A SURFACE COLLECTION AT CHEGERDAK, A BRONZE AGE CENTRE IN THE JAZMURIAN BASIN (SOUTH-EASTERN IRAN)

M. HEYDARI, H. FAZELI NASHLI, E. CORTESI AND M. VIDALE

Abstract: We describe a ceramic collection gathered during a preliminary visit to the site of Chegerdak, in the southern piedmont of the Jazmurian depression (Sistan-Baluchistan, South-Eastern Iran). Chegerdak is one of the many prehistoric locations of Jazmurian that in recent times were affected by extensive lootings of important cemeteries and settlement sites. The ceramics collected on surface witness a local settlement that flourished for a good part of the 3rd millennium BC; they also reveal important cultural links with the contemporaneous cultures and civilizations of the Halil Rud basin at north-west, the Sistan plains to the north-east and the Kech Makran valleys to the south-east.


Keywords: Jazmurian; Bronze Age; Pottery; Halil Rud or Marhashi civilization.

Mots-clés : Jazmurian ; Céramique ; Âge du Bronze ; Civilisation du Halil Roud ou de Marhaši.

RESEARCH CONTEXT

The inner valleys of South-Western Baluchistan, the region of Makran known by the ancient geographers with the Greek name of Gedrosia, presently include some of the least hospitable environments of Eurasia. Its harshness was reported in dramatic terms by the reports of the travellers that painstakingly crossed the “land of the Oreites” with part of Alexander’s army in 325 BC (Plutarch, The Parallel Lives. VII, Life of Alexander, 66). Nonetheless, as originally revealed by the first surveys (Stein 1931 and 1937) this region hosted early experiments in the development of permanent settled life.

Since the earliest surveys and excavations by Beatrice de Cardi (1965; 1968 and 1970) the sequence of the site of Bampur became the most important reference for establishing the chronology of South-Eastern Iran. For decades, the resulting preliminary sequence, from the first part of the 3rd millennium to the early 2nd millennium BC, was frequently quoted by every subsequent project in Sistan, Baluchistan, on the fringes of the Lut desert and the eastern region of the Persian Gulf (Tosi 1970 and 1974). However, Bampur is a relatively small site and its occupation, to a large extent, belongs to the medieval period; the excavation was limited to vertical trenches and the dig provided little light on the inhabitant’s economic or social adaptation over this period. Beatrice de Cardi’s periodization has valuable links with the detailed archaeological
sequence of Shahr-i Sokhta (Salvatori and Vidale 1997), in a solid framework of ceramic comparanda strengthened by an important article by D.T. Potts (2003). More recent digs at the site by M. Sajjadi (2005) did not substantially change this perspective, nor better detail the site’s stratigraphy.

Since 1990, the surveys and rescue operations by the French Mission in Kech Makran revealed a long settlement sequence in the semi-arid valleys of South-Western Pakistani Baluchistan, stretching from the late 5th–4th to the 3rd millennium BC (Besenval 1994; 1997a and b; 2005 and 2011; Besenval et Didier 2004). Such new substantial information, joined with an improved understanding of a crucial phase of Tepe Yahya’s stratigraphy in the early 3rd millennium BC (Mutin 2013a) are important contributions to the reconstruction of proto-historic social evolution in the macro-region.

In 2001, the revolutionary discovery of the Halil Rud civilization, with the preliminary excavation of the sites of Konar Sandal South and Mahtoutabad, added a part of a completely different picture (Madjidzadeh 2003; Potts 2005; Majdjidzadeh with Pittman 2008; Vidale and Desset 2013; Desset et al. 2013; Vidale and Frenez 2015). The Halil basin hosted not only a Late Neolithic-Early Chalcolithic sequence but also a great Bronze Age civilization that, according to most scholars, fits the information available for the ancient state of Marhashi mentioned in the cuneiform texts of the Sumerian and Akkadian courts. It is clear that in the second half of the 3rd millennium BC, Marhashi was a very powerful polity and commercial partner both of the Mesopotamian and the Indus worlds. At the same time, new evidence collected from the Bam valley to the southeastern margin of Baluchistan stresses the chronological continuity of permanent village life in South-Eastern Iran since one or more early Aceramic phases.

The question of the agricultural transition, in South-Eastern Iran, can hardly be separated from the problem of the domestication of the date palm. Although “[...] its precise origin is clouded by the ease with which it hybridizes with other species of the genus, so much so that it is impossible to identify an ancestral date” (Clement 1992: 73), the oldest archaeological evidence for the exploitation of the date palm, so far, dates back to the Late Neolithic of the semi-arid and arid lands from Northern Baluchistan to the oases of the southern coast of the Persian Gulf (Costantini 1985; Beech and Sheperd 2001; updates in Tengberg 2007; 2009 and 2012a and b). The information seems to be also supported by preliminary genetic studies.

As the crow flies, Jazmurian lies exactly in the middle (fig. 1). There is little doubt that the domestication of the date palm in crucial core areas of this enormous region, such as the Halil Rud valley and the Jazmurian piedmont, had a pivotal role in the establishment of permanent settled life. Actually, El Hadrami and Al-Khayri (2012: 373-374) wrote:

“[...] Establishment of date palm groves helped nomad populations in the past to settle and organize communities and begin farming. These populations became a hub for marketing/trading commodities, animal and other products. [...] Another important fact for date palm cultivation relates to the microclimate the tree creates in the desert, fostering the growth of cover crops and vegetables to sustain local human populations and their animals.”

The first date palm orchards might have demanded artificial irrigation and cooperation, and would have set the adaptive model that combined intensive, high revenue forms of cultivation, temporary storage of dates and secondary products, and new craft opportunities with the strategic control of long-distance caravan—the model that set the foundation of the Bronze Age civilizations of South-Eastern Iran and of the North Arabian peninsula. Only future large scale excavations will reveal how far this model can explain the local flourishing of powerful early urban civilizations, suddenly evident in the 3rd millennium BC.

Among the materials recovered by the Mirasfaranghi organization, Zahedan, from the sites of looted graveyards along the Jazmurian piedmont, there is a distinctive type of bronze stamp seal with complex and intricate geometric patterns, often having zigzag or braided segments and edge. As the same type of seal is found in the uppermost layers at Konar Sandal South and in the nearby looted cemetery site of Mahtoutabad (Madjidzadeh with Pittman 2008), it is highly probable that in the future we will discuss the newly discovered Jazmurian cultures in the light of the emerging archaeological picture of ancient Marhashi.

5. M. Heydari, unpublished finds; see also Besenval 2011: Figs. 100a and 102. For general information, Baghestani 1997.
6. See also H. Pittman (2012) for the general implications and relationships with the Mesopotamian chronology.

1. N. Alidadi Soleimani, ongoing research (personal comm.).
THE SITE OF CHEGERDAK (JOLGHE)

In the macro-region of Sistan and Baluchistan, wide endorheic or enclosed basins separate the main sequences of highlands and mountain created by major continental orographic processes and more recent vulcanism. The most important basins, from north, include the Dasht-i Kavir, the Dasht-i Lut, the Hamun lakes floodplains, and the basin of Jazmurian. The chain of Barez in the southern Lut, 3741 m asl, is the most important orographic feature; passes ranging from ca 1800 to 2400 m asl join the Lut area to the Jazmurian basin, that extends about 290 km from east to west and 95 km from north to south (Harrison 1943; Chobak and Kiani 2004).

The Jazmurian District is part of Rudbar-i Jonubi County, Kerman Province, Iran. Two important rivers, the Bampur and the Halil, feed a lake, seasonally turning in a salt desert, in the centre of Jazmurian, also reached by seasonal, ephemeral streams. The sparse vegetation pattern favoured by fresh silt around the lake is temporary suitable for grazing, especially during the rainy season, while when the lake dries drinkable water is searched with wells. The southern divide of the basin reaches an elevation of ca 1200 m asl and is crossed by the Fanuch pass, ca 870 m asl. In general no modern cities exist around the lake and less than 50,000 inhabitants live in the area, their subsistence being based on scanty agricultural practices and cattle herding.

The site of Chegerdak (27°5’14’’ N ; 59°7’8’’ E) is found in the south-western piedmont of the Jazmurian depression. It was first discovered, with many other looted locations, because of illegal and ruinous excavations. The ancient settlement rose near the confluence of the Halil Rud, flowing from north-west, with the Bampur river, flowing from east. In the valley of the first one, settled life and the most complex and influential Early Bronze Age urban civilization of South-Eastern Iran flourished thanks to extensive agriculture. Along the Bampur plains, many village communities expanded westwards the peculiar socio-economic adaptations of the South-Western Baluchistan valleys. The Jazmurian piedmont also marks the eastern boundary of the so-called and still mysterious ‘Uruk expansion’ of the late 4th millennium BC, and, later, was outside the limit of the direct Indus sphere of influence. The nature of the political and cultural western boundary of the Indus Valley civilization, to date, is still a major question mark.

This important Early Bronze Age site was identified in the plains of Jolgha Chah Hashem (figs. 2 and 3) in 2004, when the Iranian archaeological authority was informed of new, large-
scale excavations illegally carried out on the spot. During these illegal activities, two contiguous graveyards (labelled A and B) were largely destroyed (fig. 2). As usual, the looters had a limited interest in pottery and many vessels or sherds were abandoned aside the pits. The rescue activities of the Mirasfaranghi organization started in 2004, with two distinct emergency field programs, with the assistance of the security forces. Later excavations were carried out in 2006. All the field activities were directed by M. Heydari.

According to the first information, the graves mainly belonged to the central centuries of the 3rd millennium BC, and possibly, to a more limited extent, to the late 4th–early 3rd millennium. Although we calculated that not less then 3000 graves had been plundered, M. Heydari established with a series of more than 50 test soundings that a minor percentage of the ancient burials is still conserved at the two sites and might be excavated in future with positive results. However, the water table at the site in winter is high and can prevent exploration in depth of the funerary sites. The surface materials collected on the tappeh (fig. 3), broadly speaking, confirm the chronological span of the graveyards (from late 4th–early 3rd millennium BC to the second half of the 3rd mill.), but with a greater representation of the later assemblages (see below).

On the whole, the Iranian team collected from the surface of the damaged graveyards more than 12,000 potsherds, stone and copper/bronze objects, and semiprecious stones ornaments. About 100 objects (including vessels, some carved chlorite artefacts, bronze tools and utensils) were complete. Human remains were in very poor conditions, mostly because of the constant fluctuations of the local water table, and in general could not be recovered. The whole collection is presently conserved in the Heritage Museum of Zahedan. In the last years, a research team directed by M. Heydari has carried out a complete documentation (including photographs and drawings) of this substantial collection.

While the study of these important assemblages is currently in progress, in this article we present a preliminary surface collection of potsherds made by one of the authors (H. Fazeli Nashli) with M. Heydari and students of Tehran University in 2010. Some of the sherds come from the surface of the settlement, others were collected from damaged graves; in any case, they come from unstratified contexts.

The tables that accompany Figures 4 and 6-157 present the ceramics by broad formal groups, regardless of their hypothesized chronology, proceeding from open to closed and finally strongly restricted, necked forms. In the technical descriptions, colours are coded according to the Munsell cards; ‘WT’ means ‘wheel-thrown’; ‘C’ stands for ‘coil-built’. In many cases, ‘C+WT’ therefore indicates pots built with coils or plastic clay strips fashioned on the potter’s wheel. Comparisons and chronological implications of relevant vessels are discussed below.

THE POTTERY COLLECTED ON SURFACE

Figure 4 (table 1) – Comparisons and comments

- 003 Ch 2011: although the motif is ascribed by A. Didier (2013: 106-107) to Periods IIIb-IIc of Makran, it seems more frequent in period IIIc (Ibid.: Figs. 146, 2, 5, 7; 168, 5; 169, 4). At Bampur it is found in Periods II (de Cardi

7. The pottery was recorded by M. Vidale in the laboratories of the Institute of Archaeology, University of Tehran; later, the drawings were finalized by E. Cortesi, to be collectively studied by all authors.
A surface collection at Chegerdak, a Bronze Age centre in the Jazmurian basin (South-Eastern Iran) 1970: Fig. 21, 123), IV, I and VI (Ibid.: Figs. 25, 253; 39, 397; 41, 408). See also G. Stein’s collections at Damin (Ibid.: Figs. 25, 253; 39, 397; 41, 408), and a Black-on-Red globular jar found at Konar Sandal South (Madjidzadeh with Pittman 2008: Fig. 22, upper row, centre).

- 012 (see also fig. 5: a) and 010 Ch 2011: the palm designs on Emir Grey bowl and 010 (see also figs. 8: 033 and 10: 001 and 009) are one of the most common and distinctive motifs of South-Eastern Iran in the second half of the 3rd millennium BC. At Shahr-i Sokhta the design appears on a Black-on-Red warerestricted jar from the late Period II dumps of the Central Quarters (Salvatori and Vidale 1997: Fig. 188, 6) as on Buff ware vessels of Period III from the graveyard (Piperno and Salvatori 2007: Grave 731, 8081, fig. 675). Palm designs are common on Black-on-Red wares at Konar Sandal South (Madjidzadeh with Pittman 2008: Figs. 22, lower row, middle; 23, lower left); see also a Grey Ware jar from the same site (Ibid.: Fig. 24, lower left). The same motif is visible in many Grey Ware vessels confiscated in Iran after the lootings in the Halil Rud valley (Madjidzadeh 2003: 162, upper left) and on similar jars of Period IIIb (both Black-on-Buff/Orange and Black-on-Grey) from cemeteries plundered in Makran (Didier 2013: Figs. 74, 7.14 and 7.16; 75, 7-170/3/1 and 8/180/22; 91, 6).

A. Didier (2013: Fig. 127) also compares cylindrical jars with palms designs to finds at Tell Abraq in Oman. Similar vessels were found at Shahdad, cemetery A (Black-to-Brown of Buff or Red pots; Hakemi 1997: 571, Ba. 4 and Ba. 5; 573, Bc. 3; 599, En. 2) and at Tepe Yahya—a Black-on-Orange/Buff

![Fig. 4 – Chegerdak, surface collection 2011. Truncate-cone shaped bowls (M. Vidale, E. Cortesi).](image)

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>003 Ch 2011</td>
<td>Emir Grey</td>
<td>25.5</td>
<td>4.89</td>
<td>Fine</td>
<td>Light grey 7.5YR4/0</td>
<td>Very dark grey 2.5YR 3/0</td>
<td>WT</td>
</tr>
<tr>
<td>012 Ch 2011</td>
<td>Emir Grey</td>
<td>-</td>
<td>4.67</td>
<td>Fine, compact</td>
<td>Light grey 5YR7/1</td>
<td>Very dark grey 5YR3/1</td>
<td>WT</td>
</tr>
<tr>
<td>010 Ch 2011</td>
<td>Emir Grey</td>
<td>36</td>
<td>10.04</td>
<td>Fine, compact, with sand</td>
<td>Brown 10YR5/3</td>
<td>Black 2.5YR4/0</td>
<td>C+WT*, brown slipped</td>
</tr>
<tr>
<td>053 Ch 2011</td>
<td>Emir Grey</td>
<td>18</td>
<td>4.03</td>
<td>Very fine</td>
<td>Grey 7.5YR 5/6</td>
<td>Very dark grey 2.5Y3/0</td>
<td>WT</td>
</tr>
<tr>
<td>052b Ch 2011</td>
<td>Emir Grey</td>
<td>22</td>
<td>3.42</td>
<td>Very fine, a few pores</td>
<td>Light grey 5YR7/1</td>
<td>Brown 7.5YR5/2</td>
<td>WT</td>
</tr>
<tr>
<td>052a Ch 2011</td>
<td>Emir Grey</td>
<td>23</td>
<td>3.53</td>
<td>Fine, compact, with fine sand</td>
<td>Grey 7.5YR5/6</td>
<td>Very dark grey 2.5YR3/0</td>
<td>WT</td>
</tr>
<tr>
<td>059 Ch 2011</td>
<td>Black-on-Red ware</td>
<td>30</td>
<td></td>
<td>Fine, compact, with fine sand</td>
<td>Weak red 10YR5/4</td>
<td>Very dark grey 7.5YR3/0</td>
<td>WT, fired in slightly reducing conditions</td>
</tr>
</tbody>
</table>

*C (coil); W (wheel) technology.
sherd belonging to a jar with an ibex-and-palm frieze, dated, together with the famous unfinished chlorite artefacts of the Halil Rud valley style, to Phase IVB, second half of the 3rd millennium BC. The motif is also present in Makran, Period IIIc. At Bampur, palm designs are on record in Period I (de Cardi 1970: Fig. 17, 12) and more common in Period IV. It continues in Period V (Ibid.: Figs. 36, 98; 37, 107-108, 110; 38, 375, 379, 382) and in Period VI (Ibid.: Fig. 40, 403). See also two Emir Grey bowls with the same inner pattern, from a grave at Damin (Tosi 1970: Figs. 10-11).

Fig. 5 – Chegerdak, surface collection 2011: a and b) Wall fragments of large bowls or basins in Grey Ware. Outer friezes with palm designs (respectively drafted with scale in fig. 4: 012 and fig. 9: 033); c) Rim of truncated-cone shaped Emir Grey bowl with a frieze of ibexes’ heads (drafted with scale in fig. 7: 005); d) Rim of a Buff ware truncated-cone shaped bowl with an inner frieze of triangles filled with incident lines; the vessel, drafted in scale in fig. 8: 040, was presumably imported from Sistan; e) Emir Grey hemispherical bowl fragment, seen from above (drafted in scale in fig. 10: 004); f) Emir Grey ware, rim and wall fragment of an hemispherical bowl. Below the rim, on the outer surface, hangs a palm with two ibexes in heraldic position feeding on its leaves (drafted in scale in fig. 11: 001); g) Grey ware, fragment of a restricted jar, with a band of exalted triangles below the rim. Under the band, traces of a black-painted line (drafted in scale in fig. 12: 019); h) Mouth and shoulder fragment of a Buff ware jar with horizontal and wavy ridges in relief, painted black with various designs (drafted in scale in fig. 13: 042).

the comments and comparisons outlined for Figure 10, 016 and 047 (see below).

Figure 6 (table 2) – Comparisons and comments

- 014 Ch 2011: For this ceramic type, linked to similar bowls of late Period IIIa in Kech Makran (Mutin 2013b: Fig. 14.15, 10 and 11; see comments to the specimens of Fig. 10: 008 and 007).
- 025 Ch 2011: See 028, below.
- 028 Ch 2011: A Black-on-Grey ware bowl identical to this sherd and to 025 (see above) is part of the furnishing of Grave 118 at Shahr-i Sokhta, phase 4, Period III (Piperno and Salvatori 2007: Fig. 346, 0633). At Mundigak, the same bowl was recorded in assemblages of Period IV, 1 and surface (Didier 2013: Fig. 200, 2).

8. In Lamberg-Karlovsky and Potts 2001: Fig. 7; for the dating, see p. 276.
9. Didier 2013: Figs. 171, 9-193/85/25; and 229, 2 and cover; further comparisons in fig. 220.
10. De Cardi 1970: Figs. 23, 185 and 187; 25, 258. In figures 30, 5, 26, and 31, the motif is ascribed to Periods I-IV.
Table 2 – Truncate-cone shaped bowls (some with slightly modified rim).

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>014 Ch 2011 graveyards</td>
<td>Red-Buff ware</td>
<td>22</td>
<td>2.84</td>
<td>Compact, tiny white particles</td>
<td>Dusky red 2.5YR3/2</td>
<td></td>
<td>WT, trimmed and smoothed on the base</td>
</tr>
<tr>
<td>037 Ch 2011 graveyards</td>
<td>Emir Grey</td>
<td>24</td>
<td>4.30</td>
<td>Very fine, compact</td>
<td>Light grey 5YR6/1</td>
<td>Very dark grey 2.5YR3/0</td>
<td></td>
</tr>
<tr>
<td>021 Ch 2011 graveyards</td>
<td>Emir Grey (oxidized)</td>
<td>24</td>
<td>4.33</td>
<td>Very fine, homogeneous</td>
<td>Pinkish white 5YR8/2</td>
<td>Dark reddish brown 5YR3/2</td>
<td>WT, smooth on the wheel</td>
</tr>
<tr>
<td>025 Ch 2011 graveyards</td>
<td>Emir Grey</td>
<td>17</td>
<td>2.25</td>
<td>Very fine, homogeneous</td>
<td>Grey 7.5R6/0</td>
<td>Dusky red 5R3/3</td>
<td></td>
</tr>
<tr>
<td>058 Ch 2011 settlement</td>
<td>Black-on-Red ware</td>
<td>16</td>
<td>2.58</td>
<td>Very fine, compact</td>
<td>Light reddish brown 5YR6/4</td>
<td>Dark reddish grey 5YR4/2</td>
<td>C+WT, extensively trimmed</td>
</tr>
<tr>
<td>060 Ch 2011 settlement</td>
<td>Emir Grey</td>
<td>18</td>
<td>2.90</td>
<td>Very fine, homogeneous</td>
<td>Dark grey 5YR4/1</td>
<td>Black 5YR2.5/1</td>
<td>WT</td>
</tr>
<tr>
<td>051 Ch 2011 settlement</td>
<td>Emir Grey</td>
<td>18</td>
<td>2.97</td>
<td>Fine, with pores and linear voids</td>
<td>Grey 7.5YR5/0</td>
<td>Black 2.5YR2.5/0</td>
<td>WT, turned outside with chattering marks</td>
</tr>
<tr>
<td>028 Ch 2011 graveyards</td>
<td>Emir Grey</td>
<td>18</td>
<td>2.32</td>
<td>Very fine, homogeneous</td>
<td>Grey 7.5YR6/0</td>
<td>Black 7.5R2.5/0</td>
<td>WT, turned outside with chattering marks</td>
</tr>
<tr>
<td>027 Ch 2011 graveyards</td>
<td>Emir Grey</td>
<td>18</td>
<td>3.39</td>
<td>Very fine, homogeneous</td>
<td>Grey 7.5R6/0</td>
<td>Black 7.5R2.5/0</td>
<td></td>
</tr>
<tr>
<td>056 Ch 2011 settlement</td>
<td>Buff-Red ware</td>
<td>24</td>
<td>4.15</td>
<td>Medium-fine, with sand</td>
<td>Pink 5YR8/4</td>
<td>Dark grey 5YR4/1</td>
<td>WT, stacked in firing with identical pots</td>
</tr>
</tbody>
</table>

Fig. 6 – Chegerdak, surface collection 2011. Truncate-cone shaped bowls (some with slightly modified rim) (M. Vidale, E. Cortesi).
Fine Black-on-Grey ware bowls of the same fashion and similar decoration were reported in the assemblages of Period IIIb of Makran (Ibid.: catégorie 2, 93-94, figs. 64; 67, 3, 6, 10, 12, 14) where the type is also well known in Period IIIc (Ibid.: Figs. 144, 6 and 10; 161, 7).

At Bampur, similar bowls appear in Periods IV, 1; 11 IV, 2 (Ibid.: Fig. 28, 270) and IV, 3 (Ibid.: Fig. 29, 301).

027 Ch 2011: The multiple stroke meander is quite common on the Black-on-Grey wares of South-Eastern Iran in the middle-late 3rd millennium BC, particularly on small restricted fine jars. Examples come from Grave 725 inferior at Shahr-i Sokhta (Period III, probably phase 3; see Piperno and Salvatori 2007: Fig. 639, 8282), Grave 728 (Ibid.: Fig. 660, 8482), and Grave 731 (Ibid.: Fig. 686, 8089) both contemporary to the former one. More precise comparisons (multiple strokes meander inside, horizontal lines outside) may be established with Black-on-Grey painted bowls of types 2.20 and 2.21 of Period IIIb in Makran (Didier 2013: Fig. 68, 13, 21). It is also well known at Bampur and Damin (Ibid.: Fig. 211, 37 and 49; Tosi 1970: Fig. 13). At Bampur the motif appears on truncated-cone shaped bowls of Period II (de Cardi 1970: Figs. 18, 39; 21, 109), on the exterior of sherd the same period (Ibid.: Figs. 19, 62; 20, 90) then on bowls or basins of Period IV, 1 (Ibid.: Figs. 24, 220; 25, 259) and of Period IV, 2 (Ibid.: Fig. 28, 273). For Periods I-IV, the design runs on the upper part of a Grey Ware small jar (Ibid.: Fig. 30, 45) identical to those found in the above mentioned Period III graves at Shahr-i Sokhta; a Black-on-Red painted jar with the same form and decoration was recorded in the copper processing houses of Shahdad (Hakemi 1997: object 4505, 714). At Bampur, in Period V, 1 the design has different associations (de Cardi 1970: Fig. 34, 339).

Figure 7 (table 3) – Comparisons and comments

032 Ch 2011: At Shahr-i Sokhta, alternating triangles of the same template appear on the exterior of small restricted Black-on-Grey jars in the dumps of late Period II (Salvatori and Vidale 1997: Fig. 191, 11-12, from NXK 3 and NXK 1). A similar design is reported from Miri Qalat, Period IIIc (Didier 2013: Fig. 164,1/1-96/1/752/11).

031 Ch 2011: What remains of the main design outside the sherd (a truncated-cone shaped bowl, painted both inside and outside) recalls a peculiar ‘M’-like pattern well known, with transformations, in South-Eastern Iran, as at Bampur Period II (de Cardi 1970: Figs. 20, 81-83 and 21, 95, 119, 122). Other Bampur specimens are ascribed to Periods I-V (Ibid.: Figs. 30, 28 and 31; 34, 326; 36, 100).

002 Ch 2011: Similar bowls are reported at Bampur, Periods II and III (Ibid.: Figs. 21, 112 and 115; 22, 139). Small restricted jars or beakers with the same design, but in Black-on-Red Ware, were found at Shahr-i Sokhta, Central Quarters, in the dumps of late Period II (Salvatori and Vidale 1997: Fig. 187, 4-7 and 9).

005 Ch 2011 (see also fig. 5: c): The row of ibexes’ heads on the exterior can be precisely compared to a Black-on-Grey bowl from Shahr-i Sokhta, Central Quarters, NXK 1 (most probably phase 5B, late Period II: Ibid.: Fig. 190, 5). The parallel and wavy lines on the interior are very similar to another Black-on-Grey bowl from the same context (Ibid.: Fig. 190, 7). Black-on-Grey bowls with the same designs belong to period IIIb of Makran (Didier 2013: Figs. 65, 4-170/173/2 and 5/170/221/3-6; 87, 2, 9, 14; and 93, 1) and to Bampur Periods IV, 2, IV, 3 and with period V (de Cardi 1970: Fig. 28, 269; 29, 300 and 36, 81).

017 Ch 2011: For the curved swastika-like inner pattern, and the frieze running on the inner edge, see Black-on-Grey bowls fragments from Shahr-i Sokhta, Central Quarters, NXK 3-1 (phase 5B, late Period II).12 See also sherd from Damin (Tosi 1970: Fig. 13). The earliest spread of this pattern, between the late 4th and the early 3rd millennium BC, is discussed by Mutin (2013b: 266).

Figure 8 (table 4) – Comparisons and comments

040 Ch 2011 (see also fig. 5: d): This Buff ware fragment, easily distinguished in terms of colours and texture from the other wares of Chegerdak, is an import from Sistan. It belonged to a truncated-conical bowl with a slight S-shaped trend on the upper edge, a distinctive type of phase 6, early Period II of Shahr-i Sokhta. Close comparisons are found in well controlled stratigraphical contexts of the Central Quarters.13

023 Ch 2011: see a sherd from Bampur, Period II (de Cardi 1970: Fig. 21, 112).

12. Salvatori and Vidale 1997: Fig. 190, 3-4. The wavy line below the inner frieze also appears in other sherds from NXK 1-3. See also Ibid.: Fig. 189, from NXP 3 (contemporary to the sherds commented above).
13. Salvatori and Vidale 1997: Figs. 102-115; see in particular, for the painted frieze, Figs. 103, 4; 105, 4; 106, 5; 107, 3; 109, 2; 110, 3; 114, 4.
A surface collection at Chegerdak, a Bronze Age centre in the Jazmurian basin (South-Eastern Iran)  141


Table 3 – Other truncate-cone shaped bowls.

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>032 Ch 2011 graveyards</td>
<td>Grey Ware</td>
<td>-</td>
<td>2.74</td>
<td>Fine, homogeneous</td>
<td>Grey 2.5YR6/0</td>
<td>Dusky red 2.5YR3/0</td>
<td>WT, trimmed, turned with chattering marks</td>
</tr>
<tr>
<td>031 Ch 2011 graveyards</td>
<td>Grey Ware</td>
<td>-</td>
<td>5.43</td>
<td>Fine, with sand, white granules</td>
<td>Pinkish grey 7.5YR7/2</td>
<td>Very dark grey 7.5YR3/0</td>
<td>WT</td>
</tr>
<tr>
<td>002 Ch 2011 graveyards</td>
<td>Emir Grey</td>
<td>27</td>
<td>3.81</td>
<td>Fine, with fine sand</td>
<td>Light grey 5YR7/1</td>
<td>Dark grey 5YR4/0</td>
<td>WT</td>
</tr>
<tr>
<td>005 Ch 2011 graveyards</td>
<td>Emir Grey</td>
<td>32</td>
<td>4.71</td>
<td>Fine, compact, homogeneous</td>
<td>Dark grey 5YR4/1</td>
<td>Reddish black 10R2.5/1</td>
<td>WT, extensively turned</td>
</tr>
<tr>
<td>017 Ch 2011 graveyards</td>
<td>Emir Grey</td>
<td>20</td>
<td>2.84</td>
<td>Fine, compact</td>
<td>Light grey 5YR6/1</td>
<td>Yellowish red 5YR5/8</td>
<td>WT, turned with chattering marks, wet-smoothed</td>
</tr>
</tbody>
</table>

Fig. 7 – Chegerdak, surface collection 2011. Other truncate-cone shaped bowls (M. Vidale, E. Cortesi).

### Table 4 – Open truncate-cone shaped bowls.

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>040 Ch 2011</td>
<td>Buff ware</td>
<td>32</td>
<td>6.33</td>
<td>Medium-fine with sand</td>
<td>Pinkish grey 7.5YR7/2</td>
<td>Dark reddish grey 5YR4/2</td>
<td>WT</td>
</tr>
<tr>
<td>020 Ch 2011</td>
<td>Emir Grey</td>
<td>39</td>
<td>5.17</td>
<td>Medium-fine, white granules</td>
<td>Grey 2.5YR6/0</td>
<td>Very dark grey 2.5YR 3/0</td>
<td>WT</td>
</tr>
<tr>
<td>023 Ch 2011</td>
<td>Emir Grey (oxidized)</td>
<td>38</td>
<td>4.04</td>
<td>Very fine, homogeneous</td>
<td>Light grey 5YR7/1</td>
<td>Dark reddish brown 5YR3/2</td>
<td>WT, slow-rotated</td>
</tr>
<tr>
<td>062 Ch 2011</td>
<td>Buff ware</td>
<td>34</td>
<td>3.95</td>
<td>Fine, porous</td>
<td>Reddish brown 2.5YR6/4</td>
<td>Dusky red 10YR3/2</td>
<td>WT, turned with thick chattering marks</td>
</tr>
<tr>
<td>057 Ch 2011</td>
<td>Buff-red ware</td>
<td>33</td>
<td>2.98</td>
<td>Fine, compact, white granules</td>
<td>Red 10YR5/8</td>
<td>Very dark red 10R2.5/2</td>
<td>C+WT, coated with a red slip (10YR5/8)</td>
</tr>
<tr>
<td>006 Ch 2011</td>
<td>Buff-red ware</td>
<td>40</td>
<td>3.66</td>
<td>Medium-fine, with fine sand</td>
<td>Light yellowish brown 10YR6/4</td>
<td>-</td>
<td>WT</td>
</tr>
</tbody>
</table>

*Fig. 8 – Chegerdak, surface collection 2011. Truncate-cone shaped bowls (some with slightly inward-flected rims) (M. Vidale, E. Cortesi).*
A surface collection at Chegerdak, a Bronze Age centre in the Jazmurian basin (South-Eastern Iran)  143


– 057 Ch 2011: A frieze with rectangular metopes alternatively filled with horizontal wavy traits and vertical lines appears on the exterior of a catégorie 2 bowl of Period IIIb of the Makran sequence (Didier 2013: Fig. 67, 16). For Bampur, see a bowl from Period II (de Cardi 1970: Fig. 20, 64). See also, in this paper, Figure 11: 039.

– 006 Ch 2011: On the exterior, a transformation of the ‘M’-shaped designs discussed as a general class for the specimen of Figure 7: 031. Very similar designs are known at Bampur Period I (Ibid.: Fig. 17, 1, 15) and Period II (Ibid.: Figs. 20, 82-83; 21, 95).

Figure 9 (table 5) – Comparisons and comments

– 033 Ch 2011 (see also fig. 5: b): For comments and comparanda with other palm motifs see above Figure 4: 012 and 010.

Figure 10 (table 6) – Comparisons and comments

– 022, 050, 015 and 013 Ch 2011: Many fine broken vessels identical to these were discarded in the Central Quarters of Shahr-i Sokhta: NXXK 1-4, phase 5B, late Period II (Salvatori and Vidale 1997: Fig. 191, 1-3, 5-8; see also figs. 223-225). The type is well known in Makran, Period IIIb, and A. Didier has well summarized its comparanda with pottery assemblages at Bampur, Periods I-II, Khurab and Damin (Didier 2013: Fig. 211; see also Tosi 1970: Figs. 14-16).

– 008 and 007 Ch 2011: These bowls come from plundered graves. Bowls apparently quite similar in terms of form and decoration were found in Grave (G.) 139 of Shahr-i Sokhta (Piperno and Salvatori 2007: Fig. 410, 7526-7527). The link between Shahr-i Sokhta G. 139 and the Chegerdak collection can be extended to other specimens of Figure 10, namely 004, 016 and 047 (Ibid.: Fig. 410, 7528 and 7529). Vessels of this fashion are not common in the settlement of Shahr-i Sokhta, but, because of their technological features (potter’s wheel aided by coiling and/or paddling), they may be dated to the early 3rd millennium BC. This is supported by the strong similarity with a hemispherical bowl found at Tepe Yahya, Areas F and G, phase IVC1 (Lamberg-Karlovsky and Potts 2001: Fig. 2.25D) and with other vessels of the Makran sequence, late period IIIa (Didier 2013: Fig. 10, 2 and 12; Mutin 2013b: Fig. 14.15, 10-11).

Table 5 – Hemispherical bowls and/or subglobular pots.

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>055 Ch 2011</td>
<td>Buff ware</td>
<td>18</td>
<td>4.73</td>
<td>Medium-fine with sand</td>
<td>Pink 7.5YR7/4</td>
<td>Dark brown 7.5YR3/2</td>
<td>C+WT, trimmed and smoothed</td>
</tr>
<tr>
<td>036 Ch 2011</td>
<td>Buff ware, overfired, reduced</td>
<td>-</td>
<td>4.60</td>
<td>Medium-fine with sand, white granules</td>
<td>Light yellowish brown 2.5Y6/4</td>
<td>Dark greyish brown 10YR4/2</td>
<td>C+WT</td>
</tr>
<tr>
<td>033 Ch 2011</td>
<td>Emir Grey</td>
<td>-</td>
<td>4.22</td>
<td>Medium-fine, porous</td>
<td>Grey 2.5YR5/0</td>
<td>Black 2.5YR2.5/0</td>
<td>WT</td>
</tr>
</tbody>
</table>

14. Note in particular the form, the broad bands of the inner and outer friezes, and the close similarity of the redundant comb-like triangle-like combs on the interior of G. 139/7527 to our bowls 008 and 007.
– 004 Ch 2011 (see also fig. 5: e): Similar, for form and decoration, to a specimen from Bampur Period II (de Cardi 1970: Fig. 21, 104).

– 016 and 047 Ch 2011: Perhaps similar to some simple hemispherical bowls published by Didier (2013: Fig. 10, 6-8) who dates them to period IIIa of the Makran sequence. On the other hand, in the same cultural contexts such sherds remind bowls of type 2.3 ascribed to Period IIIb (Ibid.: Fig. 66, 3-5, 10).
Table 6 – Other hemispherical bowls.

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>022 Ch 2011</td>
<td>Emir Grey</td>
<td>16</td>
<td>3.77</td>
<td>Fine, homogeneous</td>
<td>Grey 2.5YR6/0</td>
<td>Dusky red 2.5YR3/2</td>
<td>WT, trimmed or turned, wet-smoothed</td>
</tr>
<tr>
<td>050 Ch 2011</td>
<td>Emir Grey</td>
<td>18</td>
<td>3.37</td>
<td>Fine, homogeneous</td>
<td>Grey 5YR5/1</td>
<td>Very dark greyish brown 10YR3/2</td>
<td>WT</td>
</tr>
<tr>
<td>015 Ch 2011</td>
<td>Emir Grey</td>
<td>18</td>
<td>4.27</td>
<td>Fine, with very fine sand</td>
<td>Pinkish grey 7.5YR6/2</td>
<td>Black 2.5YR2.5/0</td>
<td>WT, extensively turned; stacked with identical bowls</td>
</tr>
<tr>
<td>013 Ch 2011</td>
<td>Emir Grey</td>
<td>21</td>
<td>4.15</td>
<td>Fine, compact, with fine sand</td>
<td>Light grey 5YR5/1</td>
<td>Dark grey 5YR4/1</td>
<td>WT</td>
</tr>
<tr>
<td>008 Ch 2011</td>
<td>Buff ware, reduced</td>
<td>28</td>
<td>3.14</td>
<td>Fine, compact</td>
<td>Light brownish grey 10YR6/2</td>
<td>Dusky red 10R3/2</td>
<td>C+WT, extensively turned</td>
</tr>
<tr>
<td>007 Ch 2011</td>
<td>Buff ware, reduced</td>
<td>28</td>
<td>3.82</td>
<td>Fine, compact</td>
<td>Light brown 7.5YR6/4</td>
<td>Dark reddish grey 10R3/1</td>
<td>WT, enlarged by beating, turned with chattering marks</td>
</tr>
<tr>
<td>004 Ch 2011</td>
<td>Emir Grey</td>
<td>15</td>
<td>3.10</td>
<td>Fine, homogeneous</td>
<td>Grey 7.5YR6/0</td>
<td>Dusky red 7.5YR2.5/4</td>
<td>WT, trimmed and turned with chattering marks</td>
</tr>
<tr>
<td>016 Ch 2011</td>
<td>Emir Grey</td>
<td>34</td>
<td>5.43</td>
<td>Fine, with fine sand</td>
<td>Light grey 10YR7/1</td>
<td>Reddish brown 5YR4/3</td>
<td>C+WT, turned on the base with chattering marks</td>
</tr>
<tr>
<td>047 Ch 2011</td>
<td>Buff ware</td>
<td>19</td>
<td>7.20</td>
<td>Medium-fine, with few lighter granules</td>
<td>Reddish yellow 5YR6/8</td>
<td>Black 5YR2.5/1</td>
<td>C+WT, turned or trimmed on the base</td>
</tr>
</tbody>
</table>

Figure 11 (table 7) – Comparisons and comments
– 026 Ch 2011: ‘Intrusive’ Black-on-Buff hemispherical bowls fragments of the same formal description were found at Tepe Yahya in IVB6 contexts (Lamberg-Karlovsky and Potts 2001: Fig. 3.7, F-I).
– 001 Ch 2011: This fine fragment (visible also in Fig. 5: f, for the style of the ibex and the inner swastika) is comparable to a Black-on-Grey ware specimen from the late Period II dumps in the Central Quarters of Shahr-i Sokhta (Salvatori and Vidale 1997: Fig. 190, 7).  
– 009 Ch 2011: For the palm designs that appear on 001 and 009, see above (figs 4: 012 and 010; 9: 033). A bowl with a large frieze on the exterior including palms is reported at Bampur, Period V, 1 (de Cardi 1970: Fig. 34, 326).
– 024 Ch 2011: The comparanda for this piece at Shahr-i Sokhta are the same already discussed for the sherds of Fig. 7: 005 and 017.

Figure 12 (table 8) – Comparisons and comments
– 019 Ch 2011 (see also fig. 5: g): This excised decoration is not common in other areas, but is encountered in other ceramic assemblages collected on surface of the Jazmurian region (M. Heydari, unpublished materials).
– 035 and 034 Ch 2011: Ovoid jars with wavy ridge in relief and superimposed friezes with complex designs, appear at Bampur, Period II, together with open, bell-shaped basins with similar features (de Cardi 1970: Figs. 19-20, various specimens). Here, the same traits become common in Period IV, 1-3 (Ibid.: Fig. 23, in particular 173-175, and for the decoration figs. 24, 224 and 29, 317-320).

Figure 13 (table 9) – Comparisons and comments
This figure and the following gather some unpainted Buff ware pots, some of which hand-formed, perhaps used as common cooking ware.

Figure 14 (table 10) – Comparisons and comments
– 038, 049 and 011 Ch 2011: Similar potsherds were recorded at Bampur, Period V (de Cardi 1970: Figs. 36, 93 and 38, 361).
– 044 Ch 2011: Lids of the same type are common in the ceramic assemblages excavated on the upper levels of Konar Sandal South, as well as at Konar Sandal North (Madjizadeh with Pittman 2008: Fig. 27, upper row, middle). At Tepe Yahya, the same type was recorded as found in levels dated to phase IVC2 (Lamberg-Karlovsky and Potts 2001: Fig. 1.5), but the object is probably intrusive, as suggested by the recovery of the same type in Context BW.69.T5.5-7, with several sherds of the second half of the 3rd millennium BC (Ibid.: Fig. 7.5). At Bampur, the type is present since Period II (de Cardi 1970: Fig. 18, 51-52).
Table 7 – Other hemispherical bowls with a slightly S-shaped profile.

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>026 Ch 2011</td>
<td>Emir Grey</td>
<td>20</td>
<td>2.84</td>
<td>Very fine, homogeneous</td>
<td>Grey 7.5R6/0</td>
<td>Dusky red 7.5R3/4</td>
<td>WT</td>
</tr>
<tr>
<td>001 Ch 2011</td>
<td>Emir Grey</td>
<td>22</td>
<td>4.53</td>
<td>Fine, with fine sand</td>
<td>Dark grey 10YR4/1</td>
<td>Dark reddish brown 5YR3/2</td>
<td>WT</td>
</tr>
<tr>
<td>009 Ch 2011</td>
<td>Buff-red ware</td>
<td>32</td>
<td>3.82</td>
<td>Very fine, homogeneous</td>
<td>Yellow 10YR7/6</td>
<td>Dark brown 10YR4/3</td>
<td>WT, red slipped (?)</td>
</tr>
<tr>
<td>024 Ch 2011</td>
<td>Emir Grey</td>
<td>38</td>
<td>3.40</td>
<td>Very fine, homogeneous</td>
<td>Reddish grey 10R8/0</td>
<td>Dark reddish grey 10R3/1</td>
<td>WT</td>
</tr>
</tbody>
</table>

Fig. 11 – Chegerdak, surface collection 2011. Other hemispherical bowls with a slightly S-shaped profile (M. Vidale, E. Cortesi).
### Table 8 – Other restricted or cylindrical pots.

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>019 Ch 2011</td>
<td>Buff ware, reduced</td>
<td>21</td>
<td>5.19</td>
<td>Fine, homogeneous</td>
<td>Light greenish grey</td>
<td>Very dark grey</td>
<td>WT, excised decoration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5G7/1</td>
<td>2.5YR3/0</td>
<td></td>
</tr>
<tr>
<td>035 Ch 2011</td>
<td>Buff ware</td>
<td>22</td>
<td>9.18</td>
<td>Fine, homogeneous</td>
<td>10YR5/3</td>
<td>Black</td>
<td>C+WT, applied ridge, slipped</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.5YR2.5/0</td>
<td>2.5YR3/0</td>
<td></td>
</tr>
<tr>
<td>034 Ch 2011</td>
<td>Buff ware</td>
<td>22</td>
<td>6.58</td>
<td>Fine, hard fired,</td>
<td>Reddish yellow</td>
<td>Very dark grey</td>
<td>C+WT, slipped (?) with applied ridges</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>homogeneous</td>
<td>5YR/66</td>
<td>2.5YR3/0</td>
<td></td>
</tr>
<tr>
<td>030 Ch 2011</td>
<td>Buff ware</td>
<td>-</td>
<td>9.80</td>
<td>Fine, compact</td>
<td>Light brown</td>
<td>Very dark grey</td>
<td>C (or slabs) + WT. The joints among coils are wavy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.5YR 6/4</td>
<td>7.5YR3/0</td>
<td></td>
</tr>
<tr>
<td>039 Ch 2011</td>
<td>Buff ware</td>
<td>50</td>
<td>6.31</td>
<td>Reddish yellow</td>
<td>Reddish grey</td>
<td></td>
<td>C+WT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5YR5/2 (vanished)</td>
<td>5YR/3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fig. 12 – Chegerdak, surface collection 2011. Other restricted or cylindrical pots (M. Vidale, E. Cortesi).**
Table 9 – Globular bowls, jars and pots.

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>048 Ch 2011 settlement</td>
<td>Buff ware</td>
<td>8</td>
<td>9.40</td>
<td>Medium, light coloured granules</td>
<td>Reddish yellow 5YR6/6</td>
<td>-</td>
<td>C+WT, smoothed on surface</td>
</tr>
<tr>
<td>045 Ch 2011 settlement</td>
<td>Buff ware, coarse</td>
<td>7</td>
<td>8.90</td>
<td>Coarse with sand, mica, limestone</td>
<td>Light brown 7.5YR6/4</td>
<td>-</td>
<td>C (6 to 7 superimposed coils, badly joined)</td>
</tr>
<tr>
<td>029 Ch 2011 graveyards</td>
<td>Buff ware, coarse</td>
<td>15</td>
<td>8.08</td>
<td>Coarse with sand, mica, limestone</td>
<td>Yellowish red 5YR5/6</td>
<td>-</td>
<td>C+WT, slipped (?)</td>
</tr>
<tr>
<td>018 Ch 2011 graveyards</td>
<td>Buff ware, reduced</td>
<td>10</td>
<td>15.02</td>
<td>Fine, homogeneous</td>
<td>Dark grey 2.5YR4/0</td>
<td>-</td>
<td>WT. A cooking pot?</td>
</tr>
</tbody>
</table>

Fig. 13 – Chegerdak, surface collection 2011. Globular bowls, jars and pots (M. Vidale, E. Cortesi).
Table 10 – Globular jars, pots and bowls, and a flat lid.

<table>
<thead>
<tr>
<th>ID</th>
<th>Ware</th>
<th>Mouth Ø (cm)</th>
<th>Thickness (mm)</th>
<th>Paste</th>
<th>Paste colour</th>
<th>Paint colour</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>038 Ch 2011 graveyards</td>
<td>Buff ware</td>
<td>-</td>
<td>4.93</td>
<td>Fine, with fine sand</td>
<td>Pink</td>
<td>Brown</td>
<td>WT</td>
</tr>
<tr>
<td>049 Ch 2011 settlement</td>
<td>Buff ware</td>
<td>-</td>
<td>7.26</td>
<td>Fine, compact, lime granules</td>
<td>Reddish yellow</td>
<td>Reddish grey</td>
<td>WT</td>
</tr>
<tr>
<td>011 Ch 2011 graveyards</td>
<td>Buff ware, reduced</td>
<td>-</td>
<td>6.33</td>
<td>Fine, compact, with fine sand</td>
<td>Light brown</td>
<td>Very dark grey</td>
<td>Moulded, or beaten by paddle and anvil</td>
</tr>
<tr>
<td>046 Ch 2011 settlement</td>
<td>Buff ware, locally reduced</td>
<td>20</td>
<td>4.60</td>
<td>Coarse with sand, mica, limestone</td>
<td>Light brown</td>
<td>-</td>
<td>C+WT</td>
</tr>
<tr>
<td>054 Ch 2011 settlement</td>
<td>Buff ware</td>
<td>24.5</td>
<td>5.40</td>
<td>Medium-coarse, with sand, mica and lime granules</td>
<td>Very pale brown</td>
<td>-</td>
<td>C+WT</td>
</tr>
<tr>
<td>044 Ch 2011 settlement</td>
<td>Buff ware, reduced</td>
<td>20</td>
<td>14.74</td>
<td>Coarse with sand, mica, limestone</td>
<td>Light yellowish brown</td>
<td>-</td>
<td>WT</td>
</tr>
</tbody>
</table>

Fig. 14 – Chegerdak, surface collection 2011. Globular jars, pots and bowls, and a flat lid (M. Vidale, E. Cortesi).
Figure 15 (table 11) – Comparisons and comments

- 061 Ch 2011: Black-on-Red/Orange necked jars found in the excavations of the houses around the citadel of Konar Sandal South bear on the shoulder similar friezes (Madjidzadeh with Pittman 2008: Fig. 22, upper right, lower left). The distinguishing feature is a vertical panel with lozenges or check-board patterns, fringed on both sides with short dashes. These panels usually frame fields occupied by animal figures: see a jar fragment found at Tepe Yahya, area A, phase IVB5 (Lamberg-Karlovsky and Potts 2001: Fig. 4.28, F); a pot from Damin (Tosi 1970: Fig. 10b) and several sherds of the Bampur sequence (de Cardi 1970: Period II, fig. 19, 61; Period IV, figs. 23, 183-184; 28, 262; Periods I-IV, figs. 30, 31, 35-36 and 31, 51-52).

- 043 Ch 2011: The best comparisons are specimens from Bampur Period V, 2.15

- 042 Ch 2011 (see also fig. 5: h): At Tepe Yahya, restricted jars with relief ridges appear in the Persian Gulf room, phase IVB5 (Lamberg-Karlovsky and Potts 2001: Fig. 4.19); in the same chronological horizons, wavy bands filled with short strokes appear on the shoulder of large globular containers (Ibid.: Fig. 4.28). Other similar specimens are ascribed to phase IVB1 (Ibid.: Fig. 6.5 A). Wavy ridges in relief, with dots or short strokes, are common at Konar Sandal South (Madjidzadeh with Pittman 2008: Fig. 22, lower right). At Shahr-i Sokhta, a single similar specimen was found in the Central Quarters excavation, in a late Period II secondary context (Salvatori and Vidale 1997: Fig. 186, 1). Wavy ridges also are a distinguishing feature of medium-large restricted jars from Makran, Periods IIIb (Didier 2013: Figs. 105, 13; 108, 1-153/03/14)16 and IIIc (Ibid.: Figs. 168-169, in particular 169, 6-7). Didier outlines generic comparisons with Bampur (Periods II-VI) and Damin (Didier 2013: Fig. 217, 9-20, 21-24; Tosi 1970: Figs. 28-29). At Bampur, the best matches are with materials of Periods V-VI (de Cardi 1970: Fig. 39, 389c).

Fig. 15 – Chegerdak, surface collection 2011. Necked jars, globular at the shoulder (M. Vidale, E. Cortesi).

15. De Cardi 1970: Fig. 38, 377 (for the form and general look of the designs) and 381 (for the decoration).
16. Both with alternating hatched triangles, instead of filled festoons.
DISCUSSION AND CONCLUSION

The unstratified surface collection here presented was selective and not systematic. It took place before a proper topographic survey of the site was carried out. However, in a gross estimate, and using the following values in a purely indicative fashion, ca 62% of the comparisons thus established for the ceramics from the surface of the settlement link the collection to the early 3rd millennium BC, or better, more generally, to the first half of the 3rd millennium. The rest of the comparisons (ca 38%) shows a less represented, later habitation phase of the middle-to-second half of the same millennium. In terms of the Kech-Makran sequence, most comparisons point to Period IIIa, and a minor percentage to Periods IIIb-IIIc.17

When we look to the pottery from areas where graves had been plundered, the situation is reversed: the earlier materials, linked to Kech-Makran Period IIIa, amount only to ca 11% of the recorded comparisons; among these range materials very similar to a bowl from Tepe Yahya IVc1, early 3rd millennium BC. The rest (89%) consistently link the collected sherds to the mid-to second half of the 3rd millennium, mainly to Makran Period IIIb. The Jazmurian sites, at the time, were evidently part of a much wider network of economic and cultural links that crossed the Kech-Makran valley, extending to the shores of the Persian Gulf and its trading entrepôts.

The Grey Wares that form great part of the collection were commented more than 40 years ago in the following terms (Tosi 1970: 42):

"[...] the grey ceramics [...] are related to mature stages of the process of urbanization that had the Helmand Basin as its centre, and spread into the valleys of Baluchistan, influencing a whole series of cultural centres that had been settled bit by bit along the perennial watercourses."

However, the discovery of other important early urban sites even outside Sistan and the Halil Rud valley—the major agricultural basins of the region—demands a general reconsideration of similar statements.

For the moment, it is clear that, in the frame of a general transfer of ceramic technologies from South-Eastern Iran to the Omani peninsula (Potts 2005), fine Grey Ware vessels (or goods packaged and somehow branded in these highly recognizable pots) were extensively traded to the other side of the Persian Gulf (Méry et al, 2012).

Besides Kech-Makran Period IIIb, most comparanda from the graveyards were established with Bampur Periods I-IV and, in terms of the Shahe-I Sokhta record, with late Period II and Period III (Tosi 1970: 50) in turn dated to ca 2500-2300 BC (cal. 14C). Only a minor amount of sherds would rather link the Chegerdak collection to Bampur Periods V-VI, i.e., always grossly speaking, to the late centuries of the 3rd millennium BC (Tosi 1974 and 1983; Potts 2003). Thus, the last settlement period at Chegerdak, judging from our collection, has only a partial overlap with the use of the plundered burial grounds.

Across the 3rd millennium BC, technology shows a transition from sturdy bowls made on the potter’s wheel with coils

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17. As defined in Didier 2013. We continue to follow here, as a hypothetical framework, the chronology based on 14C cal. absolute dates as proposed in Salvatori and Tosi 2005 and Cortesi et al, 2008, which places Shah-i Sokhta Periods III-IV between the second half of the 3rd and the early 2nd millennia BC (Tosi 1983). The French colleagues who worked in Makran and at Mehrgarh would rather limit the same cultural horizons, mainly on the basis of their perception of consistent similarities among pottery assemblages, within the first half of the 3rd millennium (Jarige et al, 2011; Didier 2013; for a general framing of the question: Besenval 1994; 1997a-b; 2005 and 2011; Besenval and Didier 2004; Franke 2008; Didier 2013; Didier et Méry 2012; Mutin 2007; 2012a-b and 2013a-b). Period III at Shahr-i Sokhta, with its evident correlations to the main settlement phase at Konar Sandal South (Madjizadeh with Pittman 2008; M. Vidale and A. Lazzari, ongoing research) is still framed with some difficulty in the chronological schemes available for South-Eastern Iran. The reader should be aware that the question will remain open until new, consistent 14C dates from key sites are available.

18. For the general scenario, see also Wright 1984; 1989 and 1995.
Table 12 – Buff ware sherds from Bampur, Periods III and IV. Probably imports from Sistan compared with the ceramic sequence of the central Quarters of Shahr-i Sokhta (after de Cardi 1970).

<table>
<thead>
<tr>
<th>Bampur Period</th>
<th>Reference</th>
<th>Remarks on surface and paint</th>
<th>Links with the Shahr-i Sokhta sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>De Cardi 1970: Fig. 22, 151</td>
<td>Dark brown paint on cream, carinated bowl</td>
<td>Period II, Phase 5B – Salvatori and Vidale 1997: Fig. 154, 9</td>
</tr>
<tr>
<td>III</td>
<td>De Cardi 1970: Fig. 22, 153</td>
<td>Brown paint on cream, cylindrical vessel</td>
<td>Period II, Phase 5B – Salvatori and Vidale 1997: Fig. 174, 2</td>
</tr>
<tr>
<td>IV</td>
<td>De Cardi 1970: Fig. 24, 202</td>
<td>Dark brown on cream</td>
<td>Period II, Phase 5B</td>
</tr>
<tr>
<td>IV, 1</td>
<td>De Cardi 1970: Fig. 25, 228</td>
<td>Dark brown on buff, goblet</td>
<td>Period II, Phase 5B – Salvatori and Vidale 1997: Fig. 174, 2</td>
</tr>
<tr>
<td>IV, 1</td>
<td>De Cardi 1970: Fig. 25, 227</td>
<td>Dark brown on buff</td>
<td>Period II-III, Phases 5B-4 – Salvatori and Vidale 1997: Fig. 197, 1, 2, 5</td>
</tr>
<tr>
<td>IV, 1</td>
<td>De Cardi 1970: Fig. 25, 228</td>
<td>Cream, internal design</td>
<td>Period II-III, Phases 5B-4 – Salvatori and Vidale 1997: Figs. 197, 1; 198, 3</td>
</tr>
<tr>
<td>IV, 1</td>
<td>De Cardi 1970: Fig. 25, 229</td>
<td>Cream, internal design</td>
<td>Period II-III, Phases 5B-4 – Salvatori and Vidale 1997: Figs. 197, 1; 198, 3</td>
</tr>
<tr>
<td>IV, 3</td>
<td>De Cardi 1970: Fig. 29, 305</td>
<td>Dark brown on cream</td>
<td>Period III, Phases 4-3 – Salvatori and Vidale 1997: Fig. 221</td>
</tr>
</tbody>
</table>

and sometimes with the aid of a beating process, often carelessly hand-trimmed on the external base, sometimes (apparently) turned on the potter’s wheel after hand-turning (and fired in stacks which caused a strongly reducing environment on the interior), to better wheel-thrown, thinner containers regularly turned on the bottom of the wheel. In this later technical environment, firing was more uniform, without strong gradients from the interior to the exterior.

The bowl fragment in Figure 8: 040 is an import from Sistan, that could be dated to early Period II, phase 6 of the Shahr-i Sokhta sequence; these bowls, as ascertained by previous X-ray studies, were made by slabs pressed within moulds centered and rotating on the potter’s wheel.25 It is worthwhile to list the sherds found by de Cardi at Bampur, that, on the base of the drawings, can be similarly considered (even on formal grounds) Buff ware imports from Sistan.

Table 12 does not add much information to what S. Salvatori originally published in 1997.26 It does not certainly include all the ceramics imported from Sistan or from Kandahar (Casal 1961) to the Bampur settlement, nor does it offer any account of fine Grey or Red ware containers that might have been made near Shahr-i Sokhta or at the specialized pottery making villages like the Rud-e Biyaban centres and traded southwards. However, it is important to stress that these Sistanian vessels found by B. de Cardi at Bampur are common pots used for serving food and drinks and even for cooking. For example, sherds belonging to a type of painted jar (de Cardi 1970: Fig. 25, 226) are certainly a type well known at Shahr-i Sokhta: a pear-shaped jar made with coils fashioned on the potter’s wheel and lavishly painted with long metopal patterns. The bottom of such pear-shaped jars, after forming, was extensively turned in order to make it thinner, thus helping the heat transfer from the fireplace to broiling food, and ultimately saving fuel. This is supported by the soot marks that regularly cover the exterior of these vessels, often stronger near the mouth. Other Sistanian Buff ware imports seem to be pear-shaped beakers, a cheap, small vessel possibly used in lots of hundreds in common households for drinking and other domestic functions. The bowl fragment in Figure 8: 040 too belongs to a vessel presumably used for serving and consuming food.

In short, all Buff ware sherds listed in Table 12 belong to common domestic equipment, and for this reason do not necessarily represent commodities intentionally exchanged on long-distance trade routes. In future studies, it will be useful to de-emphasize recurrent generic statements of ‘cultural links’ and ‘evidence of contact’ among different civilizational areas, and investigate which forms of movement and transport of people and goods was actually enacted. For example, aside the possibility that people did trade cheap pottery vessels, one could consider the chance that such domestic ware was carried southwards by occasional travellers, nomads or on the occasion of inter-regional marriages; even if these, admittedly, are mere conjectures, and probably impossible, at least at present, to be tested on the grounds of the general archaeological evidence.

The main route connecting the two major endorheic basins of the south-eastern Plateau was the Damin valley. Aside the more visible and well established trade in luxury goods,27 these links, if better substantiated in future, might express another

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19. Laneri and Vidale 1998. In Period III of the Shahr-i Sokhta and Tepe Rud-e Biyaban sequence, bowls are generally hemispheric and in most cases entirely fashioned in a single step on the potter’s wheel; from this point of view, this phase 6 bowl is still produced with a rather complex, archaic technical approach.

20. See the chronological correspondence table in Salvatori and Vidale (1997: 78), that might be still valid, and also footnote 1.

21. The shipping of Grey Ware pots from Baluchistan and Makran to Oman; see Méry et al. 2012.
aspect of the variegated interaction sphere that along the 3rd millennium BC loosely connected Sistan, Baluchistan and the Indus Basin (Cortesi et al. 2008) with the west (Lamberg-Karlovsky 1970; Lamberg-Karlovsky and Tosi 1973; Lamberg-Karlovsky and Potts 2001).

In conclusion, what is presented here is just a preliminary approach to an unknown world. Chegerdak and the other Early Bronze Age sites so badly discovered and semi-destroyed along the Jazmurian piedmont are important components of a widespread and largely unexplored network. The following step will be a full documentation and publication of the abundant materials recovered and safely kept in the Zahedan storerooms.

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