9. THE MIDDLE CHALCOLITHIC IN SOUTHERN TURKMENISTAN AND THE ARCHAEOLOGICAL RECORD OF ILGYNLY-DEPE

Gian Luca Bonora and Massimo Vidale

Introduction
This paper presents a general review of the Middle Chalcolithic (or Namazga II period) of southern Turkmenistan (c. from the middle to the late fourth millennium BC), including periodisation and absolute chronology. An inventory of the known sites shows the rise along the piedmont of the first early towns, imposing themselves upon networks of minor rural sites. At the same time, a small number of centres in the ecologically constrained endoreic delta of the Tedjen River were fortified with defensive walls and round angular towers at a surprisingly early date. Ilgynly-depe, in the Chaacha-Meana district of the piedmont strip, shows not only fully developed crafts (pottery production, metallurgy, stone working, perhaps textiles manufacturing), but also the first hints of long-distance trade. A complex symbolic apparatus (wall paintings, formal seats, copper artefacts, stone sculptures, and terracotta figurines) appeared in special rooms, some of which might have been planned and used as steam baths or hammams rather than – as more commonly proposed – cultic buildings. We will review the research at Ilgynly-depe and also the Middle Chalcolithic funerary record of the region. Contrary to the traditional Soviet idea of Chalcolithic or “Aeneolithic” egalitarian tribal communities suddenly transformed into city states by a secondary urban revolution in the second half of the third millennium BC, early urban growth and social stratification processes were already active 1000 years before.

Contextualising southern Turkmenistan in the fourth millennium BC
Many assume that the prehistoric societies of southern Turkmenistan represented the “north-eastern periphery of the Near East Civilization” (Tosi 1973–1974), as along the Kopet Dag piedmont the original knowledge of farming and herding would have been partly borrowed from the south-western Iranian Plateau (Harris and Gosden 1996; Harris 2010).

The local prehistoric communities, however, can hardly be imagined as passive recipients of cultural innovation from their southern and western neighbours. Ceramics and inscribed documents of the so-called Proto-Elamite interaction spheres, identified to the south-east up to the foot of the first mountain chains of Iranian Baluchistan (Lamberg Karlovsky 1978; Potts 2001; Vidale and Desset, this volume) were never found beyond the Kopet Dag (Hiebert 2002: 35). The economic interests and associated ideological values at the root of the fast spreading so-called Proto-Elamite phenomenon “clashed” here with a highly structured and quite different social world, the result of at least 3000 years of selective pressure and local evolution. The communities of the region, since the beginning of farming and sedentary life around 6000 BC, evolved into independent hierarchical social organisations, even if affected and partially transformed by contacts and exchanges with their neighbours. During the Neolithic and Chalcolithic, cultural and economic relationships between southern Turkmenistan and the northern fringe of the Iranian Plateau recall a core-periphery model of interaction, but the process was soon intensified by the fast development of metallurgy and other industrial sectors. At the same time, the prehistoric societies of these two cultural worlds seem to have given rise to a series of discrete, highly fluid political entities, each having something both to offer and to gain from exchange and communication. Southern Turkmenistan was not at the periphery of early agriculture and cattle-breeding foci farther west, but...
was an integral and leading partner within a much wider south-west Asian cultural interactive sphere from the ninth to the fourth millennium BC.

A constellation of unstable agro-pastoral settlement areas became widely established from the Levant to the northern and eastern margins of the Iranian Plateau, and far beyond eastwards. The fourth millennium BC was an epoch of significant change and development across the Iranian Plateau and the surrounding regions.

In the Chalcolithic, the piedmont plain north of the Kopet Dag mountain ridge – stretching in what is today southern Turkmenistan from the shores of the Caspian Sea to the lower Tedjen River valley (Fig. 9.1) – hosted a succession of increasingly sophisticated and complex communities, living in populated villages and farming their land by means of artificial irrigation. People exploited two millennia of cumulative skill in farming and husbandry within severely constrained and demanding ecosystems, and interacted with the local nomadic communities. They also produced and used handmade and wheel-thrown pottery, knapped flint and ground stone, and cast lead, silver, gold, and copper alloys. A substantial and developed metallurgy – considering the local absence of important ore sources – was carried out both within individual dwellings in larger centres and in less important specialised independent sites (Thornton 2009, 2010). Although settlement systems mostly developed in a discontinuous fashion, regional uniformities in the forms and styles of pottery are evidence of intimate and resilient modes of communication across time and space.

In the last centuries of the Chalcolithic (c. 3300–3000 BC), while a large area of the central and western Iranian plateau was variously affected by the so-called “Uruk” and “Proto-Elamite” expansions, in southern Turkmenistan local evolutionary processes gave birth to independent large-scale early urban communities (Namazga-depe, Kara-depe, Altyn-depe, Ilgynly-depe, and Geoksyur 1). Forty years of Russian excavations at Altyn-depe and other sites, from the Kopet Dag to the edge of the Kara Kum desert, revealed high levels of social complexity (defensive walls and monumental gates, and the emergence of different specialised crafts, partially centralised in the early urban compounds). In the Middle Chalcolithic layers at Ilgynly-depe, the local metallurgy provides an early example of technical sophistication and widespread consumption of valuable copper goods (Masson 1962: table X, 23; Solovyova et al. 1994: figs 3.4, 3.6, 4.1; Berezkin and Solovyov 1998: 93).

Figure 9.1. Distribution map of Middle Chalcolithic sites in southern Turkmenistan.

Key: 1 = Chinghiz-depe; 2 = Parkhay II; 3 = Gievchik-depe; 4 = Tilk’in-depe; 5 = Gavych-depe; 6 = Suncha-depe; 7 = Ekin-depe; 8 = Ak-depe; 9 = Anau north; 10 = Kara-depe; 11 = Elen-depe; 12 = Jassy-depe; 13 = Namazga-depe and Gara-depe; 14 = Sermancha-depe; 15 = Ulug-depe; 16 = Altyn-depe; 17 = Ilgynly-depe; 18 = Serakhs site; 19 = sites of the “Geoksyur oasis”: Geoksyur 1, Akcha-depe, Aina-depe, Jalangach-depe, Geoksyur 7, Geoksyur 9, Mullali-depe, and Chong-depe; 20 = Tepe Yam; 21 = Tepe Shirvan; 22 = Yarim Tepe (on the Gorgan plain); 23 = Yarim Tepe (on the Darreh Gaz plain).
Although such craft systems mainly exploited local resources, new archaeometric studies and sourcing of stone and metal base materials will reveal, in future, more complex patterns of medium- and long-range procurement and trade. The first beads and pendants in turquoise and lapis lazuli show direct or indirect links with the Kara Kum desert fringe or the northeastern Iranian Plateau, the Hindukush valleys, and the Badakshan region of eastern Afghanistan (Kurbansakhatov 1987: 91, fig. 44.1; Masson 1962: 8, 22, table X.3). The range of such connections is shown by the discovery of red *Spondylus* shell beads, coming from the shores of the Mediterranean or the Persian Gulf, in graves dated to the *Transitional Chalcolithic* of the Qazvin plains (early fourth millennium BC), in northern-central Iran (Fazeli and Vidale, ongoing research). Terracotta model wheels, in this period, demonstrate the spreading of wheels drawn by camels, wild equids, or oxen (Kurbansakhatov 1987: fig. 44, 17; Sarianidi 1960: 273, table VII, 16 and 17; Khlopin 1969: table VII, 45 and 17, table XXIII, 8 and 9, table XXVI, 48–50; see also Kircho 2009 for an updated review of wheeled transport in southwestern Central Asia).

We must also mention the enigmatic “weights” or *gyr* with handle in polished stone from Anau north, Kara-depe, and Ilgynly-depe (Masson 1960: 354, fig. 12 and 451, table XXXII, 1, 4; 1962: table XI, 10–3; Korobkova and Sharovskaja 1994: 27–30; Hiebert 2003: fig. 7.15), which might have been used in the production of textiles, possibly kilims or carpets. Examples of these dating to the fourth millennium BC have also been found at Sheri Khan Tarakai in north-west Pakistan (Knox et al. 2010: 222–24, fig. 7.50–7.54). The new technological and demographic realities demanded a growing investment in domestic and early urban administration, as demonstrated by stamp seals and unbaked clay sealings at Kara-depe, Geoksyur I, and Altyn-depe (Masson 1960; Sarianidi 1965; Kircho 1990; Masson and Kircho 2008: pl. 119, 1–2; pl. 145, 13–21, pl. 168) as well as at Ilgynly-depe (unpublished surface find, 1999: Bonora et al., in press). Special constructions interpreted as “shrines” or “sanctuaries” were attached to multi-roomed seats of extended families, linked to each other by kinship and tribal ties. Some rooms had special round “hearth-altars”, wall paintings, and coloured benches, with valuable or symbolic artefacts scattered on the floors (Kircho 2007: 194–96).

**Chronology and periodisation**

The *Chalcolithic* in southern Turkmenistan is traditionally divided into three phases, *Early*, *Middle*, and *Late* periods. In the archaeological literature of Middle Asia, such three-tiered subdivision is also known as *Namazga I, II, and III* (hereafter *NMG I, II, and III*), after the work of B. A. Kuftin (1956) at the largest known prehistoric settlement, Namazga-depe near Kaakha. These periods at Namazga-depe, however, were established through rough artificial cuts, about 0.5m thick, recording general changes in the ceramics, matched by changes in architecture. The paradigm widely popularised by V. M. Masson and V. I. Sarianidi (1972) was that in the second half of the third millennium BC in the *NMG V* period (in Mesopotamian terms, from the late *Early Dynastic* period to the *Ur III* state), a secondary “urban evolution”, described in strictly Childean terms, affected the southern agricultural societies of Turkmenistan. Dramatic changes included a sudden and sharp class differentiation, a vertical growth of the craft sectors, a subdivision of the towns or cities into neatly segregated functional and residential sectors, and an incipient invention of a “proto-writing” system on celtic terracotta figurines (Masson and Sarianidi 1972).

Until approximately the 1990s, the *NMG I* period was dated to the fifth millennium BC, *NMG II* to the first half of the fourth millennium BC, and *NMG III* to the second half of the fourth millennium BC (Kuftin 1956; Masson 1956a, 1962, 1982; Masson and Sarianidi 1972; Khlopin 1969; Kohl 1984). Recently, F. T. Hiebert and K. Kurbansakhatov’s excavation at Anau north, with new radiocarbon dates (Hiebert 2003), a reanalysis of the prehistoric complexes along the Kopet Dag also carried out by Hiebert (2002), and the long-standing work at Altyn-depe and Ilgynly-depe by V. M. Masson, L. Kircho, Ju. Berezkin, and N. Solovyova, similarly supported by new radiocarbon dates (Berezkin 1993; Masson and Berezkin 2005; Masson and Kircho 2008), produced a slightly modified and more refined chronology. The piedmont was not a compact cultural entity, as suggested by the generic term “Namazga Civilisation”. Its western, central, and eastern sectors experienced their own trajectory of cultural development, distinguished by shared traits but also by totally original features. The chronological sequence presently available is detailed in Table 9.1.

The alternate use, in both Russian and English archaeological literature, of the terms “Chalcolithic” (a word frequently used in the archaeology of the Ancient Near East) and “Aeneolithic” (more common, together with “Copper age” in the archaeology of south-eastern Europe) for indicating the same evolutionary stages, is rather confusing. Although in this paper we have adopted the first label, the two terms are synonyms.

**Ceramic classes and cultural areas of the mid-fourth millennium BC**

Ak-depe, near Ashgabad, is – together with the graveyard of Parkhay II (see below) – one of the few sites of southern Turkmenistan documenting for the
middle phase of the Chalcolithic the stratigraphic association of bichrome painted pottery (red or brown/black on buff or reddish ware) and grey wares, whose evolution and diffusion can be followed until the Iron Age. Here only the 13th layer contained NMG II – early KD 6 – materials, but the exposure was quite limited. The distribution of grey and other well-recognised wares of the Chalcolithic period evinces a first regionalisation process. In fact, already around the middle of the fourth millennium BC, the piedmont of western Turkmenistan was part of a “grey ware province” (Fig. 9.2/A) stretching into the Gorgan Plain and northern Iran.

It is well known (Masson 1962; Khlopin 1969; Kohl 1984) that the geographic distribution of the main ceramic classes points to a threefold geographical division, with: i) a polychrome red- and brown-on-buff ware in the piedmont strip (firstly appearing in the central piedmont zone at Kara-depe and Namazga-depe) (Fig. 9.2/B); ii) a monochrome black-on-red ware in the eastern piedmont and in the Geoksyur deltaic area (Fig. 9.2/C); and iii) (as already stated) painted wares associated with grey wares in the western piedmont (Fig. 9.2/A). The grey wares of north-eastern Iran and south-western Central Asia in the Chalcolithic and Bronze Age periods are described as handmade ceramics of dark grey to black fabric, with a high proportion of sand, gypsum, and grog tempers, and more rarely grass or chaff inclusions, fired at high temperatures in strongly reducing atmospheres. The surface is slipped reddish grey to black and often highly burnished. It is either plain or decorated with incised motifs of parallel lines and diagonally or horizontally hatched, alternating upright and inverted triangles with shared borders (Sarianidi 1976; Kircho 1999). Grey fabric sherds are present in small amounts from the lowermost levels of many Middle Chalcolithic sites, but later increase. They have been found in large numbers in the Late Chalcolithic layers of south-western Turkmenistan and the nearby regions, where as a result of increased interaction, growing social complexity, and specialisation processes, these grey wares became more homogeneous across the region and finally exhibited increased uniformity in colour, forms, and decoration (Khlopin 1997). Similar grey wares are well documented in the Gorgan plain of north-eastern Iran2 and in north-central Iran (on the Tehran, Qazvin, and Kashan plains),3 while in the central and eastern piedmont and in the Geoksyur area this particular Middle Chalcolithic ceramic is limited to a few types. The Middle Chalcolithic layers of Altyndepe, where grey or blackish vessels were probably imported from south-western Turkmenistan or the north-central Iranian Plateau, or where local imitations, include hemispherical bowls, biconical pots, and vessels with a sub-cylindrical neck (Masson and Kircho 2008: pls. 6A, 15; 6B, 20; 7V, 17; 50B, 27; 51V, 27). At Kara-depe, two grey ware sherds were dated to the first phase of the Middle Chalcolithic (Masson 1960, 1962).

Y. Majidzadeh and other scholars, linking pots and peoples, viewed these or similar grey wares of the northern Iranian plains as evidence of the migration or invasion of new ethnic groups from south-western Central Asia (Majidzadeh 1978, 1981). Today, new discoveries in the north-central Iranian plateau suggest a very gradual introduction of these wares, followed by internal innovation.

This ceramic “family” has no direct parallels in the surrounding regions (Transcaucasia and Mesopotamia) during this or the preceding periods. As the making of thin-walled vessels, fired in reducing atmospheres to the edge of sintering, may have mirrored a parallel diffusion – among the elites – of prestigious and costly metallic vessels, some grey wares could have been skeuomorphs. At any rate, such technical evolution should be considered a side effect of a growing social hierarchy and social display.

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Table 9.1. The emerging chronological framework for the Chalcolithic period along the Kopet Dagh piedmont (modified after Hiebert 2002, 2003). SWT, in the western region, stands for “south-western Turkmenistan”; here the chronology is based on I. N. Khlopin’s research (1997, 2002) on the graveyards of the Sumbar valley.

<table>
<thead>
<tr>
<th>Period</th>
<th>Western region</th>
<th>Central region</th>
<th>South-eastern region</th>
<th>Absolute chronology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Chalcolithic</td>
<td>Anau 1A or KD 4</td>
<td></td>
<td></td>
<td>c. 4500–4000 BC</td>
</tr>
<tr>
<td>Early Chalcolithic</td>
<td>SWT VII period</td>
<td>NMG I or KD 5</td>
<td>Dashlidji period</td>
<td>c. 4000–3500 BC</td>
</tr>
<tr>
<td>Middle Chalcolith</td>
<td>SWT VI period</td>
<td>NMG II or late KD 5–early KD 6</td>
<td>Jalangach period</td>
<td>c. 3500–3200 BC</td>
</tr>
<tr>
<td>Late Chalcolithic</td>
<td>Late Chalcolithic or SWT V period</td>
<td>NMG III or late KD 6</td>
<td>Geoksyur period</td>
<td>c. 3200–2800 BC</td>
</tr>
</tbody>
</table>
Figure 9.2. Main ceramic classes of the Middle Chalcolithic in southern Turkmenistan: A. painted wares associated with grey wares in the western piedmont; B. polychrome red and brown on buff ware in the piedmont strip (first appearing in the central piedmont zone at Kara-depe and Namazga-depe); C. monochrome black-on-red wares, common in the eastern piedmont and in the Geoksyur deltaic area.
Ecological background and early technologies of ancient farming

In prehistoric southern Turkmenistan, rain-fed cultivation of cereals was impossible, as it is at present. For P. Dolukhanov (1981: 375) the seasonal moisture regime of the Neolithic and Chalcolithic periods did not differ significantly from that of today, even if in the past annual precipitation was greater and spring floods more substantial. The earliest cultivators of the Djeitun Neolithic (c. 6000–5000 BC) depended on irrigation and/or groundwater in order to ripen the crops. Intensive research at Djeitun (Lisizyna 1965, 1969, 1978; Harris and Gosden 1996; Harris et al. 1996; Harris 2010) confirmed this hypothesis. Agriculture with artificial irrigation was also possible where the extensive alluvial clay formations (takyrs) border the southern edge of the Kara Kum desert, on the northern edge of terminal run-offs from the Kopet Dag (Harlan and Pasquereau 1969).

Palaeobotanical remains from Neolithic contexts at Djeitun, Chopan-depe, Bami, and Chagylly-depe (Lisizyna 1978; Zohary 1989: 359–62; 1996) indirectly confirm that small-scale irrigation in the Neolithic allowed the cultivation of domesticated einkorn and emmer wheat (*Triticum monococcum* and *Triticum dicoccum*) and six-row barley (*Hordeum sativum*, in both varieties: naked- and hulled-grain). Moreover, two “stone hoes” found at Chakmakli-depe and dated back to the Anau IA pre-Chalcolithic period (Berdyev 1968a), would have been well suited to cut irrigation channels and diverting watercourses. Similar tools were discovered at Tappeh Sialk I (Ghirshman 1938). A triangular cross-section channel (1 m in width and 0.24 m in depth) was dated to the Chalcolithic (c. 5200–4700 BC) at Tepe Pardis, in the Tehran plains. It may be the earliest example of artificial water management in Iran and the surrounding areas. Its antiquity is supported by a series of radiocarbon dates, associated ceramic sherds, and correlation with late Neolithic-Transitional Chalcolithic levels (Coningham et al. 2006; Fazeli et al. 2007; Gillmore et al. 2009).

In the following Chalcolithic, experienced farmers exploited land surfaces already improved by intensive agricultural cycles, and periodically refreshed by seasonal, small-scale floods. Irrigation agriculture was developed farther east, on the clay and silt plains of the Tedjen River delta. At Geoksyur 1 (Lisizyna 1965, 1972, 1981), a network of canals drew water from the main deltaic branches and associated reservoirs and discharged it near the settlement, where the crop fields were managed. Three parallel canals merged almost at right angles from an ancient silted river, and side canals or *arykhs* branched off from the three canals at various distances. A small water reservoir filled by a ditch was discovered near Mullali-depe or Geoksyur 4, dated back to the end of the fourth millennium BC (Lisizyna 1965: 107–13). Intensive artificial irrigation in the ecologically constrained deltaic area of the Tedjen might have temporarily granted a noticeable economic surplus to the local groups, but at the same time required the early defensive systems of sites such as Mullali-depe and Jalangach-depe (Fig. 9.3) (among others, Hiebert 2002: 36). Resource concentration and ecological circumscription in the Tedjen delta might be at the root of a diverging pattern of early urban development (after Carneiro 1970).

The Meana-Chaacha region of southern Turkmenistan is named after two streams called Meana-chay and Chaacha-chay. These streams experienced a shift from an eastern or south-eastern direction to a northern or north-western trend (Marcolongo and Mozzi 1997: 49–61), with important consequences on the local settlement patterns (see below). A buried irrigation canal, probably dug in prehistoric times to divert the water of the palaeo-Tedjen River, is best preserved between the two courses, 3–4 km north-east of Ilgynly-depe and more than 5 km east of Altyn-depe.

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Figure 9.3. Early defensive systems in the Middle Chalcolithic sites of the Geoksyur area (Mullali-depe and Jalangach-depe).
 Settlements of the Middle Chalcolithic in southern Turkmenistan and the surrounding regions

The documentation of the Middle Chalcolithic period (NMG II or late KD 5 and early KD 6 in the piedmont plain, see Table 9.1) is much more complete than the preceding Early Chalcolithic, dated to the first half of the fourth millennium BC. Extensive excavations were carried out in some sites of the piedmont plain and of the Geoksyur oasis, i.e. Kara-depe, Jalangach-depe, Akcha-depe, Mullali-depe, and to a lesser extent also at Altyndede. This allows a more reliable reconstruction of the cultural and socio-technological developments of the middle and second half of the fourth millennium BC (Table 9.2).

A general reconstruction of the stratigraphic sequence obtained from many excavations and test trenches at Altyndede was first attempted by V. M. Masson in the late 1970s, and later developed by L. Kircho and V. A. Alekshin (Masson 1977, 1981, 1988; Masson and Berezkin 2005; Masson and Kircho 2008). All tested contexts had Jalangach-type painted ceramics and distinctive unpainted red-slipped wares. These ceramics are typical of the Middle Chalcolithic of the central region of the piedmont of the Kopet Dag (Masson 1962: 14; 1989: 29; Kircho 1999: 60–64; see above), but are scantily represented in the Geoksyur region (Khlopin 1969: 27, 29). The unpainted red-slipped ware is very close to the pottery of southwestern Iran of the Lapui phase, dated to the first half of the fourth millennium BC (Sumner 1988). Russian archaeologists concluded that the mound was not fully occupied in the Early Chalcolithic and that in the following Middle Chalcolithic its settlement area (and possibly its population) was doubled.

NMG II layers were also unearthed in the imposing settlement of Ulug-depe, the site with the longest stratigraphical sequence in Central Asia: from the Chalcolithic to the Achaemenid period. Ulug-depe is located about 45–50 km north-west of Altyndede and Ilyngly-depe, very close to the mosque of the modern city of Dushak. V.I. Sarianidi, between

Table 9.2. Settlements in southern Turkmenistan and the nearby regions in the Middle Chalcolithic by contexts and (for the few published sites with specific information) their extent on the surface.

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Mid-Chalcolithic layers or finds</th>
<th>Extension in ha</th>
<th>Main bibliographic references</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chingiz-depe</td>
<td>South-western Turkmenistan, west of Kyzyl Arvat</td>
<td>Red-slipped pottery of NMG II type</td>
<td></td>
<td>Berdyev 1971: 11</td>
</tr>
<tr>
<td>Parkhay II</td>
<td>South-western Turkmenistan, Sumbar valley</td>
<td>About 33 collective graves with NMG II material culture</td>
<td></td>
<td>Khlopin 1981, 1997, 2002</td>
</tr>
<tr>
<td>Gievzhik-depe</td>
<td>South-western Turkmenistan, Geok-depe area</td>
<td>In the upper levels</td>
<td></td>
<td>Korobkova 1972</td>
</tr>
<tr>
<td>Til’kin-depe</td>
<td>South-western Turkmenistan, Geok-depe area</td>
<td>NMG II pottery recorded in the upper layers.</td>
<td></td>
<td>Khlopin 1983: 8; Masson 1982: 8</td>
</tr>
<tr>
<td>Gavych-depe</td>
<td>South-western Turkmenistan, Geok-depe area</td>
<td>NMG II pottery recorded</td>
<td></td>
<td>Berdyev 1976: 14; Masson 1982: 30</td>
</tr>
<tr>
<td>Suncha-depe</td>
<td>South-western Turkmenistan, Geok-depe area.</td>
<td>NMG II pottery recorded</td>
<td></td>
<td>Masson 1982: 30</td>
</tr>
<tr>
<td>Ekin-depe</td>
<td>Southern Turkmenistan, Ashgabad area</td>
<td>NMG II pottery recorded</td>
<td>12–20 ha.</td>
<td>Ganjalin 1956; Khlopin 1963: 8</td>
</tr>
<tr>
<td>Ak-depe</td>
<td>Southern Turkmenistan, Ashgabad area</td>
<td>Layer Ak depe II (T: c. 7 m)</td>
<td></td>
<td>Durdyev 1959; Masson 1966</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13th horizon</td>
<td></td>
<td>Kircho 1999</td>
</tr>
<tr>
<td>Kara-depe</td>
<td>Southern Turkmenistan, central Etek</td>
<td>Levels 15–9 (or 10) in sounding 1 (T: c. 3 m); levels 17–14 in sounding 2 (T: c. 2 m); horizons Kara 6–2 in exc. 1 (T: c. 5 m).</td>
<td>Probably between 8 and 14 ha.</td>
<td>Masson 1962, 1982; Hiebert 2002</td>
</tr>
<tr>
<td>Elen-depe</td>
<td>Southern Turkmenistan, central Etek</td>
<td>Seven horizons (from II to VIII) (T: 6.5 m)</td>
<td></td>
<td>Shchetenko 1968: 18, 21–24; Masson 1982: 30</td>
</tr>
<tr>
<td>Name</td>
<td>Location</td>
<td>Mid-Chalcolithic layers or finds</td>
<td>Extension in ha</td>
<td>Main bibliographic references</td>
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<tr>
<td>Namazga-depe</td>
<td>Southern Turkmenistan, central Etek</td>
<td>Levels 22–18 in sounding 1; levels 19–12 in sounding 5 (T: 2.5 m).1</td>
<td>Probably between 8 and 14 ha.</td>
<td>Kuftin 1956; Masson 1956a</td>
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<tr>
<td>Sermancha-depe (?)</td>
<td>Southern Turkmenistan, central Etek</td>
<td>Possibly on surface.</td>
<td></td>
<td>Marushchenko 1956</td>
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<td>Ulug-depe</td>
<td>Southern Turkmenistan, eastern Etek</td>
<td>NMG II pottery documented.</td>
<td></td>
<td>Masson 1982: 30</td>
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<td>Altyyn-depe</td>
<td>Southern Turkmenistan, Meana-Chaacha area</td>
<td>See text</td>
<td>Probably about 15 ha.</td>
<td>See text</td>
</tr>
<tr>
<td>Ilgynly-depe</td>
<td>Southern Turkmenistan, Meana-Chaacha area</td>
<td>See text</td>
<td>17 ha.</td>
<td></td>
</tr>
<tr>
<td>Seraks site</td>
<td>Southern Turkmenistan, Meana-Chaacha area</td>
<td>NMG II pottery documented.</td>
<td></td>
<td>Masson 1962</td>
</tr>
<tr>
<td>Geoksyur 1</td>
<td>Southern Turkmenistan, “Geoksyur oasis”</td>
<td>Levels 7–4</td>
<td>Possibly between 8 and 14 ha.</td>
<td>Sarianidi 1960; Khlopin 1964</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Levels 7–2</td>
<td></td>
<td>Masson and Berezkin 2005</td>
</tr>
<tr>
<td>Akeha-depe</td>
<td>Southern Turkmenistan, “Geoksyur oasis”</td>
<td>Seven levels (5–11) (T: 3.25 m)</td>
<td></td>
<td>Khlopin 1964</td>
</tr>
<tr>
<td>Aina-depe</td>
<td>Southern Turkmenistan, “Geoksyur oasis”</td>
<td>Four levels (5–8)</td>
<td></td>
<td>Khlopin 1964</td>
</tr>
<tr>
<td>Jalangach-depe</td>
<td>Southern Turkmenistan, “Geoksyur oasis”</td>
<td>Four levels (5–8) (T: 5.4 m)</td>
<td></td>
<td>Khlopin 1964</td>
</tr>
<tr>
<td>Geoksyur 7</td>
<td>Southern Turkmenistan, “Geoksyur oasis”</td>
<td>Seven levels (5–11)</td>
<td></td>
<td>Khlopin 1964</td>
</tr>
<tr>
<td>Geoksyur 9</td>
<td>Southern Turkmenistan, “Geoksyur oasis”</td>
<td>Four levels (9–12)</td>
<td></td>
<td>Khlopin 1964</td>
</tr>
<tr>
<td>Mullali-depe</td>
<td>Southern Turkmenistan, “Geoksyur oasis”</td>
<td>Five levels (8–12) (T: 4.7 m)</td>
<td></td>
<td>Khlopin 1964</td>
</tr>
<tr>
<td>Chong-depe</td>
<td>Southern Turkmenistan, “Geoksyur oasis”</td>
<td>Three levels (10–12)</td>
<td></td>
<td>Khlopin 1964</td>
</tr>
<tr>
<td>Tepe Yam</td>
<td>North-eastern Iran, upper Atrek valley</td>
<td>NMG II-like pottery documented.</td>
<td></td>
<td>Kohl et al. 1982</td>
</tr>
<tr>
<td>Tepe Shirvan</td>
<td>North-eastern Iran, upper Atrek valley</td>
<td>NMG II-like pottery documented.</td>
<td></td>
<td>Kohl et al. 1982</td>
</tr>
<tr>
<td>Yarim Tepe</td>
<td>North-eastern Iran, Darreh Gaz plain</td>
<td>NMG II-like pottery documented.</td>
<td></td>
<td>Kohl and Heskel 1980; Kohl et al. 1982</td>
</tr>
<tr>
<td>Nishapur</td>
<td>North-eastern Iran, northern Khorassan</td>
<td>NMG II-like pottery documented.</td>
<td></td>
<td>Hiebert and Dyson 2002;</td>
</tr>
<tr>
<td>Tepe Pahlavan</td>
<td>North-eastern Iran, northern Khorassan</td>
<td>NMG II-like pottery documented.</td>
<td></td>
<td>Vahdati 2010</td>
</tr>
<tr>
<td>Turang Tepe</td>
<td>North-eastern Iran, Gorgan plain</td>
<td>NMG II-like pottery documented.</td>
<td></td>
<td>Wulsin 1932; Deshayes 1966, 1967</td>
</tr>
<tr>
<td>Shah Tepe</td>
<td>North-eastern Iran, Gorgan plain</td>
<td>NMG II-like pottery documented.</td>
<td></td>
<td>Arne 1945</td>
</tr>
<tr>
<td>Yarim Tepe</td>
<td>North-eastern Iran, Gorgan plain</td>
<td>NMG II-like pottery documented.</td>
<td></td>
<td>Crawford 1963</td>
</tr>
</tbody>
</table>

Note  
1 Mixed materials dated to the Middle and Late Chalcolithic were also found in sounding 3, from 14.6 to 18.1 m.
the 1960s and the beginning of the 1970s (Sarianidi and Kachuris 1968; Sarianidi 1969, 1972) reached the Late Chalcolithic layers (NMG III), but not the oldest settlement deposits, extensively covered by massive Bronze and Iron Age deposits and structures. For example, Sarianidi in Excavation 1 reached Late Chalcolithic deposits (NMG III) some metres above the contemporary ground surface. At Kara-depe, levels 4–6 are a coeval phase (i.e. NMG II or late KD 5/early KD 6) of the central piedmont plain (Masson 1960, 1982). Here the distinctive ware is an attractive polychrome painted pottery, which, however, does not continue into the subsequent layers Kara-depe 2–3, the transitional phase between the Middle and the Late Chalcolithic. There is an architectural break between Kara-depe 3 and 4, marked by a diverging orientation of the buildings. Nonetheless, the shapes of the multi-roomed complexes and the tradition of burying the dead in uninhabited areas (the so-called intra moenia or intra-mural burials) continued, until the site was definitely abandoned in the Late Chalcolithic.

The Jalangach period is mainly attested, as already stated, in the Geoksyur and in the Meana-Chaacha regions. V. M. Masson and V. I. Sarianidi (1972: 66) suggested that the occupation of Geoksyur I in the Jalangach period extended over 10 ha or more (but such a figure is speculative, considering that the Early and Middle Chalcolithic occupations only come from a single stratigraphic pit). Distinguishing features of the excavated settlements are fortress walls, “shrines”, or buildings placed in the centre of the settlement with corners oriented to the cardinal points and containing raised rectangular podium-altars, series of parallel mud-brick walls interpreted as basements for granaries, and circular towers or round rooms set at the end of sections of the outer fortification walls. The pottery of this period is very diagnostic: open pots with parallel annular bands running beneath the rim, connected by thin triangles (a simplification of an Early Chalcolithic pattern). Figurines, bent-legged or in a sitting position with emphasised sexual organs, thighs, and buttocks, came from Jalangach-depe, Altyne-depe, and Ilglyny-depe (see below).

In the middle of the fourth millennium BC, eight of the nine prehistoric sites known today in the Geoksyur area seem to have been occupied at the same time, in a peak of demographic growth between the Early and Middle Chalcolithic. Only Dashlidji-depe, the northernmost ancient village and the key site for the Early Chalcolithic, was abandoned during the Middle Chalcolithic, probably due to the drying up of the terminal branch of the Tedjen River on which it was located. I. N. Khlopin (1964) suggested that Aina-depe, Jalangach-depe, and Geoksyur 7, were abandoned too, before the end of the same period, while Chong-depe, Mullali-depe, and Geoksyur 9 were established during this second phase of the Chalcolithic and survived into the next late period. In the Geoksyur period (NMG III), the architectural innovations of the Jalangach period continue in the Geosyur region, with a numeric increase of the multi-roomed living complexes. A characteristic type of pottery is an unpainted red-slipped ware, sometimes burnished, with irregular black spots on the exterior formed accidentally during firing.

Few sites have so far been identified in the western region of southern Turkmenistan. Here, all Middle Chalcolithic sites were described as very small and their deposits as unsubstantial or ephemeral. It might be an accident of exploration, because the international border areas are difficult to access. West of Ashgabad, only five small sites have Middle Chalcolithic layers: Chingiz-depe, Gievzdzhik-depe, Til’kin-depe, Gavych-depe, and Suncha-depe. The surface of Chingiz-depe was spotted by red-slipped pottery sherds of NMG II type (Berdyev 1971: 11). At Gievzdzhik-depe, where NMG II materials were found on the surface, the only excavation carried out in this macro-partition of southern Turkmenistan was very limited (Korobkova 1972). Til’kin-depe was investigated by D. Durdyev and A. A. Marushchenko in 1959, with a 6 × 4 m test trench that brought to light six architectural layers. The lowermost layers contain Early Chalcolithic sherds, while in the upper layers wares of the Early and Middle Chalcolithic were mixed (Masson 1962: 8). Information on Gavych-depe and Suncha-depe is limited to the presence of NMG II materials on the surface (Masson 1982: 30).

In summary, the total number of sites with Middle Chalcolithic deposits is less than the number of sites with documented Early Chalcolithic layers, but as Lisizyna argued (1978: 48), it was during this period that the settlements became differentiated into smaller and larger leading centres. Limited evidence shows that only seven sites (from west to east, Ekin-depe, Kara-depe, Namazga-depe, Ulug-depe, Altyne-depe, Ilglyny-depe, and possibly Geoksyur 1) were between 10 to 20 ha in size, and could have hosted, according to the most common estimates, a few thousand inhabitants. The other sites, as far as we presently know, were rural villages settled by a few households. The main centres seem to be separated from each other by distances of about 50–70km; a radius of 30–40 km might have expressed a measure of their territorial control on the most fertile portions of the piedmont strip. It is important to note, however, that the Tedjen delta cannot be considered in such simplistic terms; and that the boundaries of the sites on the surface, in this latter region but also near the alluvial fans of the piedmont streams, are probably very deceptive because of the intensity of sedimentation.

The models so far proposed for explaining the growth of the first large centres are limited to the abandonment of a certain number of small centres and a demographic shift towards a few larger settlements, some of which sensibly grew in size.
Similar explanations follow a traditional Soviet explanatory model: due to a doctrinal faith in unilinear evolution, any archaeological discontinuity was promptly accounted for by invasions or expedient population shifts. For example, Altyn-depe and Ilgynly-depe grew during the Jalangach period into large villages or small- to medium-sized towns of approximately 10–17 ha each. The substantially smaller site of Mondjukli-depe, located 2 km south-west of Altyn-depe and about 8 km north-west of Ilgynly-depe, was abandoned in a late moment of the Early Chalcolithic and its inhabitants might have moved to the two other sites growing nearby.

Along the same line, Marcolongo and Mozzi (1997: 49–61) more recently suggested that the Chalcolithic settlement of Ilgynly-depe was abandoned after the change of the course of the Meana-chay at the end of the fourth millennium BC, its inhabitants shifting to Altyn-depe, which as a result strongly expanded and began to acquire the features of an actual proto-urban settlement. One is impressed, however, by the close proximity of the two relatively large and probably central sites, located at a distance of less than 10 km from each other. If the sites were indeed settled (at least in part) in the same period, one should better regard them as a single extended and still poorly understood site complex, rather than separate and competing settlements.

**Ilgynly-depe: a crucial case-study of the Middle Chalcolithic**

Ilgynly-depe (Figs 9.4–9.5) was first discovered in 1929 by A. A. Semenov with the name of Kosha-depe (perhaps meaning “two depe” or “double depe”) in his unpublished report “Drevnosti Meycheneyskogo rayona – Antiquities of the Meychene region”. According to Semenov, the settlement was coeval with Anau, northern mound, excavated by R. Pumpelly (1908). In 1935 A. A. Maruschenko confirmed the attribution of the main stratigraphic deposit of Ilgynly-depe to the Anau II period. In 1951 S. A. Erschov explored most of the prehistoric sites of the piedmont plain, north of the Kopet Dag. In his report (1956), the site is unnamed (or the name of the site is not specified) and according to the surface material was again dated to the Anau II period.

In 1952, the XIV brigade of the JuTAKE, headed by B. A. Kufkin (1956) made the first topographical plan of the ancient mound and collected more sherds. Further studies were carried out in the autumn of 1953, in order to determine the stratigraphic sequence and its chronological span in the framework of the evolution of the Anau culture.

Later, three stratigraphic tests were opened in the site: one on the northern mound, another in the centre, and the last near the southern edge of the ancient mound. The results of the investigations are presented in Fig. 9.6.
village (Ganjalin 1959). The first was 6 × 3 m in size and 8 m deep. Here Ganjalin recognised nine layers (from IX to I), the total thickness of which was 4.5 m. The second sounding, in the centre, was 4 × 2 m wide and reached anthropic layers at a depth of about 3 m. Although none of these small trenches touched and explored the deepest strata or reached the natural soil, A. F. Ganjalin uncovered a continuous stratigraphic sequence, encompassing layers from Anau I to II of Pumpelly’s stratigraphic column (1908). Specifically, Ganjalin uncovered, above the Anau I level of the Early Chalcolithic, a layer with red- and grey-ware sherds, transitional to the Anau II level of the Middle and Late Chalcolithic period. This transitional phase, already described by Pumpelly, had not been encountered by Kuftin at Namazga-depe (1956) and for this reason had been considered with scepticism.

Between the 1960s and the 1970s, the site was visited by many archaeologists and researchers. Ceramics, ornaments, and tools were unsystematically collected. M. D. Khlobystina (1977) studied the anthropomorphic figurines of the old and new collections. Between 1985 and 1999 Ilgynly-depe was investigated by the Kara Kum Archaeological Expedition of the Institute for the History of Material Culture of St Petersburg (IIMK), headed first by V. M. Masson and later by Yu. Berezkin and N. Solovyova (Berezkin 1989; Masson 1989, 1992). In the first five years (1985–1989) a dozen trenches were laid down in the most promising areas. Excavations 4 and 5, on the north-eastern top of the mound, became extensive trenches, while Excavations 1 and 3, on the south-western edge of the highest part, were deepened to uncover a full stratigraphic sequence (Salvatori et al. 2009: fig. 2).

Even though a detailed stratigraphic column of Ilgynly-depe is still unpublished, according to V. M. Masson (1989), the uppermost layers of Excavations 2 and 3 contain, for a depth of 1.5 m, Geoksyur-type material of the first phase of the Late Chalcolithic, while lower deposits (more than 2 m deep) contain Jalangach-type pottery sherds and other artefacts of the Middle Chalcolithic period. Excavations 1 and 4 revealed unimpressive levels with Late Chalcolithic materials covering, in turn, a more massive Middle Chalcolithic deposit. Apparently, at Ilgynly-depe there are no layers with materials comparable to Mullali-depe, and the Mullali phase, considered by many as the end of the Middle Chalcolithic, might be relevant only in the so-called “Geoksyur oasis”, in the eastern Tedjen delta. In brief, two different trajectories of cultural development are recognised in two nearby regions, the Meana-Chaacha and the Geoksyur area, with alternating phases of tight interaction and weak connections.

Eventually, six architectural levels at Ilgynly-depe revealed a new Middle and Late Chalcolithic cultural complex, with high standards of technology and

Figure 9.5. New topographic map of the site of Ilgynly-depe in the Meana-Chaacha region: elevation in colours and 1 m contour lines, inclined view (G. L. Bonora).
crafts or artistic skill (Berezkin 1989, 1992; Berezkin and Solovyova 1998; Solovyova 2000, 2012), not fully reflected in the production of domestic pottery. Most of the vessels, in fact, are unpainted with a buff or reddish surface with dark patches due to uneven firing. Painted pottery is similar to that of Altyndepe: open bowls and cups painted with parallel blackish lines below the rim and large storage jars bearing chevron-like or schematic vegetal motives. Some fine polychrome sherds, in black and red, were perhaps imported from the Akhal region of southern Turkmenistan, between Anau and Namazga-depe, including Kara-depe.

The bulk of faunal remains belongs to domestic sheep, goats and bovines, and wild half-asses, suggesting that animal breeding and farming coexisted with hunting (Dolukhanov 1981; Kasparov 1989, 1994a, 2006). At Ilgynly-depe the wild half-ass or onager (Equus hemionus kulan) accounts for about 15% of the total, while in the Mesolithic-Neolithic layers at Djebel and Dam Dam Chesme, bones of this animal are absent or extremely rare. In Neolithic Djettun, onager or kulan bones are absent, and at Chagylly-depe and Chopan-depe they are still very scarce, suggesting that the systematic hunting of these animals was a Chalcolithic innovation (Berdyev 1966: 27; Kasparov 1994b: 148). At Ilgynly-depe sheep bones are about 64% of the total caprinoines vs. 36% of goats. Domestic dogs were possibly used for hunting or pastoral purposes (Kasparov 1996, 2006). Palaeobotanical materials include charred cereal seeds (mainly wheat and barley) and large amounts of charcoal, showing the exploitation of wetter environments than contemporary ones.

Excavations 1, 4, and 5 exposed the remains of mud-brick domestic and residential complexes with the richly decorated rooms mentioned above, interpreted by the excavators as “sanctuaries” (Fig. 9.6). The identification was supported by benches painted red, first constructed with wooden planks and later plastered; floors and walls painted black; low altars or fireplaces, oval in plan; clay tables and chairs, common in the earlier Middle Chalcolithic layers; rows of standardised containers sunk into the floors, almost always along the walls of the rooms; and elaborate wall paintings, preserved in the lower portion of the walls, with snakes, trees, dots, and geometric patterns. Big clay bucchero decorated with snakes in relief were discovered in level 5. Many anthropomorphic and zoomorphic statuettes completed the inventories of such rooms. These “shrines” were approximately square in plan with an average floor space of 60 m² (Berezkin 1989; Berezkin and Solovyova 1998; Masson et al. 1994). The excellent maps made by the Russian archaeological team (Masson et al. 1994; Solovyova et al. 1994; Solovyova 2000) show large dumps of sherds and burnt pebbles cracked by firing near these buildings. Wall paintings in similar buildings were found in four other sites (Pessedjik-depe, Jassy-depe, Sermancha-depe, and Anau). The earliest “shrine” with painted walls in Middle Asia, however, was discovered in the Qazvin plain at Tepe Zagheh (Negahban 1979). This north-central Iranian “sanctuary” is noticeable because of its size (117 m²), platforms or benches built as seats along the walls, a central fireplace, mountain goat skulls and horns mounted on the walls over the benches, and a large number of clay figurines found on the floor. Other buildings with peculiar architectural features, larger than the more common living structures, were found in nearly all the Geoksyur NMG II sites. Their distinguishing features are a topographical position near the centre of the settlements, a raised podium or altar in the centre of the room, and platforms or benches along the massive walls. Corners are oriented towards the cardinal points, and their stratigraphical continuity across several living phases confirms an important symbolic function. The most relevant of these constructions are room 1 of Jalangach-depe, room 7 at Mullali-depe, room 5 at Akcha-depe, and room III.1 at Aina-depe (Khlopin 1964). Although some of these rooms may share the functions and symbolic meanings of the “sanctuaries” of Ilgynly-depe, the complex wall paintings of the latter site are unique. Moreover, while the small surviving portions of wall paintings from other agricultural sites, regardless of the subject, were decorated with simple monochrome or polychrome paintings, those of Ilgynly-depe were made with a peculiar “graffito” technique.

According to the Russian excavators, the excellent preservation of the wall paintings of Ilgynly-depe is explained by a ritual process of abandonment of the painted rooms (e.g. Berezkin 1992; Masson et al. 1994; Solovyova 2011, 2012). Constructions would have been deliberately burnt and filled in when they went out of use, abandoning large numbers of objects inside. These include unbroken copper tools and many stone implements, among which there were about 70 stone mortars, some with a zoomorphic shape; many animal figurines and no less than 700 terracotta female figurines in unbaked clay; several complete anthropomorphic statues and two dozen in fragments. These buildings also contained equipment for daily use, such as terracotta spindle-whorls, and several wheel-shaped ceramic objects – mentioned above – probably parts of models of cartwheels (Kircho 2009: fig. 1); flint or chert tools; grinding stones; tools for manufacturing metal and stone objects; many small finds in other materials (leather, wood, pigments, and others); and bone awls. From the “sanctuary” of layer IV (Excavation 5), the Russian archaeologists also uncovered disarticulated bones of children and adults as well as two complete infant skeletons laid in an unusual stretched position (Masson et al. 1994).
Some anthropomorphic statues, similar in style to the clay figurines (see below) were made of sandstone (Korobkova 1987; Masson and Korobkova 1989) (Fig. 9.7). A stone human head had ochre stains in the mouth, while another human face decorated the side of a heavy stone container. These statues, like the numerous stone vases found in the dig, were locally manufactured. In fact, unfinished stone objects, production rejects, and waste still visible on the surface of the site are evidence that Ilgynly-depe was at the time an important stone-working centre.

Ilgynly-depe is very rich in copper artefacts and tools (Solovyova et al. 1994), the majority of which were found either on the floors of the so-called “sanctuaries” or in the adjacent rooms and open spaces. Such copper tools and ornaments include no less than 90 blades, and chisels, spear points, awls, rods with a thickened, flattened, or broken end, the double-spiral-shaped head of a pin, pipes and rolled beads, sheets, a shaft-hole axe-adze (the earliest so far in the ancient Near East and Middle Asia), and a round mirror. In spite of the hundreds of copper
artefacts found in the excavated trenches and on the surface, the Russians found no slag, crucible fragments, or other pyrotechnological indicators, and considered Ilgynly-depe as a copper-consuming settlement, not involved in metallurgical processing.

The Middle Chalcolithic anthropomorphic and zoomorphic figurines (Masson and Korobkova 1989) are perhaps evidence of an aspect of the spiritual life of the settlement (Khlobystina 1977; Antonova and Sarianidi 1990; Solovyova 2005). The most common type is a female image, sitting or rarely standing, with legs, large breasts, a slender neck, and a head covered with a small cap (cf. Sheri Khan Tarakai in Pakistan; Knox et al. 2010). Most of these statuettes were found in pieces; they were tempered with chaff and slipped in red or yellowish hues. Some figurines bear painted necklaces, while a few others have a straight line descending from the necklace and passing between the breasts. Other lines are painted on the upper parts of the arms and might represent bracelets. The largest figurine shows odd painted motives on the hips (comb-shaped patterns, simple and double lines, zigzag, nets, and sun motives with a point in the centre). Zoomorphic figurines are rather schematic, but represent mostly bulls (Kasparov 2000, 2001). Some portrayed goats, wild half-asses (onagers), and dogs.

Ilgynly-depe: new topography and surface studies

In spring 1999, an Italian team and N. Solovyova, Director of the Russian Expedition to Ilgynly-depe, carried out a new topographical plan of Ilgynly-depe during a two-week campaign (Figs 9.4–9.5; see also Salvatori et al. 2009: fig. 2). The team mapped the contemporary mound surface reconstructing in detail the shape of the mound and its dynamics of spatial occupation, recording the old Russian trenches, testing the possible evidence of craft activity areas,
Gian Luca Bonora and Massimo Vidale

and studying the local polished stone industry visible on the surface (copper and lead-related artefacts, finished and unfinished stone vessels, grinding stones, pestles, mortars, hollowed and grooved stones perhaps used as weights, rings, and various types of rough-outs; Fig. 9.8). Topographic recording was complemented by pictures taken with a camera suspended on a kite. The new topographic plan shows that the site covers approximately 17 ha and rises to about 14 m above the contemporary surrounding alluvial plain. It extends from north-east to south-west for c. 497 m and from north-west to south-east for c. 482 m. The perimeter of the settlement is 1520 m.

The search for craft activity areas revealed hundreds of terracotta spindle-whorls of variable size, suggesting that the site had concentrated important spinning and perhaps weaving activities. Also found near the top of the mound was a cluster of metallurgical indicators including tiny slag pieces, copper prills, and fragments of finished objects among which were copper sheets, rods, nails and beads, and a set of lead-like lumps (Salvatori et al. 2009). This is the only copper processing area so far discovered in a Chalcolithic site of southern Turkmenistan, and demonstrates for certain that some previous ideas (i.e. the absence of metallurgy in the ancient

Figure 9.8. Ilgynly-depe, surface survey. Stone artefacts identified and collected on the surface. Key: A, H, L = different types of stone vessels; B = stone ring; C, F = unfinished stone vessels; D, E = grooved weights; G, I, J, K = possible door sockets.
settlement) were wrong. A crucible fragment, possibly used for melting a polymetallic compound, was found at another point of the mound. Subsequent archaeometric studies revealed that the melting of copper and leaded copper for casting, the fabrication of copper beads by rolling specially prepared flat preforms into cylinder-like pieces, and the forging of short nails with a thick and enlarged head, possibly used for tapestry and wooden furniture, were all being carried out. In contrast, the smelting of copper-bearing ores is not on record; the settlement must therefore have imported semi-finished copper lumps or ingots. Notably, one object had been cast with a lost-wax process. Even more interestingly, the lead-like lumps turned out to be litharge fragments, possibly a by-product of a silver-refining technology.

Besides copper beads, already known from the Russian excavations, the finding of a silver bead and another one in gold suggests that the inhabitants of the centre might have been fully aware of the symbolic implications of ornaments made of the three metals and the involved hierarchy of value and status. With the exception of a few silver beads from Altyyn-depe (see notes 26–31 below) such beads in precious metals were not found in the contemporary graves, where the ornaments are mostly in stones such as gypsum, limestone, carnelian, agate, and others.13

The “sanctuaries” as hammams

Were the rooms or “sanctuaries” of Ilgynly-depe abandoned with their precious furnishings, to be ritually destroyed by fire because they were sacred? This is not impossible, but this interpretation (Berezkin 1989, 1992; Masson et al. 1994) is very difficult to accept, as the deliberate firing of whole buildings, in the heart of a closely packed lattice of domestic dwellings, would have been quite a dangerous undertaking. Even assuming, however, that the abandonment process was entirely dictated by unfathomable ritual reasons, what was the purpose of the rows of ceramic storage jars aligned along the walls? Why were only these special rooms provided with wooden and plaster benches? Why were large amounts of fired sherds and pebbles dumped outside these buildings?

We would like to consider the possibility that these units were hammams, rooms for hot steam baths – in other words, saunas. In Central Asia, Iran, and in many other regions of the Near East and Middle Asia, hot steam is the most common and least expensive medium for personal cleaning and body care. Furthermore, hammams have long been important places for relaxing and socialising (Figs 9.9–9.10). The inhabitants of Ilgynly-depe collected pebbles and potsherds, heated them red-hot, and placed them in rows of jars filled with water on the raised benches or “altars” and along the walls of these rooms. The jars would have thus produced hot steam, while people could sit on the benches, meet, and chat. At the same time hospitality might have had an important ethical value and could have been used as an efficient political strategy. In such socialisation contexts, wall paintings and other symbolic media would have conveyed important ideological messages, re-enforcing the social identities of the groups who owned or managed the bathhouses. The pebbles and cracked rocks used for producing steam would later have been discarded in the dumps beside the house.

Some of the most schematic anthropomorphic figurines found in the destruction layers of these rooms and in other excavated contexts, although generically described by the excavators as “limestone” artefacts, are often made with very coarse-grained, possibly volcanic stones (e.g. Solovyova 2005: nos 550–551, 556–559, 565–567, 569–570). A class of similar, possible anthropomorphic stone artefacts at Shahr-i Sokhta, was described as “volcanic rock polishers” or “reddish-to-black vacuolar basalt polishers”. They have been interpreted by M. Tosi (quoted in Ciarla 1981: figs 10, 11, p. 53) as tools for polishing alabaster vessels, but this functional association is doubtful, because such “tools” and stone vessel waste were never found in the same contexts. Similar rocks, in particular vacuolar basalts, are used today in Iranian hammams to scrape the skin, most often on the soles of the feet (Figs 9.9–9.10), and we should consider the possibility that at least some of the “figurines” of Ilgynly-depe were used as skin-scrapers in the daily activities of the bathhouses.

While this interpretation does not preclude a ritual or cultic use of the rooms, their firing in some cases might have been accidental, as a consequence of the intensive use of fuel and fire to heat the stones and sherds. The loss and scattering of many valuable artefacts might have been the result of random processes, and not necessarily of an intentional ritual behaviour. This functional hypothesis, however, does not fully explain some peculiar architectural features (such as the recesses and apparently closed cubicles of these constructions), nor the periodic discovery of human skeletal remains in the ruins. While this difficult question remains fully open to speculation, in our conclusions (see below) we venture to propose some possible socio-political implications of the new interpretation.

Graveyards and burial practices

The Chalcolithic and Bronze Age graveyard of Parkhay II was discovered in 1977 in the Sumbar valley, on the edge of the modern village of Kara-Kala, in the province of Kyzyl Arvat (Khlopin 1981, 1997, 2002). It contained 273 collective and individual burials, no less than 33 of which date back to the Middle
Figure 9.9. Leisure time and socialization activities in a traditional hammam in Iran. An attendant washing and cleaning a visitor; personal cleaning may express hierarchic or power relationships. Note the use of textiles, costly metal objects and, at far right, a plate containing rounded rubbing stones in vacuolar basalt for scraping the skin. Life-sized wax models in a traditional hammam in Iran (in the hammam museum at the Kerman bazaar, Iran).

Figure 9.10. Use of rounded rubbing stones in vacuolar basalt for scraping the soles of the feet, life-sized wax models in a traditional hammam in Iran (picture taken in the hammam museum at the Kerman bazaar, Iran).
The Middle Chalcolithic period. The Parkhay II graveyard is unique in the archaeological funerary inventory of the whole of Middle Asia, first because the graves are not disturbed, covered, or interspersed with residential or special-function buildings, and second because mostly in the Chalcolithic, but also in the following Early Bronze Age – tombs are collective, with primary and secondary burials. The number of individual graves becomes noticeable only from the Middle Bronze Age onwards, while in the Chalcolithic and in the Early Bronze Age their percentage remains very low. Third, this cemetery is the only one to have collective burials already in the Early and Middle Chalcolithic periods, confirming that the plains and intermontane valleys of south-western Turkmenistan were a distinct cultural region divided into several socio-political or cultural areas. The intermediate, central position of the Sumbar valley was optimal for spurring autonomous cultural innovation. Four other graveyards in this south-western region (Parkhay I, Sumbar I, Sumbar II, and Yangi Q’ala), which were not intermingled either with residential or with utilitarian buildings, show a clear-cut cultural and ritual distance from the prevailing proto-historic funerary traditions of Middle Asia. All the burials in the four latter-mentioned cemeteries, however, date to the Late Bronze Age (Ganjalin 1956; Khlopina 1981; Khlopin 1986).

Some child burials at Anau north, Kara-depe, and Altny-depe are as wealthy as adult ones, if not wealthier. In the largest settlement of the Meana-Chaacha region, Altny-depe, the individual burials of the Middle and Late Chalcolithic periods so far excavated amount to 24 graves, 14 of which belong to children and infants. Only two of the 10 adult burials contained a few grave-goods (nos 199 and 278). One of the 14 child graves (no. 725) had a rich funerary inventory, while another (no. 911) contained a few objects. The other 12 child and infant burials had no grave offerings.

The picture of inequality provided by the graves of Altny-depe seems fully confirmed at Kara-depe. In this site one of the few Early Chalcolithic graves, no. 28, was uncovered during Excavation 1 (Masson 1960). In the layers of the Middle Chalcolithic period at Kara-depe 62 individuals were buried, about 57% of which had no furnishings near or above the skeleton. Of the adult graves 43% contain only ceramics (with the exceptions of graves 31 and 32). The record of wealthy child burials is more substantial (graves 34, 41, 54, 55, 57, 72, and 75). In the following Late Chalcolithic, the percentage of graves with offered goods increases to 64%. One of the Middle Chalcolithic graves, no. 31, was very richly furnished, but due to the bad preservation of the skeleton it is not known whether it was a child or not. Besides burials with copper and bone artefacts and necklace and bracelet beads, graves with pottery vessels in grey-blackish ware, placed near the legs or the skull, are more common. In general, there is no apparent correlation between funerary wealth, sex, and/or age of the deceased.

During the 1904 excavations at Anau north by R. Pumpelly and L. Warner, and those in 1978–1982 by K. Kurbansakhatov and F. T. Hiebert, a total of 23 burials were discovered within the settlement area. The earliest graves (1 and 2) were ascribed to the Anau IA proto-Chalcolithic period. Eight burials (3 to 10) are dated to the Early Chalcolithic.

There were 13 burials in the Middle Chalcolithic levels at Anau, nine from the Anau IIA layers and four, all containing children, from the Anau IIB layers. As at Kara-depe, some were found surrounded by mud-brick enclosures. The furnishings were scarce and had few ceramic vessels, but often contained beads. Grave no. 17, according to Hiebert (2003: 123), or no. 9, according to Masson (1962: 8), had no less than 1066 small beads in a whitish stone, found near the pelvis of a child and decorating the girdle or other garment; and grave 6, excavated by K. Kurbansakhatov, contained a child provided with several hundred small and larger beads made of limestone, probably sewn to the dress or funerary shroud (Hiebert 2003: 120). Thus the funerary record of Anau north, as far as child burials are concerned, is consistent with Altny-depe and Kara-depe.

At Namazga-depe, information on the Chalcolithic graves is very scanty and uninformative. At Ilgynly-depe 88 Chalcolithic burials were found. The graves, hosting individuals of various age groups, had no furnishings or were supplied with a single ceramic container. Most were individual tombs and many were secondary burials. A collective grave in a round pit, similar to, and probably a prototype of, the later NMG III tholos-like graves in mud brick discovered at Altny-depe and Geoksyur 1, was also found on the western edge of the site (Masson et al. 1994).

In short, the Middle Chalcolithic communities of the region practised different types of burials. Collective round tombs, with primary and secondary (fractional) burials, are known at Parkay II, in south-western Turkmenistan and, at least in a single instance also at Ilgynly-depe, on the opposite side of the piedmont strip. These collective chambers usually do not stress (at least in terms of grave furnishings) different levels of rank, status, or wealth. They were empty burial chambers used by some families or particular individuals for generations, perhaps as a symbol of the ancient solidarity and kinship ties that kept together the extended families living in the large multi-roomed complexes. At present, the record is so scanty that it is difficult to understand how far the selective geographical distribution of similar graves depends upon idiosyncratic cultural traditions. We witness a marked differentiation in the grave furnishings of children, mainly expressed by
the number and quality of the stone beads worn by the deceased or attached to the funerary garments. The impression is that the ideologies prevailing in the period under scrutiny did not favour the representation of social inequality at the funerals of adults, but for some reason this prescription could be ignored when dealing with children. Obviously enough, the richest graves of infants and children suggest that status and differential access to important symbols, made with valuable materials, was inherited or ascribed at birth on kinship or family lines, and not individually achieved in life.

Conclusions

In the Middle Chalcolithic or NMG II period of southern Turkmenistan, settlement networks took the form of a scatter of small rural villages pivoting on a few larger central towns, spaced with some regularity at distances of 50–70 km or more, from the Kyzyl Arvat region to the Tedjen delta on the southern margin of the Kara Kum desert. These sedentary settlements thrived thanks to skilled agriculture made possible by artificial irrigation, husbandry, and (most probably) carefully maintained strategic alliances and trade links with the local nomadic groups. The noticeable amounts of wild ass bones at Ilgynly-depe might imply not only that hunting in the steppe had become a form of economic intensification, but possibly also that different specialised groups were gradually attracted towards the sphere of early urban economy, and interacted more systematically with its sedentary population.

These early towns (so far we know of seven) were soon able to concentrate and perform important economic, political, and ideological functions. Although palaces and large cultic buildings have so far not been found, in the area watered by the Tedjen delta, polygonal defensive walls and possibly round towers surrounded some relatively large houses, provided with their storage facilities. This suggests that where land and water were abundant but ecologically constrained, the elites had the resources, authority, and power to plan and defend their settlements with medium- to large-scale architectural projects. The absence of similar defensive concerns, or a lower coercive capacity of the elites, might explain the apparent absence of walls and towers in the settlements of the piedmont.

Studies on the material culture and craft systems show a very advanced technical knowledge and efficient networks of procurement and trade of strategic resources. Copper and stones reached sites such as Ilgynly-depe from medium- or long-distance source areas as consignments of raw materials (for stones) or semi-processed ingots (for copper). The smiths of Ilgynly-depe locally manufactured a wide range of tools and ornaments, copper beads among others. While former studies emphasised a pretended “primitive” character of the Middle and Late Chalcolithic metallurgy (e.g. suggesting that the forging technology was crude, and all the tools employed were made of stone; Korobkova and Sharovskaja 1994) later studies suggested that metal beads were processed with advanced copper implements. The inventory of metallurgical techniques practised at Ilgynly-depe reveals that the only meaningful innovation of the late third millennium BC was the introduction of tin as an alloying component (Salvatori et al. 2009). All the other processes had been developed 1000 years before.

Gold and silver beads were also used (and probably manufactured) in these centres. Silver might have been locally refined from ores such as galena or lead-rich ingots. Agate, carnelian, gypsum, and limestone were extracted and traded from medium-distance source areas. Precious rare materials such as lapis lazuli or exotic shells, traded from remote source areas, also gradually became part of the local ornaments. Indirect evidence (terracotta spindle-whorls and perhaps stone-handled weights) suggests that these central sites were also intensively involved with the textile industry. There is little doubt that the craft industries of the NMG II sites were fully equipped to represent the supremacy of the emerging elites, with both rough and subtle distinctions in each instance.

The welfare of a centre like Ilgynly-depe is also reflected in an abundant local production of stone vessels and anthropomorphic statues. Valuable artefacts of this type circulated together with copper items in the so-called “sanctuaries”, which we would rather interpret as hammams or steam houses. This identification does not rule out the possibility that these special buildings were the seat of important occasions of socialisation or formal ceremonies, as suggested by the lavish wall paintings. Most, if not all, of the multi-roomed complexes that form the core of the settlement of Ilgynly-depe were provided with one such room. The heads of the families could gather and meet in these rooms and bathe, perhaps with guests, while performing important rituals and discussing the town’s matters. In this light, the steam houses could have been used to perform a kind of “diffuse political control”, a possible alternative to a one-sided, direct centralisation of decision-making and religious functions – in the same way as other communities of the ancient Near East and Middle Asia. Finally, the funerary rituals on record so far may reflect a contradiction between traditional egalitarian ethics and the drive to display a growing social inequality: funerals of children, perhaps because the latter were not fully developed social personae, seem to have been the contexts in which contrasting values and new compelling political issues reached a compromise.
Notes

1 The earliest fragment of a “weight” or gyr comes from the upper horizon of Dashly-depe, near Izgant, 30 km west of Ashgabad. According to I. N. Khlopin, this stone object is dated to a late phase of the Early Chalcolithic (Khlopin 1963: 9), while according to A. A. Maruschchenko to the beginning of the Middle Chalcolithic (Kurbansakhatov 1987: 100). V. A. Alekshin proposed that these objects were used as weights, while for A. P. Okladnikov they had a technical role in irrigation, even though their frequency in domestic debris rather suggests household functions. H. Wulff observed the use of similar large stone weights in rug-making in modern Iranian villages (Wulff 1966: 202–04).

2 At Tepe Pardis in the Tehran plains, the first grey-black burnished ware appears in Late Neolithic or Transitional Chalcolithic horizons (c. 5200–4700 BC, calibrated 14C dates) (Fazeli et al. 2010). At Tepe Hisar the first but still scanty evidence of burnished grey ware is found in the Hisar IA–IB periods (Early–Middle Chalcolithic), while in the next stage, Hisar IC–IIA (Late Chalcolithic) burnished grey ware bowls on tall pedestal bases, deep bowls with flaring rims, and short- and long-necked bottles are already in use. Coeval to the Hisar IC–IIA period are Tureng IIA (sondage A, levels 26–20) (Deshayes 1966, 1967), Yarin Tepe II (Crawford 1963; Stronach 1972), and Shah Tepe III (Arne 1945). There are, however, substantial differences in the grey ware ceramic traditions of the Damghan and Gurjan regions: incised and applied decoration is common in Tureng IIA and Shah III, but is absent from the grey ware specimens of Hisar IC–IIA. Also the repertory of pottery forms is different.

3 Ghabristan, Period III, levels 8–7, in the Qazvin plain (Majidzadeh 1978, 1981), Ozbaki, Mehdikani, Mafinabad, Sadeghabed Sadeghabadi, Chouqu, Cheshmeh Ali, and Mortezagard in the Tehran plain (Fazeli et al. 2005) and Sialk, layer IIIa–IIIb in the Kish plain (Ghishman 1938). See Piller (2003–2004) for a recent study of the grey wares (grouped in Western, Central and Eastern Grey Ware) on the central and northern Iranian plateau during the Bronze Age.

4 The excavations by a French-Turkmen team in the first years of the new millennium did not uncover new Chalcolithic layers, as it considered only the stratigraphic horizons already described by Sarianidi (Lecomte et al. 2002).

5 Chingiz-depe is 12 km west-north-west of Kyzyl Arvat and 7 km east of Parou. Gievdzhik-depe and Til’kin-depe are located in the Geok-depe region. The first site is 18 km west-north-west of Geok-depe, while the second is 6 km east of the same city. Gavych-depe is located between the mouth of the Chuli gorge and the railway, while Suncha-depe is located 12 km south-east of Bakhardan.

6 The correlation between Excavation 3, where six layers were excavated, and Excavation 5, dug to a total depth of 1.5 m, is based on the following identifications: the bottom of layer II = layer IA; the top of layer III = layer IB; the bed of layer III = layer IIA; and layer IV = layer IIB.

7 Some patterns (black parallel lines under the rim) in the Jalangach period are shared by the sites of the Geoksyur area as well as by the ceramic repertories of Altyn-depe and Ilgynly depe; see also the collective burials of the Late Chalcolithic at Geoksyur, Altyn-depe, and Ilgynly-depe

8 Peschedjik-depe is a Djebut culture Neolithic site in the Geok-depe area (Berdyev 1969b; 1976; Lollekova 1978, 1988). It has a 3.5 m cultural deposit dating back to the Middle Neolithic (second half of the sixth millennium BC). The uppermost layer has a large structure, room 12, measuring 64 m², with massive walls, an alabaster-plastered floor, and a big hearth-fireplace. It contained no utilitarian finds. In the second building level of this “sanctuary” or “clubhouse”, a fresco was found with geometric designs, in black and red on a whitish background, and naturalistic animals. Other fragments of wall paintings were found by O. Lollekova in 1976 on the low parallel walls near room 12.

9 Jassi-depe, a few kilometres north of Namazga-depe in the eastern Akhal region, was excavated by S. E. Erschov and B. A. Kutfin in the 1950s (Erschov 1952; Kutfin 1956). In two rooms (nos. 15 and 16) of a central building interpreted as a “shrine” (33 m²), with corners oriented towards the cardinal points, repainted geometric frescoes were found with lozenges connected end to end, and a series of wooden columns.

10 Sermancha-depe is a small site in the piedmont between Namazga-depe and Ulug-depe, dated to the Early Chalcolithic. Also reported on the surface were NMG II-related sherds. A wall painting was discovered here in the 1950s (Masson 1956b: 226).

11 The excavations at Anau north – by S. E. Erschov in 1953 (1956: 27), K. Kurbansakhatov in 1977 and 1982 (Hiebert 2003), and F. T. Hiebert in 1997 (Hiebert 2003) – unearthed several wall paintings. The earliest examples were found in Erschov’s second architectural level, corresponding to layer 17 of Hiebert’s sequence, and dated to the Anau IFI period, an early phase of the Early Chalcolithic. Here, room 3, interpreted as a shrine (Masson 1982: 21), had plastered and painted inner walls with stylised checkerboards and triangles. In the architectural levels of the late phase of the Early Chalcolithic, equal to layers 9–5 of Hiebert’s column, buildings were found whose inner walls were repeatedly painted black, with benches or piers and square-shaped rooms whose interior had been deliberately cleaned and burned (Hiebert 2003). This interpretation was borrowed from what was proposed for the “sanctuaries” of Ilgynly-depe (Berezkin 1992).

12 This construction was dated, after its general archaeological context, between the end of the seventh and the beginning of the sixth millennium BC.

13 All these stones were visually identified.

14 Not far from the Parkhaya II cemetery and from Karam-Kala, the site of Parkhaya, formed by an outer rock shelter and an inner cave divided into two sectors, yielded a potsherd near the lowermost layer, possibly belonging to the Chalcolithic, without specifying whether it belonged to the early, middle, or late phase of the same period (Harris 2010: 109–10).

15 The toponym Parkhaya II was for a long time associated only with the Chalcolithic and Bronze Age graveyard. A residential settlement near the cemetery has been
recorded by the excavator I. N. Khlopin since 1984, but very little information has been published. In the third figure of the second book on Parkhaj II, the location of the settlement is marked by a dotted line running a few metres to the west of the cemetery (Khlopin 2002: fig. 3). The settlement extends for 300–400 m to the south-west of the graveyard, covers an area of 5–6 ha, and its surface is covered by Early Bronze Age materials. The thickness of the anthropic deposit is more than 4 m and the layers also contain Late Chalcolithic ceramics. D.R. Harris tested the settlement, while searching (unsuccessfully) for Neolithic deposits beneath the Chalcolithic layers (Harris 2010). He described it as 500 × 300 m site, the surface covered with bones and ceramics. In these new accounts, the topography of the Parkhaj II site complex (cemetery and settlement) seems very similar to that of Shahr-i Sokhta: in both cases the residential quarters were built near the space for the dead, but the two areas are neatly segregated.

16 The most common prehistoric funerary custom of Middle Asia was to dig the burial pits into the floors of abandoned residential structures, or build mud-brick tombs in abandoned sectors of the ancient settlements (cemetery intra moenia). For the exceptional separation of graveyards and settled areas at Parkhaj II and Shahr-i Sokhta see previous note.

17 In the Late Chalcolithic, the latest centuries of the fourth and the first centuries of the third millennium BC, collective burials appear in several sites, widespread in Middle Asia. There now follows a catalogue of the sites with Late Chalcolithic collective burials so far excavated and published. At Tepe Hissar the remains of ten individuals were uncovered in sq. DG 00 while 12 individuals were unearthed in sq. DG 96; both groups were found in Hissar III contexts (Schmidt 1933: 440). In 1962 at Kara-depe a mud-brick rectangular structure (2.20 × 2.60 m) was found, built within the courtyard of one of the massive multi-roomed complexes of the uppermost level, dated to the Late Chalcolithic (Masson 1964: 3–4). The number of collective graves at Altyne-depe is higher. We start with the grave with individuals 281–282 from layer Altyne 9 (excavation 1; hereafter exc. 1) dated to the Late Chalcolithic; another grave with individuals 291–296 and 308 from layer Altyne 10 (exc. 1) also dated to the Late Chalcolithic; a grave with individuals 525–528 and 535 from layer Altyne 9 (still from exc. 1); funerary chamber 27 (individuals 683–686) from layer Altyne 8 (exc. 5), possibly a transitional level between the Late Chalcolithic and the Early Bronze Age; funerary chamber 3 (individuals 738–739 and 795) from layer Altyne 9 (exc. 5); the funerary chamber in courtyard B (individuals 905–910) from layer Altyne 10 (exc. 5); the funerary chamber in courtyard A (individuals 913–918) from layer Altyne 10 (exc. 5) (Masson and Berezkin 2005). Primary and secondary burials were recognised within round- and squarish-shaped buildings, named tholoi by the excavator, at Geokxsuyu 1: tholoii A, B, B, Г and D from the so-called “excavation of the necropolis”, tholoii III, ІV, 3 and another (without a name, within room 51) from exc. 2; and tholoi T, С, LI, Y, X, Φ, another without a name (north of tholos Φ), III and E from exc. 3.

All these funerary structures are dated to the Late Chalcolithic (Sarianidi 1959, 1960, 1965, 1966; Masson 1964). At Mundigak in Afghanistan a certain number of ossuaries were excavated in mound C (Casal 1961: 45–46), while at Shahr-i Sokhta, in the Iranian Sistan, two collective burials were found by the Italian mission: grave GTT 1003 lower layer, and grave HTW 410 (Piperno and Salvatori 1983, 2007; Piperno 1986; Bonora 1998–99; Bonora et al. 2000). More recently, other collective burials (14007, 2000, 2301, 5605, 6009, 6200, 6301, 6514, and 6605?) were found by the Iranian mission headed by M. Sajjadi (2003, 2007; Sajjadi and Casanova 2006). At Sohr Damb, in the Nal valley of eastern Baluchistan, collective burials were dug both by H. Hargreaves in the 1920s (Hargreaves 1929) and more recently by the German project headed by U. Franke-Vogt (2003–2004, 2005). Here the graves with collective fractional burials hosted infants, children, and adults buried together. Single and multiple burials are briefly reported in a destroyed mound, site 131, in the Darra-ye Bolagi area of Fars, Iran (Azarnoush and Helwing 2005: 206, figs 25, 26). As already stated, Altyne-depe has many examples of this funerary practice, the earliest from layers Altyne 10 and 9, the latest moments of the Late Chalcolithic, when Ilgyny-depe was already abandoned or was about to be abandoned. A collective grave in this latter site, dated to the middle of the fourth millennium BC (Masson et al. 1994), would be extremely relevant – if such a dating can be confirmed – as the earliest grave of this type in south-eastern Turkmenistan, older than those found at Altyne-depe, and a remarkable deviation from the traditional burial customs of Middle Asia. Regrettably, this (possible) collective burial from Ilgyny is not described.

18 The individual graves at Altyne-depe (Masson and Berezkin 2005) are the following: nos. 186, 189, and 190 (exc. 11, arbitrary cut VII, layer Altyne 11 or later); no. 199 (exc. 11, arbitrary cut XVIII, probably the only one of the Middle Chalcolithic); no. 278 (exc. 1, layer Altyne 9 or later); no. 284 and 285 (exc. 1, layer Altyne 9); no. 722 and 725 (exc. 15, layer Altyne 10); nos. 735, 822, 823, 824, 825, 835, 838, 838A, 840, 841, 904, 911, 912, and 919 (exc. 5, layer Altyne 9); nos. 925 and 926 (exc. 5, layer Altyne 11).

19 In grave 725, a child of about 8 years old was buried with 11 vessels, 10 beads, and spacer-beads in lapis lazuli, turquoise,agate, and limestone, a spherical-conical “finial” or “globe” in limestone and two female terracotta statuettes, one of which was painted (Masson and Berezkin 2005: 130, pl. 114).

20 Grave 911 contained a 5–6-year-old child, buried with a painted cup and a small pot, an agate spacer-bead, and an anthropomorphic terracotta statuette in a sitting position (Kircho 1994: figs 2, 14, 15; Masson and Berezkin 2005: 144, pl. 145B, 1–4).


22 Possibly a girl, buried with bracelets, a necklace, and the hair decorated with many other stone beads.

23 With a necklace of 32 beads and a bracelet of 11 gypsum beads.
24 Grave 34 contained the remains of a child of about two years, provided with seven beads in a light brown stone and eight in a dark red stone; grave 41 belonged to a child about four years old, on whose neck 62 gypsum flat beads were found; another child of about four years was buried in grave 54, with 92 carnelian beads found near the skull and the neck; a newborn infant in grave 55 had 32 flat beads in a whitish stone on the neck, and 26 flat and two elongated beads in lapis lazuli near the knees; a newborn infant in grave 57 was accompanied by five elongated beads in gypsum; the skeleton in very bad condition of preservation in grave 72 was furnished with 24 flat gypsum beads found near the right wrist; lastly, grave 75 contained a child of about four years with 420 beads in gypsum, one in carnelian, two in lapis lazuli, and six in silver-coated gypsum, all found near the neck and the chest, a bracelet of seven carnelian beads on the left wrist and a second bracelet of seven beads, two of which in carnelian, four in lapis lazuli, and one in silver. Some animal bones were detected on the legs. In this burial cluster, all tombs belonged to layer Kara 2 of exc. 1, with the exception of the last, found in layer Kara 3 of the same trench.

25 The Early Chalcolithic graves of Anau north are listed here following F.T. Hiebert’s book (2003: 118–126), providing substantial descriptions and useful drawings and pictures of these funerary contexts. Complementary information may be found in I.N. Khlopin 1963: 9–10.

26 In the words of I.N. Khlopin, “...inside layer XXI [of test trench 1], characterised by polychrome pottery sherds typical of the Middle Chalcolithic and by other sherds decorated with patterns of the Early Chalcolithic, besides some children and infant burials, was a grave containing an adult, whose sex remains undetermined. The body was lying in a crouched position on the right side, with the arms bent at the elbow, the hands in front of the face, and the skull directed towards the east. The funerary inventory was represented by a painted bowl, dated by V.M. Masson to the beginning of the Middle Chalcolithic.” (Khlopin 1963: 12). This description contradicts a previous statement by V.M. Masson, who had stated that, “...in the layers of the Middle Chalcolithic of test trench 1 three adult burials and four containing children were excavated. Two adult burials, from layer XIX, were filled with corpses lying in a flexed position on the right side and the skulls facing towards the south. In front of the face of one of the two skeletons was a bowl. The body in the grave from layer XXI was also lying in a flexed position, but on the left side, with both arms bent at the elbow and the hands in front of the face. The skull, like the other two previously described, was facing towards the south.” (Masson 1962: 11). These two descriptions are so contradictory that it is probable that the two authors are describing two different graves from the same archaeological layer, despite the fact that Khlopin quotes Masson’s views on the chronology of the tomb. The picture published by Kultin (1956: 271, fig. 13) seems to confirm Khlopin’s description, but the question remains open, because the orientation, eastwards or southwards, is not reported.

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