

The Middle Iron Age in Ulug-depe: A preliminary typo-chronological and technological study of the Yaz II ceramic complex

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Pottery and chronology of the Early Iron Age in Central Asia

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The Middle Iron Age in Ulug depe: a preliminary typo-chronological and technological study of the Yaz II ceramic complex

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Abstract:

At the crossroads of Central Asia and Iran the pre-Achaemenid city excavated in Ulug depe (Turkmenistan), includes a citadel of proto-Median type. The pottery is typical of the pre-Achaemenid period in Central Asia. The study of this pottery, combining typological and technological approach, allows the authors to define some elements of characterization of this badly known pottery in a chronological perspective. At a macro-regional scale, it contributes to a better characterization of the Iron Age in southern Central Asia, and shows the existence of regional or chronological variations.

Key-words:
Ulug depe, Turkmenistan, Iron Age, pre-Median, pottery, typochronology, technology, Yaz II

More than 50 years after the pioneering excavation of V. Masson in Yaz depe (Masson 1959), the periodisation of the Middle (Yaz II) and Late (Yaz III) Iron Age still remains a matter of debate in Central Asia. Excavations in Ulug depe in Turkmenistan provide better characterization of the material culture of this period.

175 km east of Ashgabat and 6 km south of the village of Dushak in the Etrap of Kaahka, Ulug depe is located in the alluvial plain of the eastern Kopet-Dagh piedmont zone, close to the bed of the ancient Kelet River [***Fig. 1***]. The site covers a total area of 13 ha and rises to more than 30 m above the surrounding plain. Ulug depe has the longest stratigraphical sequence of all Central Asia, from the late neolithic until the Middle Iron Age period[1], which makes it a key site to understand cultural and socioeconomic changes underway in Central Asia throughout the Bronze and the Iron Ages. It is also ideally located to study interactions with the Iranian plateau and other parts of Central Asia.

The first excavations were conducted in the late 1960s and early 1970s by V. I. Sarianidi (1968, 1969, 1971, 1972; Sarianidi, Kachuris 1968), who carried out six soundings and thus defined the general stratigraphy of the site, and then by I. S. Masimov (1972). Extensive research was undertaken in 2001 by the French–Turkmen Archaeological Expedition headed by O. Lecomte, J. Bendezu-Sarmiento and M. Mamedov (Lecomte *et alii* 2002; Lecomte 2011, 2013).



Fig. 1. Map of Turkmenistan with location of Ulug-depe (Map A. Dupont-Delaleuf)

1. Some recent discoveries of Hellenistic type pottery may indicate also a short occupation of the site during the Hellenistic period, but the related layers were probably eroded and no settlement was found.

THE MIDDLE IRON AGE IN ULUG DEPE

Ulug depe is a key site for all the Iron Age sequence. Thanks to its very long stratigraphy, it has already shown a stratigraphic continuity between middle Bronze Age (Namazga V) and early Iron Age levels (Yaz I) (Bendezu-Sarmiento, Lhuillier 2011; Sarianidi 1971). Results are important for the early Iron Age (Lhuillier *et alii* in print). They are even more significant for the Middle Iron Age: ongoing excavation work allowed the discovery of a pre-Median town [***Fig. 2***]. It was identified on the site in 2003, thanks to a geomagnetic survey conducted on the top of the site (Lecomte 2007a). It allowed the identification of an urban settlement consisting of an upper part characterized by monumental buildings on either side of the main street, and a lower part. In the upper part, the main buildings are the so-called "treasury", a three parts building with long corridor, like ware-houses; a "palatial complex" and a "manor house" erected on a mud-brick and *pakhsa* platform. The town was surrounded by a badly preserved city wall, about 1.5 to 3 m thick, set on top of earlier structures.

A building located at the highest point of the site, called the "citadel" [***Fig. 3***], was the centre of this city (Boucharlat, Francfort, Lecomte 2005). This fortified square building with 40 m long sides is based on a mud-brick and *pakhsa* platform. This platform is a complex – probably two-stepped – structure, which enhanced the citadel thanks to buttresses and emphasized the verticality effect. Preservation is good and the walls are 1 to 3 m high. A staircase indicates the existence of a second floor. Two peripheral

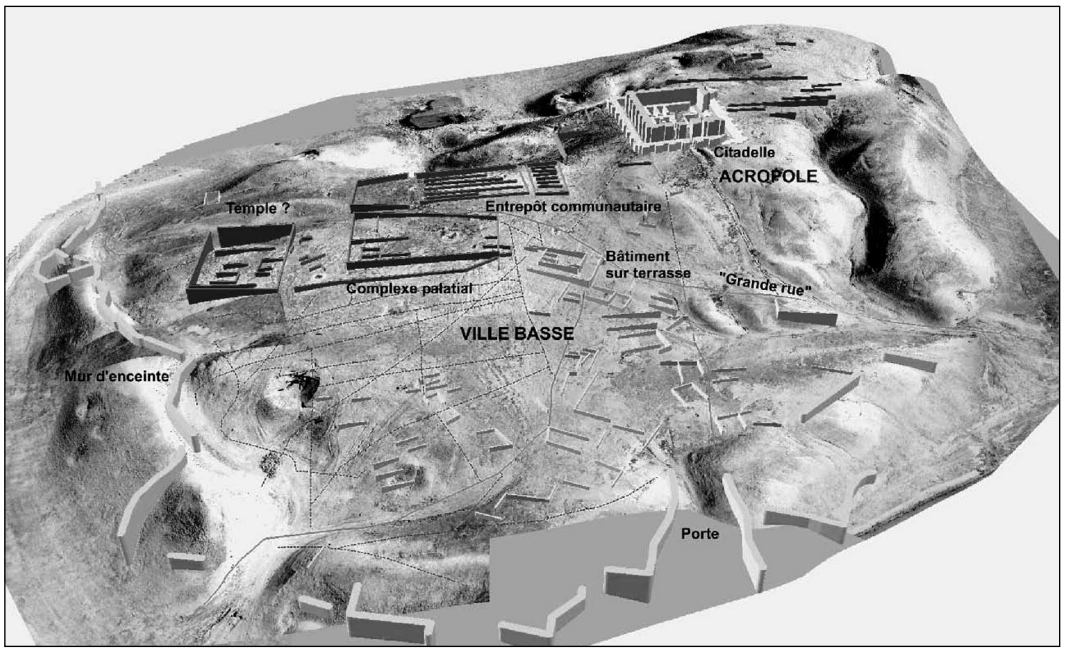


Fig. 2. 3D reconstitution of the pre-Median city (Lecomte 2007b: fig. 14, after G. Davtian)

walls with buttresses and recesses define a peripheral corridor, paved with pebbles and coated with clay. The very symmetrical plan of the citadel shows narrow rectangular rooms with low benches. In these rooms, big jars were sometimes discovered during the excavation, some of which bore sealings (Lecomte 2004; Wu, Lecomte, 2012). The ground floor of the citadel had thus a storage function. After an important fire that partially destroyed much building during the 9th century BC, it was rebuilt shortly after, as shown by stratigraphy, reused during two hundred years and finally abandoned after some closure rites were performed inside the building (Lecomte, Mashkour 2013).The dicovery of a neo-Assyrian print on a bulla led O. Lecomte to abandon the eventuality of a final occupation of the citadel during the Achaemenid period.

Two typical Iranian Iron II vessels (i.e. "tankard" with two handles and carinated profile) were found deposited under a threshold leading to the northern part of the citadel. Then only the re-occupation of the ruins of the destroyed building could be attributed to the Yaz III period, i.e achemenid, and mostly, thanks to the pottery discovered, to the Hellenistic period.

The occupation of the citadel must thus be attributed to the Middle Iron Age (Yaz II) period. About ten radiocarbon dates ob-

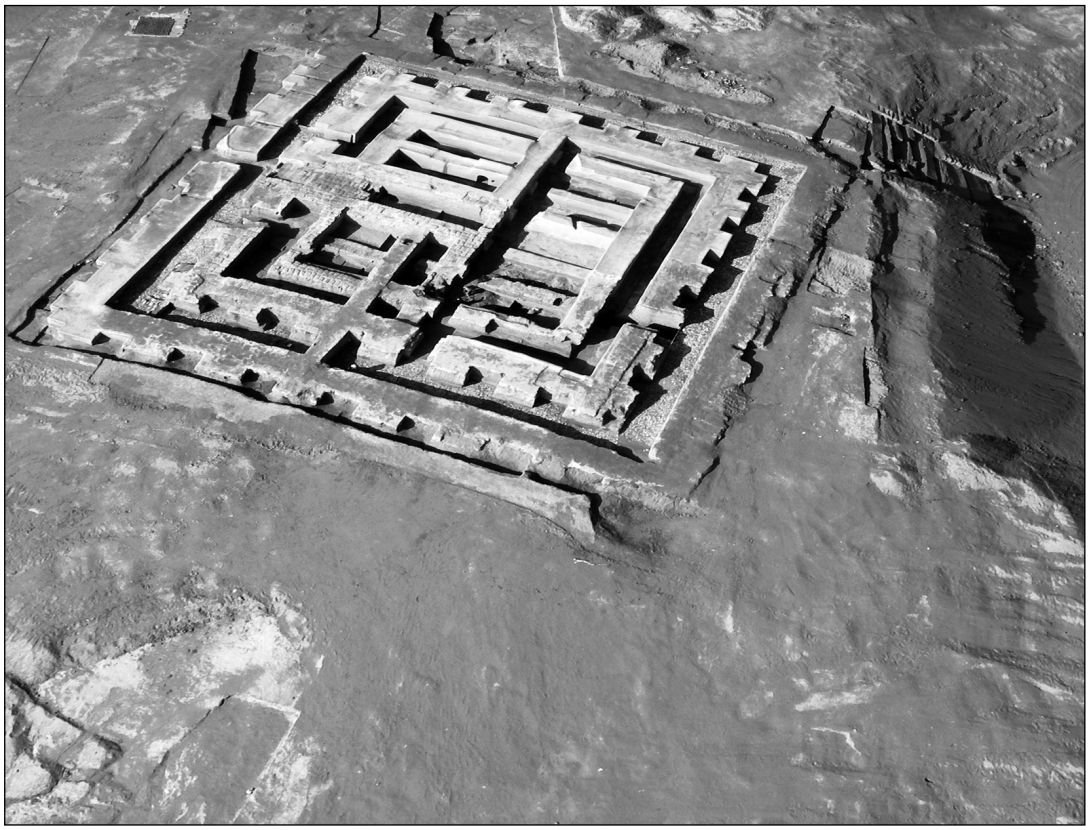


Fig. 3. The pre-Median citadel (Photo G. Davtian, MAFTur)

tained from charcoal samples. The earliest sample dates to 2763 ± 27 BP. The date calibrates to 979–833 BCE at 99% probability (or 930–891 BCE at 57% probability); the latest sample dates to 2564 ± 18 BP. The date calibrates to 799–759 BCE at 91% probability (or 792–771 BCE at 100% probability). The analyses were carried out by Laboratoire d'Océanographie et du Climat: Expérimentation et Approches Numériques (LOCEAN) at Institut Pierre-Simon Laplace (IPSL) in Université Pierre et Marie Curie (UPMC)/Paris. These dating are coincident both with those obtained by L. Sverchkov and N. Boroffka for the same period in Bactria (Sverchkov, Boroffka in print) and with the dating of the end of the Yaz I period obtained in Margiana, Bactria and Sogdiana (cf. Lhuillier, Rapin in this volume).

There is no direct analogy in Central Asia for this large "citadel", but its plan takes its origins in a central Asian architectural tradition as noticed by D. Stronach about the fort in Nush-i Jân, and recalls those of the "Zagros forts" of Nush-i Jan, Godin tepe and Tepe Ozbaki in Iran or Tell Gubba in Irak (see Boucharlat, Francfort, Lecomte 2005 for more details). It is thus probably the first evidence of a pre-Median presence in southern Central Asia: Ulug depe is in the current state of research the only urban site known during the pre-Median period in Turkmenistan and even during so-called Median period in Western Iran since it is earlier than the Zagros forts themselves (Lecomte 2011). However, the ceramic complex falls within the scope of the Central Asian Yaz II culture.

THE YAZ II POTTERY IN ULUG DEPE

In this context, our main purpose is both to clarify the Yaz II chronology and to characterize the associated ceramics with a typological point of view but also for the first time in Central Asia with a technological point of view[2].

The last two seasons in particular enabled us to clarify the stratigraphy of the citadel and the contemporary structures, allowing to bring to light different chronological stages inside the Yaz II occupation in Ulug depe.

The first stage is earlier than the citadel and it was identified under the citadel itself. Excavations of the underlying layers in the south-eastern part of this building have revealed several buttresses and recesses belonging to an earlier building, which had roughly the same orientation then the citadel and also displayed two walls with buttresses separated by a corridor. This previous building displays a plan similar to that of the citadel, but smaller.

A trench opened in the northern part of the citadel under the paved corridor and under the inner peripheral wall has shown the presence of 3 m thick levels dating to the Yaz II period. Several dump layers cov-

2. The researches lead during the first 4 seasons allowed H.-P. Francfort, whom we would like to thank, to define a typology of Yaz II ceramics, which J. Lhuillier could complete thanks to the pottery discovered during the later excavations. The technological study was undertaken by A. Dupont-Delaleuf (2011).

ered by a thin silt layer (0.03 m thick) indicates a temporary abandonment of the area between the Yaz II occupation prior to the citadel and the citadel itself. Below, several successive floors and three mud-bricks walls were identified. The top of the Yaz I layers was reached at 3 m under the ground of the citadel, without any evidence of hiatus.

This earlier Yaz II occupation has also been reached in other parts of the *depe*, where it is about 1 or 1.5 m thick, but in all cases the transition between Yaz I and Yaz II is also characterized by a continuous stratigraphy (Bendezu-Sarmiento, Lhuillier 2011). For example, in the centre of the *depe*, we excavated a building on a platform (the so-called "manor"). Its platform was constructed on an earlier abandoned Yaz II building which was levelled off. Under this building, a collapsed mud brick construction, whose function remains obscure, and several dump layers occur. Just under these layers, we reached the Yaz I levels without any hiatus.

Researches on these levels and the duration of this first stage of the Yaz II period are still in progress.

The second stage corresponds to the main occupation of the site, that is the occupation of the citadel and other buildings excavated in the western and central part of the site, i.e. the treasury, the palatial complex, the manor on platform, as well as the levels associated with the fortification wall. Most of the material found on the site is thus related to this period, which includes several successive architectural phases (Lecomte 2011).

After their abandonment, these buildings have been partly reoccupied, including new floors with filling out with large stones and pebbles and circular ovens. Some of the ceramics found in these levels can be attributed to the Hellenistic period while the other part seems to be connected to a "Yaz II–III" type assemblage still to define more precisely. We do not know yet how long after the abandonment of the citadel this occupation took place, so that it is difficult to be more precise. The ongoing study of the pottery might allow defining it. For this reason, we will focus here only on the preliminary results concerning the first two complexes.

1) The Yaz IIA complex

In the oldest Yaz II complex there is little morphological variety, but this probably could be explained by the small size of the excavated areas.

Some jars with vertical walls, but most of the closed shapes have convex walls were found [***Fig. 4***]. They often present a beak- or hooked-rim. The *manjet*-rim jars are present, and they always a simple rim: often with a concave, but sometimes with triangular or slanting banded-rim. There are also rim jars similar to those discovered in the later levels of the citadel and everted rim globular pots. Some more unusual shapes are present, like a jar with restricted walls or a rim jar. However, vertical or con-

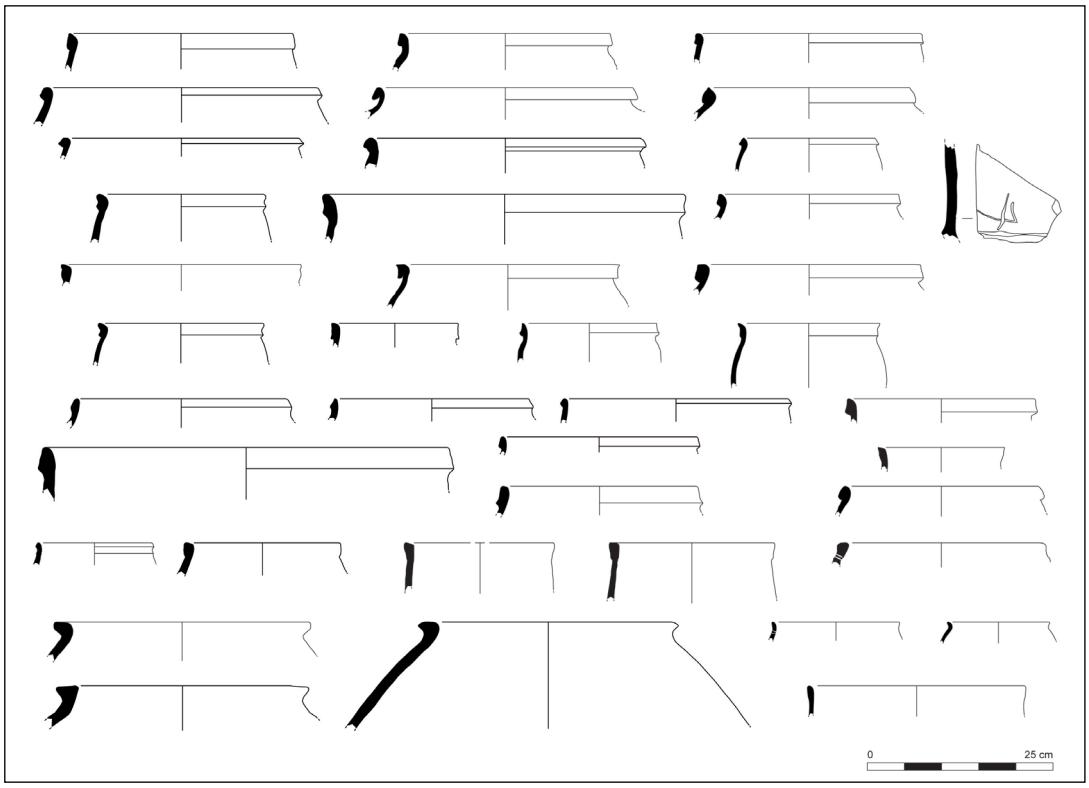


Fig. 4. Some closed shapes, Yaz IIA complex (Drawing J. Lhuillier, MAFTur)

vex *manjet*-rim jars and outward projecting rim seem to be absent, as well as necked jars. Open vessels include shapes that will be widespread during the following stage, like opened walls or convex walls bowls with rim curved inwards [***Fig. 5***]. But some other shapes seem to be documented only during this stage. This is for example convex walls bowls with a straight or S-shaped rim, or bowls with curved inwards walls and thickened rounded rim, flat rim or beak-rim. Opened-wall bowls can be carinated, with the upper part being concave, which in not the case of the ceramics associated with the citadel. There are already carinated beakers; they seem to be smaller than during the next stage (average diameter of the base 4 cm) and the carination is low. There are also some unidentified vessels on stand.

The most striking feature of this complex is the red slip covering some sherds, either only inside, either on both sides, on all the surface or only on the rim [***Fig. 6***]. The slip is usually heterogeneous, the stroke of the brush being visible.

Most of the ceramics of this complex is wheeled-fashioned. It seems that the technological processes are similar to those of the later complex, with maybe some small difference, but the study of these sherds is still in progress.

Handmade coarse ware is present in small quantities. There are mainly jars with an everted rounded or flattened rim, or more rarely opened vessels with slightly curved inwards walls. This handmade ware

should not be considered as indicative of a technological continuity with the Yaz I pottery because the paste is different, usually coarser and more tempered.

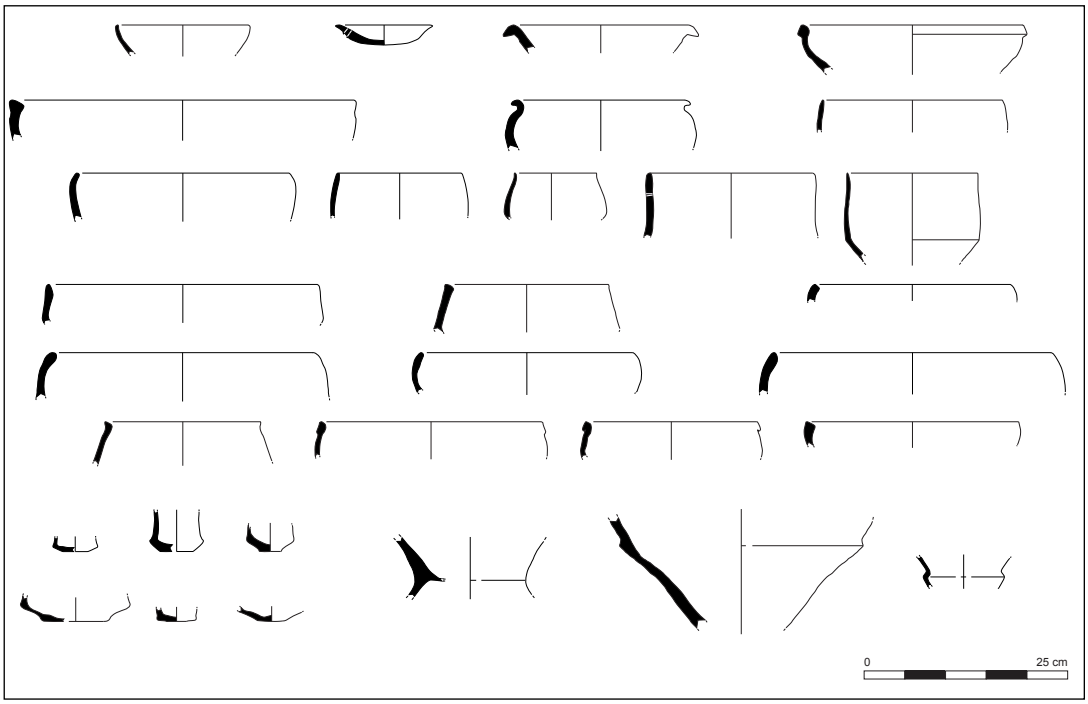


Fig. 5. Some open shapes, Yaz IIA complex (Drawing J. Lhuillier, MAFTur)

2) The Yaz IIB complex

The most recent assemblage, which comes from the citadel and other contemporary structures, is well documented and shows a great morphological variety, with about 40 open and closed shapes. Open vessels include plates, basins, and hemispherical bowls, with several kinds of rims [***Fig. 7***]. Beakers have vertical concave wall with flat or more often truncated base. This complex also includes many closed vessels. Small or large jars may have a beak-rim or a hooked-rim, with convex or more or less vertical walls, sometimes with a ridge on the shoulder [***Fig. 8***]. Most of the closed vessels, however, are cylindrical or carinated jars, mainly *manjet*-rim jars with usually a vertical rim, but it can also be concave, triangular or convex. There are also some pots or jugs with an everted rim, sometimes with a neck. There are also flared wall lids with a central lug. Some vessels with a pedestal are more unusual and were discovered in Ulug depe in 2011 for the first time.

Even if it is less frequent than during the

previous stage, some of these vessels can also have a slip, covering the entire surface or not [*Fig. 9*].

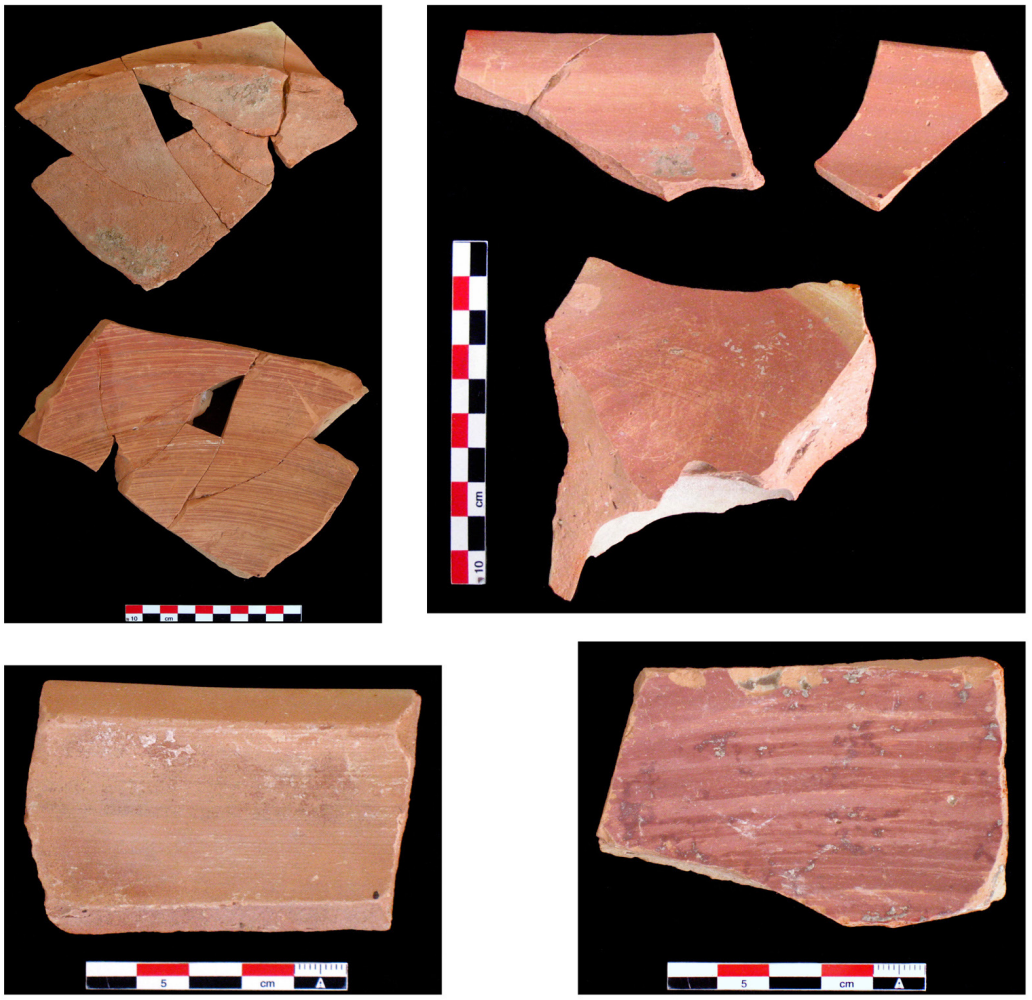


Fig. 6. Some examples of slipped sherds, Yaz IIA complex (Photo J. Lhuillier, MAFTur)

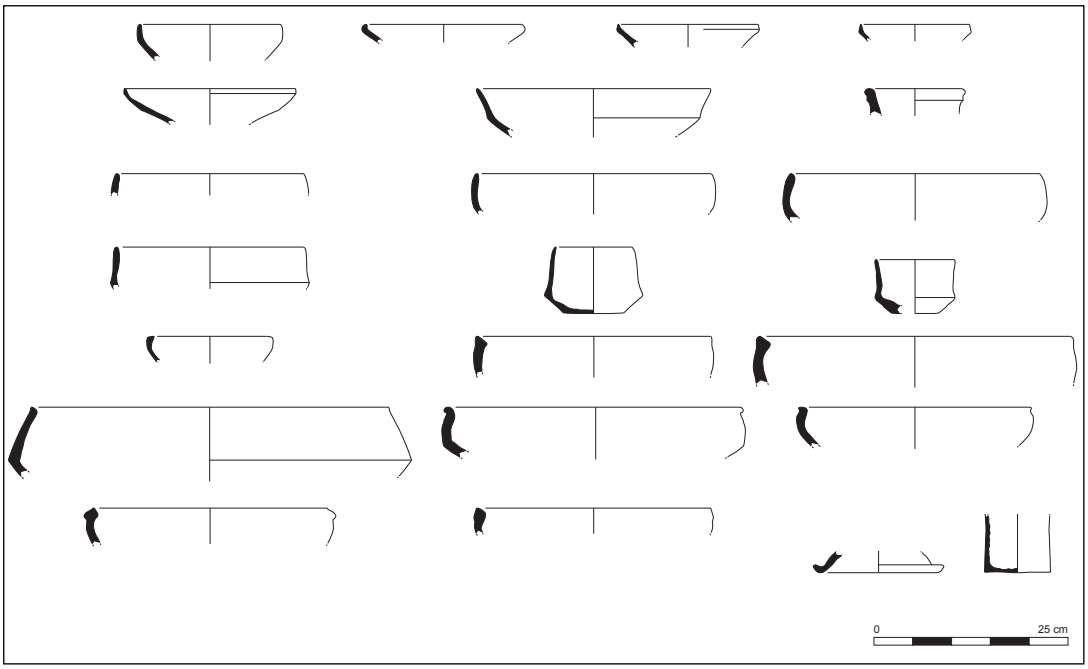


Fig. 7. Some open shapes, Yaz IIB complex (Drawing J. Lhuillier, MAFTur)

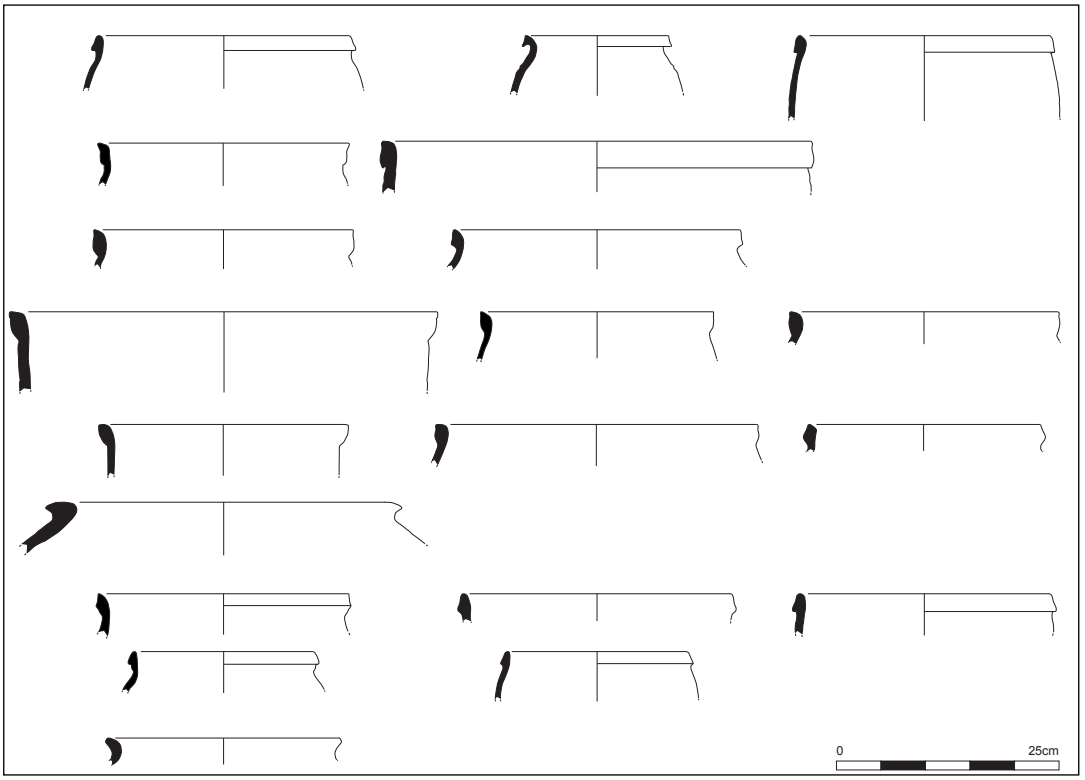


Fig. 8. Some closed shapes, Yaz IIB complex (Drawing J. Lhuillier, MAFTur)



Fig. 9. Some examples of slipped sherds, recent Yaz II complex (Photo J. Lhuillier, MAFTur)

3) Technological study

A technological study was laid, that ses on the Yaz IIB complex[3]. This study aims at bringing further data to better characterize the pottery of the Middle Iron Age in Ulug Depe, according to a new protocol defined for the region. It is also meant to give a first portrait of the craftsmen who produced these artefacts and to document their knowledge and their skill in order to determine their degree of expertise and specialization.

Some traces observed on the Yaz II pottery suggest the use of wheel-throwing technique: the typical fine horizontal striations visible on both sides of the wall, the undulations visible on the inner wall, the angular streaks visible on the lower part of the vessel and on the base, and the axial

3. Observing and identifying the marks visible on the vessels, this work aims to reconstruct the operational chain and the potter's gesture. The methodology used is primarily based on a personal experience of making pottery and on the introduction of the potter's point of view. These knowledge and expertise have also been complemented by an experimentation developed during two study missions directed by S. Méry in the United Arab Emirates on a funerary assemblage technically similar to that found in Ulug Depe (Méry, Dupont-Delaleuf, Van der Leeuw 2010).

symetry of the vessel. However, all these marks are not sufficient to conclude that the pottery assemblage was totally wheel-thrown. Indeed, we can also observe some preferential breaks, some discontinuous lines of junctions, and some variations in thickness of the walls. These marks indicate that the pottery was manufactured with coil-building and wheel-throwing techniques combined into the same operational chain (Roux, Courty 1998).

The pottery of the Yaz IIB complex can be divided into three main technical groups:

1 – Handmade vessels: This group is formed only by large-sized jars found in the citadel [***Fig. 10***]. They are manufactured with a thick slab on to which the potters have added large coils (about 8–10 centimeters diameter) arranged in ring. The vessel is built section by section with drying sequences because the base must support the weight of the body.

2 – Coil-built and wheel-fashioned vessels [***Fig. 11***]: The vessel class (which is the most abundant) involves the use of the coil-building technique but with a step of wheel-fashioning. The potters have likely manufactured one or two coils before the use of the rotation in the preforming step. A time of drying is necessary before adding the following coils. In some cases, we can also observe a movement of vertical stretching of the clay. The bases can be molded or handmade.

3 – The last group includes coil-built and wheel fashioned vessels for which the bases are manufactured with rotation [***Fig. 12***]. In this case, a small lump of clay is centred and used to make the base. This group is minoritary, but the identification is only made possible from the base potsherd. The use of this technique is a first step towards



Fig. 10. Handmade vessel: a large-sized jar found in the citadel (Photo A. Pelle, drawing A. Dupont-Delaleuf, MAFTur)

an entirely wheel-thrown pottery, but despite their technical skill, the Yaz II craftsmen never adopt a complete manufacturing on a wheel. The most the clay mass is important, more it is difficult to proceed to the centering of the vessel. This also might be explained by the physical properties of the raw materials, by the used tools or for socio-cultural reasons, for example the importance of the tradition.

Firing is the last stage of the operational chain [***Fig. 13***]. Usually, the inner surface is red and the outer surface is beige. The firing is well-mastered and homogeneous. The only visible firing marks are due to the vessel stacking, contrasting the colours. The homogeneity of the colours could also be linked with the uniformity of the ceramic pastes including the same proportions and nature of clay and mineral inclusions. Further analysis will allow to confirm or not this hypothesis.

To sum up, the technological study of the Yaz II pottery emphasizes the main use of both coil-building and wheel-fashioning techniques combined into the sameoperational chain. It is interesting to notice that there is no evidence of the use of a single wheel-throwing technique throughout the overall occupation sequence of Ulug Depe from the Chalcolithic to the Middle Iron Age (Dupont-Delaleuf 2010; 2011; 2013). For the Yaz II pottery, another important feature is the absence of slip applied on the external surface of the vessel, despite

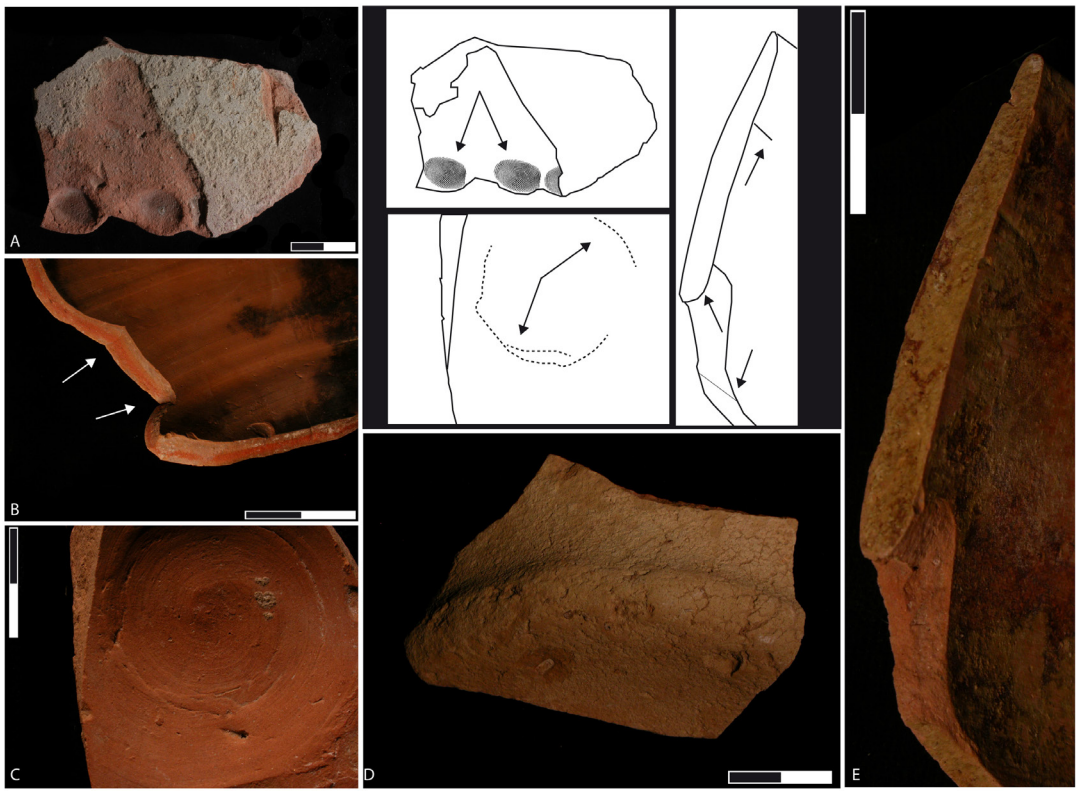


Fig. 11. Coil-built and wheel-fashioned vessels with handmade bases (Photo and drawing A. Dupont-Delaleuf, MAFTur)

the data sometimes provided in the scientific literature. The variation of the colour observed on the pots is due to a deliberate firing process. Indeed, the potters add some oxygen at the end of a firing in a reducing atmosphere. The pottery characteristics witness a high level of expertise that can be related to specialized craftsmen. This hypothesis, which in no way prejudges the socio-economic status of potters (Roux, Corbetta 1989), is based on the gesture homogeneity and efficiency, the potters's skill and the large numbers of standardized ceramics (Costin 1991: 33–43; Hagstrum 2001; Hardy 2006).

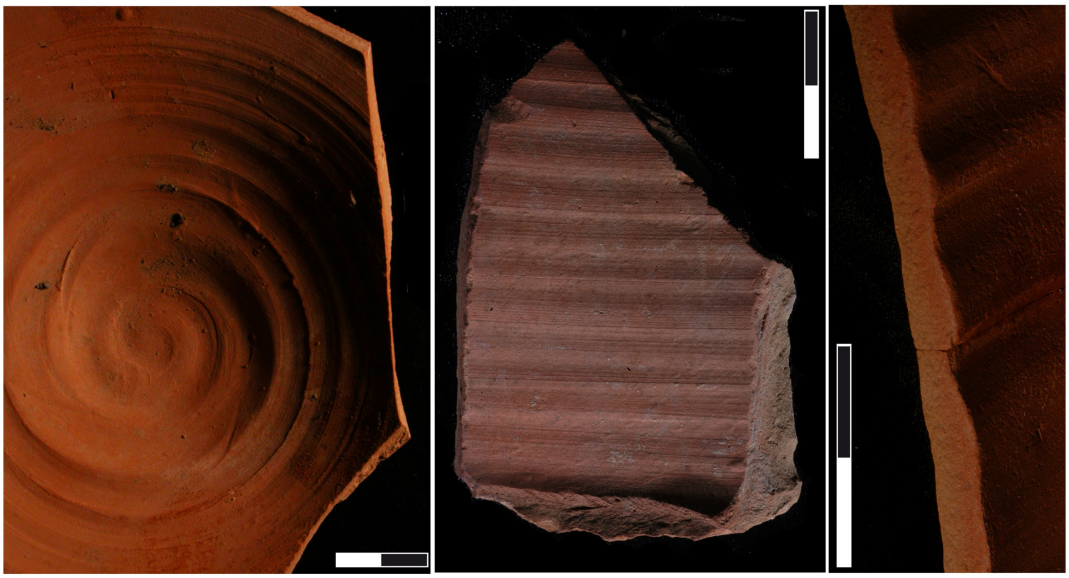


Fig. 12. Coil-built and wheel-fashioned vessels with thrown bases (Photo A. Pelle, MAFTur)

DISCUSSION

This complex thus seems mainly characterized by the abundance of beak-rim or hooked-rim jars, which is quite consistent with what L. Sverchkov and N. Boroffka have identified as characteristic of the Yaz IIA stage in Bektepa (in 4th and 5th layers), in Kuchuk II, in Kyzylcha 6 or in small sites near Denau in northern Bactria, but also in Tillya II in southern Bactria and in El'ken III or Garry-Kyariz I in Turkmenistan (Sverchkov, Boroffka 2008; in print). According to them, the Yaz IIB complex is mainly defined by the appearance – in coexistence with beak-rim jars – of vertical *manjet*-rim jars, which become more prevalent in the Yaz III period. However, there are a lot of *manjet*-rim jars in the citadel and in the other contemporary buildings in Ulug depe.

So the Yaz II period phasing in Ulug depe does not exactly fit with that of Bactria as defined by L. Sverchkov and N. Boroffka. Two hypotheses can explain this, if we consider that the citadel and the associated buildings should not be dated from the Yaz III period, which would not appear to be consistent neither with the stratigraphy, nor with the C14 dates, nor with the absence of typical Achaemenid vessels.

The first hypothesis is to consider that there is a time lag between Margiana and Kopet-Dagh foothills on one hand and Bactria on the other hand. The *manjet*-rim jars would have appeared earlier in Margiana and in the Kopet-Dagh foothills, therefore already during the Yaz IIA stage. If this hypothesis is true, it would mean that the Yaz IIA stage is represented in Yaz depe as well as in Ulug depe, which would be consistent with the stratigraphic continuity between Yaz I and Yaz II levels we could observe in Ulug depe.

But this difference may also indicate the existence of regional particularities, as during the previous Yaz I period (Lhuillier 2013), that have been hidden by the apparent uniformity of the Yaz II–III pottery in all Central Asia. The presence of a totally different complex in Koktepe during this period, the "pinkish burnished ware" (Lyonnet 2009), before the appearance of wheeled-made pottery during Yaz III period, shows the existence of such regionalisms during the pre-Achaemenid period. Closer to Ulug depe, M. Cattani and B. Genito (1998) mention some cordoned or grooved decoration on the shoulder of the cylindrical jars in the Murghab delta, which have not been identified in Ulug depe. In this case, we should expect a partly different assemblage in each region of Yaz II cultural area, with some common shapes, but these particularities are still to be identified at the macro-regional scale.

Moreover, we cannot exclude that some particular features of the Ulug depe's assemblage, like the presence of a slip or

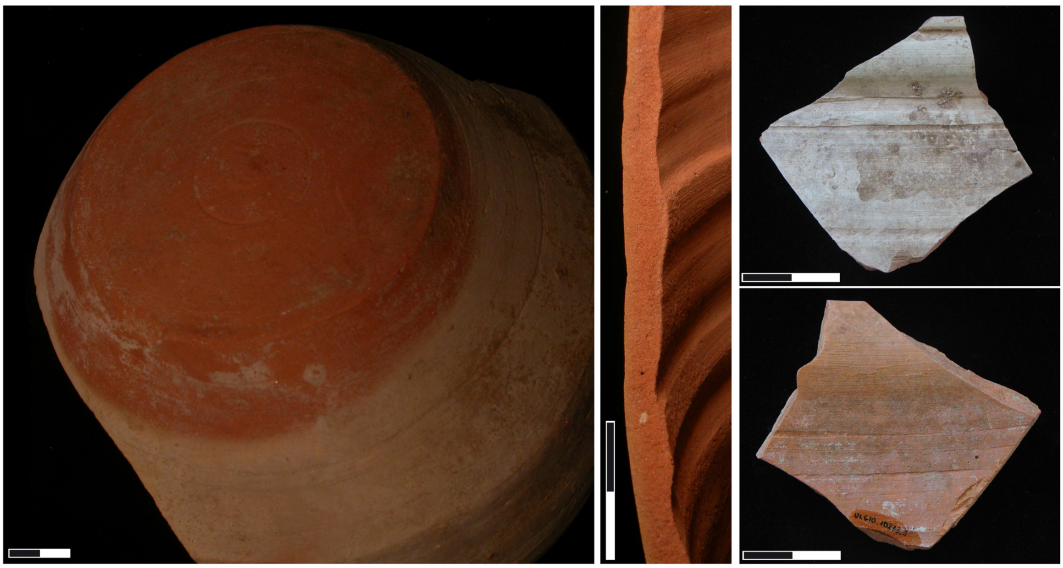


Fig. 13. Variation of colours and firing process (Photo A. Pelle, MAFTur)

some unusual shapes, are caused by contact with surrounding areas, certainly the Iranian plateau as proven by the presence in the citadel of Sialk A like tankards (Ghirshman 1938, 1939).

In any case, the study of the pottery from Ulug depe is not finished yet and the data that have been shown here are only preliminary and indicative.

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