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Ulug-depe and the transition period from Bronze Age to Iron Age in Central Asia. A tribute to V.I. Sarianidi

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Volume 6

To the Memory of Professor Victor Sarianidi

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N.A. Dubova (editor in chief),
E.V. Antonova, P.M. Kozhin, M.F. Kosarev,
R.G. Muradov, R.M. Sataev, A.A. Tishkin

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Данный выпуск Трудов посвящен памяти открывателя нового центра древневосточной цивилизации, основателя и постоянного руководителя Маргианской археологической экспедиции В.И. Сарияниди. Он состоит из трех разделов. В первый из них включены воспоминания друзей и коллег выдающегося археолога; во второй — описание и анализ новых находок и открытий, сделанных на известном памятнике эпохи бронзы Гонур-депе (2300-1600 до н.э.); а в третий — характеристика Гонура и других объектов Бактрийско-Маргианского археологического комплекса (БМАК) в сравнительном контексте с синхронными памятниками Центральной Азии и Ближнего Востока. Затрагиваются вопросы строительства и архитектуры, древней металлургии, мировоззрения населения, глиптики и сфрагистики, биоархеологических реконструкций, реставрации археологических предметов. Значительное место уделяется анализу торговых и культурных связей в пространстве Евразии, значению древней дельты Мургаба как перекрестка путей. Вводится в научный оборот ряд новых уникальных объектов эпохи бронзы, в том числе найденные и на Гонуре.

Transactions of Margiana Archaeological Expedition. Vol. 6. To the Memory of Professor Victor Sarianidi / N.A. Dubova (editor in chief), E.V. Antonova, P.M. Kozhin, M.F. Kosarev, R.G. Muradov, R.M. Sataev, A.A. Tishkin – M.: Staryi sad, 2016 — 580 p.
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This issue of Transactions is devoted to the memory of the discoverer of a new center of ancient oriental civilization, the founder and the permanent head of the Margiana archaeological expedition Victor Sarianidi. It consists of three sections. The first one included the memories of friends and colleagues about the outstanding archaeologist; the second one – description and analysis of new findings and discoveries made in the famous Bronze Age archaeological site Gonur Depot (2300-1600 BC); and the third one – the characteristics of Gonur and other objects of the Bactria-Margiana archaeological complex (BMAC) in a comparative context with synchronous monuments of Central Asia and the Middle East. The construction and architecture, ancient metallurgy, ideology, glyptic and sphragistics, bioarchaeological reconstructions, restoration of archaeological objects are affected. The significant attention is given to the analysis of trade and cultural relations in the Eurasian area, to the value of the ancient delta of the Murghab river as the crossroads. New series of unique Bronze age objects, including those have found at Gonur are introducing into scientific circulation.

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ТОМ 6
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Ulug-depe and the transition period from Bronze Age to Iron Age in Central Asia. A tribute to V.I. Sarianidi

After the pioneering excavations of V.I. Sarianidi at Ulug-depe in the late 1960s, the site appeared as one of the rare settlements of Central Asia with an occupation during both the Bronze Age and the Iron Age. For him as for the French-Turkmen Archaeological Mission currently working at the site, it offers an excellent opportunity to study the transition period between the Bronze Age and the Iron Age. In this paper, we bring together some unpublished data from V.I. Sarianidi's excavations and the first results of our recent work concerning this issue. In order to reach an understanding, we set back Ulug-depe in the context of the neighbouring settlements of the Kopet Dagh piedmont, but also of the contemporary sites of Margiana and Bactria. Altogether, the data evidence a continuity of the occupation between the Late Bronze Age and the Early Iron Age, in a context of coexistence of different cultural communities, and a progressive, but short transition phase.

Introduction

Ulug-depe is located in the eastern Kopet-Dagh piedmont zone, 6km south of the village of Dushak in the Etrap of Kaahka. With a total area of 13ha and more than 30m high above the surrounding plain, Ulug-depe displays the longest stratigraphic sequence of Central Asia, from the Late Neolithic until the pre-Achaemenid period (Lecomte, 2011, 2013).

First excavations at Ulug-depe were laid from 1967 to 1970 by the Geoksjur expedition of the Institute of Archaeology of the Academy of Sciences of the USSR, headed by Viktor Ivanovich Sarianidi. During the four field seasons he led at Ulug-depe, V.I. Sarianidi opened six soundings that allowed him to draw the outlines of the stratigraphy of Ulug-depe. He thus evidenced levels from the Early Bronze Age (Namazga IV, hereafter NMG), the Middle Bronze Age (NMG V), the Late Bronze Age (NMG VI), the Early Iron Age (Yaz I), and the Achaemenid period (Сарианиди, 1967, 1968a, 1968b, 1969, 1971, 1972; Сарианиди, Качурис, 1968). Since 2001, the French-Turkmen Archaeological Mission (MAFTur) works in turn at the site, under the direction of M. Mamedov and O. Lecomte

(2001–2013) and J. Bendezu-Sarmiento (since 2014).¹ The work of the MAFTur contributed to refine the chrono-stratigraphy of the site, and it became clear that the last period of occupation should be attributed to the pre-Achaemenid period (Yaz II), the site being abandoned before the Achaemenid period (Lecomte, 2013; Lhuillier *et al.* in print 1). Due to the extent of the remains of this last stage, the layers related to the Yaz I period have been less intensively excavated.

However, a common goal to both the Soviet and the French missions was the study of the transition period between the late Bronze Age and early Iron Age, which is “one of the most intriguing mysteries of Central Asian archaeology”, according to V.I. Sarianidi himself (Sarianidi, 2007. P. 135). Indeed, the disappearance of the Bronze Age Bactrian-Margian Archaeological Complex (BMAC – corresponding to the

1 I would like to express my deepest gratitude to the three of them, for having invited me to work at Ulug-depe, and authorized me to publish. I owe much to prof. Olivier Lecomte, thanks to whom I was also able to access the unpublished data (field reports, photographs, drawings) Viktor Ivanovich Sarianidi gave him when he started to work at Ulug-depe in 2001.

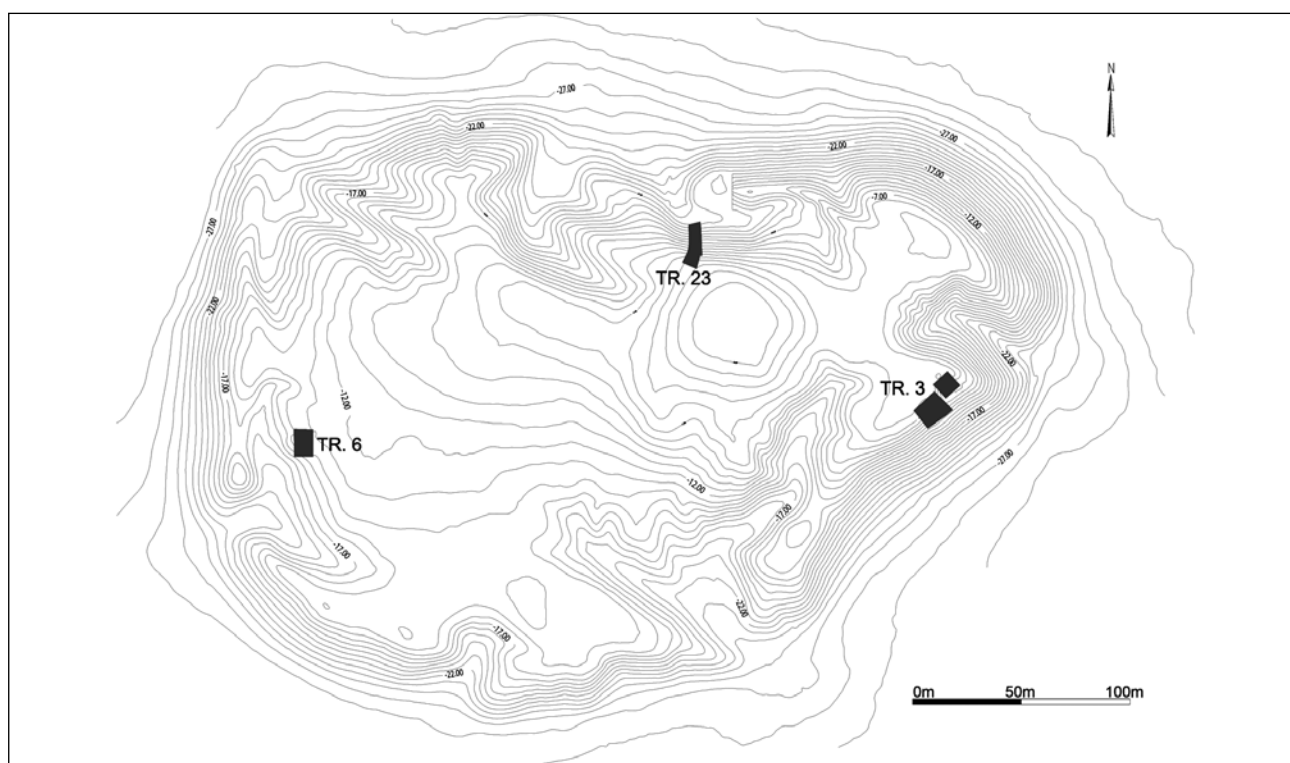


Fig. 1. Topographical map of Ulug-depe with the location of the soundings where the transition between Bronze Age and Iron Age has been observed (soundings N 3 and 6 opened by V.I. Sarianidi, and sounding N 23 opened by the MAFTur) (© MAFTur).

Namazga V–VI periods), and the subsequent appearance of the Painted Ware Cultures during the second half of the II millennium BC (Early Iron Age, or Yaz I period) is such a global transformation that it was long attributed to a “Barbarian invasion” from the steppes. E.E. Kuz'mina (Кузьмина, 2010) already underlined the major contribution made by V.I. Sarianidi to this issue; we intend here to complete and to highlight this work thanks to recent data gathered at Ulug-depe. Some recent synthetic works contributed to shed a new light on the transition period (Lhuillier, 2013a, 2013b; Luneau, 2014), but a problem remains, i.e. the stratigraphic approach of the transition. Indeed, most of the Yaz I sites are settled at the beginning of the Iron Age, even if the new settlements are usually located in the same oases as during the previous period.² As for now, few sites are known that are occupied during both the Bronze Age and the Iron Age, among which Ulug-depe displays one of the best stratigraphy, and appears as a key

site for the studying and understanding of the transformations that occurred at the end of the Bronze Age and led to the formation of the Early Iron Age culture.

The contribution of Viktor Ivanovich Sarianidi to the study of the Bronze Age – Iron Age transition at Ulug-depe

Among the six soundings V.I. Sarianidi opened, two are particularly relevant for the study of the transition period, soundings N 3 and N 6 (fig. 1).

Sounding N 3 is located on the eastern side of the *depe*, and was opened in 1967 by K.A. Kachuris, head of the Achaemenid Group of the Geoksjur expedition (Сарианиди, 1967; Сарианиди, Качурис, 1968), and excavated in 1968 by V.I. Sarianidi (Сарианиди, 1968a, 1968b, 1969). There, the team evidenced four main stages of occupation (NMG V, NMG VI, Yaz I,³ “Achaemenid”⁴), including some transition levels, leading V.I. Sarianidi to say that Ulug-depe offers the

² This process was well evidenced in Margiana (Salvatori, 2008) and in northern Bactria (Сверчков, Бороффа, 2007).

³ Following the seminal work of V.M. Masson at Yaz-depe (Массон 1959), V.I. Sarianidi dated the Yaz I period to the beginning of the I millennium BC. However, some recent works allowed to precise the general chronology of the Central Asian Proto-history, and to date the Yaz I period to the second half of the II millennium BC (ca. 1500–1300/1000–900 BC) (Francfort, Kuz'mina, 1999; Lhuillier, 2013a, fig. 74; Teufer et al., 2014, fig. 14).

⁴ It corresponds in fact to the pre-Achaemenid (Yaz II) period.

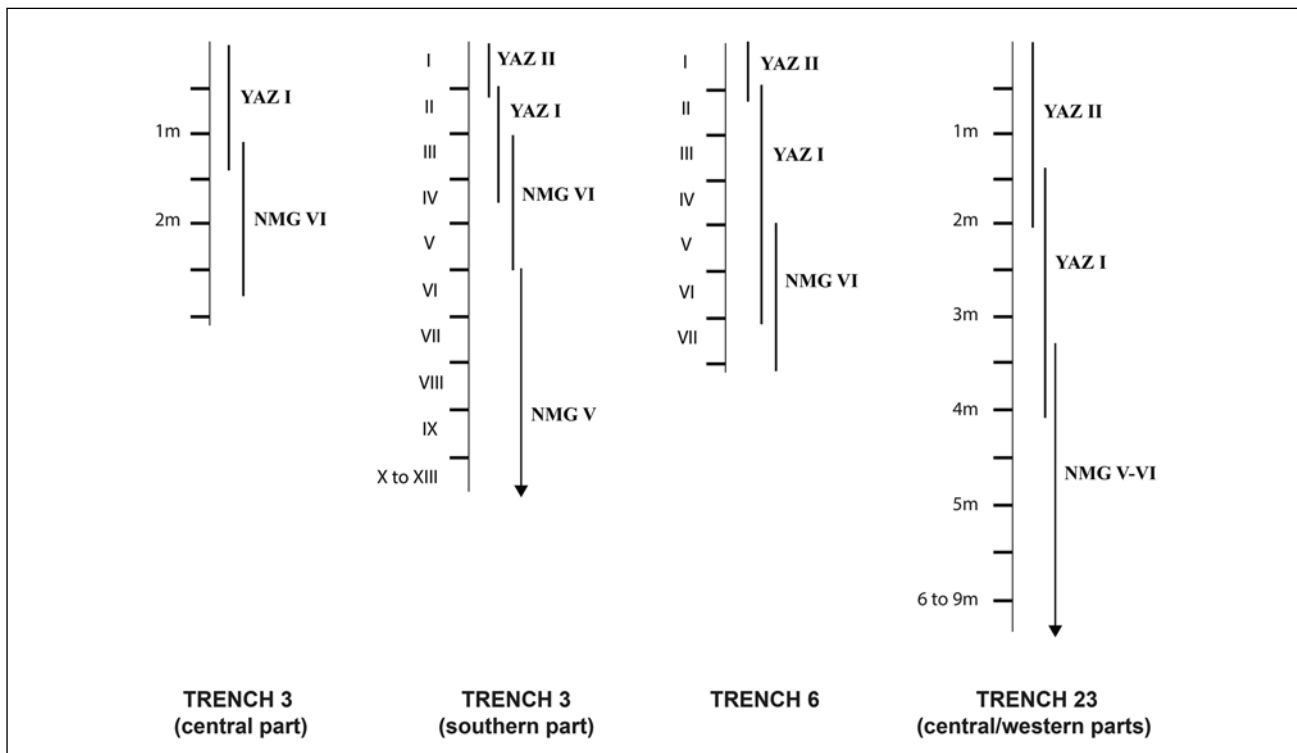


Fig. 2. Schematic stratigraphy of the soundings where the transition between Bronze Age and Iron Age has been observed (soundings N 3 and 6 opened by V.I. Sarianidi, and sounding N 23 opened by the MAFTur) (© J. Lhuillier/ MAFTur).

first opportunity to identify the transition period.⁵ The sounding has been divided into central and southern parts, and results of the excavation differ according to this spatial division. In the central part (fig. 2), the Yaz I level reaches 1,20 m thick and is characterised mainly by a massive brickwork and by typical handmade painted pottery. Beneath, a 0,20 m layer contains both Yaz I and NMG VI ceramics, in unspecified quantity. Then, V.I. Sarianidi reached a 1,20–1,30 m thick level comprising some graves (fig. 3; see also: Бендезу-Сармиенто, 2010. Table 2), characterised by a wheel-made pottery typical of the NMG VI period according to him (stands, pedestalled bowls, burnished red ware, and grey ware).

In the southern part of the trench (fig. 2, 4), excavation was made by 50 cm artificial layers (*jarus*). The two uppermost *jarus* are attributed to the Iron Age, and consist mainly in a huge “Achaemenid” dump-pit that was dug into the Yaz I levels, thus disrupting the stratigraphy. The third *jarus* is considered as a transition level since it contains both some beige-greenish

ware, wheel-made sherds, and some handmade painted sherds. But here again, the bottom of the pit partly disrupts the layers. Some handmade Yaz I pottery is still found in small quantities in *jarus* IV, because of the very bottom of the pit, and in *jarus* V–VI, because of the slope of the *depe* according to V.I. Sarianidi. He considers most of the ceramics from *jarus* IV–VI as typologically specific to the NMG VI period. From *jarus* VIII to *jarus* XIII, NMG V shapes replace this pottery, while the grey-ware ceramics disappears. As in the central part of the sounding, this trench suggests a gradual transition, which seems to be confirmed by the gradual reversal of the ceramics type as illustrated in fig. 5. However, the presence of the Yaz II dump-pit makes the southern part of sounding no. 3 unclear, despite



Fig. 3. Ceramics from the NMG VI graves (N 6, 14, 16) excavated in the central part of sounding N 3, including some grey-ware ceramics (after Sarianidi, 1967. Fig. 21).

⁵ «Раскоп 3 на Улуг-депе позволил проследить переход от слоев эпохи поздней бронзы к раннему железу, что до сих пор не удавалось сделать на других памятниках Южного Туркменистана» (Сарианиди, Качурич, 1968. С. 345).

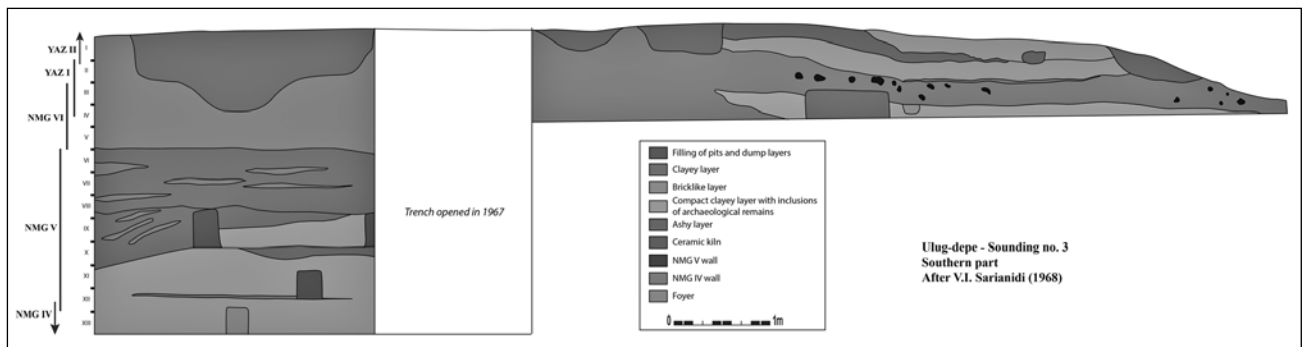


Fig. 4. Profile of the southern part of the sounding N 3 (redrawn from Sarianidi, 1968a. Fig. 3).

its long stratigraphy, and we shall be cautious with these results.

Maybe in order to bring forward a more complete answer to this problem, V.I. Sarianidi opened in 1970 a stratigraphic trench, Sounding no. 6, located at the opposite western side of the *depe* (Сарианиди, 1971, 1972) (fig. 1). Its stratigraphy covers a period from NMG VI to Yaz II, also excavated by *jarus* (fig. 2). *Jarus* II–IV are dated to the Yaz I period (according to the ceramics; fig. 6), *jarus* VII to the NMG VI period (according to the ceramics, too), and in-between *jarus* V–VI are attributed to the transitional phase. V.I. Sarianidi (1971) observed that the Yaz I complex does not replace the NMG VI complex, but coexists with it. Therefore, he suggests a gradual diffusion of the handmade painted pottery contemporaneous to a gradual

diminution of the NMG VI wheel-made pottery. This result is globally similar to that obtained in the central part of Sounding no. 3, and indicates a gradual, progressive transition, a hypothesis that the MAFTur intended to check.

**The work of the MAFTur:
some new elements toward an understanding
of the transition period**

In order to refine the general outlines of the chronology of the site, and especially to understand the nature of the occupation prior to the construction of the pre-Achaemenid city, the MAFTur opened another stratigraphic trench in 2010 (sounding N 23⁶; fig. 1) (Bendezu-

6 This trench was opened by Johanna Lhuillier, Laurianne Bruneau, and Julio Bendezu-Sarmiento.

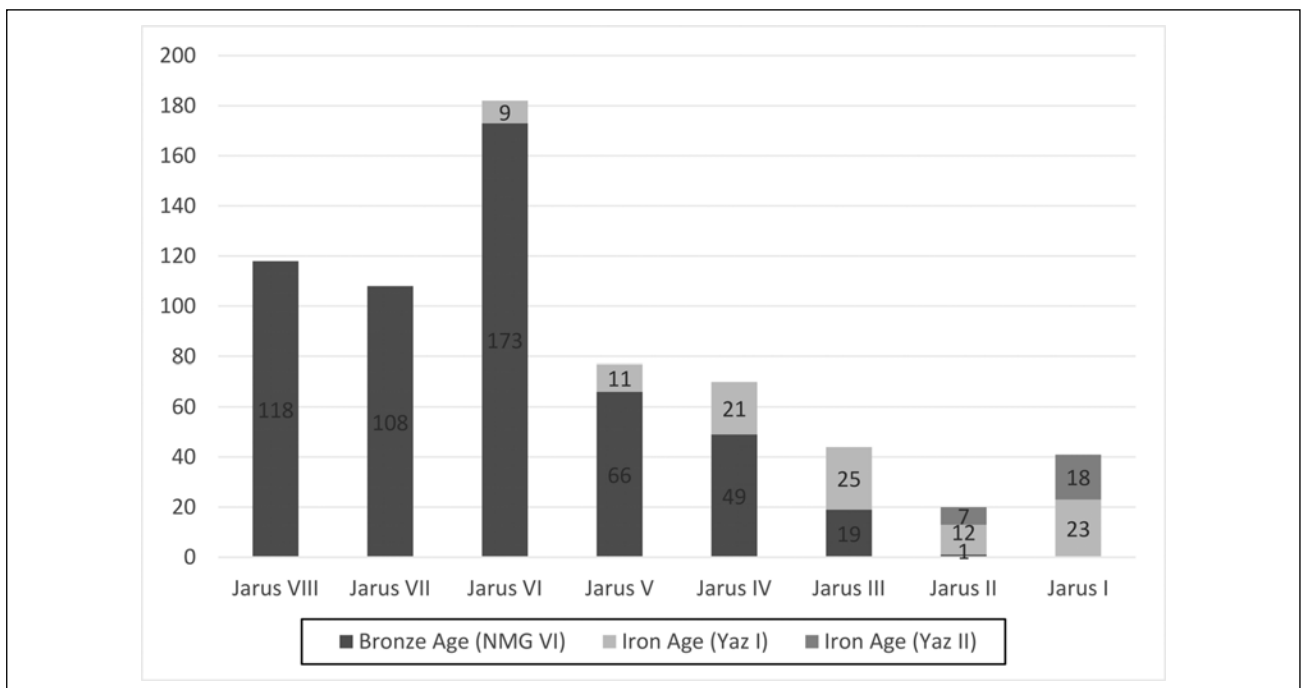


Fig. 5. Statistics of the quantity of ceramics found in the southern part of the sounding N 3, corresponding to the transition period between Bronze Age and Iron Age, from the lower to the upper *jarus*. Rims only have been used to make the counting (after Sarianidi, 1968a. P. 4–10).

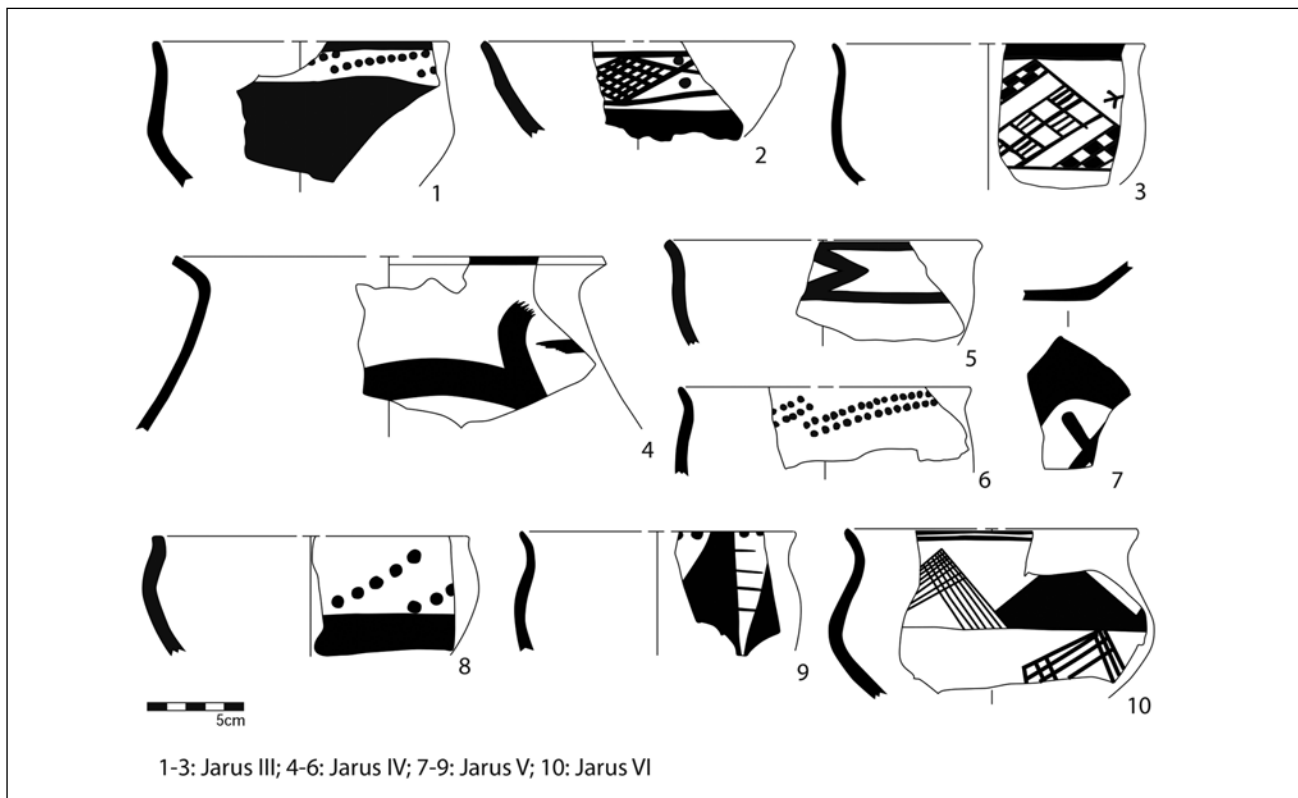


Fig. 6. Yaz I ceramics from sounding N 6 (redrawn from V.I. Sarianidi's unpublished drawings).

Sarmiento, Lhuillier, 2011). It was located in the northern side of the *depe*, at the foot of the pre-Achaemenid citadel, and facing the sounding N 1 where V.I. Sarianidi identified some NMG IV levels, a place allowing following the stratigraphy from the NMG IV period to the Yaz II period (11 m high). Among the many issues such a long stratigraphy could raise, we paid a special attention to the transition period between Bronze and Iron Age, to confirm or not the results obtained by V.I. Sarianidi in soundings N 3 and 6.

We identified four stages of occupation during the Yaz I period, each of them with

some architectural remains. The layers totalized a 2,50 m thickness (fig. 2), with a dip eastwards – the Yaz I levels being thicker in the western part than in the eastern part of the trench-, which indicates that this area already corresponds to the border of the *depe* at that time. Among the lowest layers of the first occupation stage -from 10cm thick in the eastern part of the trench to 80cm thick in the central and western parts-, ceramics is mixed, the majority being typical of the Yaz I period (fig. 7), while some sherds are already attributed to the Bronze Age (fig. 8).

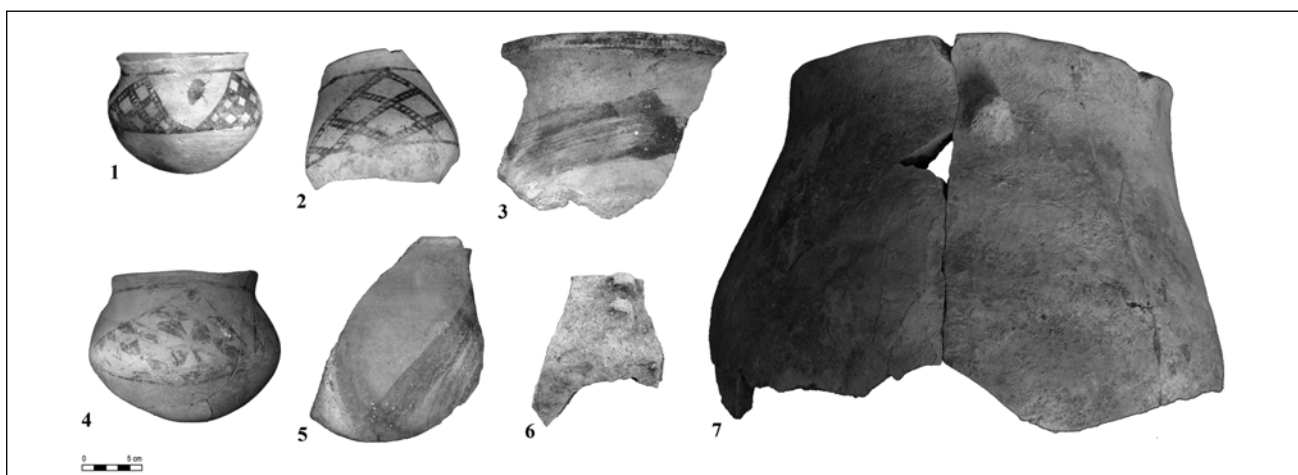


Fig.7. Yaz I ceramics from sounding N 23 (© MAFTur).

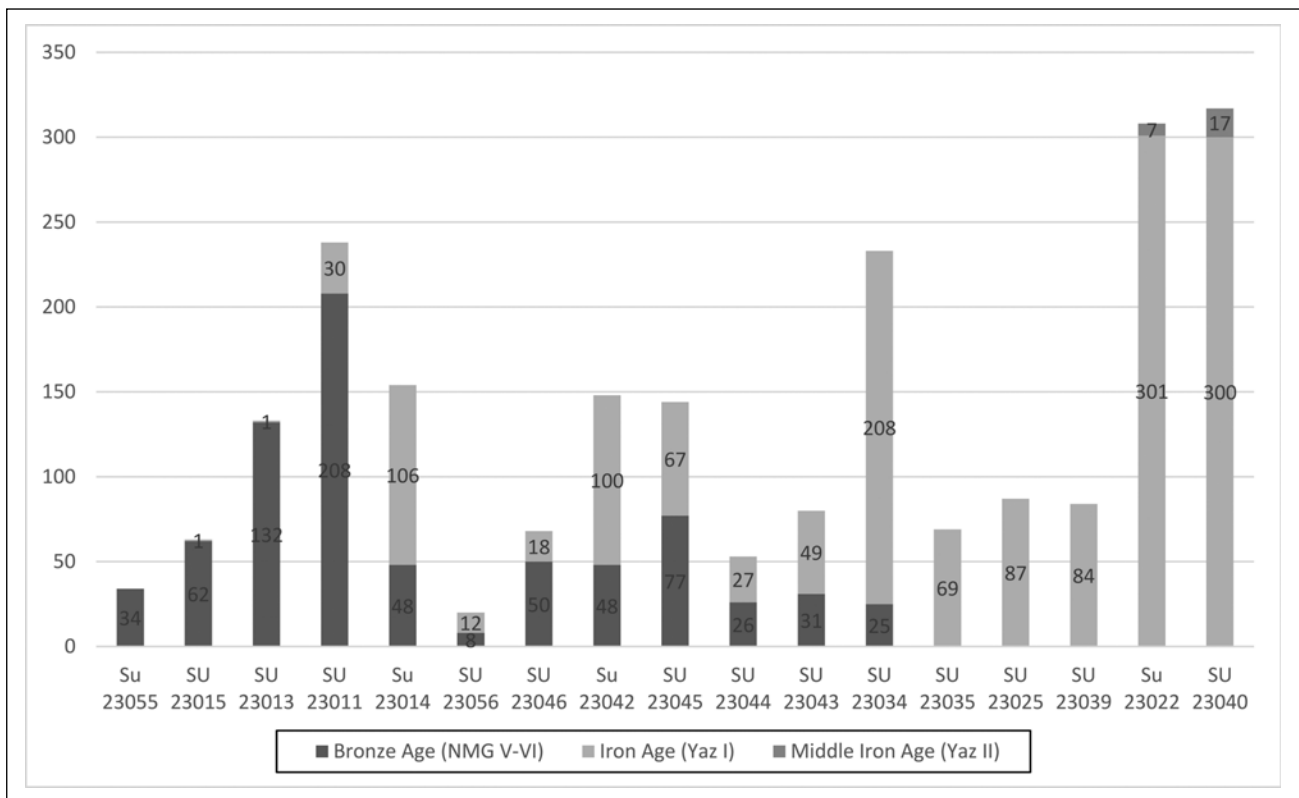


Fig. 8. Statistics of the quantity of ceramics found in the sounding N 23, in the layers corresponding to the transition period between Bronze Age and Iron Age, from the most ancient to the most recent stratigraphic units. Counting is based on the number of individuals (© J. Lhuillier/ MAFTur).

Immediately beneath, we identified the first layers attributed to the Bronze Age, according to the pottery (fig. 8, 9). In the eastern part of

the trench, we identified a 12 cm layer, well dated to the Bronze Age thanks to ceramics, and at the bottom of it a domestic oven surrounded

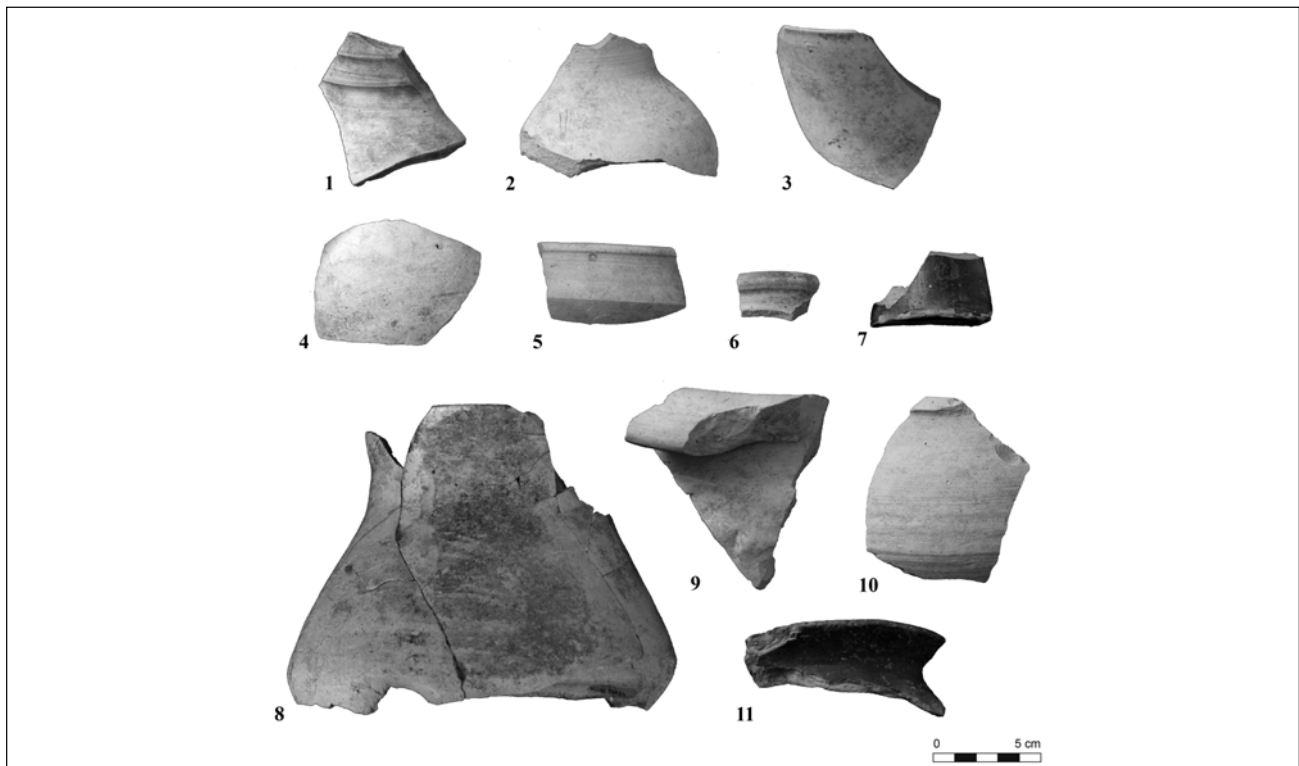


Fig. 9. NMG V (VI?) ceramics from sounding N 23. 1–7: ceramics from the uppermost BMAC layers; 8–11: ceramics from the lowermost BMAC layers (© MAFTur).

by some ashy layers. Two walls of the following Yaz I stage have been built directly on the top of these layers (fig. 10). At the same level, some Yaz I layers are still found in the western part of the trench, due to the dip.

All these elements suggest a stratigraphic continuity between the Bronze Age and the Iron Age levels, the Yaz I layers being located immediately at the top of the Bronze Age layers, without any evidence of hiatus (fig. 2). They corroborate the hypothesis made by V.I. Sarianidi of a gradual transition marked by a progressive, but quick inversion of the ceramics type.

Obviously, the location of sounding N 23 faces the same problem as soundings N 3 and N 6, i.e. the slope that can distort our understanding of the transition period. However, it raises some important issues, among which the dating of the BMAC remains. Indeed, some more Bronze Age structures have been identified deeper, including several mudbricks walls and an oven, and the BMAC levels (NMG V–VI) reached a total 5,50 m thickness. These structures have not been entirely excavated; we nevertheless were able to collect enough pottery sherds and other artefacts to date more precisely these levels.

As a result, the uppermost layers (fig. 9, 1–7) did not contain any of the shapes typologically distinctive of the NMG VI period as defined at the «Vyshka» of Namazga-depe or at Tekkem-depe (beakers with shallow walls, various kinds of bowls, pedestal bowls, stands) according to A. Ja. Shetenko (Щетенко, 1972. P. 529). Furthermore, there is no red-slipped, vertically

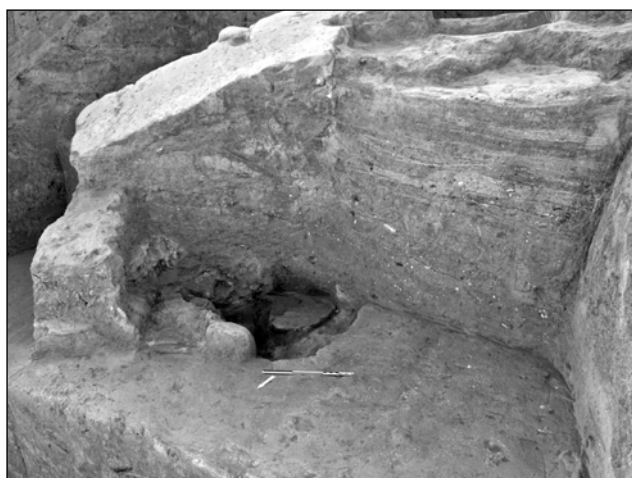


Fig. 10. The stratigraphic continuity between Bronze Age and Iron Age layers in sounding N 23. Note the Early Iron Age walls on the top of Bronze Age layers and oven
(© J. Lhuillier/MAFTur).

burnished ceramics, which is also regarded as typical for the period (Хлопин, 1968. P. 349). A burnished grey-ware beaker may be an exception (fig. 9, 7), since the grey ware is considered as typical for the NMG VI period (Хлопин, 1968. P. 349). With maybe this exception, the ceramics from these levels, as well as that from the lowermost levels (fig. 9, 8–11), displays more typological similarities with the NMG V type ceramics.

In this context, how to explain that the transition period is observed between the Yaz I material complex and the NMG V material complex, corresponding to the Middle Bronze Age, instead of the NMG VI complex of the Late Bronze Age? Yet, when V.I. Sarianidi determined the transition period in soundings N 3 and N 6, he identified some NMG VI typical ceramics. In his unpublished report about the sounding N 3 (Сарианиди, 1968a), he mentions some stands, one stem of a “fruit cup”, some unique samples of burnished red-slip vessels, one grey-ware sherd. Other shapes he lists are not specific to the NMG VI period. Most of this ceramics comes from graves he attributed to the NMG VI period (Сарианиди, Качурис, 1968. P. 344–345). Among them, a child was buried with a grey-ware beaker near the feet (fig. 3), similar to another beaker found in a grave at Tekkem-depe, in a level dated to the end of the NMG VI period according to A. Ja. Shetenko (Щетенко, 2002. P. 83–84). These elements suggests that the NMG VI pottery is attested at Ulug-depe, but remains scarce, and that the typical shapes or techniques are found in unique specimen.

As for now, the NMG VI period at Ulug-depe is represented mostly by burials (Бендезу-Сармиенто, 2010. P. 516, Table 2), which seem to be gathered in the eastern part of the site. Indeed, the MAFTur reopened and extended northwards the sounding N 3 (fig. 1), and identified both Early Iron Age and Bronze Age layers, but a preliminary study of the ceramics did not show any ceramics typologically specific to the NMG VI period, a result that has still to be confirmed by a complete study but suggests there is no occupation layer related to those graves. The typological study currently in progress of the Bronze Age ceramics, led by E. Luneau, confirms that the NMG VI ceramics is very scarce at Ulug-depe, which is quite surprising since Namazga-depe is about 30km far from Ulug-

depe only, while the technological study led by A. Dupont-Delaleuf did not allow to identify any processes specifically related to the NMG VI period (Dupont-Delaleuf, 2013).

Several hypotheses can explain it. It may be due to a concentration of the settlement during the NMG VI period in comparison with the previous NMG V period, the NMG VI layers being consequently found in some parts of the settlement only. However, in that case, the stratigraphic continuity between the NMG V and Yaz I levels observed in sounding N 23 remains an issue. It may also suggest that, in some places, the NMG V type ceramics lasted until the end of the Bronze Age, the NMG V type and the NMG VI type complexes corresponding to some cultural variants that coexisted in part, more than some periods.

The transition period at contemporary sites in the Kopet Dagh piedmont area

Of course, this important issue deserves more researches, and we may expect that a first answer come from the neighbouring settlements. Indeed, among the other sites that were occupied both during Bronze Age and Iron Age, four are located close to Ulug-depe, in the Kopet Dagh piedmont, Namazga-depe and Tekkem-depe, El'ken-depe, and Anau.

Furthermore, V.N. Pilipko recently published (Пилипко, 2010) the results of a survey he made at a site close to Ulug-depe, called Dushakskoe Selishche. According to the Yaz I type ceramics, the main occupation happened during the Early Iron Age. V.N. Pilipko also identified a few sherds with a red slip whose shapes he considers as typical of the NMG VI pottery (Пилипко, 2010. P. 232–233), suggesting a NMG VI occupation at the site. However, V.N. Pilipko makes it clear that there is no corresponding layer at the site; he suggests this ceramics either should be regarded as an addition to the usual complex of ceramics, or does not originate from the site and was brought there after its abandonment (Пилипко, 2010. P. 234, footnote 1). This discovery, difficult to interpret without any excavation, still suggests that the area of Dushak belonged to the NMG VI cultural sphere at a certain time and confirms the possible coexistence of NMG V (as evidenced at Ulug-depe) and NMG VI complexes (as evidenced at Dushakskoe Sel-

ishche), immediately before the beginning of the Iron Age.

Despite the extensive researches that were laid at Namazga-depe Vyshka and Tekkem-depe, only synthetic results are published. A. Ja. Shetenko (Щетенко, 2006) established a joint chrono-stratigraphic sequence for both sites, which shows that their upper levels are dated back to the Early Iron Age. After Stage 1 corresponding to a NMG V occupation, Stages 2–5 corresponding to a NMG VI occupation – including some temporary gaps – are followed by Stage 6 (Vyshka III₄ / Tekkem 7), which is characterized by Yaz I handmade painted pottery and by the first iron artefacts. These later artefacts are likely already related to Stage 7 that are attributed to an “Early Achaemenid” occupation likely corresponding to the pre-Achaemenid period.

According to A. Ja. Shetenko, there is a temporary gap between the NMG VI layers and the Yaz I layers, in Namazga-depe (Vyshka) as well as in Tekkem-depe (Щетенко, 2006. P. 327, 330). Based on the stratigraphic thickness of the corresponding levels at Namazga-depe, he evaluates this gap to about hundred years (Щетенко, 2006, 327).

However, the few indications about the pottery seem to provide different indications. Even if the Yaz I-type pottery is numerous in Vyshka III₄ levels only, it is already present in the previous levels Vyshka III_{1,3}, which may indicate a continuous occupation. The lack of quantitative data regarding the ceramics does not allow to be more precise; yet, in these levels, the Yaz I pottery seems to occur only in limited quantity, since the sherds have been recorded together with some “steppe” coarseware, reaching up to 16.7% of the total amount of pottery (Щетенко, 2002. P. 56–57; Щетенко, Кутимов, 1999. Fig. 5–6).

West of Namazga-depe, in the oasis of Etek close to the city of Kaakhka, the site of El'ken-depe was occupied from the Late Bronze Age to the Middle/Late Iron Age. A. A. Marushenko opened several trenches, in the border of the site as well as at the top, which all display a similar picture of the transition period between Bronze Age and Iron Age. The Early Iron Age layers (ED II period) cover the Late Bronze Age layers (ED I period), in the outside slope of settlement as well as at its higher point, where the

ED I uppermost layers are sealed by a mudbrick platform dated to the ED II period (Марущенко, 1959. P. 59–60; 62, Pl. III). A.A. Marushenko (1959. P. 61) compares the ED I ceramics with NMG VI ceramics discovered at Tekkem-depe and at Namazga-depe, thus attributing the ED I levels to the NMG VI period. The ED II levels are characterized by a handmade, sometimes painted, pottery that is typical for the Yaz I period (Марущенко, 1959. Pl. XII–XXI).

A.A. Marushenko observed in the lowest layers of the ED II period the coexistence of red-slip, sometimes burnished, wheel-made ceramics that is typical of the Late Bronze Age, and of handmade Yaz I type ceramics. Among these ceramics, typical convex-wall bowls and painted vessels are present in small quantity only, and they become abundant in the following layers. It indicates a progressive introduction of the Yaz I type pottery from the end of the Late Bronze Age. Both the stratigraphic continuity and the gradual replacement of the NMG VI type ceramics by the Yaz I type ceramics suggest a pattern of gradual transition period.

Situation at Anau, close to Ashgabat, is far from being as clear. The Yaz I type pottery was discovered among the layers of the last occupation stage of Anau South, called Anau IV. It is mixed with ceramics from the previous and the following periods (Pumpelly, 1908. P. 49; Schmidt, 1908. P. 149). However, H. Schmidt observed that it was found mainly in the “lower portion” of the upper layers, corresponding to an “intermediate occupation (barbarian?) between Cultures III and IV”, which was later called Anau IV A by V. M. Masson (Массон, 1959. Tabl. IV) to be distinguished from Anau IV, corresponding to the Middle/Late Iron Age occupation. Most of the iron artefacts have been found in these Anau IV layers, which is consistent with what has been later observed on contemporary settlements, where iron artefacts occurred usually only from the Yaz II period (Сагдуллаев, 1982; Ruzanov, 2005), leading some scholars to speak of Final Bronze Age for the Yaz I period (Lyonnet, 1997; Кузьмина, 2010). This fact lead R. Pumpelly (1908. P. 49) to observe that “the lateness of the appearance of iron in the series of Anau cultures is due [...] to a period of alternating abandonment and occupation by barbarians following upon the end of the copper culture”.

Indeed, according to R. Pumpelly, the Anau IV levels follow a period of abandonment of the site at the end of the Anau III Stage, and a long gap whose duration cannot be determined (Pumpelly 1908. P. 49, 52–53, fig. 18, pl. 5). We may yet wonder if this gap was as long, since H. Schmidt (1908. P. 149) also mentions the presence of some handmade Anau IV A pottery “into deeper layers [...], mixing there with the deposits of the older culture, though they are not so numerous as higher up”, suggesting a pattern of gradual introduction of the Yaz I ceramics in the Late Bronze Age levels, and a gradual replacement of the ceramics types similar as that observed at Ulug-depe and El’ken-depe, a hypothesis that cannot be confirmed without further excavations of these levels.

The transition period at contemporary sites in Central Asia

1. South of the Kopet Dagh, the Protohistoric sites of northern Khorasan are related to the Central Asian cultures. Many researches in the area have not been published yet, and as for now, only one site displays a stratigraphic sequence comparable to that of Ulug-depe, Nishapur-P. The site was excavated in 1937 by a team of the Metropolitan Museum of Art, who brought back a selection of material to the Museum, together with some photographs that F. Hiebert and R. Dyson used to identify the main stages of occupation (Hiebert, Dyson, 2002). Their work shows the co-occurrence of Yaz I ceramics and of NMG V–VI ceramics at the site (the lack of any distinctive shapes did not allow them to assign more precisely these ceramics to the NMG V or the NMG VI periods). Only one sounding – sounding PE – documents a stratified context with ceramics from the NMG III period to the Yaz I period (Hiebert, Dyson, 2002. P. 123, fig. 11), though these data are not precise enough to infer a direct continuity from Bronze Age to Early Iron Age.

2. Some sites in Margiana can provide complementary data on the transition period from Bronze Age to Iron Age. First, several sites of the Togolok oasis (Togolok 16, 19, 20, 22, 23, 25, 27, 29) display some Yaz I type pottery among the surface material, together with some NMG VI-type ceramics (Сарианиди, 1990. P. 47–48, 51–53). It is usually limited to a few sherds, some-

times painted (Сарианиди, 1990. Pl. LIV, 1–5). Most of these sites consist of surface scatters of ceramics, without any stratigraphic layers, which does not allow characterizing the transition period, though it shows the co-occurrence of NMG VI and Yaz I ceramics at the same sites.

Two sites of the Takhirbaj oasis provide some more information. At Takhirbaj 1, some Late Bronze Age pottery has been found among the surface material and in very low quantity in the stratigraphic layers, under the Yaz I levels (Cattani, 1998. P. 98–99). At Takhirbaj 3, the Yaz I occupation has been identified in the eastern part of the site, directly under the virgin soil in some places (Сарианиди, 1990. P. 55) but partly overlapping the Bronze Age levels in other places, which is “perhaps a continuation of it” (Cattani, 2008. P. 139). More Bronze Age levels are located at the centre of the site, and the Bronze Age ceramics is abundant among the surface findings, leading V.I. Sarianidi to consider that the site testifies of the transition period between Bronze Age and Iron Age (Сарианиди, 1990. P. 56).

3. In southern Bactria, very few settlements of the Early Iron Age have been excavated due to the recent history of Afghanistan, and Tillyatepe remains until now the only site where some elements may indicate a continuous occupation from the Bronze Age to the Iron Age. V.I. Sarianidi opened a stratigraphic trench south-east of the citadel, in the middle of a cotton field standing at the place of the former settlement surrounding the citadel (Сарианиди, 1989. P. 17–18). There, he identified a level, 1m thick and located on the virgin soil, he attributes to the Bronze Age based on wheel-made ceramics. This level contains also two painted sherds, suggesting an introduction of the Yaz I type ceramics when the Bronze Age wheel-made ceramics was still predominant. Above it are found some Yaz I layers corresponding to different stages of occupation.

4. In northern Bactria, the situations seems to be different from what has been observed in the Kopet Dagh piedmont, Margiana and Southern Bactria, the stratigraphic data being associated with some evidences of morphological continuities among the ceramics.

In southern Uzbekistan (North-Western Bactria), and in the current state of research,

only one site has been occupied during the Bronze Age and the Iron Age, Dzharkutan. The Early Iron Age occupation is not limited to some dump-pits, as the first excavations may have suggested (Аскарлов, 1976; Шайдуллаев, 2000), but is characterized by a small village (Bendezu-Sarmiento, Mustafakulov, 2013; Lhuillier et al, 2013; in print 2). This village – which comprised pit-houses, lot of pits and silos – is covering all of the previous area of the Bronze Age citadel. The first pit-houses were dug when the architecture of the Bronze Age was still standing, since they are usually found inside the rooms, either without any gap in the occupation, or after a short abandonment. Because of the very nature of the Early Iron Age settlement with pit-houses and pits, the Bronze Age levels are disturbed and it is difficult to be more precise. Together with the Yaz I type ceramics found in the Early Iron Age levels, some vessels reproduce Bronze Age shapes (pedestalled bowls, small pots with a disk-shaped base, medium-sized pots and bowls with a moulded base, spouted pots) with distinctive Yaz I type fabrics and technologies (Lhuillier et al, 2013. Fig. 3C; in print 2. Fig. 30–32), what appears as a sign of continuity with the local Bronze Age culture.

A comparable situation has been observed in south-western Tajikistan (North-Eastern Bactria). At Karim-Berdy, two fragments of wheel-made, pedestalled vessels of the Bronze Age have been found in a pit-house of the Early Iron Age together with some Yaz I-type ceramics (Teufer et al, 2014. P. 139–140, fig. 36). At Saridzhar 2, on the contrary, one painted Yaz I sherd has been found among some Late Bronze Age sherds in levels of the last occupation stage in Area A, illustrating the transition phase (Teufer et al, 2014. P. 127, 137, fig. 20). One painted Yaz I sherd has also been found in the upper layer of the Late Bronze Age site Teguzak (Пьянкова, 1986. P. 100), while four Yaz I type sherds have been found in the upper layers from sounding N 4 at the Late Bronze Age site Kangurtut (Виноградова и др., 2008. P. 173, fig. 38, 51–54). According to M. Teufer, some handmade bowls with an S-rim from Saridzhar have analogies among ceramics of the Chust culture, which belongs to the Handmade Painted Ware cultures of the Early Iron Age (Заднепровский,

1962; Lhuillier, 2013a). Furthermore, the comparison of the Early Iron Age ceramics from Karim-Berdy and the Late Bronze Age ceramics from Saridzhar reveals a continuity of the shapes (Teufer et al, 2014. P. 143, fig. 37) similar to what has been observed at Dzharkutan.

Conclusion

The common point to most of the examples listed above is some evidences of a continuity of the occupation between the end of the Bronze Age and the beginning of the Iron Age, and of a progressive transition phase. Based on the limited thickness of the corresponding stratigraphic levels, this phase seems to be quite short, and if there is a gap, it is short too. Of course, this should not hide the fact that the sites with both Bronze Age and Iron Age levels represent only a small part of the known Yaz I type sites (about 15 sites on about 250 listed in a previous study dedicated to the period; cf.: Lhuillier, 2013a). However, it confirms that the cultural transformations leading to the formation of the Painted Ware Cultures results from local processes and are not due to the coming of new populations, these populations being usually associated with steppe-related nomads being responsible of the “Age of barbarian occupation”.

In southern Turkmenistan, some “steppe” coarse ware – or incised coarse ware (Cerasetti, 1998) – has been found in stratified context in many BMAC settlements in the Late Bronze Age layers (at Namazga-depe Vyshka, Tekkem-depe, Anau, El’ken-depe, Sermancha-depe, Takhirbaj 3). This steppe coarse ware is identified mainly as Sargar – Alekseev type ceramics, a component of the Andronovo culture dated back to the mid-second millennium BC, but some sherds are related to the Alakul period, reflecting long presence of the steppe-related populations (Кутимов, 2014. P. 91–92; Щетенко, Кутимов, 1999). At Tekkem-depe, a shard of a handmade bowl with an incised ornament specific to the steppe-related ceramics and a red slip specific to the BMAC at the same time confirms the settlement was not abandoned at the time of the steppe-related occupation, according to Ju. Кутимов (Кутимов, 2014. P. 92).

The presence of steppe coarse ware in Southern Turkmenistan during the Late Bronze Age evidences long-term, pacific relationships be-

tween the mobile pastoralists and the local agriculturalists. The work led in the Murghab region, especially at Ojakly (by the joint Italian-Turkmen project and by the American-Italian-Turkmen team), suggests a close interaction of the two groups, based on technical transfer and trade interactions (Cattani, 2008; Rouse, Cerasetti, 2014). However, the two groups always kept their own cultural identities, and in that case, it is difficult to figure out why suddenly, after 300 years of presence in the region, they would have acculturated enough to lead to the formation of a very new culture at the beginning of the Early Iron Age. Furthermore, the steppe coarse ware is not attested at all the settlements with Bronze Age and Iron Age levels: for example, at Ulug-depe no steppe coarse ware has been found in the Bronze Age levels, despite the many soundings yet opened, and the contact with the steppe-related groups cannot be taken as the only prerequisite for the formation of the Yaz I culture. No steppe coarse ware has been found in the Yaz I levels of those sites, in the Kopet Dagh piedmont as well as in Margiana; it thus difficult to figure out why the steppe-related mobile pastoralists would have totally stop to produce their ceramics after having settled there.

The stratigraphic data from Northern Bactria give the same impression of a pacific coexistence of different and interacted cultural communities. At Teguzak or at Kangurtut, ceramics related to the final stages of the Sapalli culture, the Vakhsh culture and the Yaz I culture are found in the same levels (Пьянкова, 1986; Виноградова и др., 2008), as also at Dzharkutan (Luneau et al, 2011; Lhuillier et al., in print 2), while some Vakhsh ceramics may come from the Yaz I levels at Bandykhan/Мajdatepa according to the identification made by E. Luneau (Luneau, 2010. P. 388; Сверчков, Бороффа, 2006. P. 195). If this is confirmed, this later site may illustrate an overlapping of the Vakhsh culture with both the final stage of the Sapalli culture and the beginning of the Yaz I period. We may thus suggest a pattern of coexisting cultures, maintaining distinct cultural and material identities, but interacting in some cases.

We may thus consider the hypothesis of a coexistence of several cultural variants, different according the region, explaining the scarcity of the NMV VI ceramics at Ulug-depe, where

the NMG V ceramics would have been in use longer than at some neighbouring sites. Then, we should make a clear distinction between the NMG VI cultural variant, and the Late Bronze Age chronological period.

The interaction of these different cultures into a multicultural society, stimulated by the internal weakening of the BMAC during the NMG VI period that led it to turn into a new

culture, likely contributed to the formation of the Painted Ware Cultures. Then, the transition period should be more considered as a short-time coexistence of different cultural communities (or of different material complexes shared by a single community?) leading to a gradual transformation of the material culture than as a real transition, i.e. the change from one state to another.

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