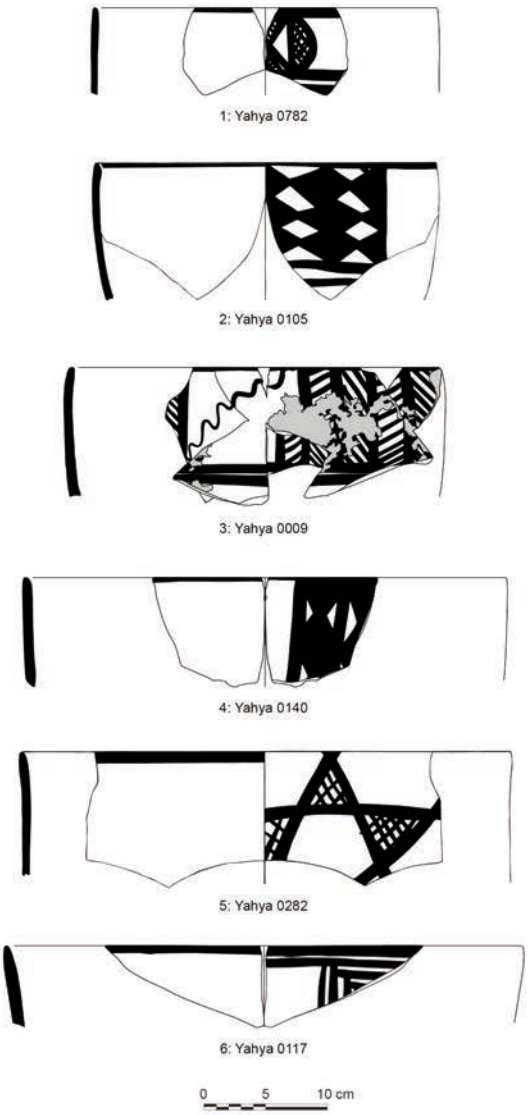


Figure 3.59 Ceramics of SEIP Group B4 from Tepe Yahya.

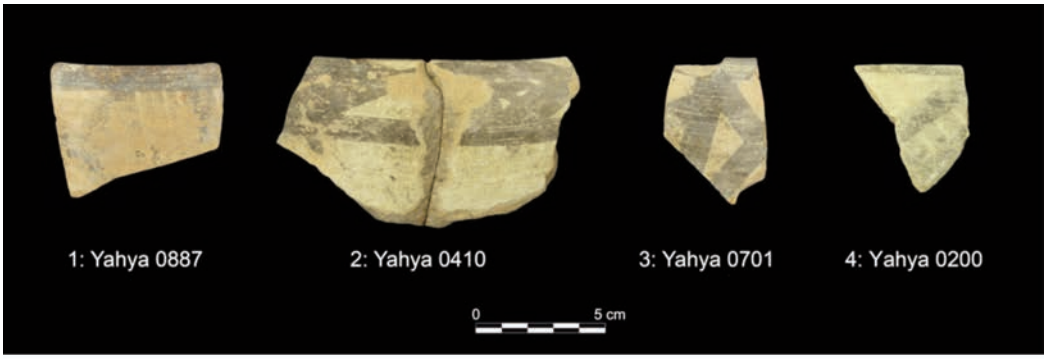


Figure 3.60 Ceramics of SEIP Group B5 from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

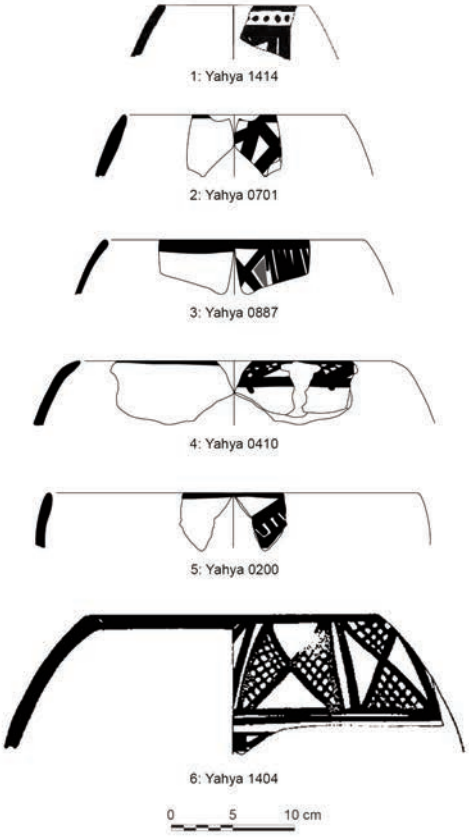


Figure 3.61 Ceramics of SEIP Group B5 from Tepe Yahya.

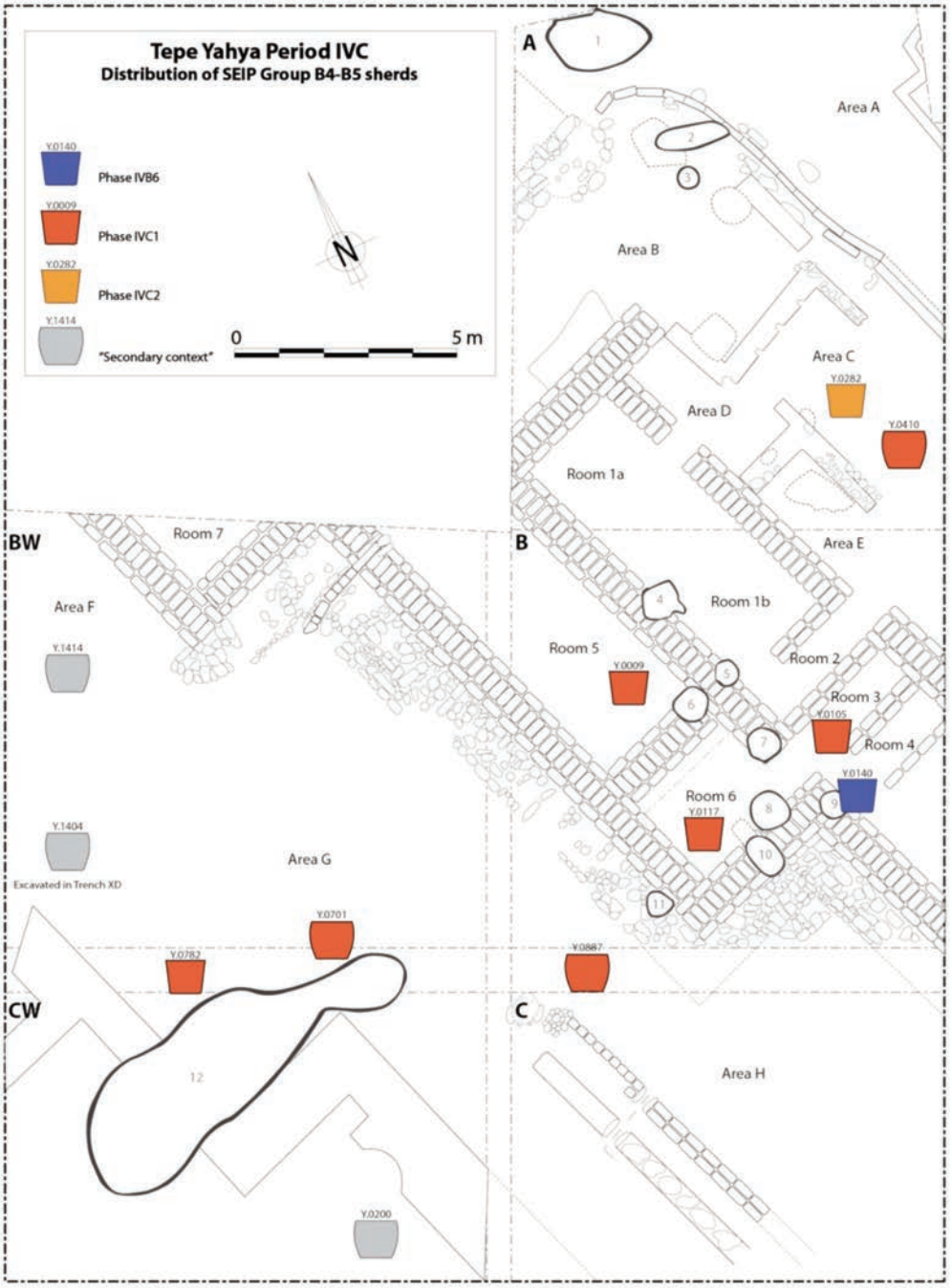


Figure 3.62 Distribution of SEIP Groups B4 and B5 fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

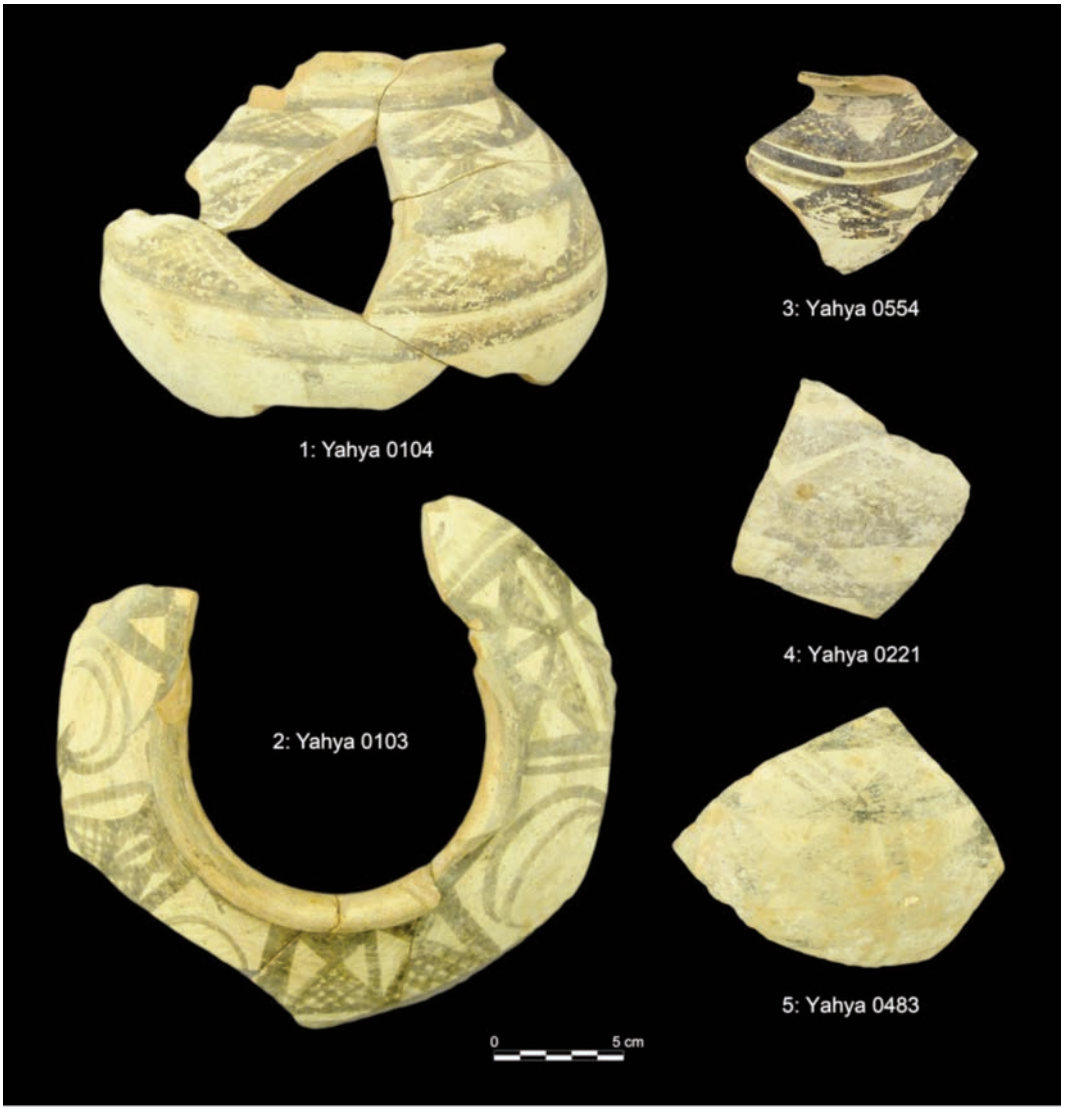


Figure 3.63 Ceramics of SEIP Group B6 from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

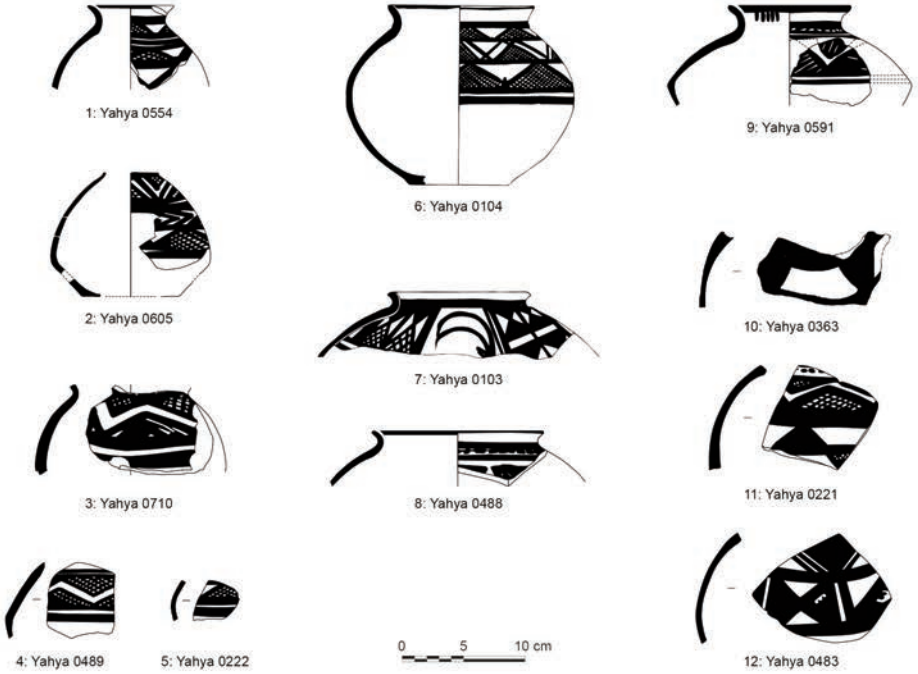


Figure 3.64 Ceramics of SEIP Group B6 from Tepe Yahya.

Figure 3.65 Ceramics of SEIP Group B6 from Tepe Yahya. Collection of the PMAE, 9999.0.3418, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.66 Ceramics of SEIP Group B6 from Tepe Yahya: Yahya 0817. Collection of the PMAE, 9999.0.3413, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

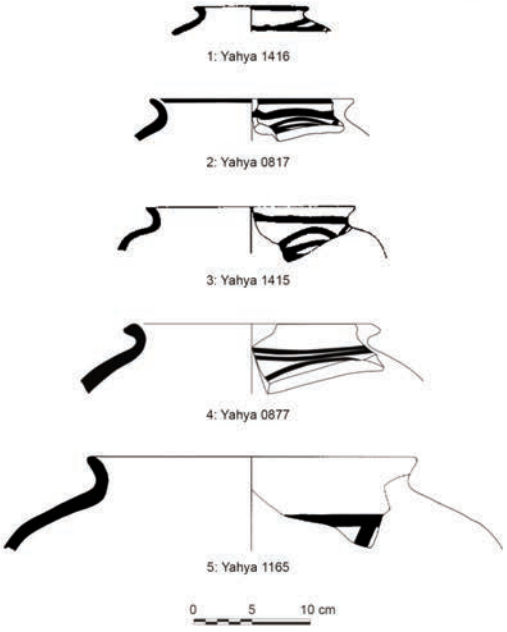


Figure 3.67 Ceramics of SEIP Group B6 from Tepe Yahya.

Figure 3.68 Ceramics of SEIP Group B6 from Tepe Yahya: Yahya 0056. Collection of the PMAE, 9999.0.3499, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

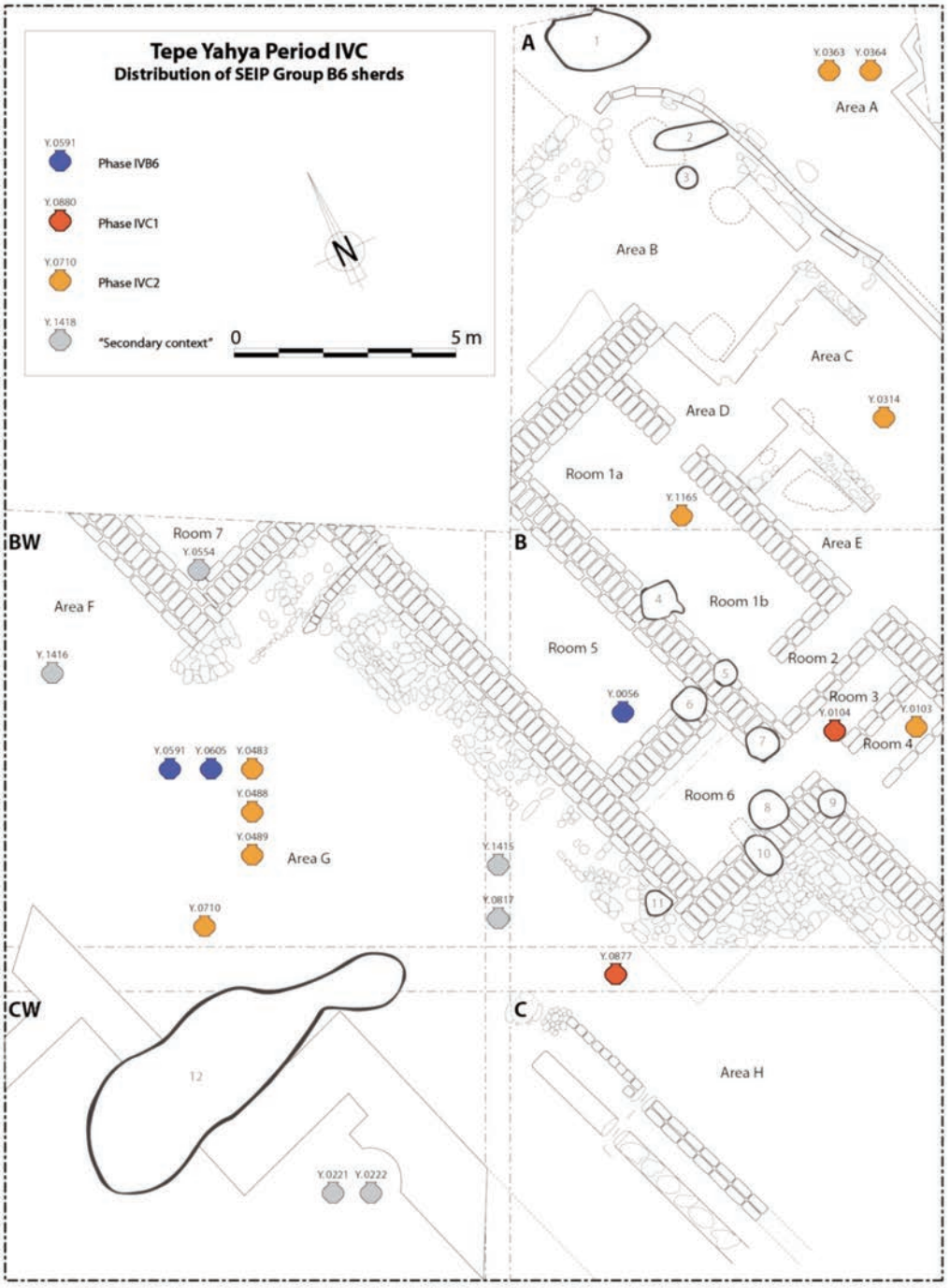


Figure 3.69 Ceramics of SEIP Group B6 fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

Figure 3.70 Ceramics of SEIP Group C from Tepe. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

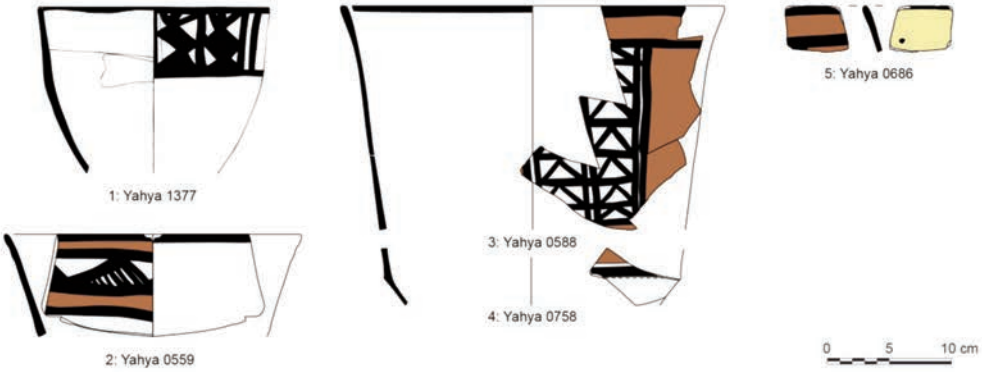


Figure 3.71 Ceramics of SEIP Group C from Tepe Yahya.

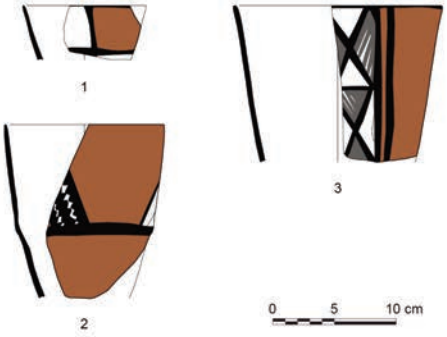


Figure 3.72 Ceramics of Chah Husaini (collection of the PMAE).

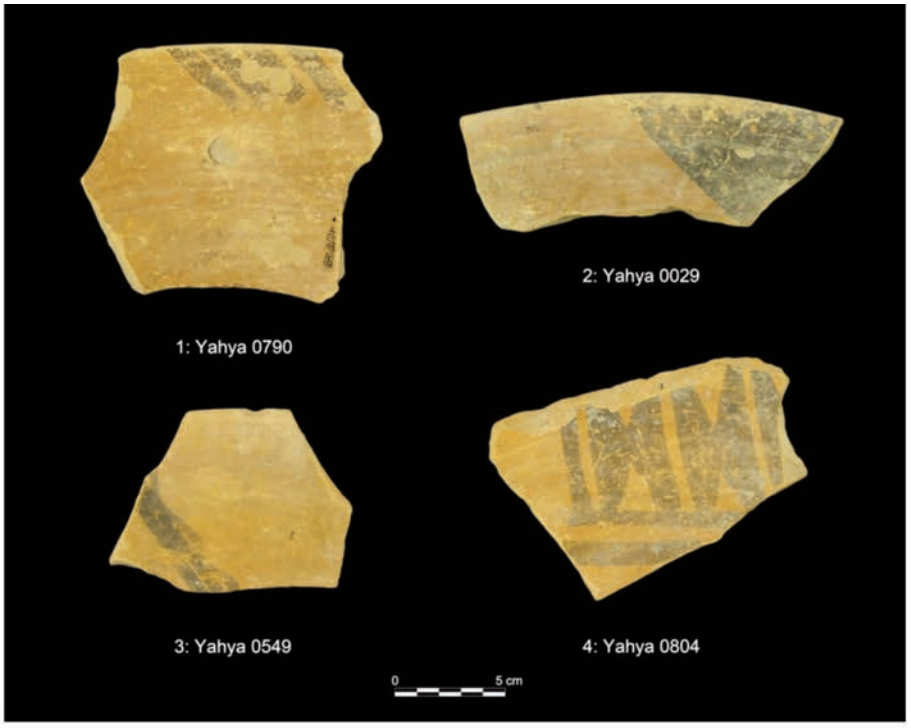


Figure 3.73 Ceramics of SEIP Group D from Tepe Yahya.

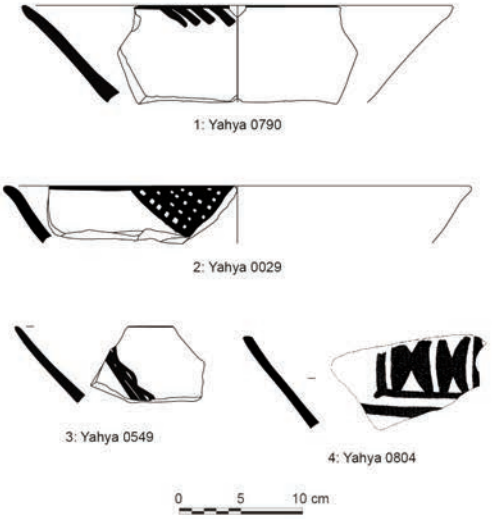


Figure 3.74 Ceramics of SEIP Group D from Tepe Yahya.

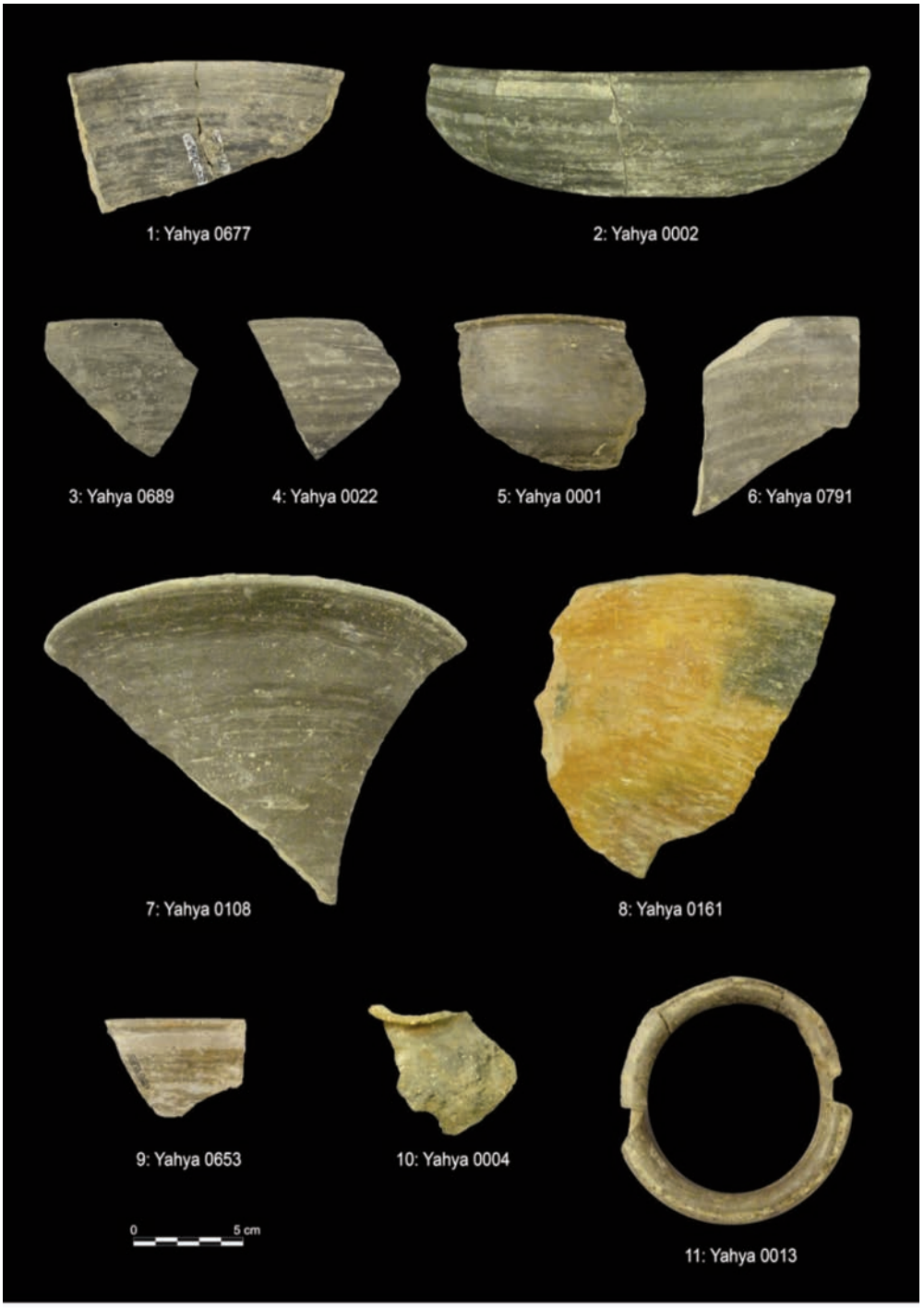


Figure 3.75 Burnished ceramics from Tepe Yahya.

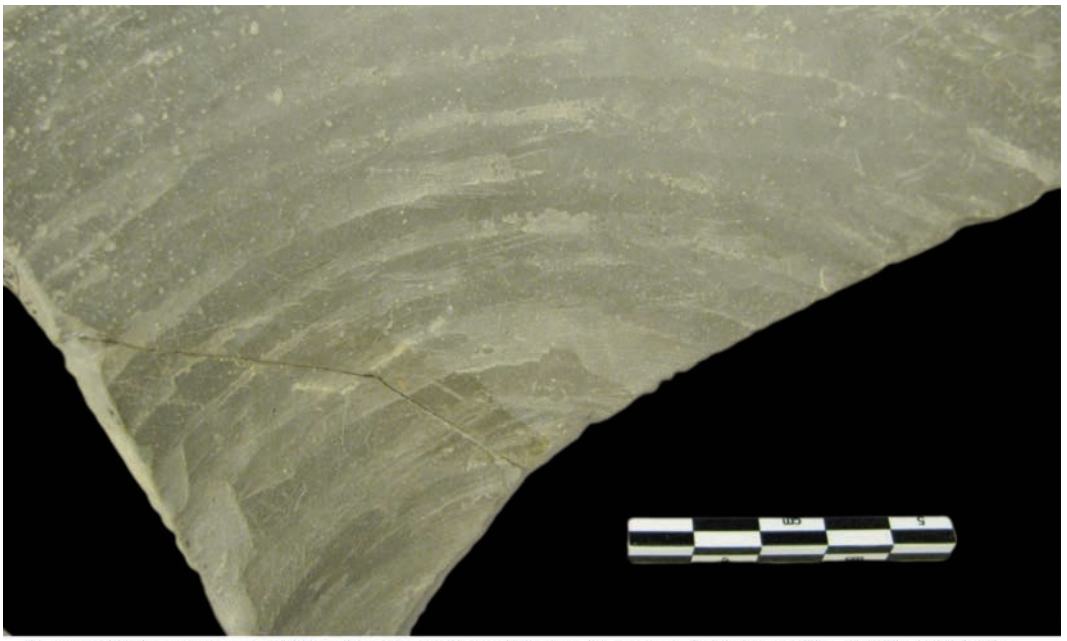


Figure 3.76 Burnished ceramic from Tepe Yahya: Yahya 0108, inside surface. Collection of the PMAE, 9999.0.3406, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

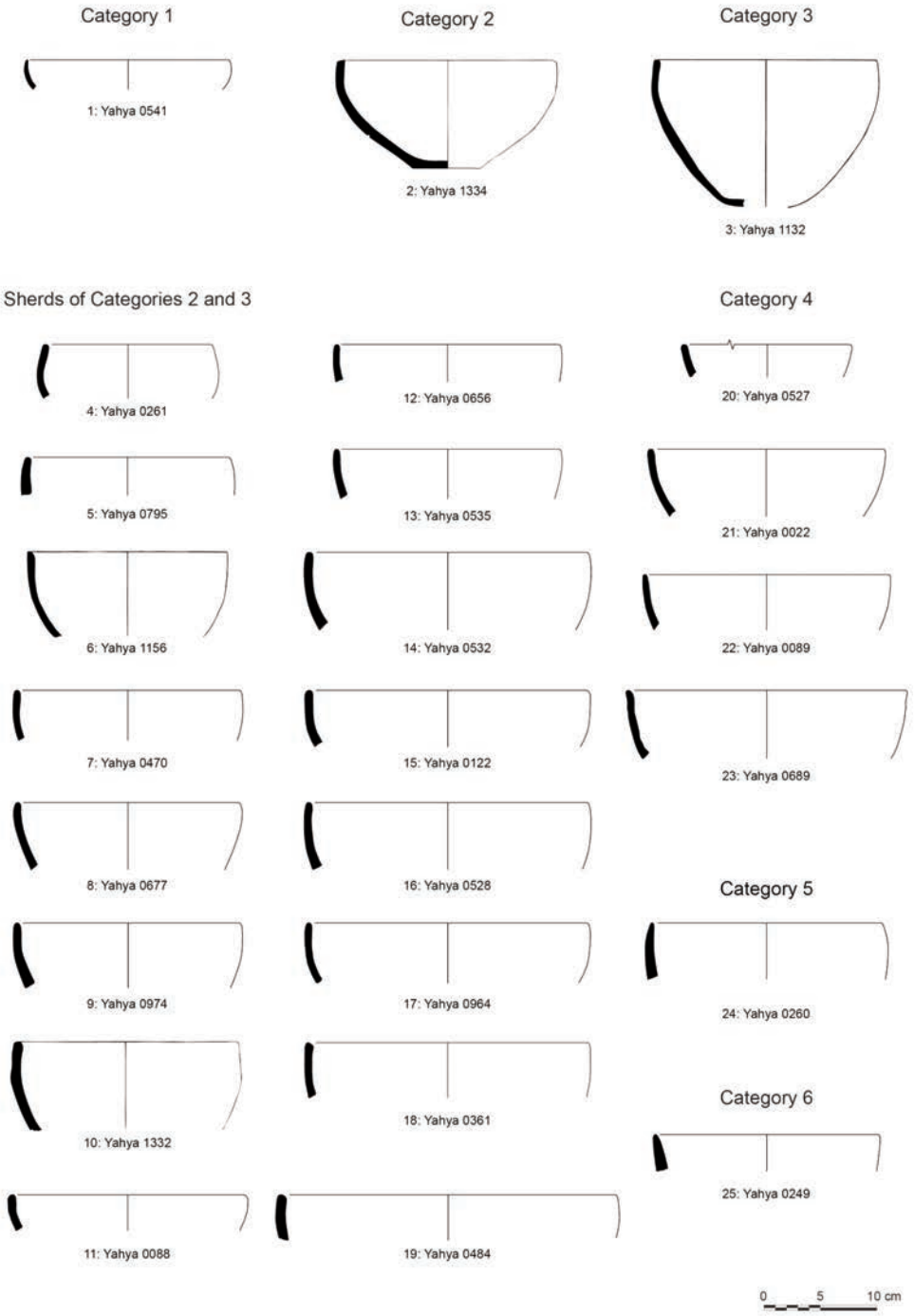


Figure 3.77 Burnished ceramics from Tepe Yahya.

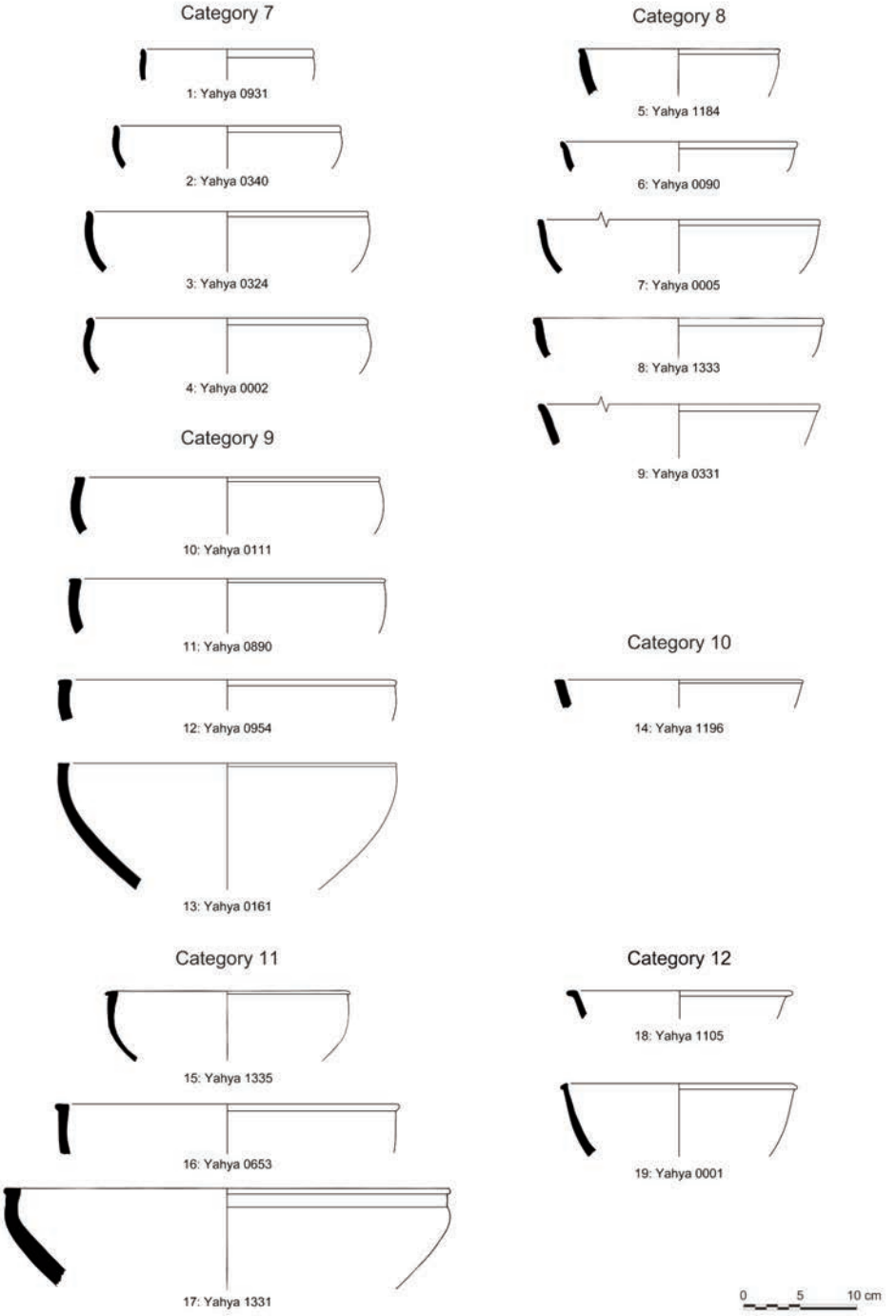


Figure 3.78 Burnished ceramics from Tepe Yahya.

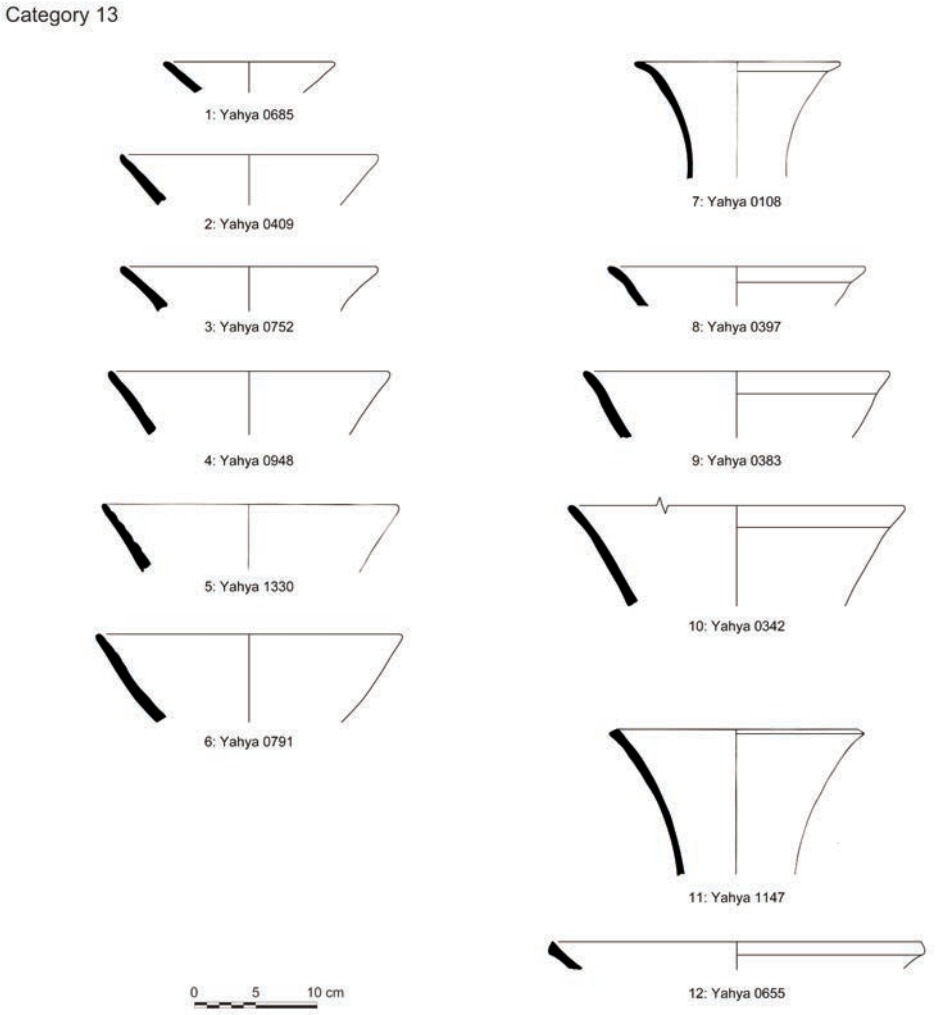


Figure 3.79 Burnished ceramics from Tepe Yahya.

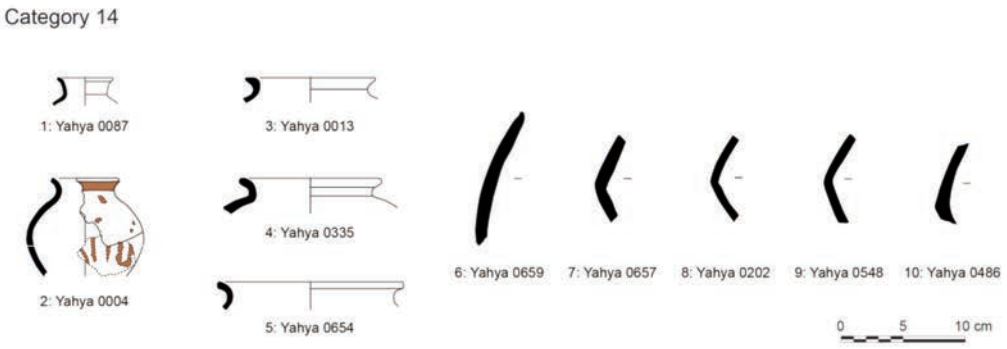


Figure 3.80 Burnished ceramics from Tepe Yahya.

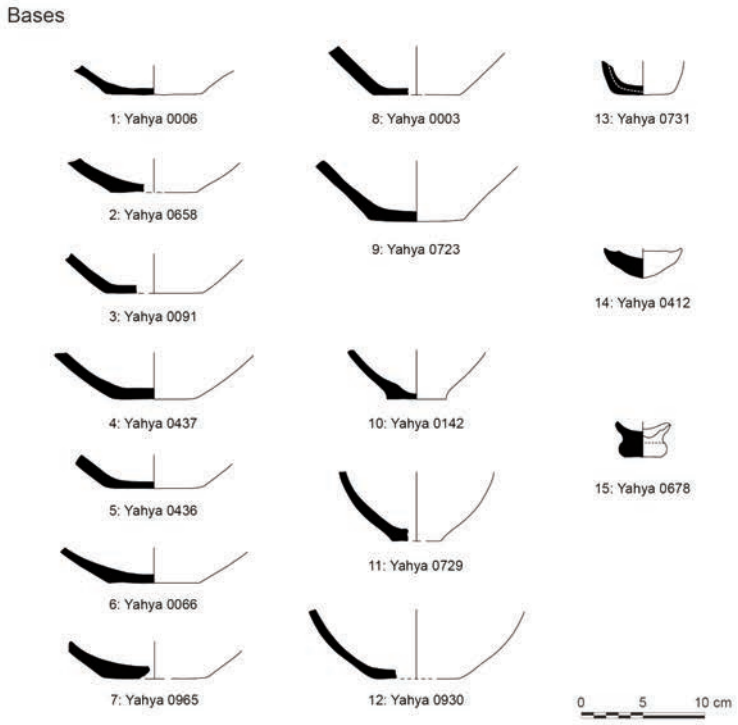


Figure 3.81 Burnished ceramics from Tepe Yahya.

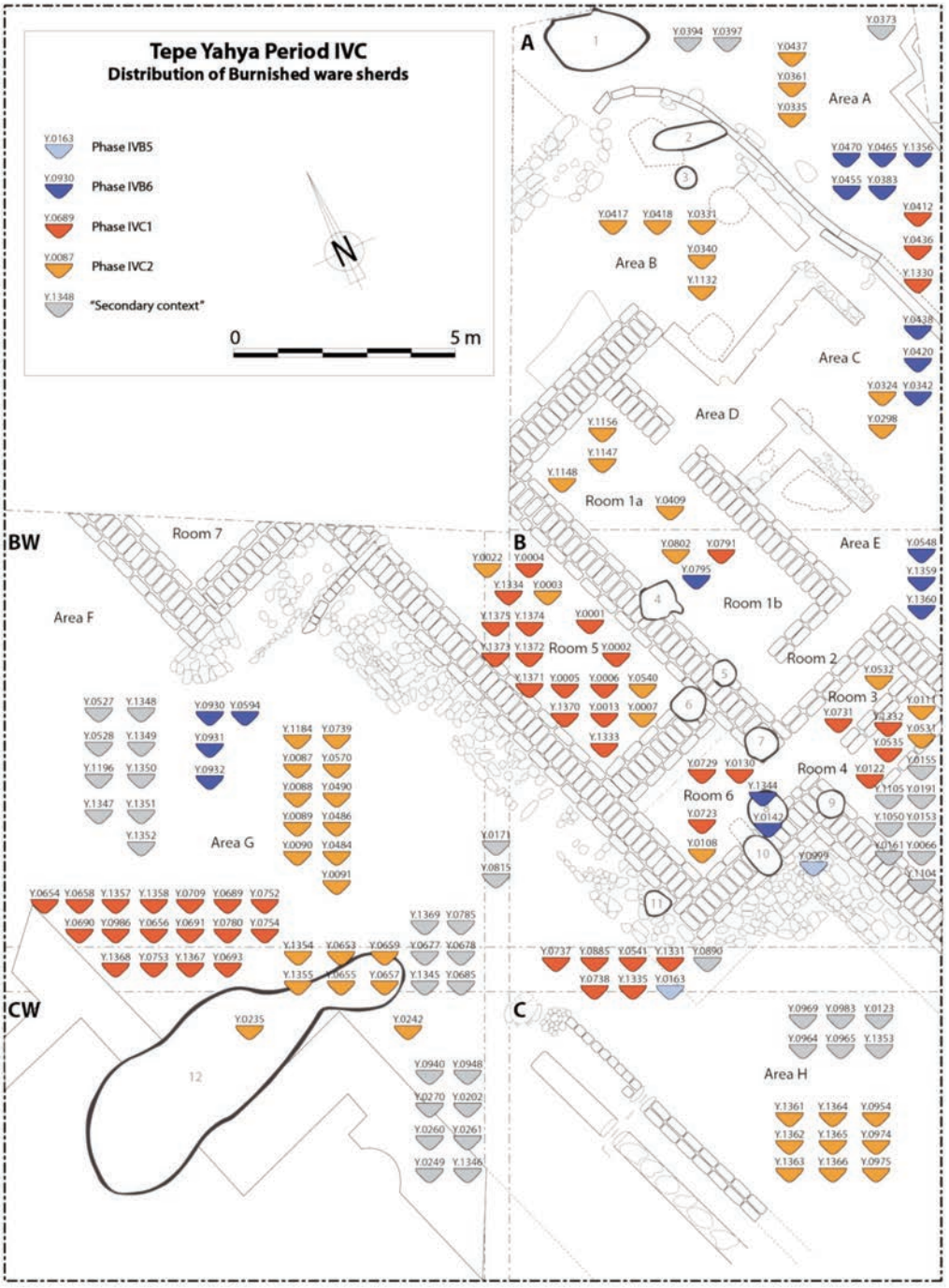


Figure 3.82 Distribution of Burnished ware in the complex of Tepe Yahya IVC (Phases IVC2-IVB5).

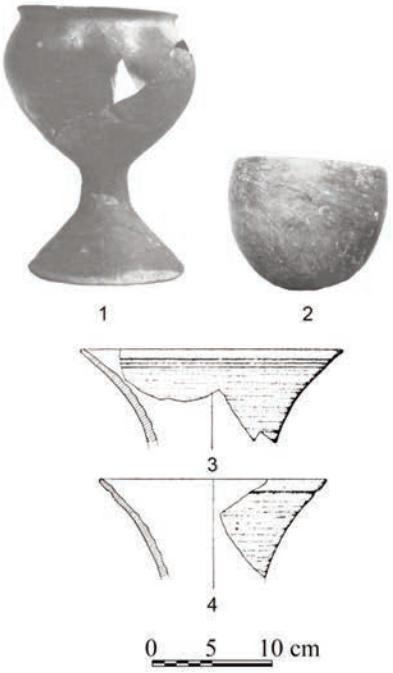


Figure 3.83 Burnished ware from Tepe Hissar and Shahr-i Sokhta, after Dyson and Remsen 1989; Amiet and Tosi 1978.

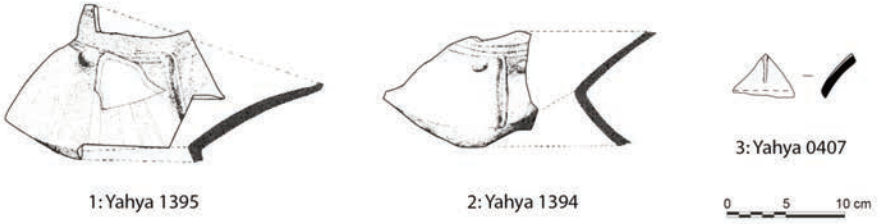


Figure 3.84 "Face pots" from Tepe Yahya.

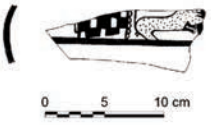


Figure 3.85 Fragment of ceramic decorated with a painted "leopard" from Tepe Yahya.

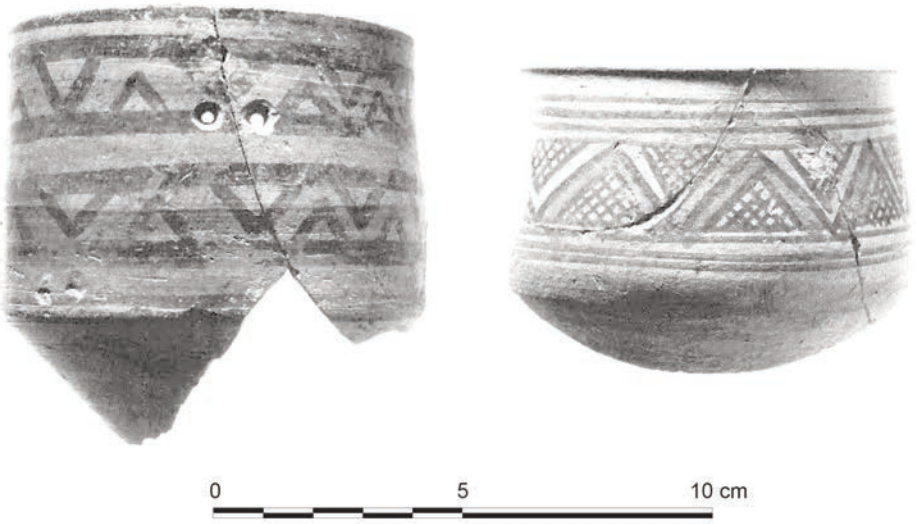


Figure 3.86 Nal-type (Yahya 1405, left) and Amri-Type (Yahya 1406, right) ceramics from Tepe Yahya.

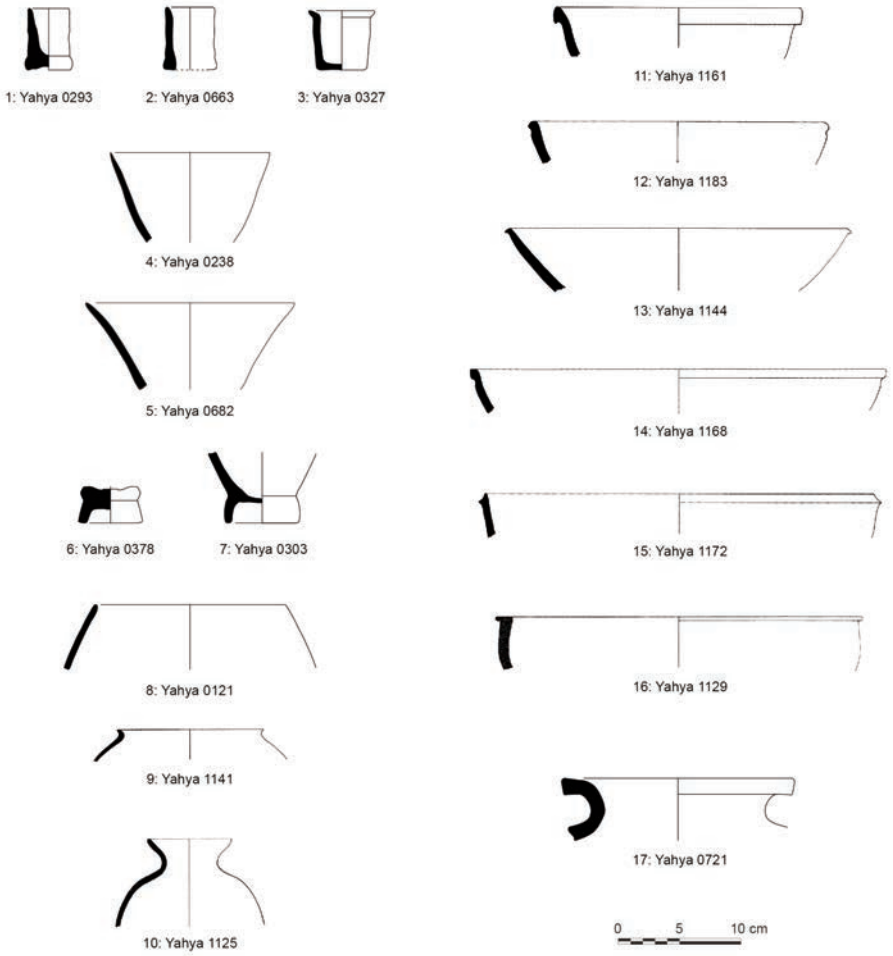


Figure 3.87 Very fine and plain ceramics from Tepe Yahya.

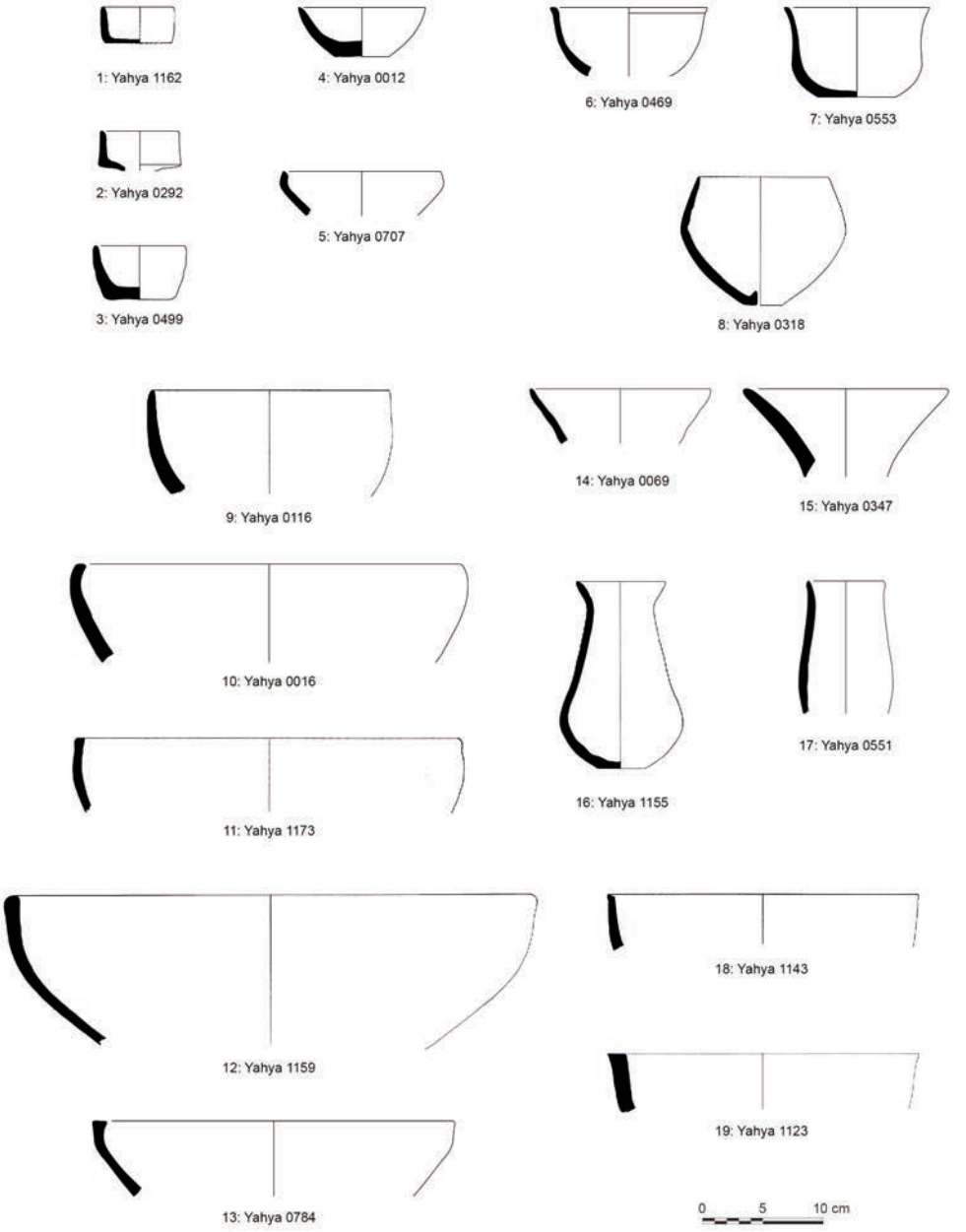


Figure 3.88 Medium and coarse plain ceramics from Tepe Yahya.

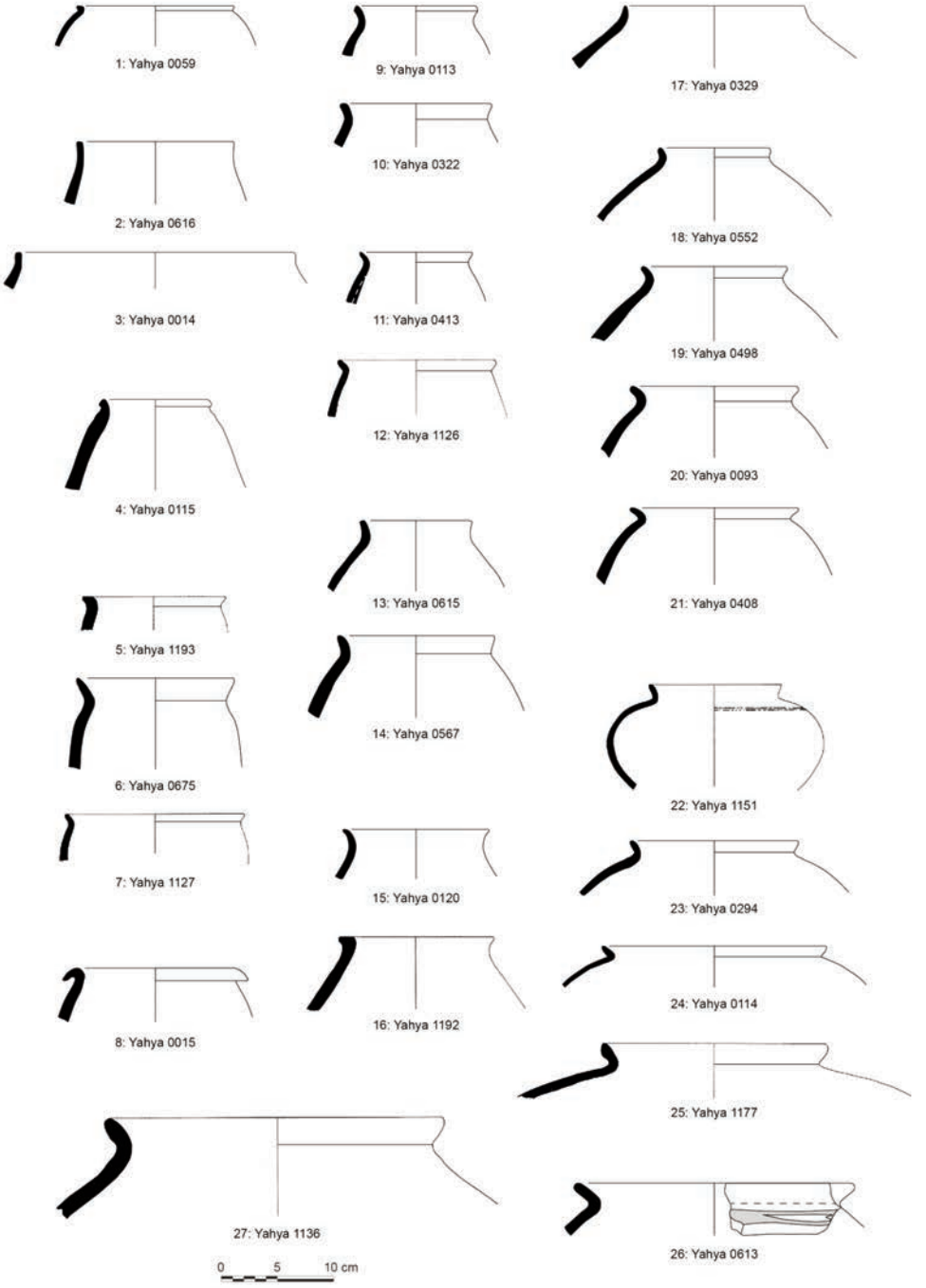


Figure 3.89 Medium and coarse plain ceramics from Tepe Yahya.

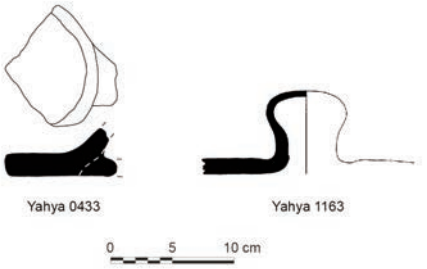


Figure 3.90 Coarse plain ceramics from Tepe Yahya: Yahya 0433 and 1163.

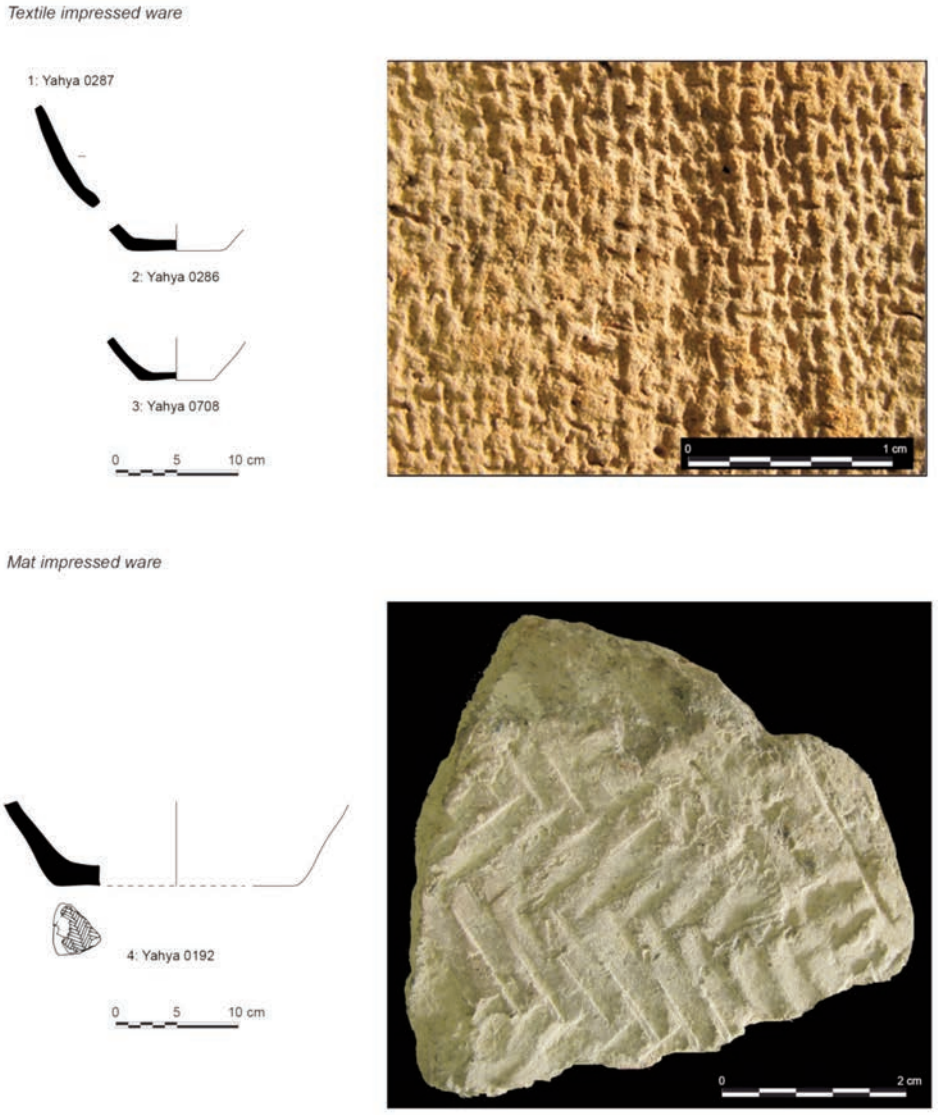


Figure 3.91 Textile impressed and Mat impressed ceramic fragments from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

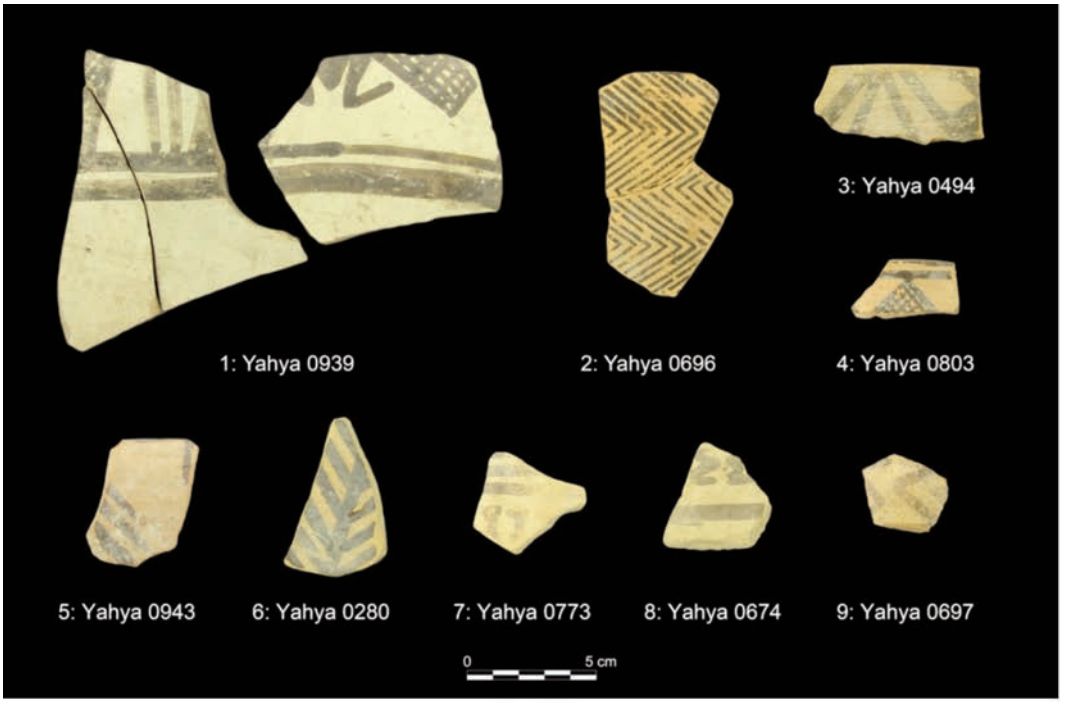


Figure 3.92 Fragments of Black-on-buff ware from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

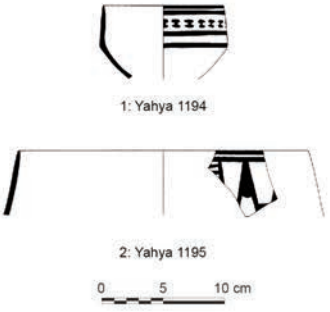


Figure 3.93 Fragments of Black-on-buff ware from Tepe Yahya, after Potts 2001:fig. 1.58A and C.

Figure 3.94 Fragments of Black-on-red ware from Tepe Yahya. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

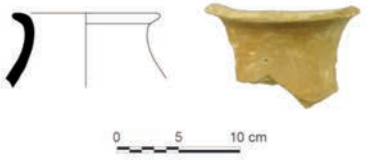


Figure 3.95 Fragment of Lapui ware from Tepe Yahya: Yahya 0027. Collection of the PMAE, 9999.0.3501, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.96 Ceramics with aspect similar to Prickett's VA-IVC Transitional material: Yahya 0441 and 0148. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

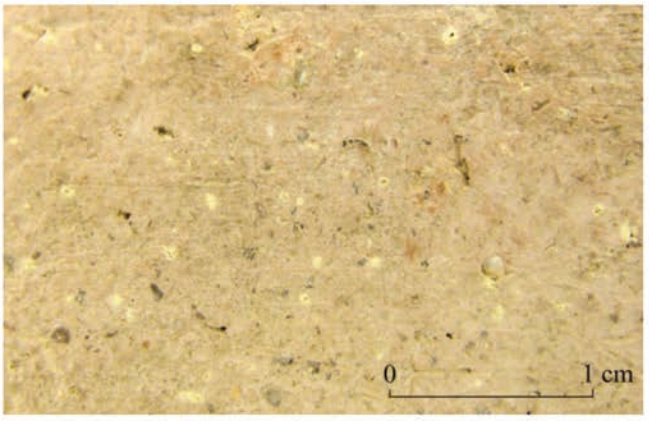


Figure 3.97 Ceramics with aspect similar to Prickett's VA-IVC Transitional material: Yahya 0441. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

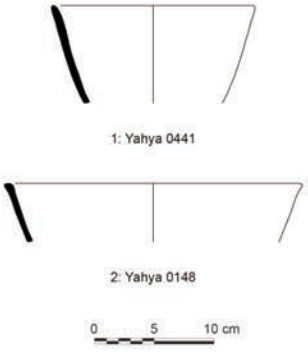


Figure 3.98 Ceramics with aspect similar to Prickett's VA-IVC Transitional material: Yahya 0441 and 0148.

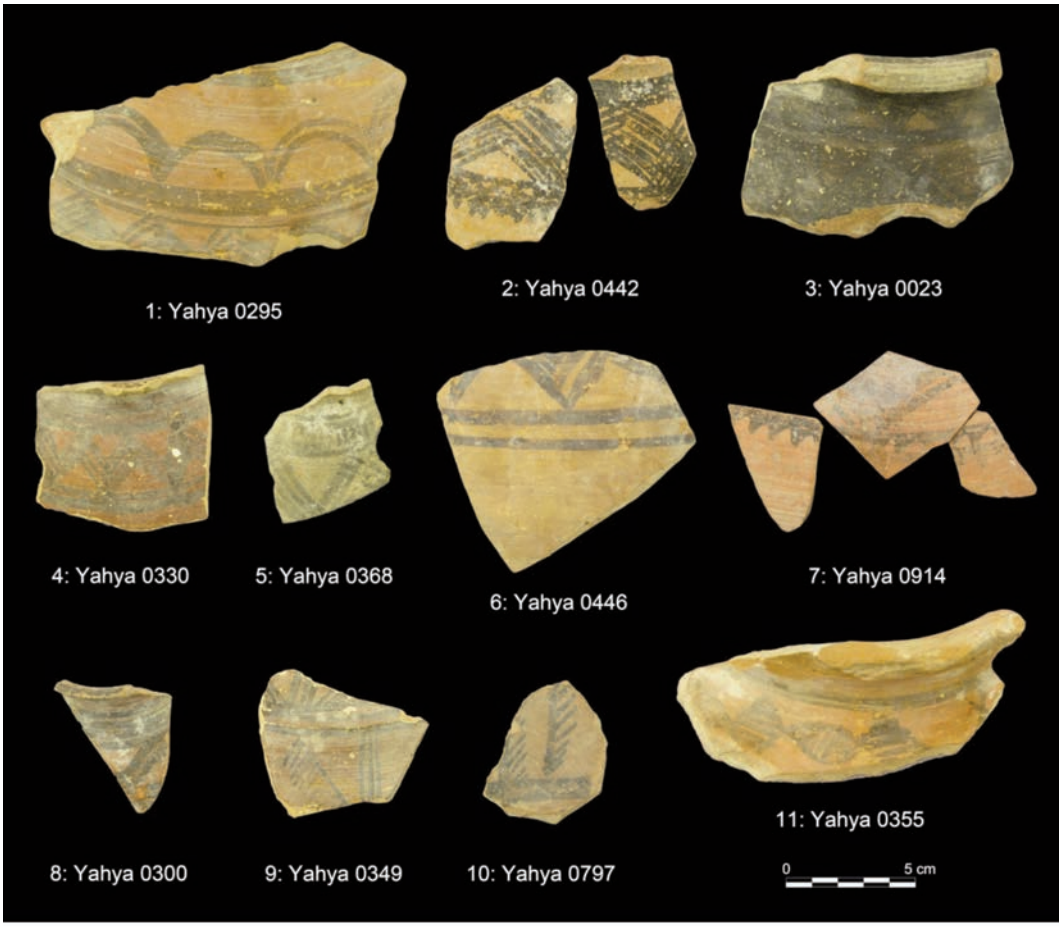


Figure 3.99 Slipped and painted ceramics with relations to Period IVB from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

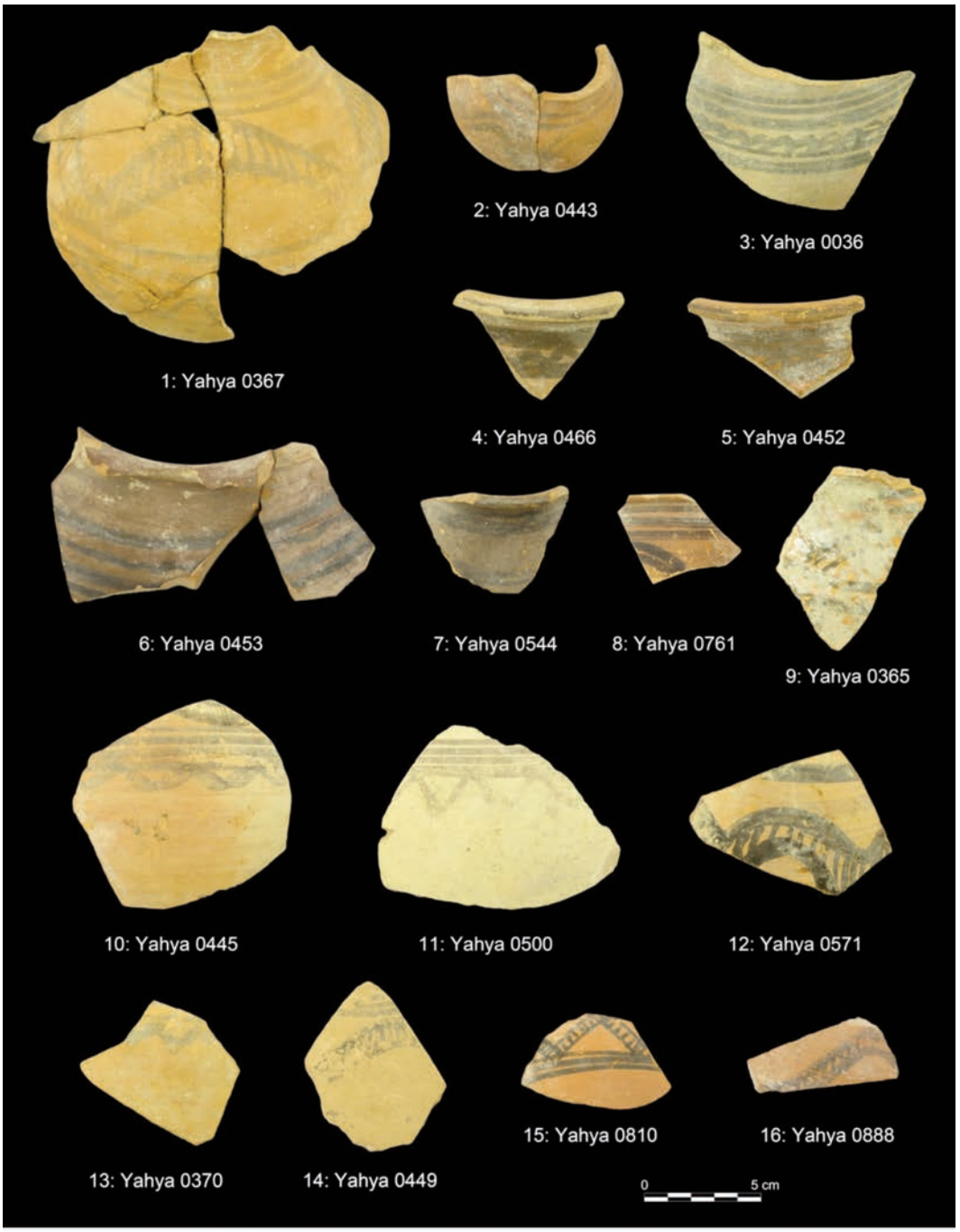


Figure 3.100 Slipped and painted ceramics with relations to Period IVB from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

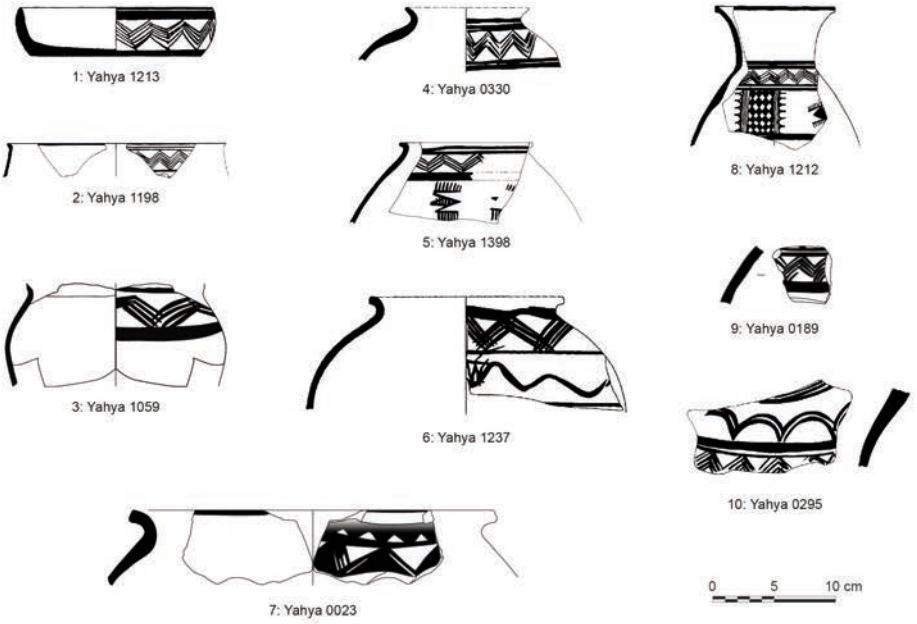


Figure 3.101 Slipped and painted ceramics with relations to Period IVB from Tepe Yahya.

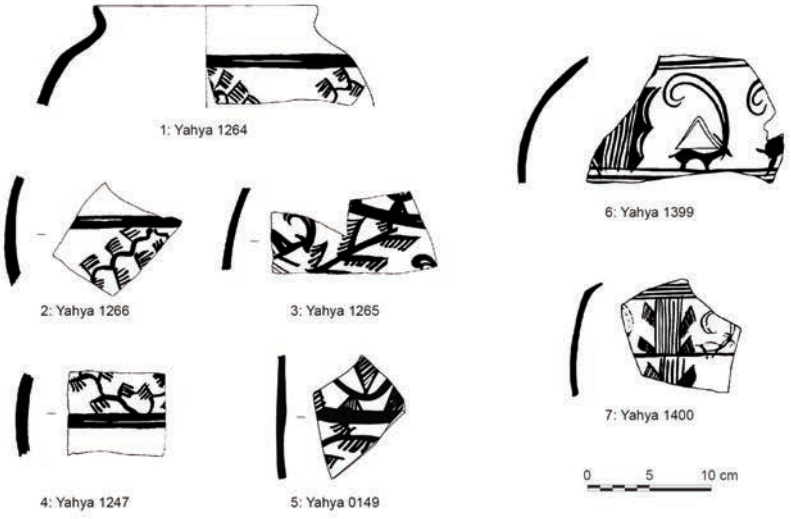


Figure 3.102 Slipped and painted ceramics with relations to Period IVB from Tepe Yahya.

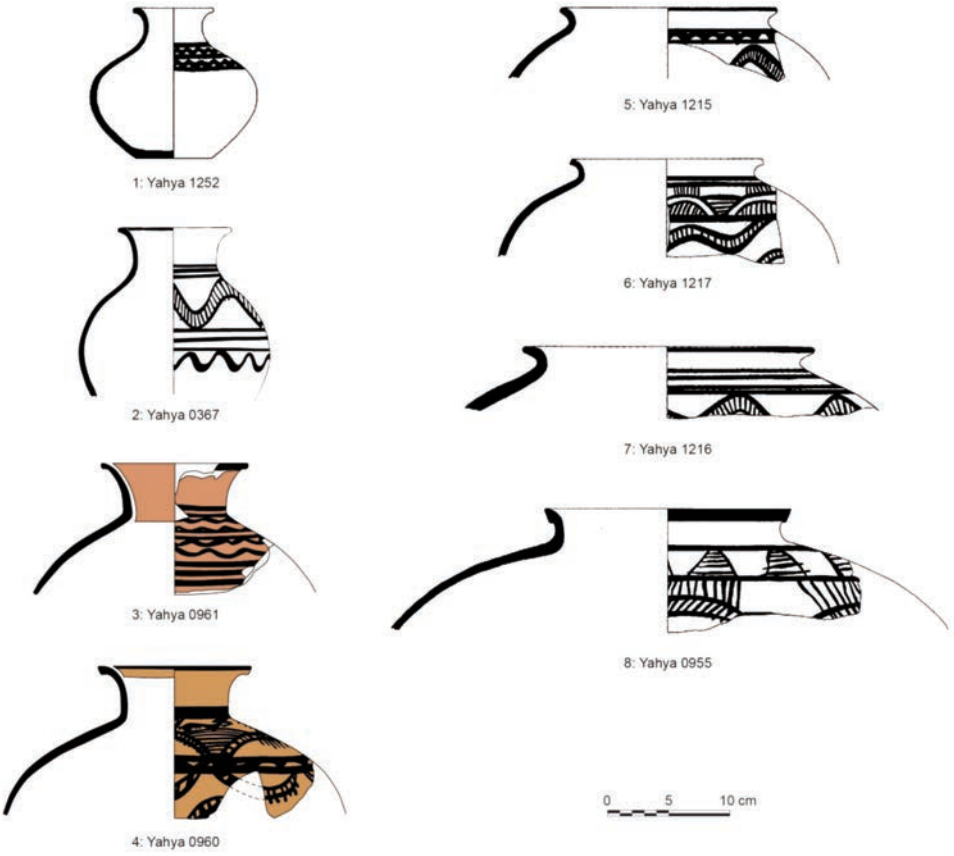


Figure 3.103 Slipped and painted ceramics with relations to Period IVB from Tepe Yahya

Figure 3.104 "Scorpion bowl" fragments from Tepe Yahya Phases IVC2 and IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.105 "Scorpion bowl" from Tepe Yahya, after Lamberg-Karlovsky 1972:fig. 3K; Lamberg-Karlovsky and Tosi 1973:fig. 107 upper left.

Figure 3.106 "Scorpion bowl" from Shahr-i Sokhta and Konar Sandal South, after Salvatori and Vidale 1997; Piperno and Salvatori 2007; Madjidzadeh 2008.

Figure 3.107 Pedestal base from Tepe Yahya Phase IVB6: Yahya 0550. Collection of the PMAE, 9999.0.3450, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

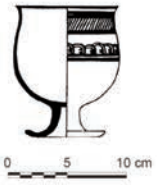


Figure 3.108 Bowl with a pedestal base from Tepe Yahya, after Lamberg-Karlovsky 1972:fig. 3E; Lamberg-Karlovsky and Tosi 1973:fig. 107 lower left.

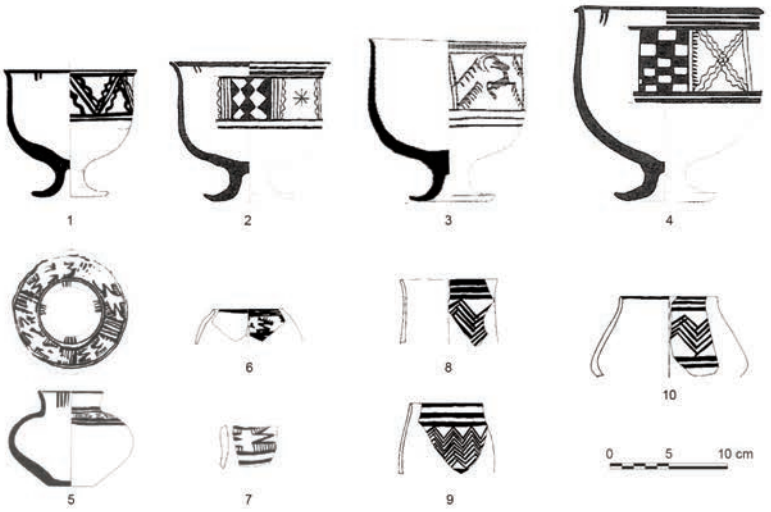


Figure 3.109 Ceramics from Shahr-i Sokhta, after Salvatori and Vidale 1997; Piperno and Salvatori 2007.

Figure 3.110 Incised ceramics from Tepe Yahya Phases IVC2 and IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

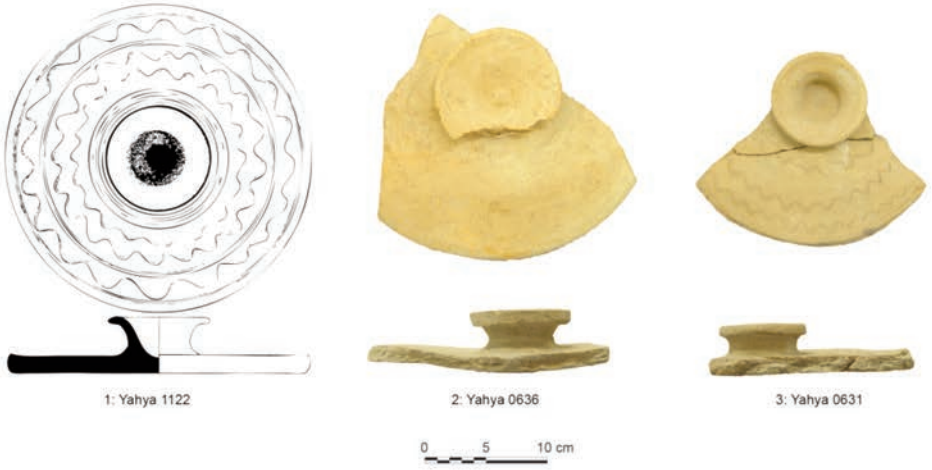


Figure 3.111 Incised lids from Tepe Yahya Phase IVB6 and "secondary contexts" related to Period IVB. Collection of the PMAE, Harvard University, photographs by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.112 Ridge and impressed ceramics from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 3.113 Ceramics from Konar Sandal, after Madjidzadeh 2008.

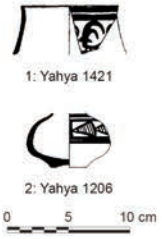


Figure 3.114 Fine, painted buff ceramics from Tepe Yahya Phase IVB6: Yahya 1421 and 1206.

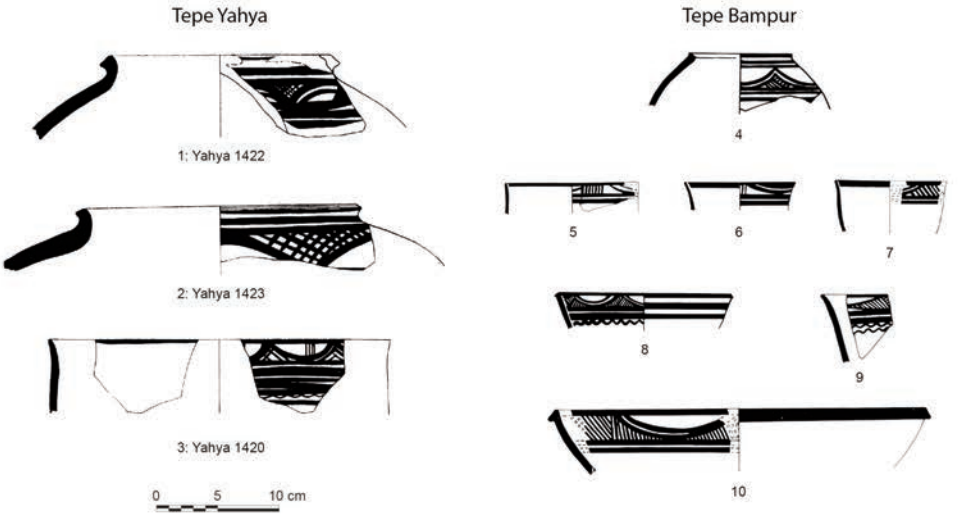


Figure 3.115 Fine, painted buff ceramics from Tepe Yahya Phases IVB6–IVB5 and ceramics from Tepe Bampur (No 4–10 after De Cardi 1970).

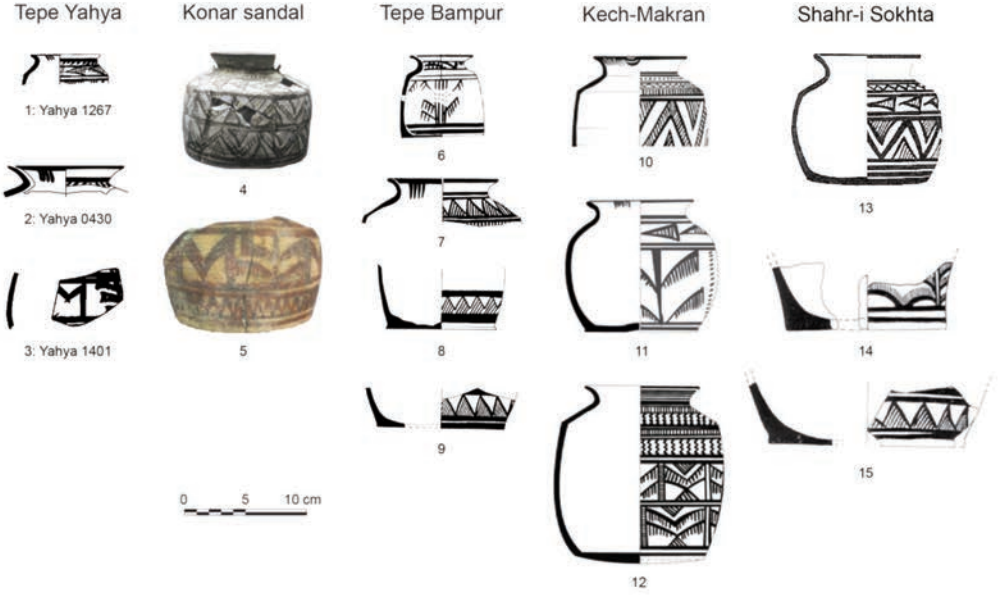


Figure 3.116 Canister-jars from Tepe Yahya and the Southeastern Iranian Plateau, after Madjidzadeh 2008; De Cardi 1970; Piperno and Salvatori 2007; Tosi 1969.

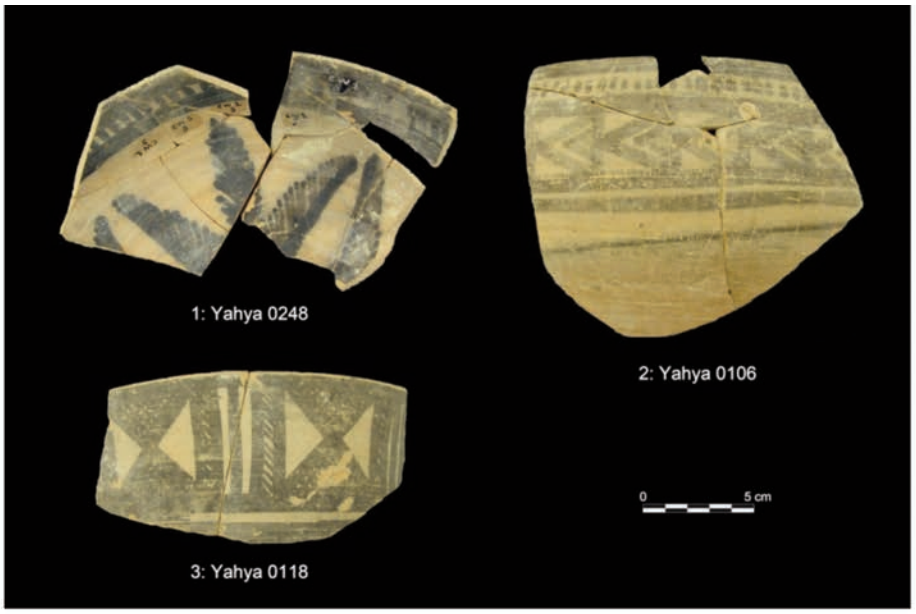


Figure 3.117 Very fine, painted ceramics from Tepe Yahya Phases IVC2–IVC1: Yahya 0248, 0106, and 0118. Collection of the PMAE, Harvard University, photographs by B. Mutin. © 2013 President and Fellows of Harvard College.

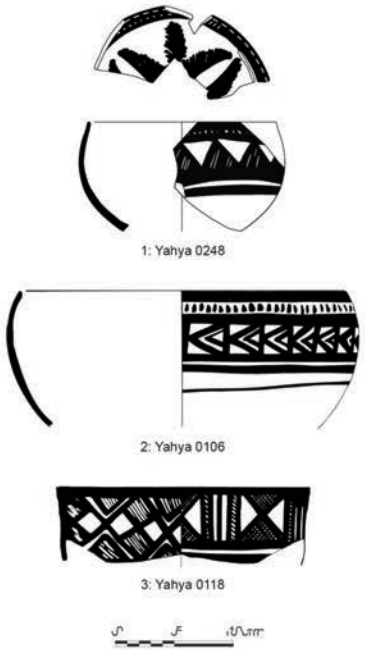


Figure 3.118 Very fine, painted ceramics from Tepe Yahya Phases IVC2–IVC1: Yahya 0248, 0106, and 0118.

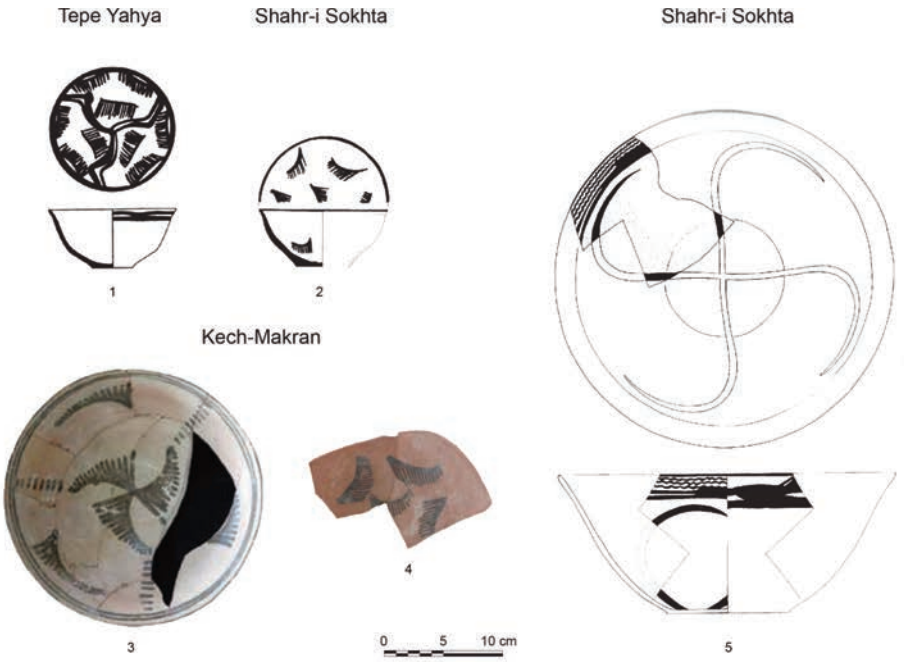


Figure 3.119 Ceramics from Tepe Yahya, Shahr-i Sokhta and Kech-Makran, after Lamberg-Karlovsky 1972; Piperno and Salvatori 2007; Salvatori and Vidale 1997; Didier 2007.

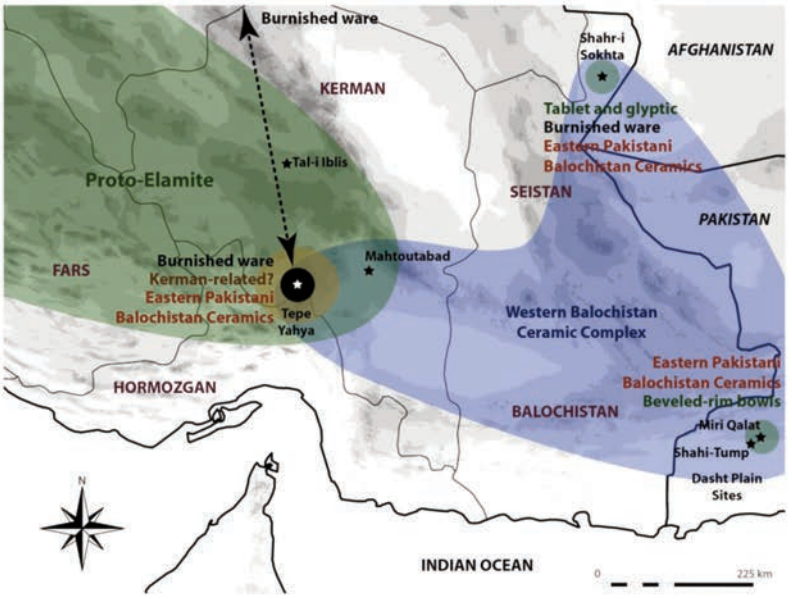


Figure 3.120 Map showing some of the main ceramic spheres represented at Tepe Yahya Phases IVC2–IVB6 and on the Southeastern Iranian Plateau.

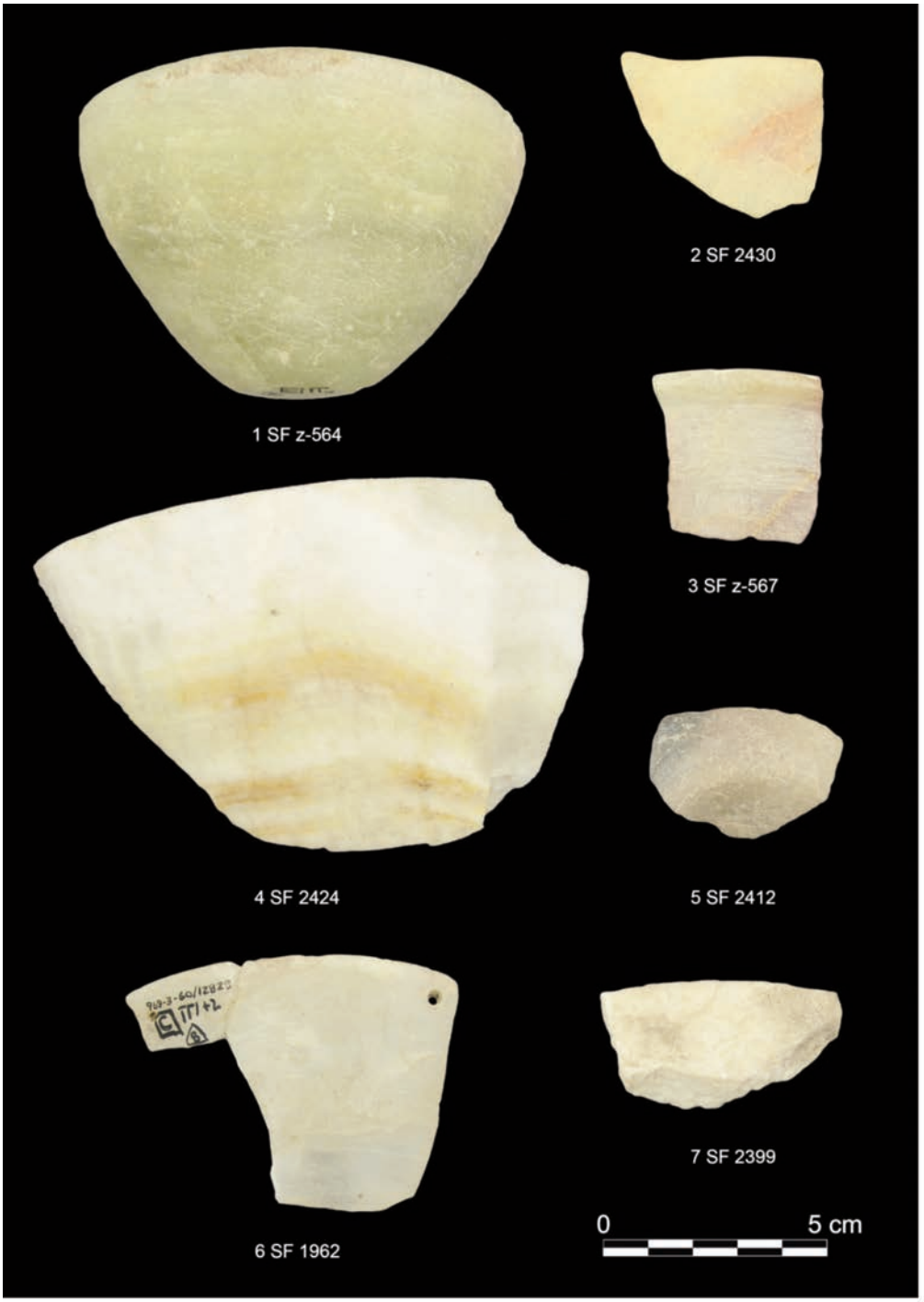


Figure 4.1 Stone vessel fragments from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

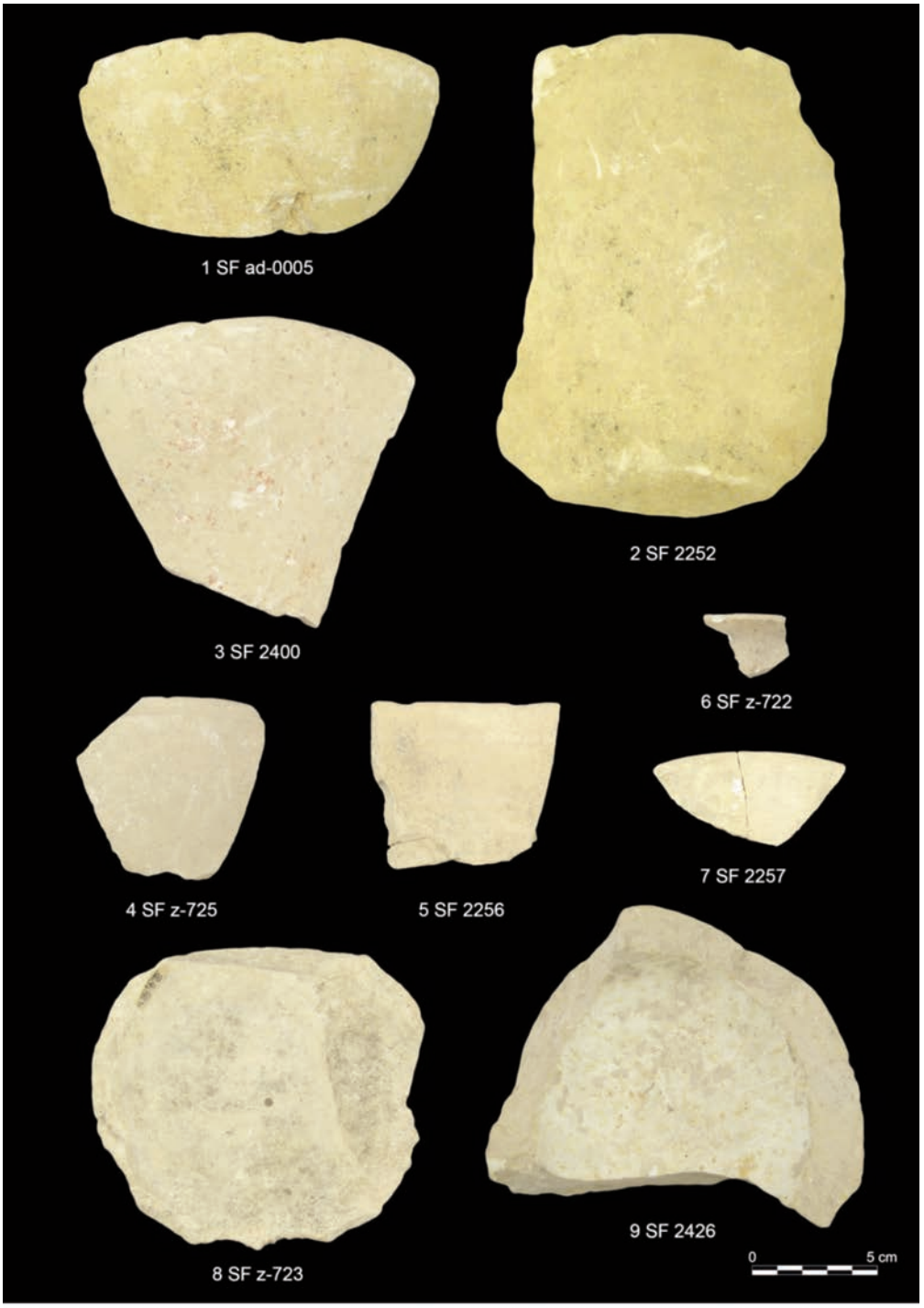


Figure 4.2 Stone vessel fragments from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

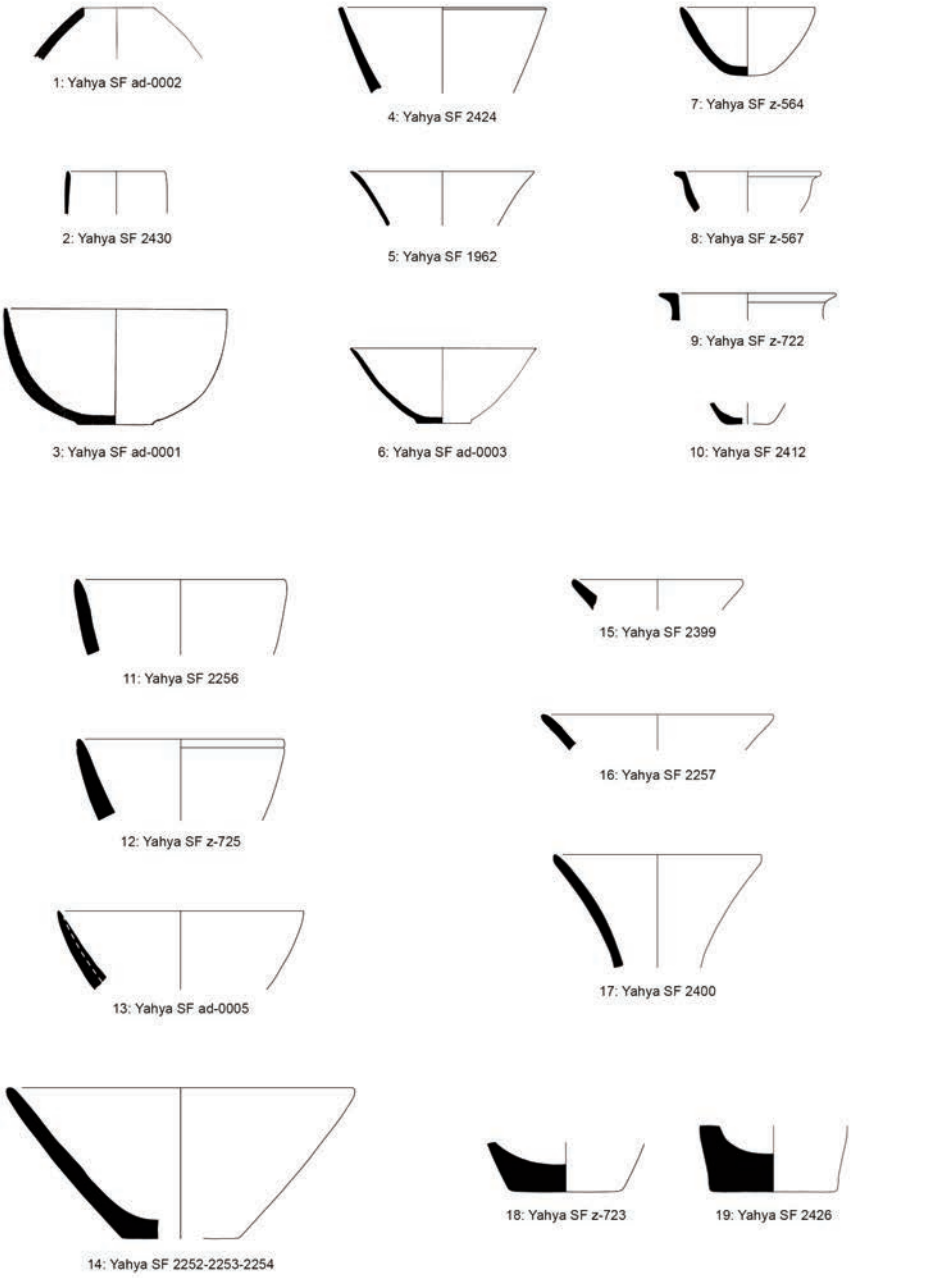


Figure 4.3 Stone vessel fragments from Tepe Yahya Phases IVC2–IVB6.

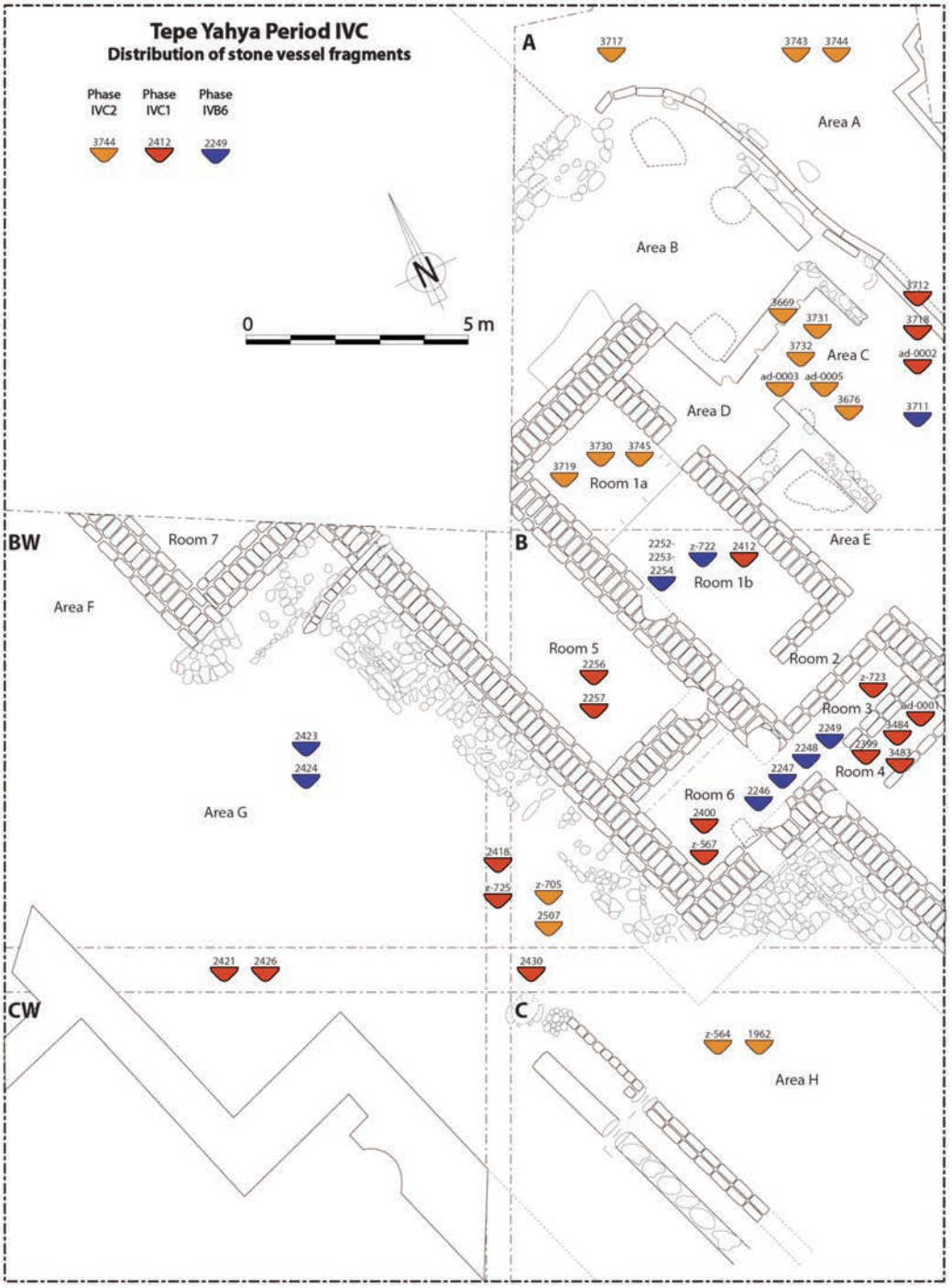


Figure 4.4 Distribution of stone vessel fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

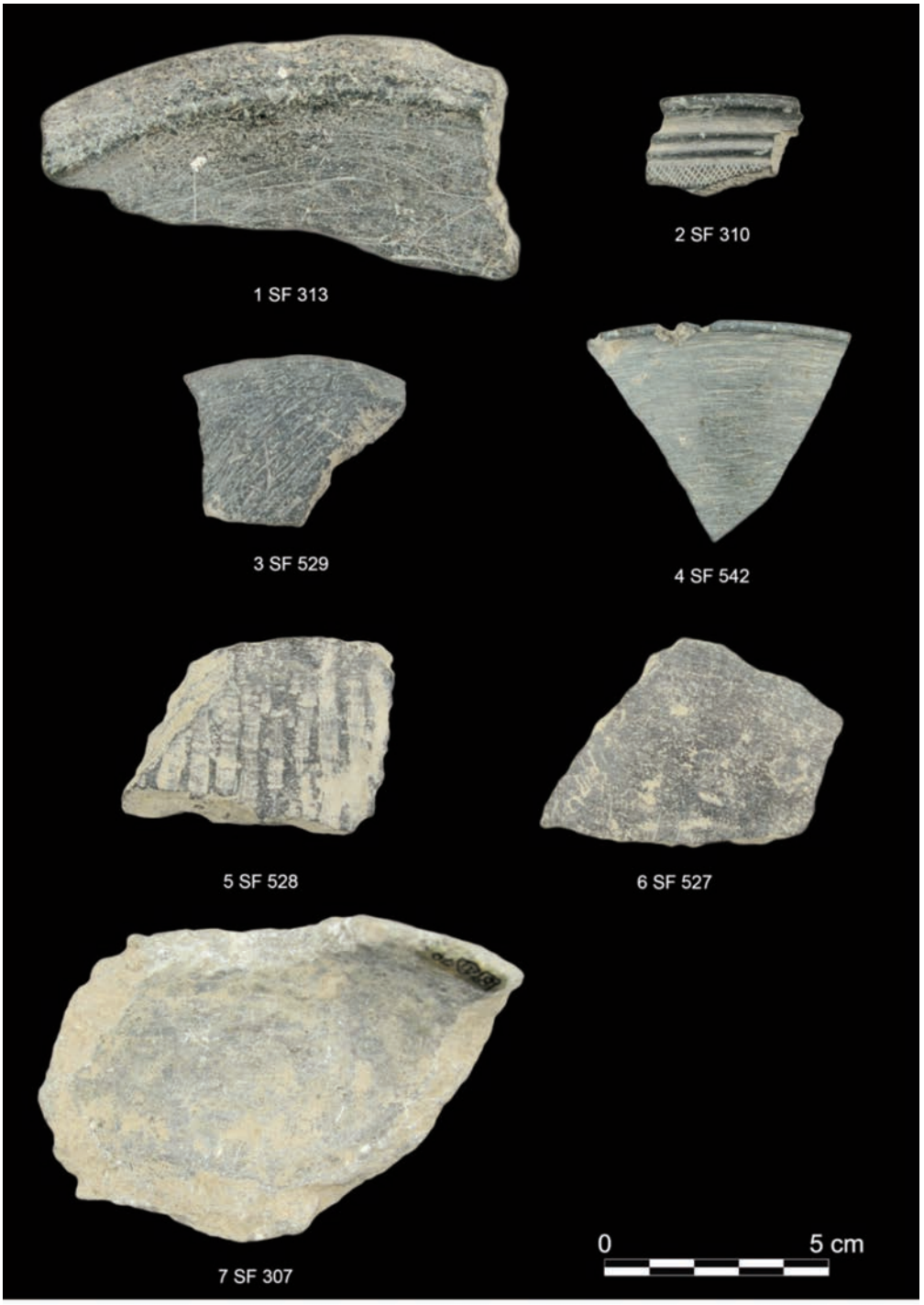


Figure 4.5 Chlorite vessel fragments from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

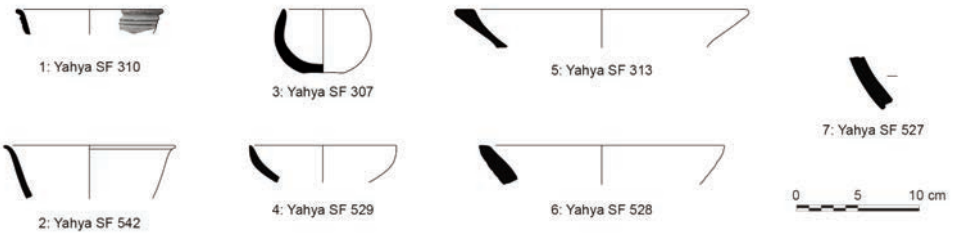


Figure 4.6 Chlorite vessel fragments from Tepe Yahya Phases IVC2–IVB6.

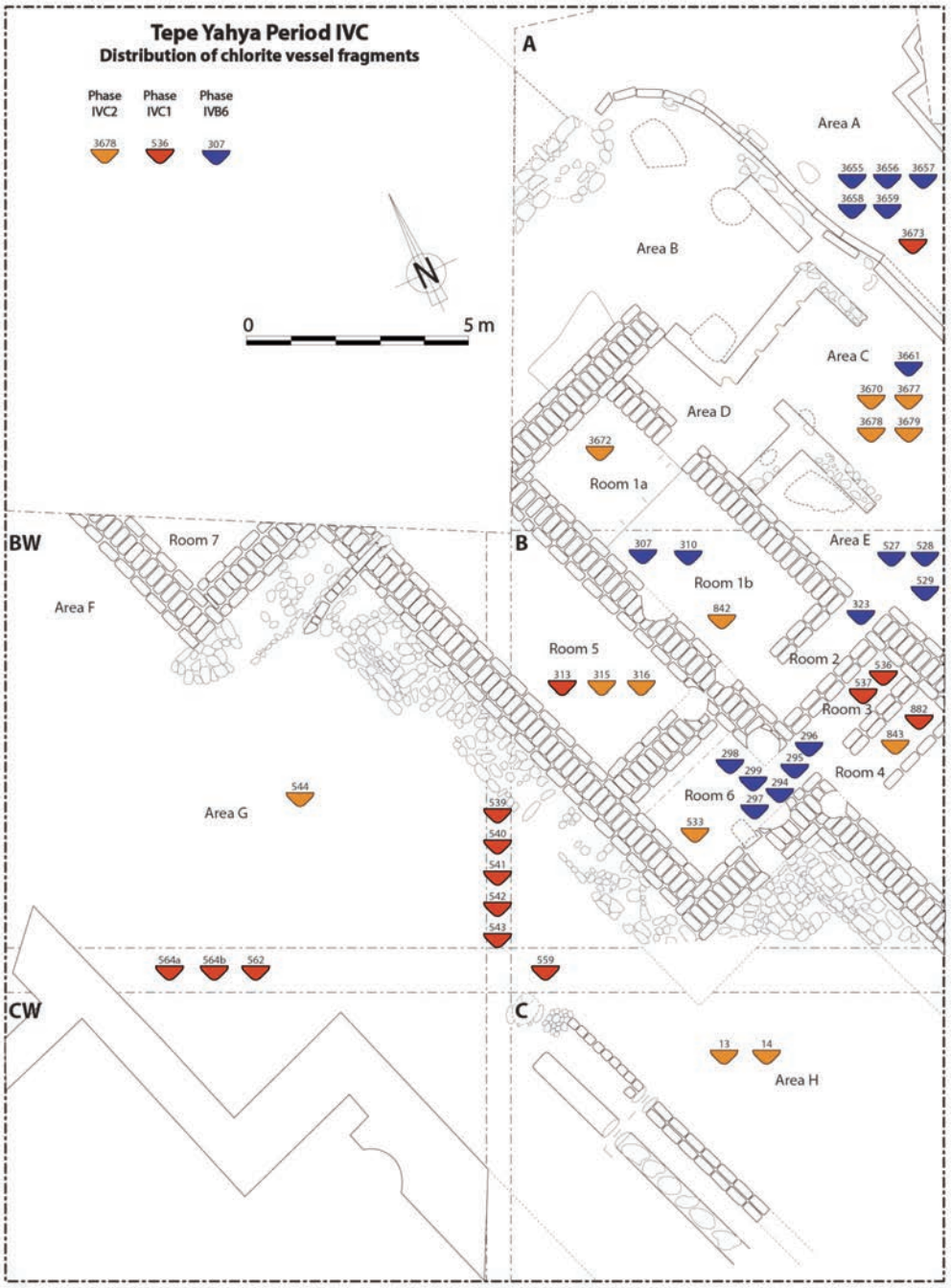


Figure 4.7 Distribution of chlorite vessel fragments in the complex of Tepe Yahya Phases IVC2–IVB6.

Figure 4.8 Stone objects and fragments from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

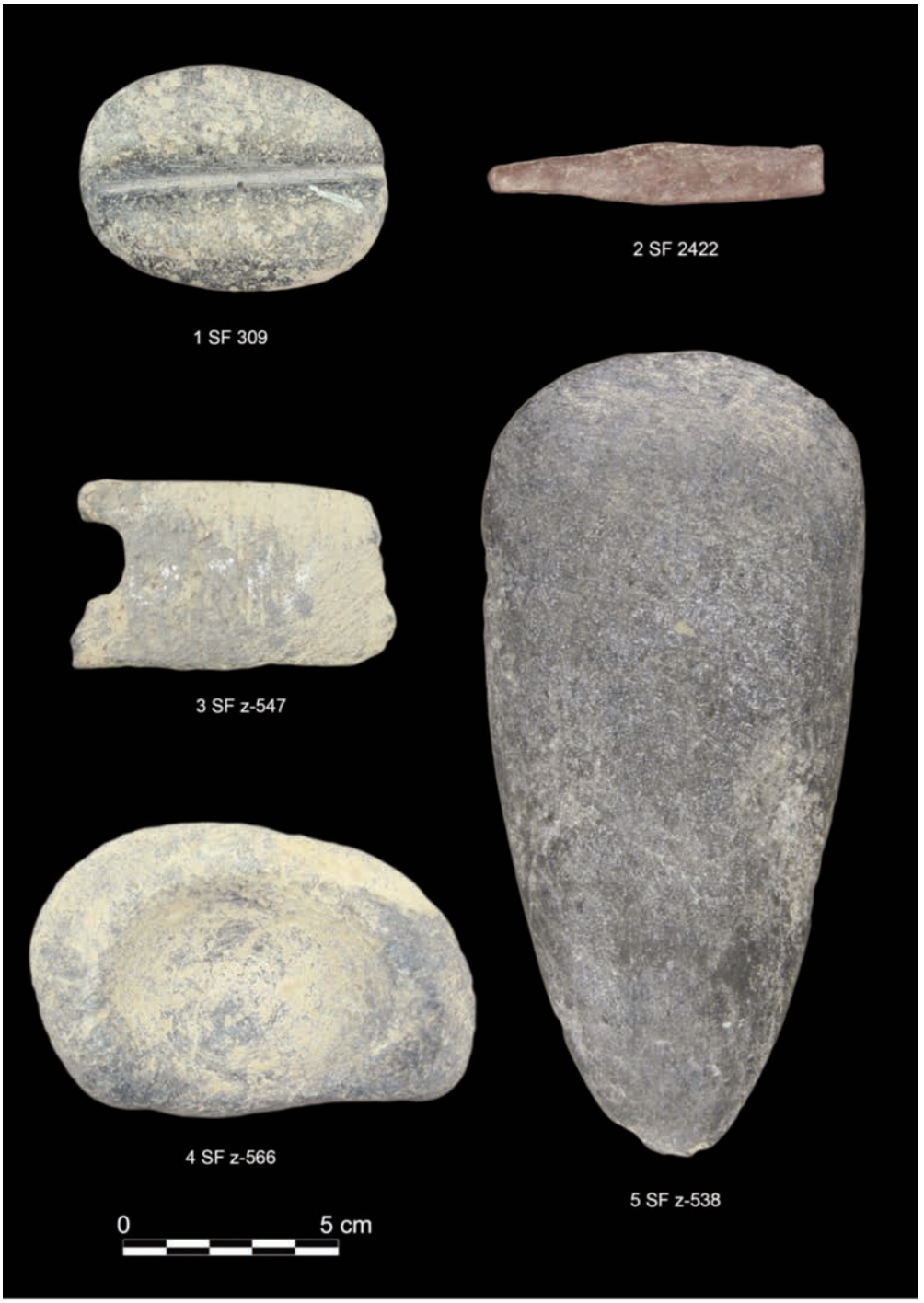


Figure 4.9 Stone objects and fragments from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

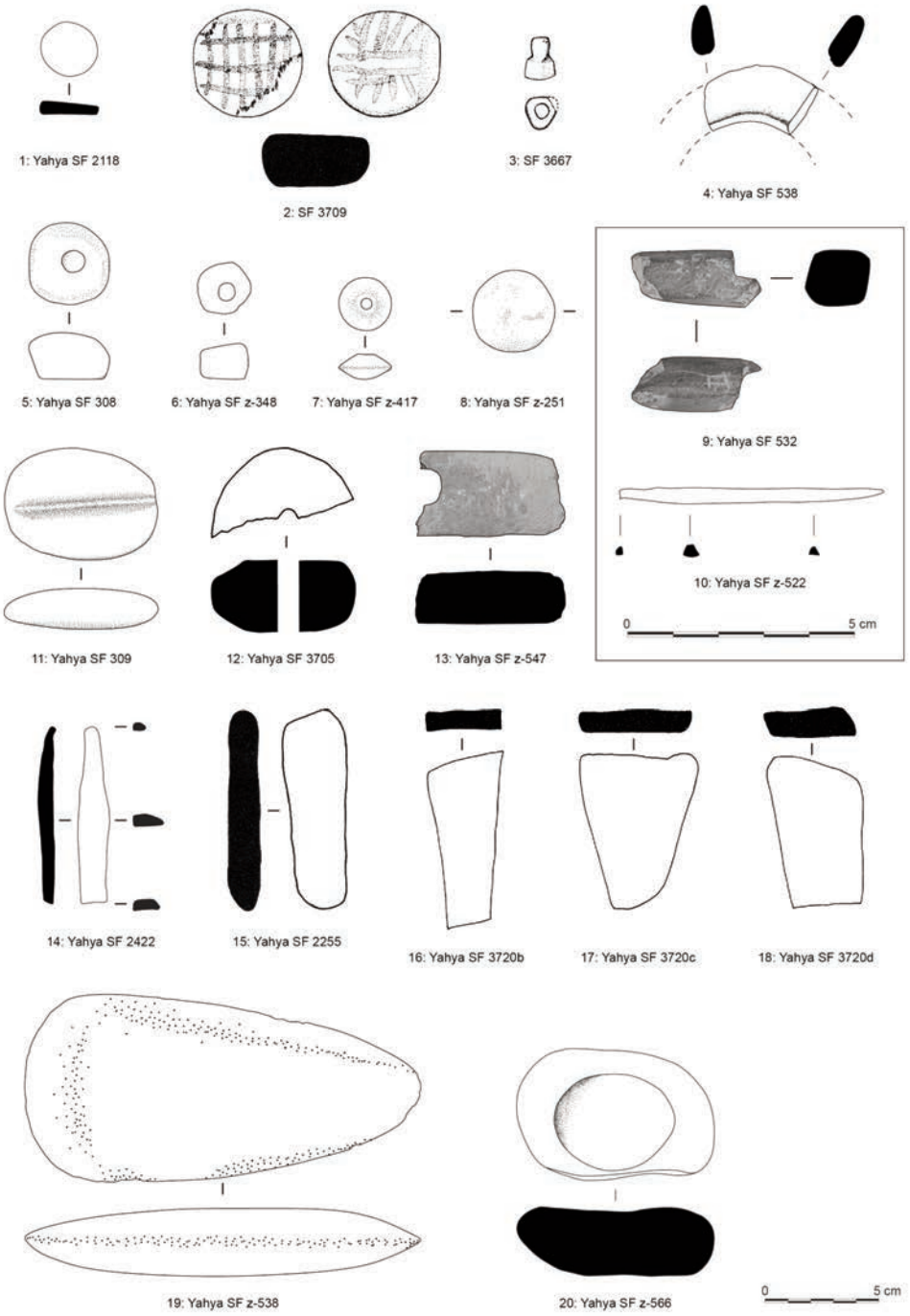


Figure 4.10 Stone objects and fragments from Tepe Yahya Phases IVC2–IVB6.

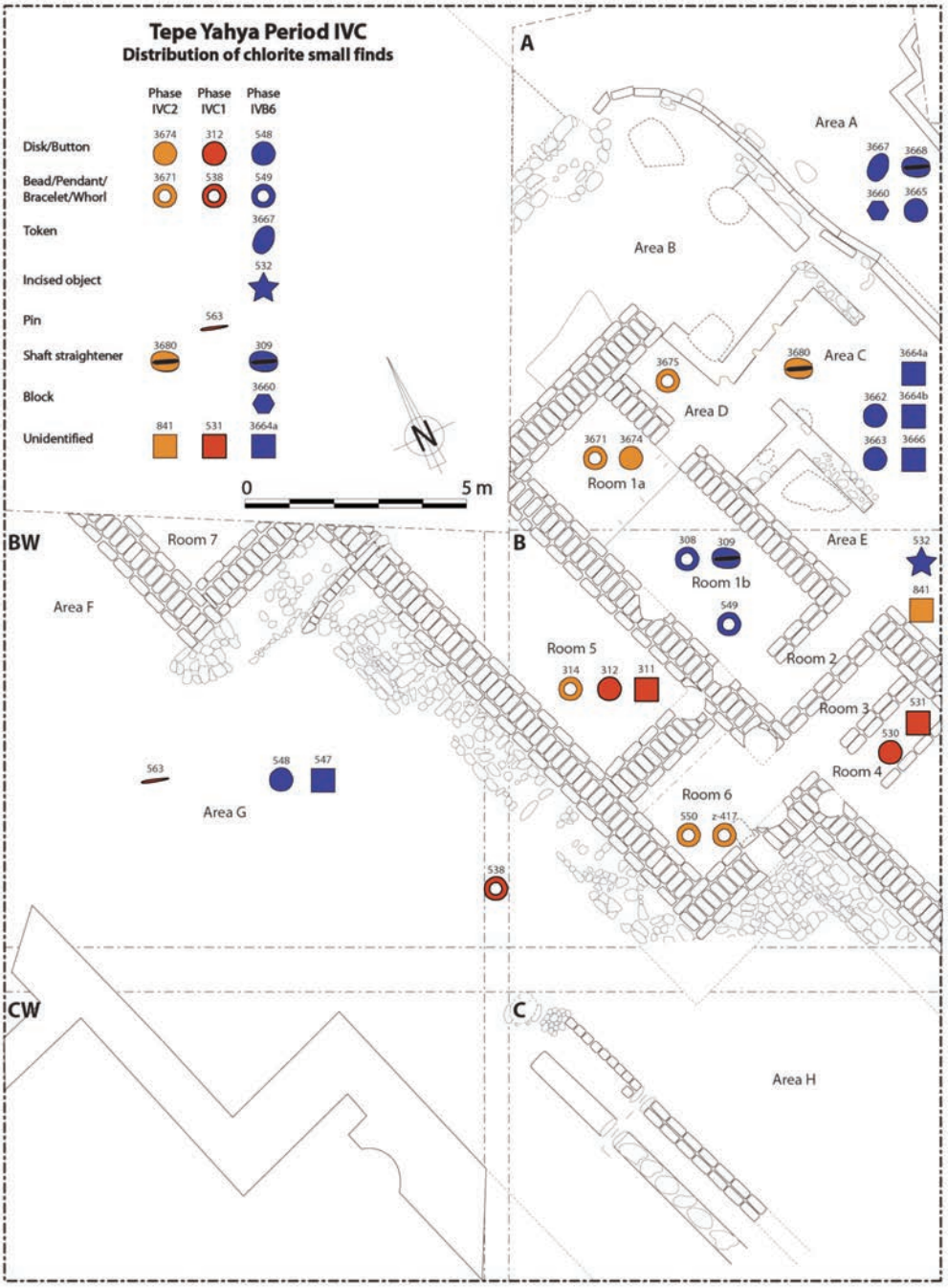


Figure 4.11 Distribution of chlorite objects and fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6). SF 821 and 822 from Trench AN2 are not illustrated on this map.

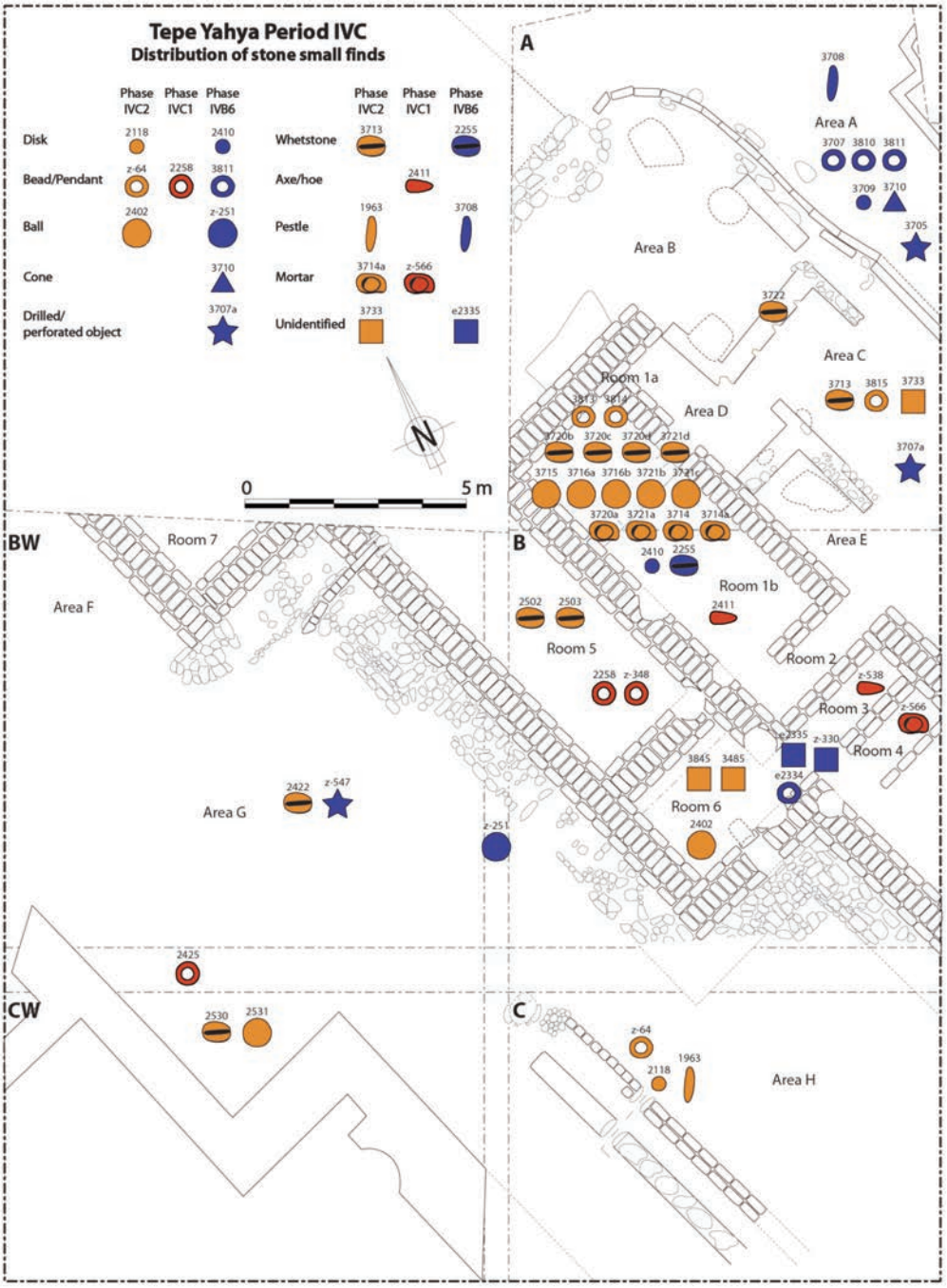


Figure 4.12 Distribution of objects and fragments of unidentified stone in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

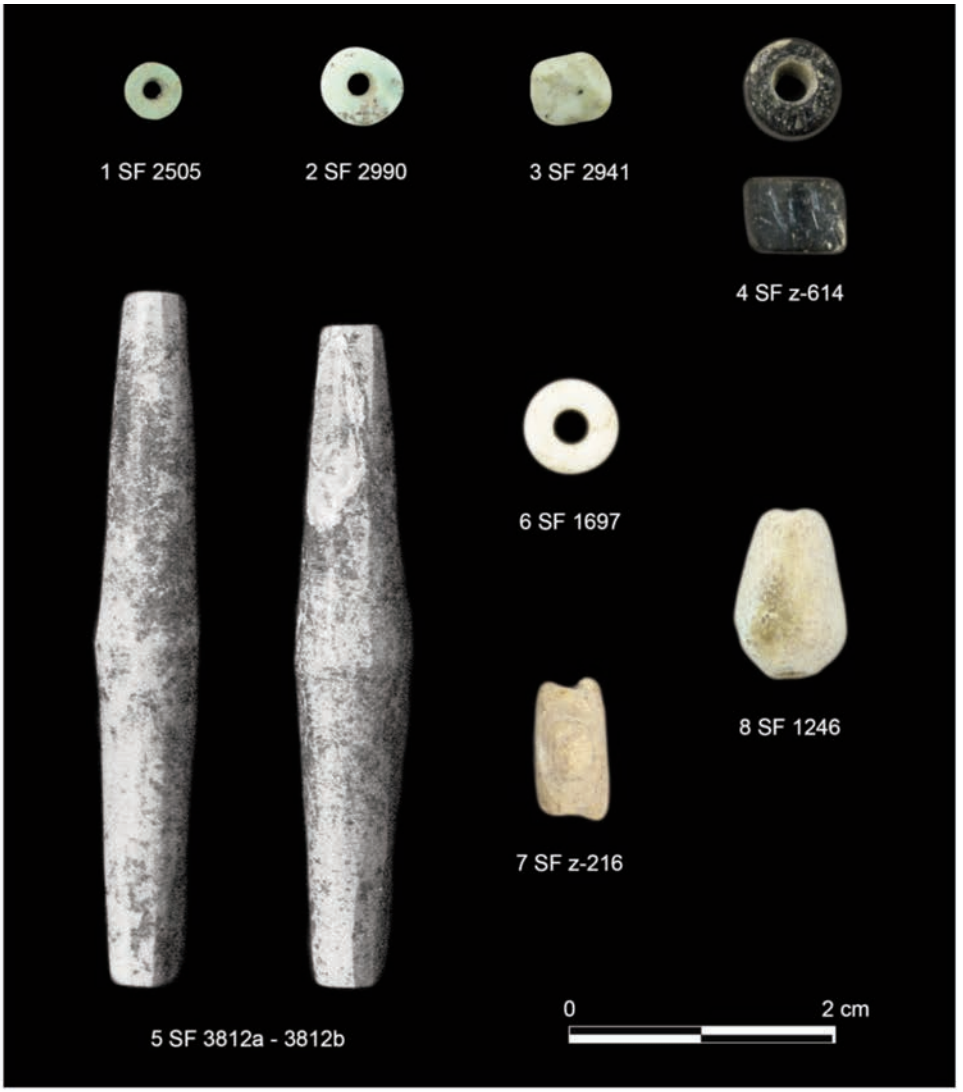


Figure 4.13 Beads and one turquoise fragment (no 3) from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 4.14 Beads from Tepe Yahya Phases IVC2–IVB6.

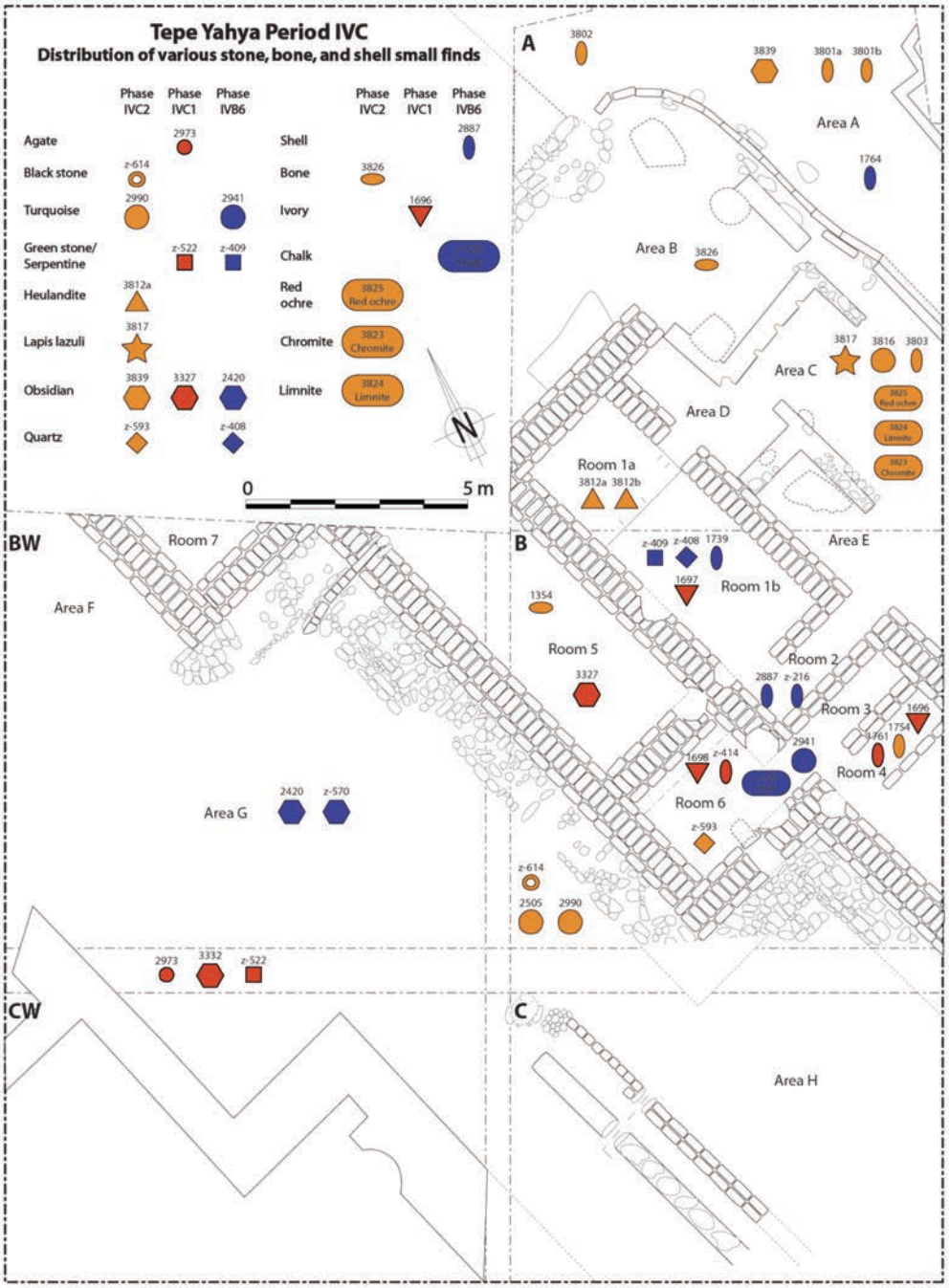


Figure 4.15 Distribution of objects and fragments of various stones, bone, shell, and ivory in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

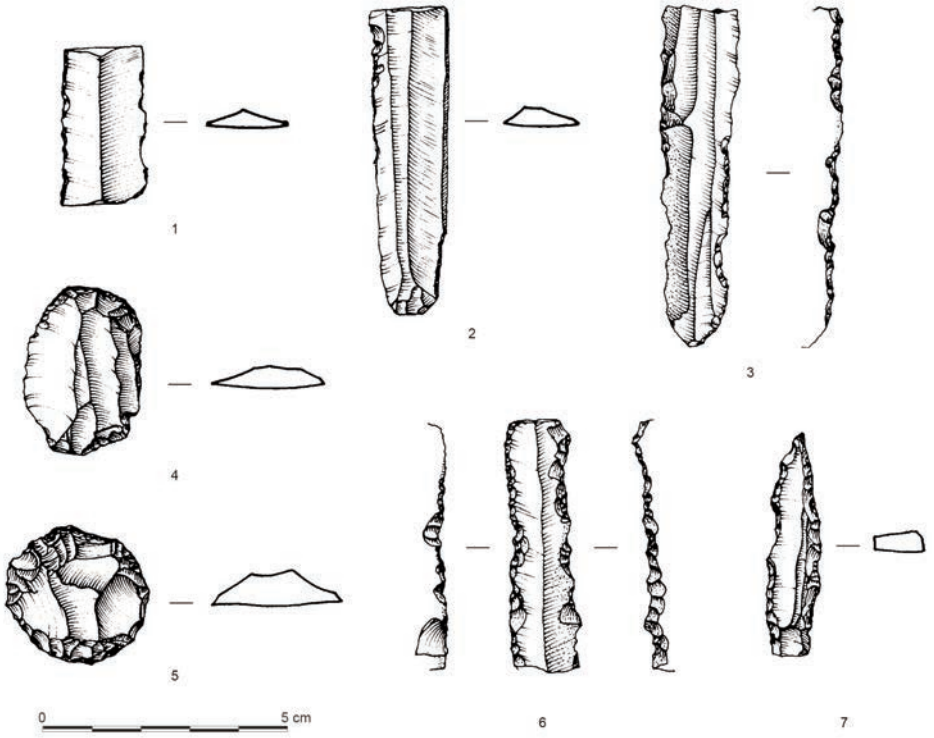


Figure 4.16 Lithic industry from Tepe Yahya Period IVC, after Piperno 1973.

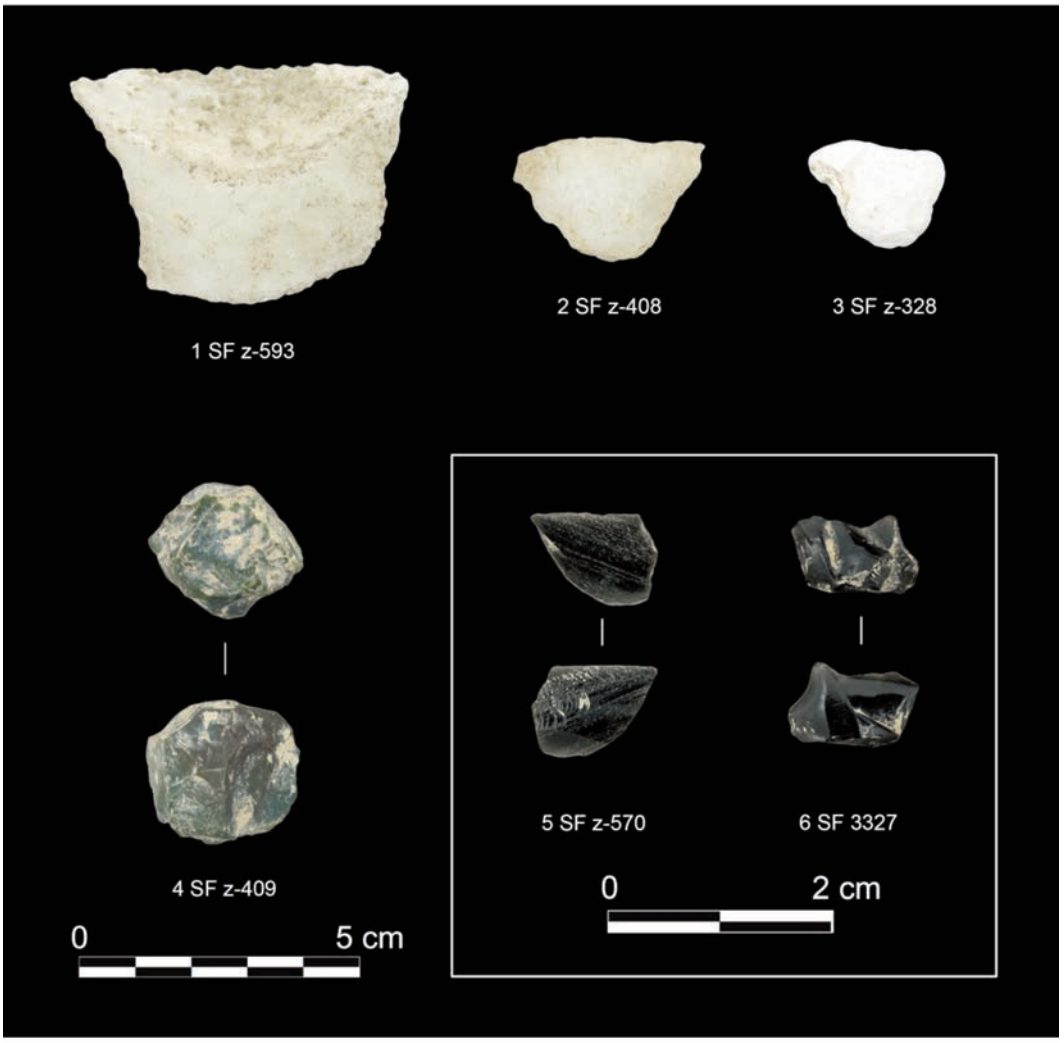


Figure 4.17 Stone fragments from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

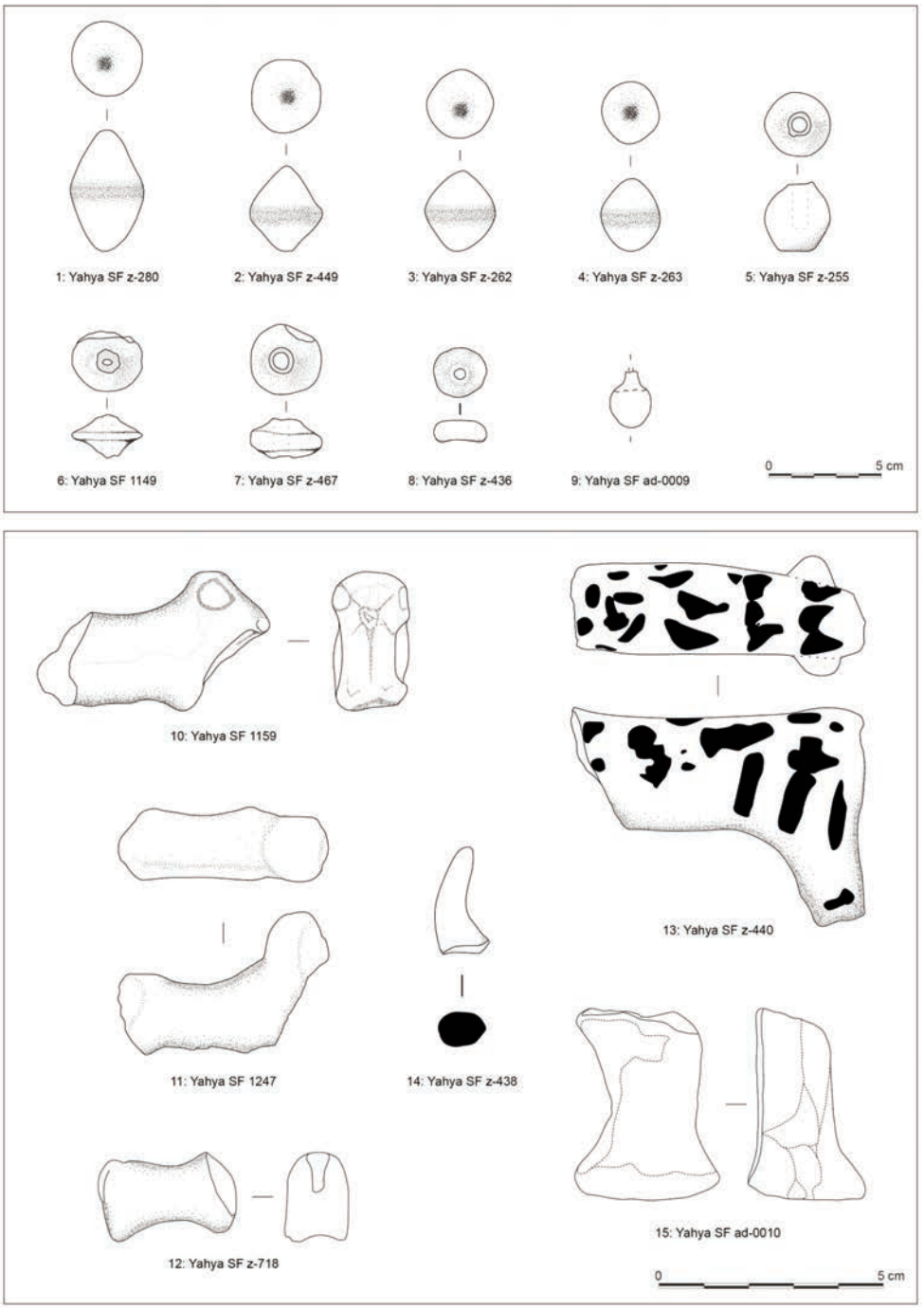


Figure 4.18 Clay objects from Tepe Yahya Phases IVC2–IVB6.

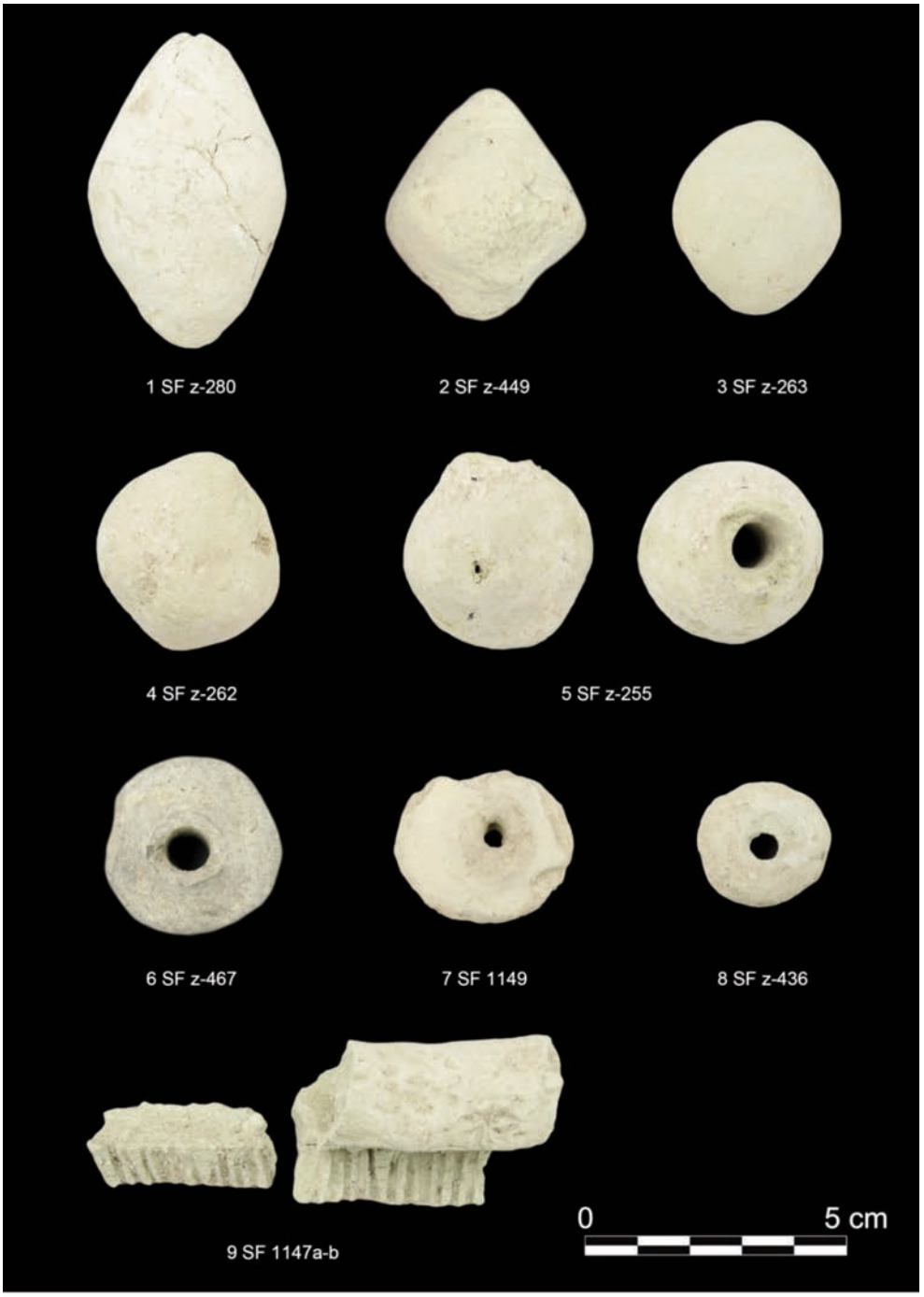


Figure 4.19 Clay objects from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 4.20 Clay objects from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 4.21 Slingballs from Tepe Yahya: SF z-286 (context B–BW.70.T2.12). Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 4.22 Comb handle from Tepe Yahya: SF z-71 (context B–BW.69.T5.4). Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

Figure 4.23 Comb handle from Tepe Yahya: SF 1228 (context XCE.71.T1.10). Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

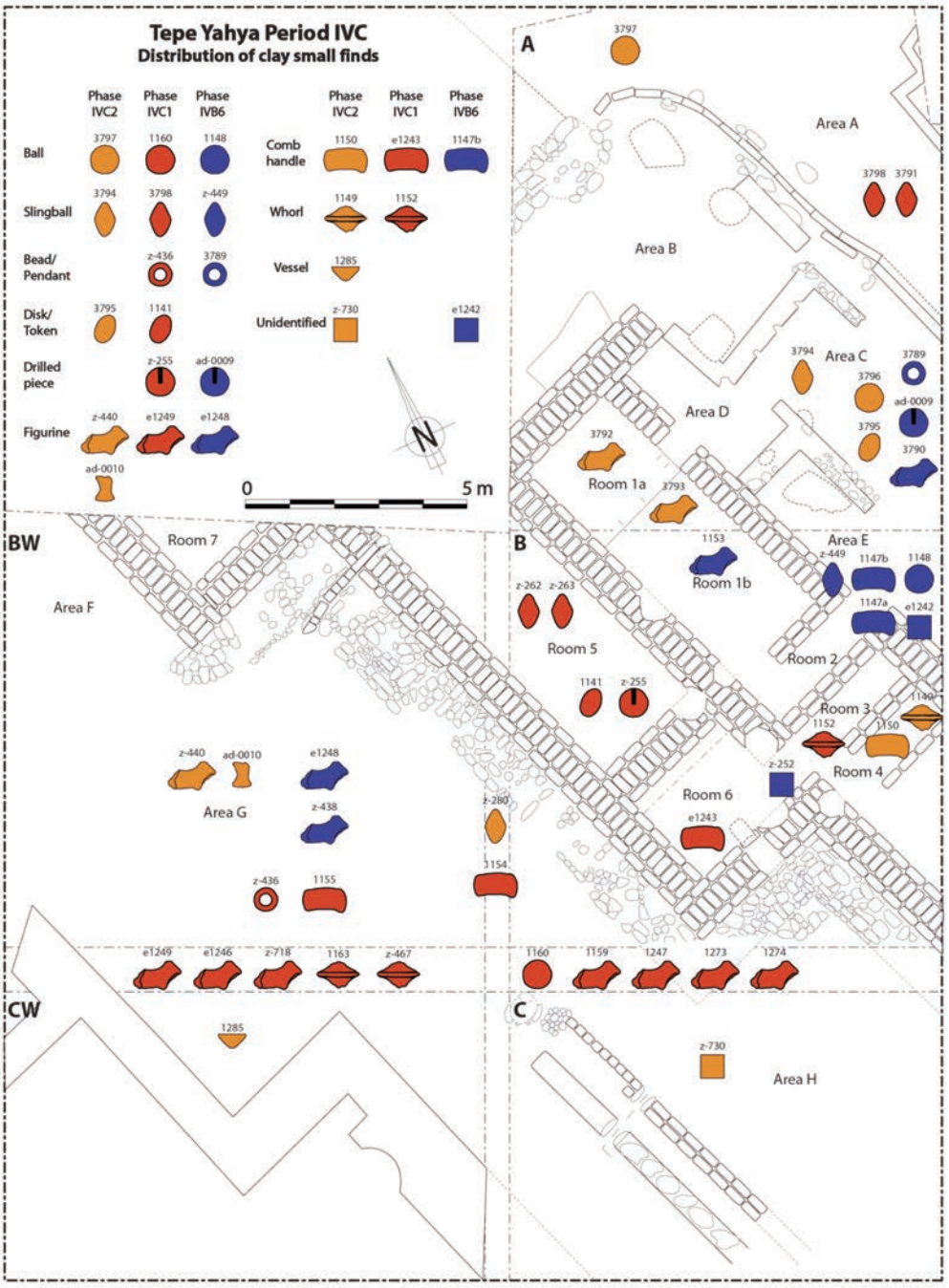


Figure 4.24 Distribution of clay objects and fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6).

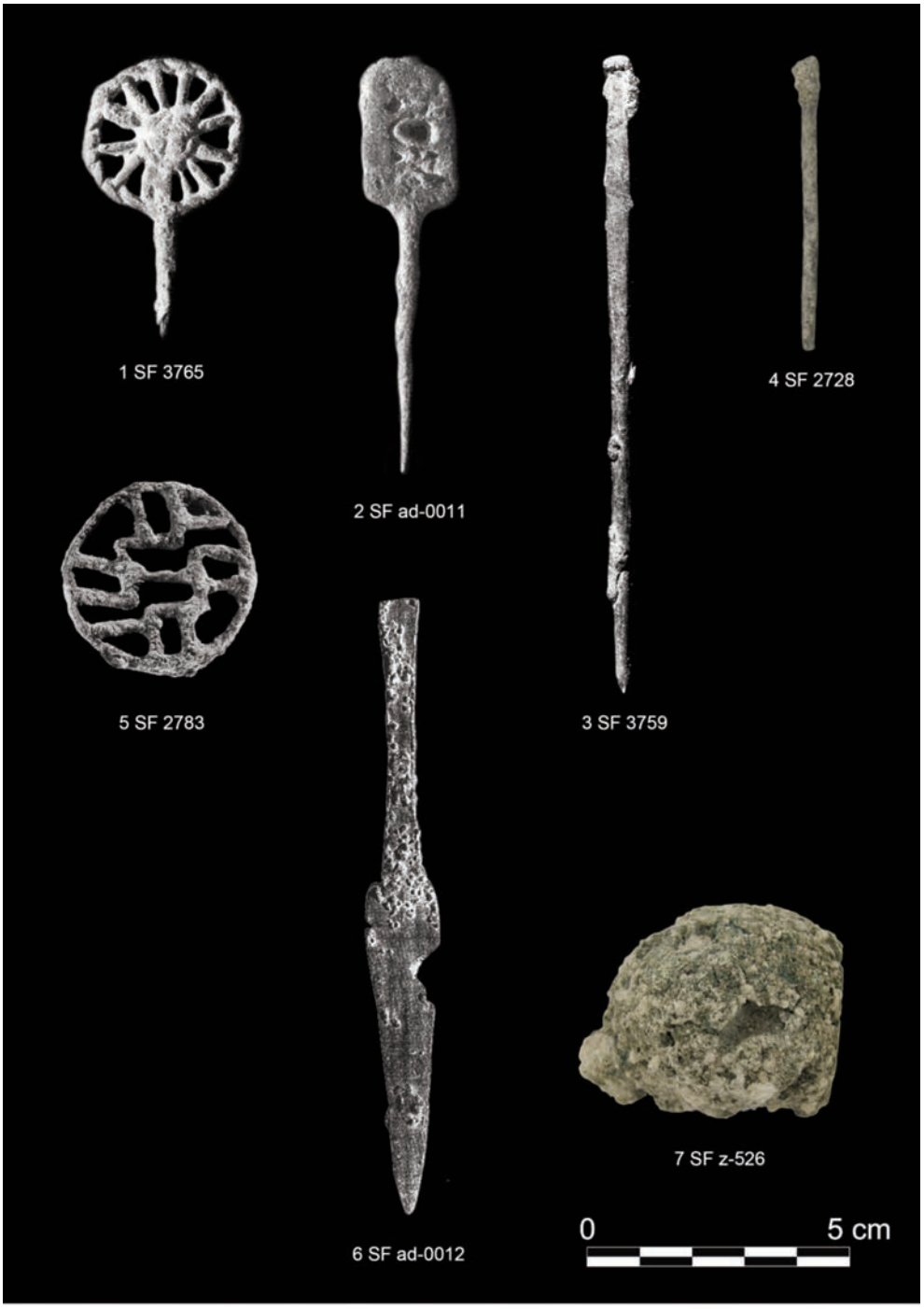


Figure 4.25 Copper objects from Tepe Yahya Phases IVC2–IVB6. Collection of the PMAE, Harvard University, photograph by B. Mutin. © 2013 President and Fellows of Harvard College.

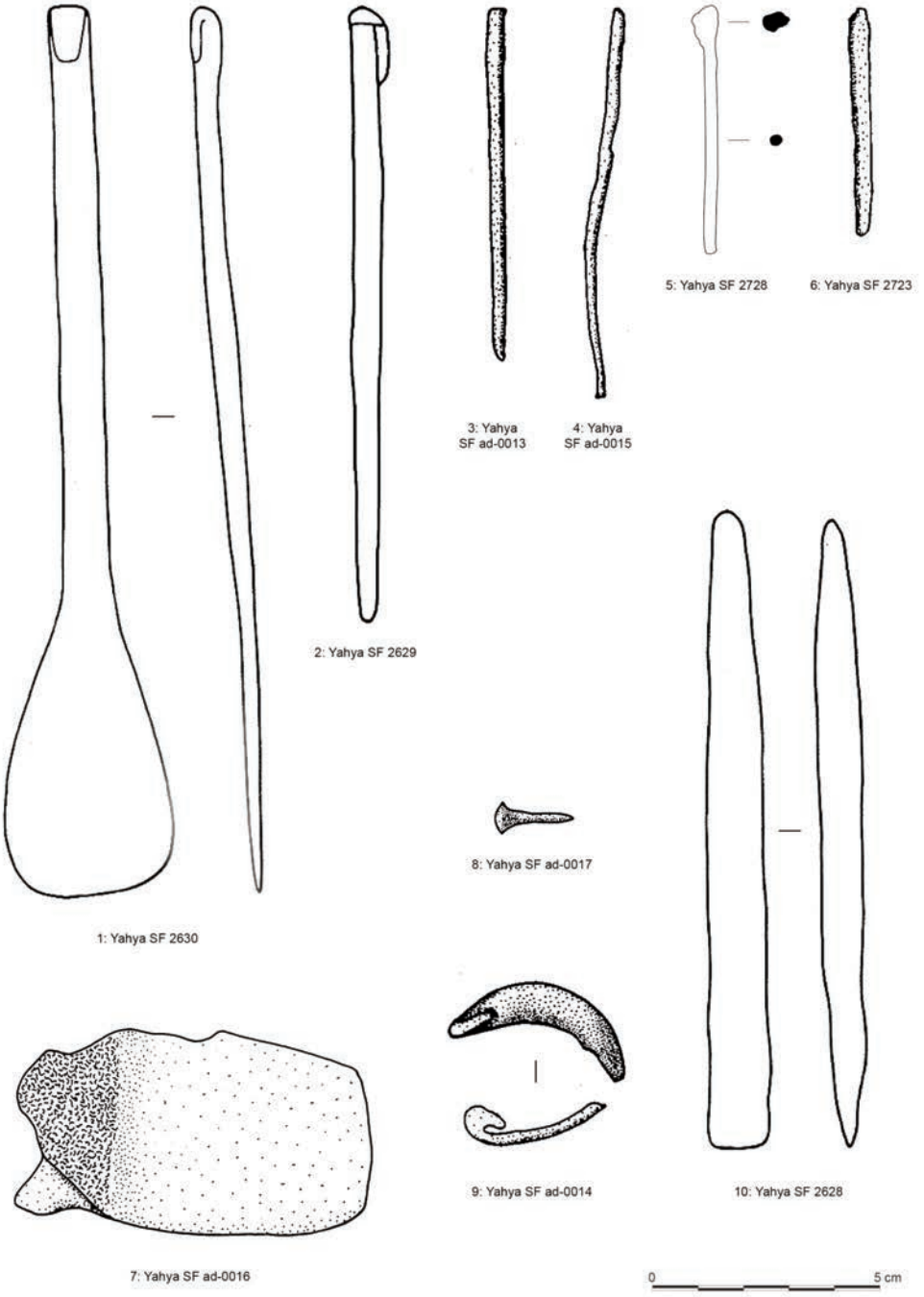


Figure 4.26 Copper objects from Tepe Yahya Phases IVC2–IVB6.

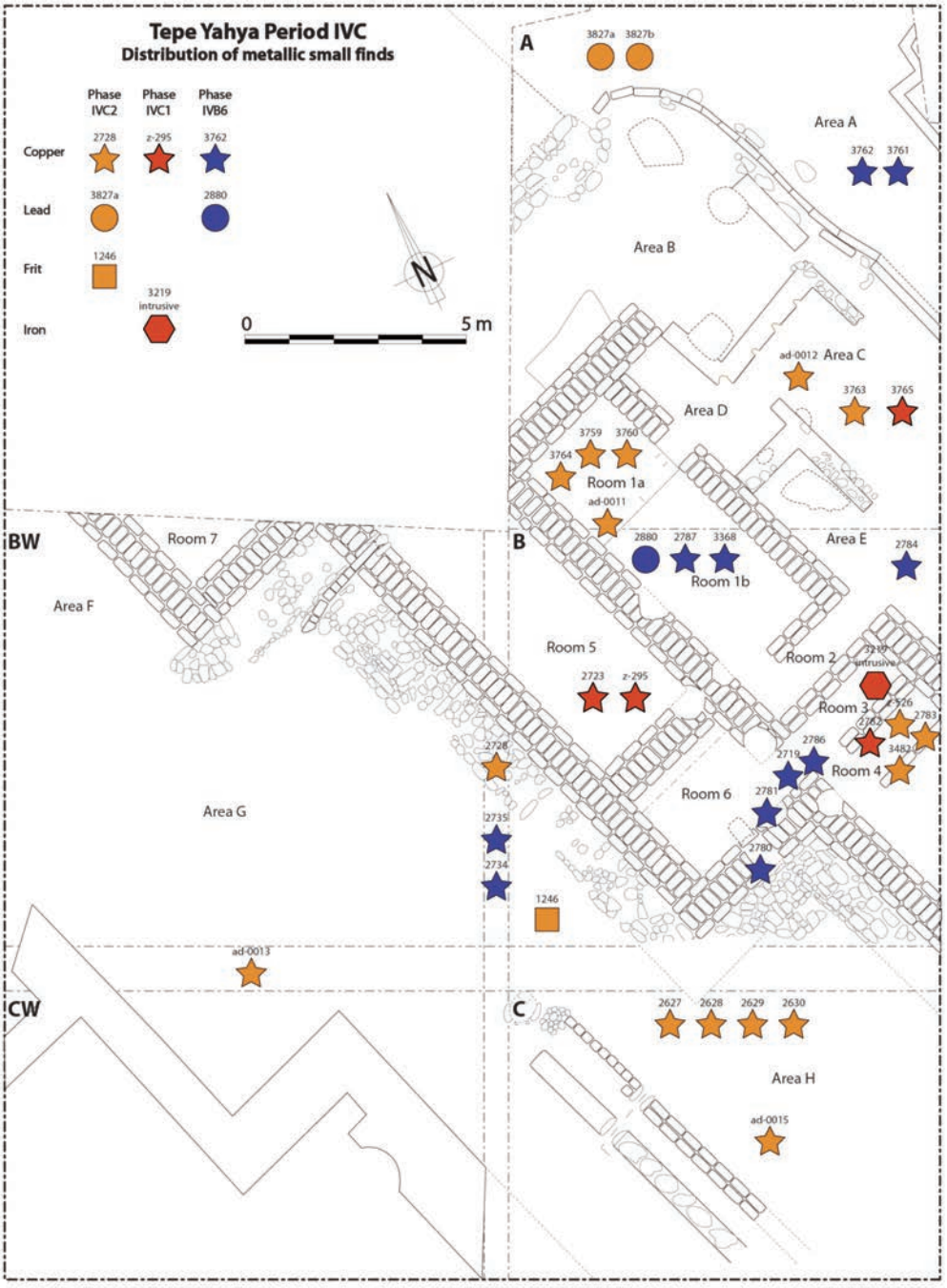


Figure 4.27 Distribution of metal objects and fragments in the complex of Tepe Yahya IVC (Phases IVC2–IVB6). SF ad-0014 from Trench XBE and ad-0016 from Trench XC are not illustrated on this map.

Figure 4.28 Lead ring (?) from Tepe Yahya Phase IVB6: SF 2880.

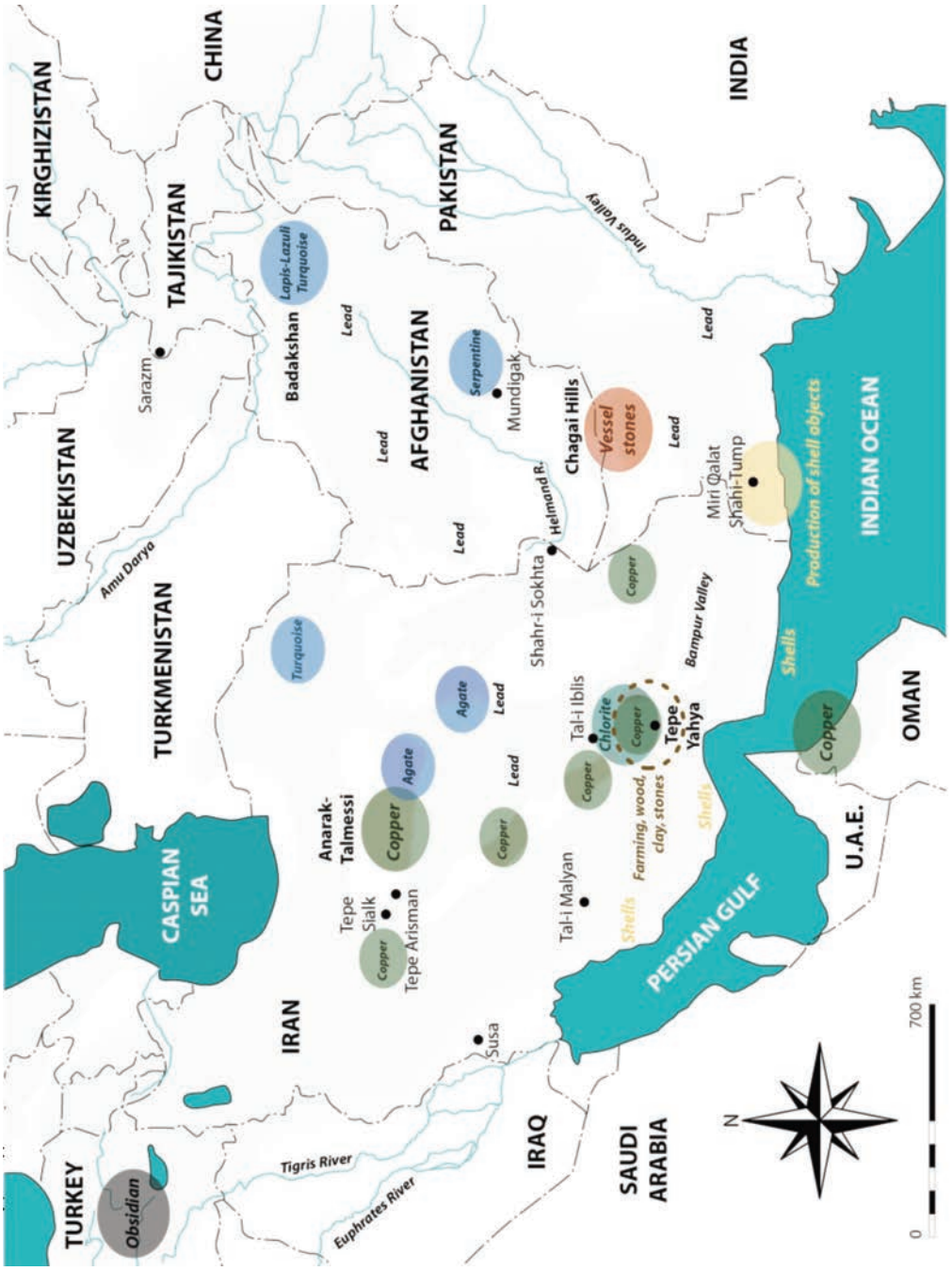


Figure 4.29 Map showing a selection of locations of sources of raw materials in Middle Asia, exploited or possibly exploited in the fourth and third millennia BC.

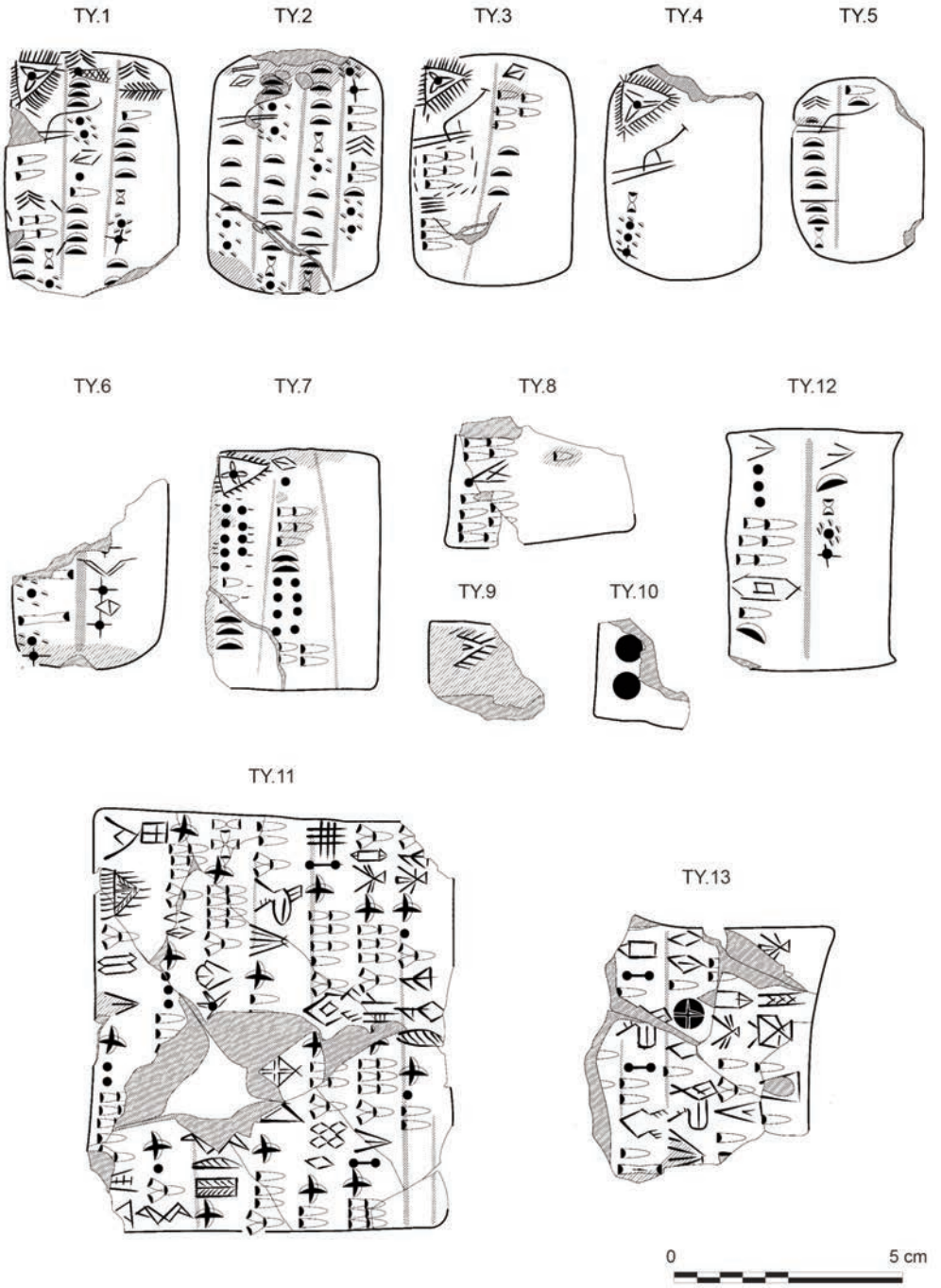


Figure 5.1 Proto-Elamite tablets from Tepe Yahya, after Damerow and Englund 1989.

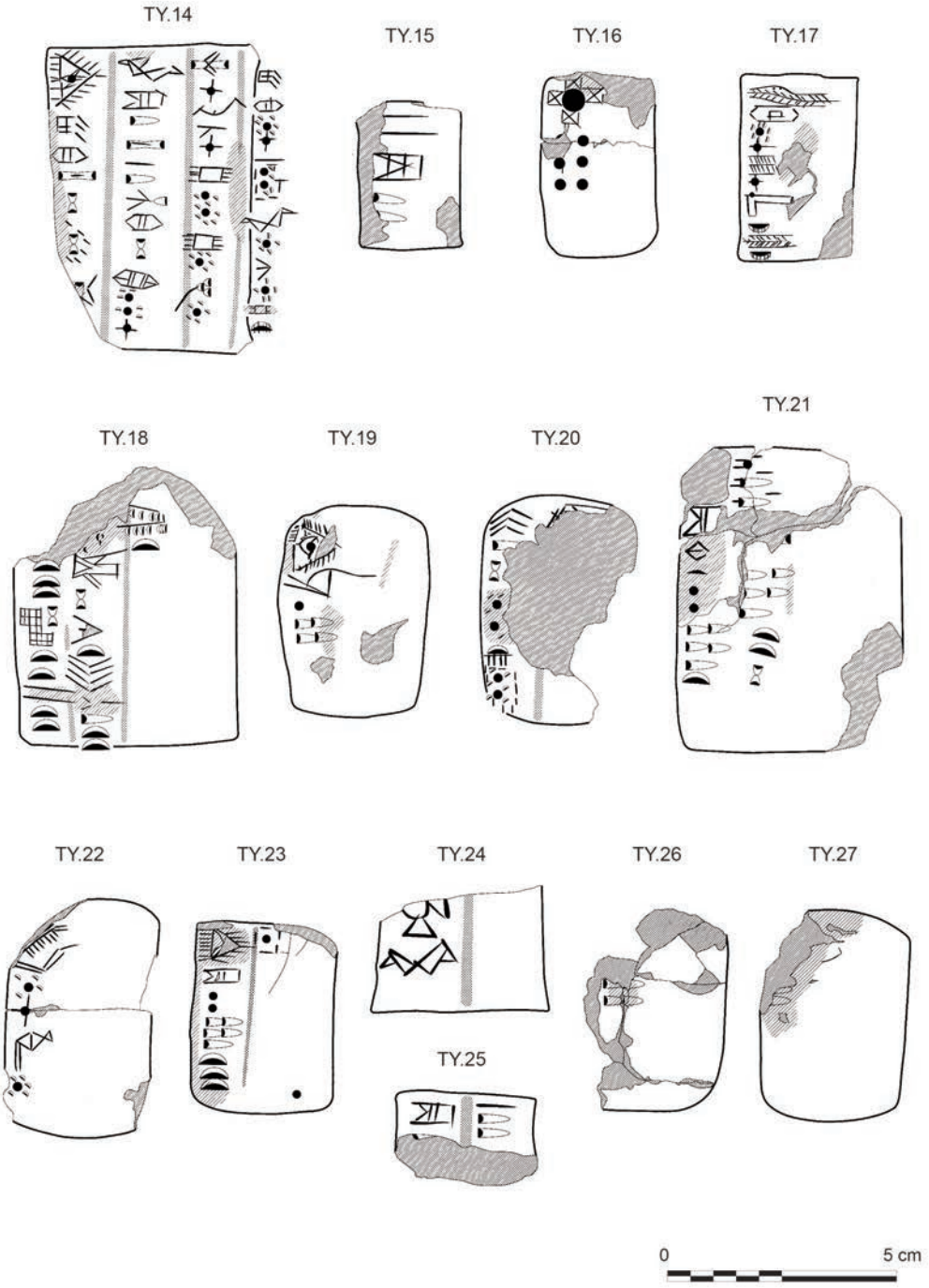


Figure 5.2 Proto-Elamite tablets from Tepe Yahya, after Damerow and Englund 1989.

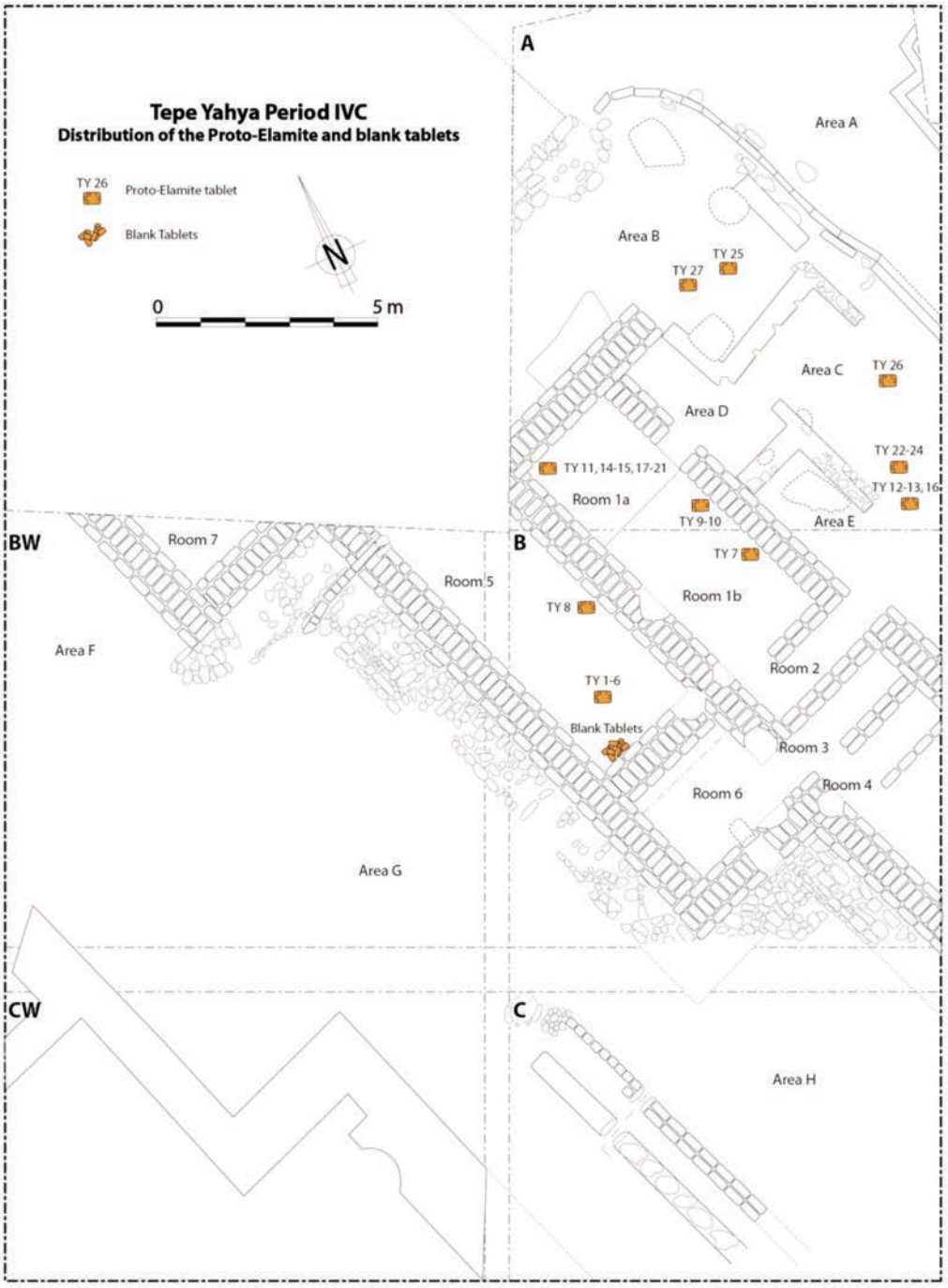


Figure 5.3 Distribution of the Proto-Elamite and blank tablets in the complex of Tepe Yahya IVC, after Lamberg-Karlovsky 1989:fig. 1.

Figure 5.4 Seal impressions from Tepe Yahya Period IVC, after Piperno 2001.

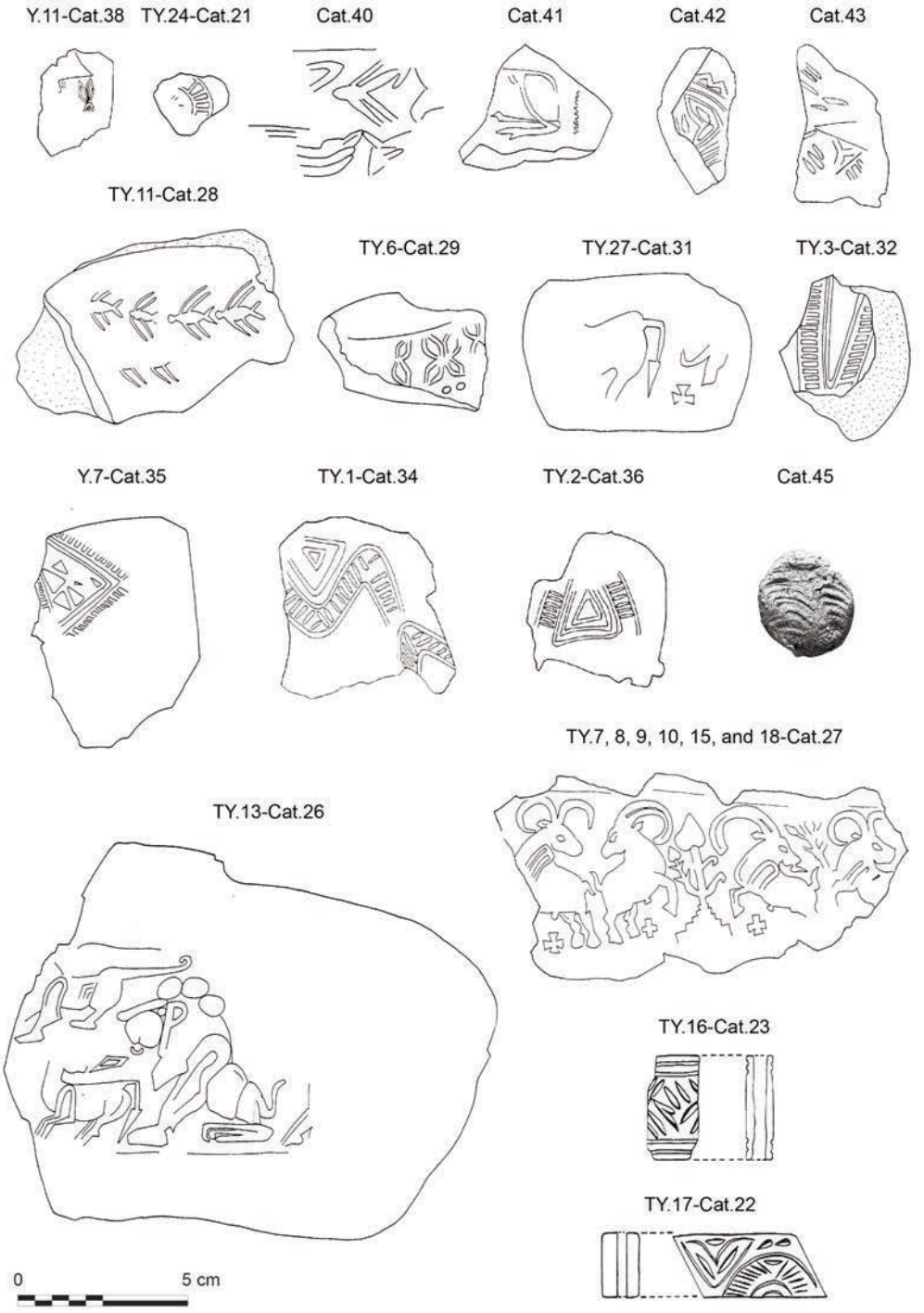


Figure 5.5 Seals and seal impressions from Tepe Yahya Period IVC, after Piperno 2001.

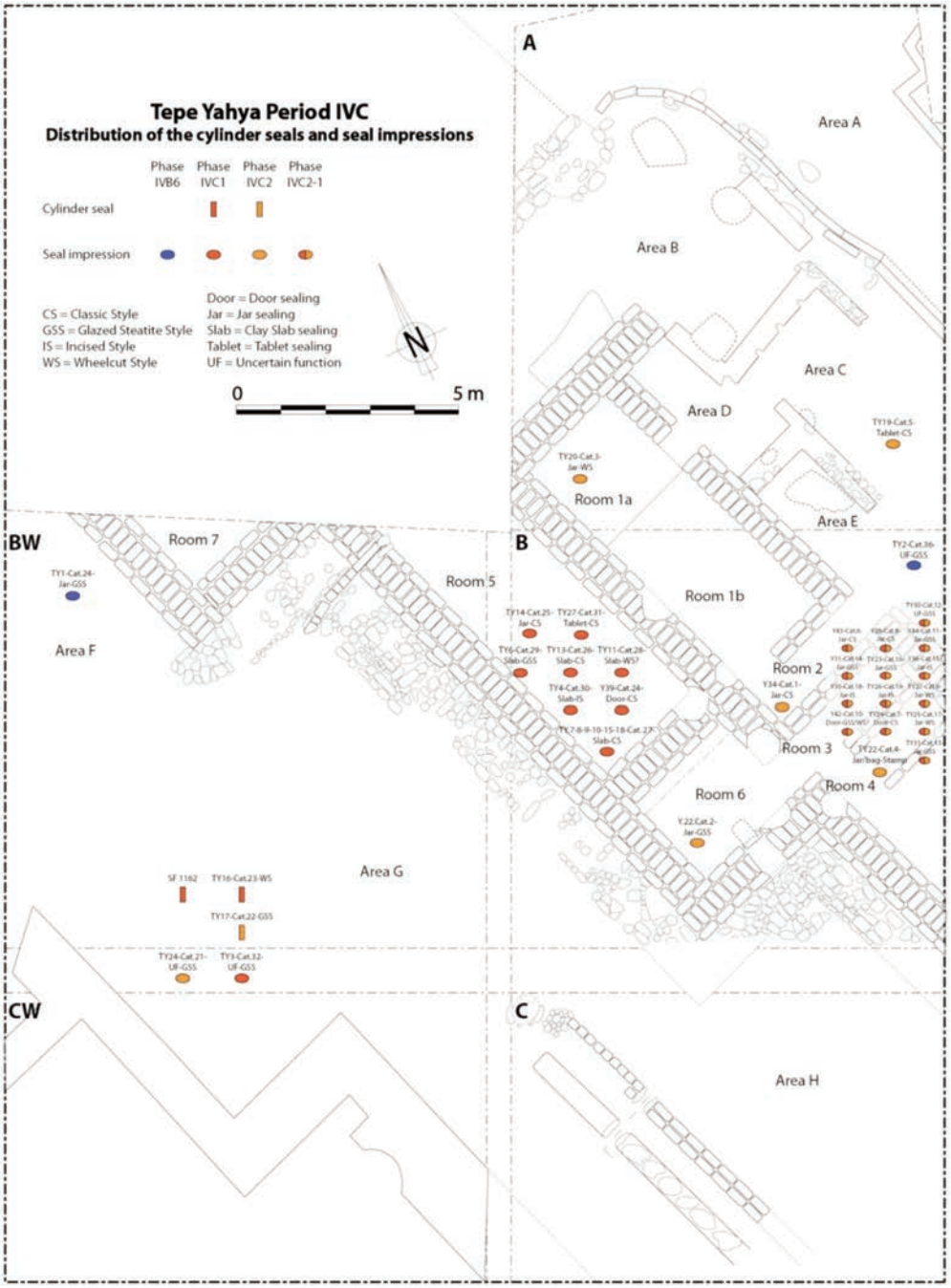


Figure 5.6 Distribution of the seals and seal impressions in the complex of Tepe Yahya IVC. Only the items with "controlled context information" are indicated on this map.

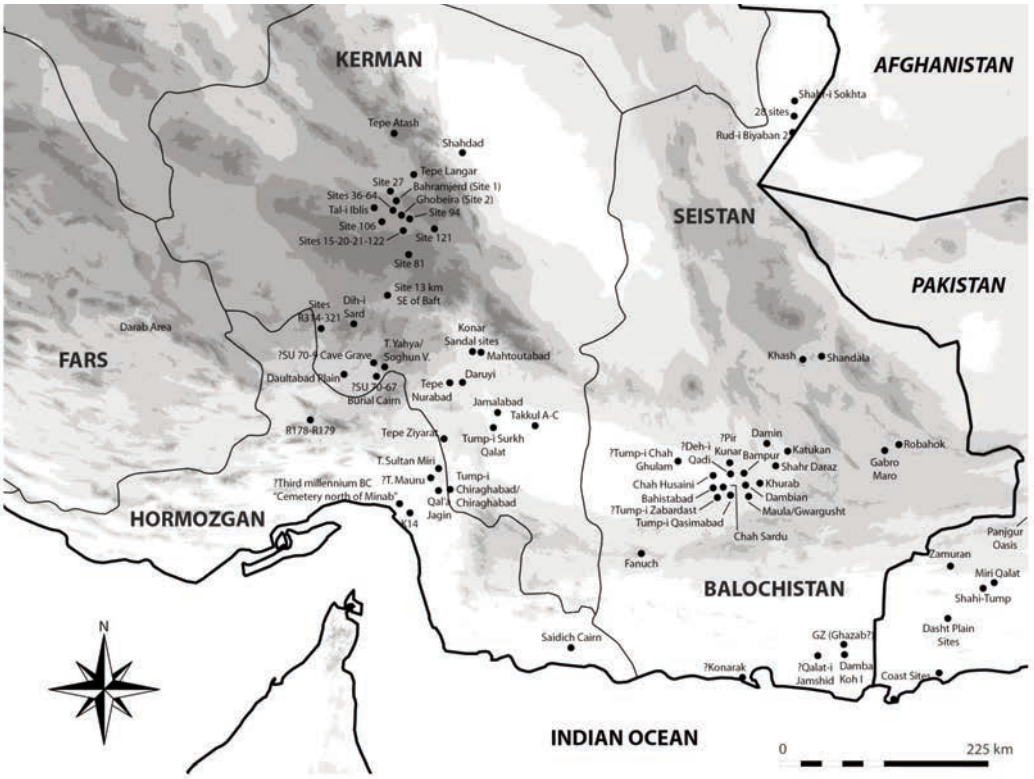


Figure 7.1 Map of the Southeastern Iranian Plateau showing location of sites contemporary with Iblis Periods IV/V/VI and Yahya Periods IVC–IVB (sites bearing Iblis IV–VI (Allabad-Mashiz-Najefarabad) component, Western Baloch Ceramic Complex component, Proto-Elamite component, and Yahya IVB–Konar Sandal/third millennium BC contemporary components).

Figure 7.2 Map of the Soghun Valley showing sites dated to Periods IVC–IVB (© 2010 Google; © 2011 Cnes/Spot Image; Image © 2011 DigitalGlobe).

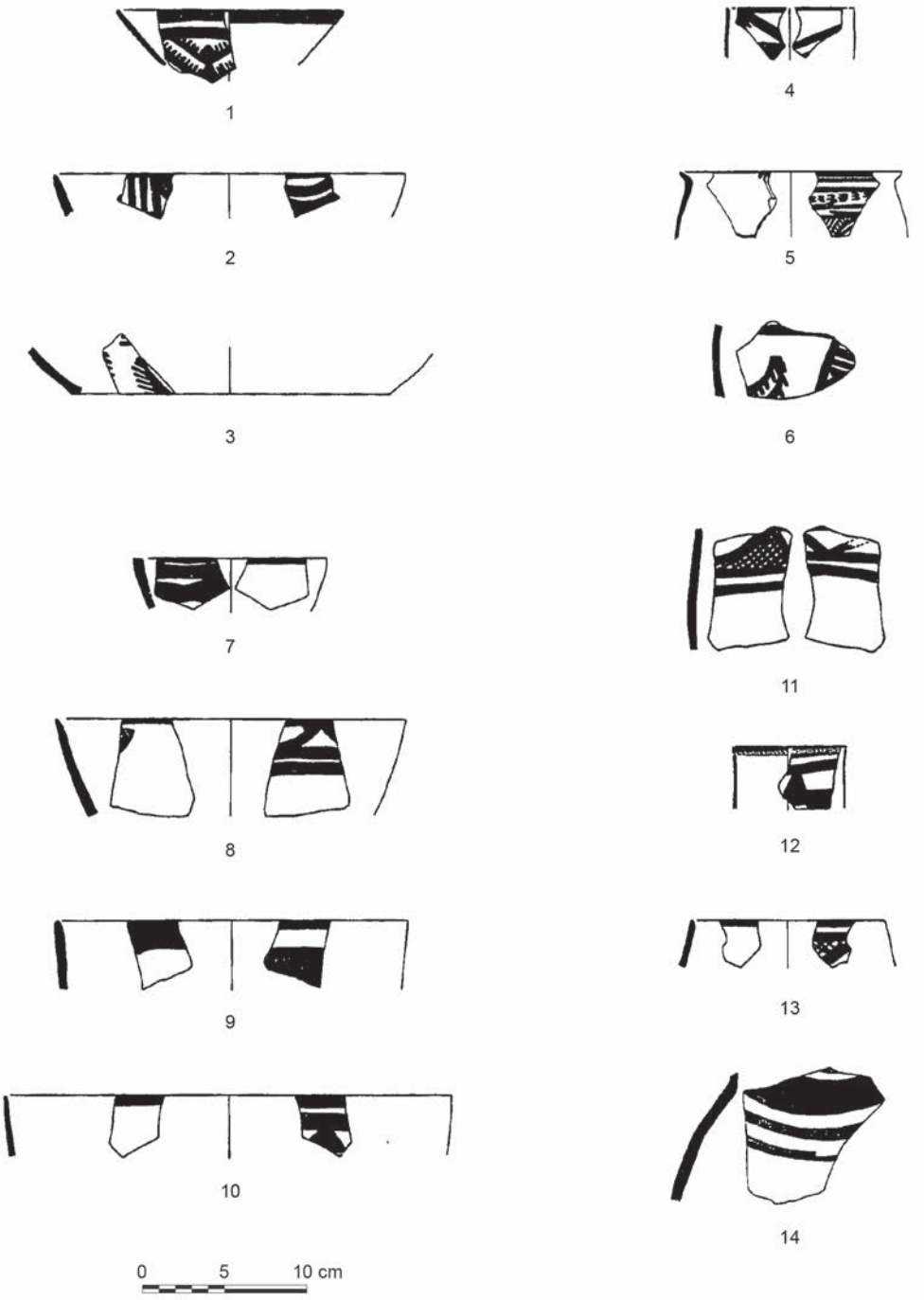


Figure 7.3 Ceramics from the Daulatabad Plain.

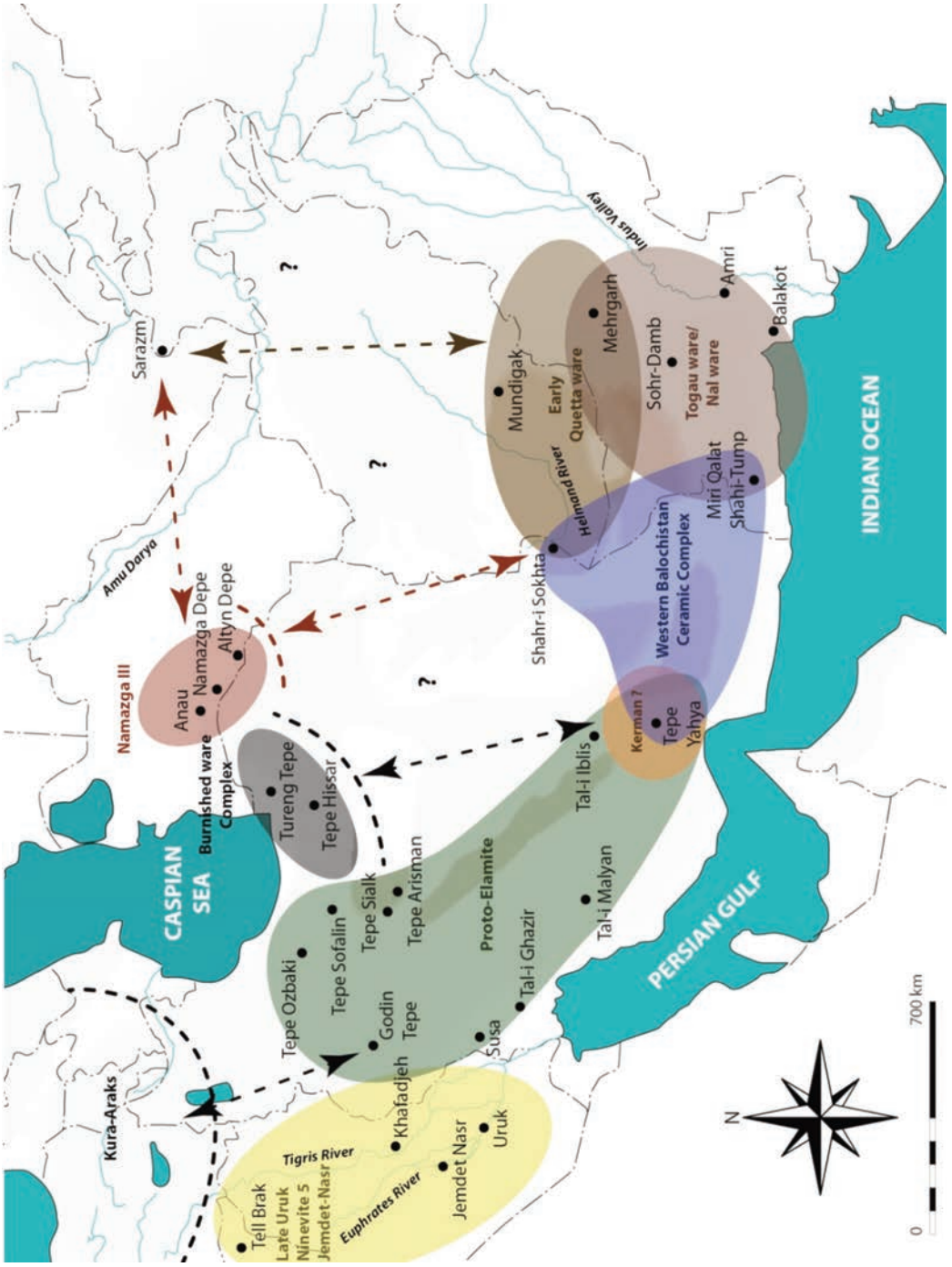


Figure 8.1 Map of Middle Asia showing the main ceramic polities in the late fourth and early third millennia BC.