PROOFS

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PROOFS
Early Bronze Age Graves at Doghlauri (Georgia): Results of the 2012–2015 Salvage Excavations

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Abstract
The cemetery of Doghlauri, which is part of the important multiperiod site of Aradetis Orgora in the Shida Kartli region of Georgia, was investigated in 2012–2015 in the framework of a salvage excavation, which brought to the light more than 400 graves. The material from the 67 Early Bronze graves was fully processed in the course of the 2017 field campaign of the “Georgian-Italian Shida Kartli Archaeological Project”. It mainly consists of pottery vessels, but includes a significant component of personal ornaments and other small finds in metal and stone. This paper presents an overview of the finds, discusses the chronology of the Doghlauri graves, and draws some preliminary conclusions about the burial customs of the Aradetis Orgora Kura-Araxes population in the framework of the funerary evidence from Shida Kartli and, more in general, from the area of distribution of the Kura-Araxes culture.

Introduction
Doghlauri cemetery is part of the important multiperiod site of Aradetis Orgora in the Shida Kartli region of Georgia in the Southern Caucasus. The site lies in the valley of the Kura River, on the western bank of the Western Prone, one of its main tributaries. It occupies a total surface of ca. 40ha and is composed of a settlement area and a vast cemetery. The settlement includes three different hills: the Western (Main) Mound, also known as Dedoplis Gora, the Eastern Mound and the Northern Mound. The cemetery extends over an area of ca. 8ha between the Northern Mound and the old Tbilisi-Senaki-Leselidze (E60) highway (Fig. 1). The main periods of occupation of the Aradetis Orgora complex were the Late Bronze/Early Iron Age (second half of the 2nd, early 1st millennium BC, corresponding to what is generally known as the Lchashen-Tsitelgori – or Central Trancaucasian – and Samtavro cultures), when all of the three mounds were settled, and the Kura-Araxes period, attested over the whole of the Main (Western) Mound. The graves of Doghlauri, which exceed 500 in number, belong for the most part to the same two periods.

Excavations at Aradetis Orgora and Doghlauri
From 2013 to 2016 the Main Mound was the object of excavations by the “Georgian-Italian Shida Kartli Archaeological project” of Ca’ Foscari University of Venice and the Georgian National Museum of Tbilisi, jointly headed by Elena Rova and Iulon Gagoshidze

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Two soundings on the opposite sides of the hill proved that this site was occupied without significant interruptions, although with different intensity, from ca 3100 BC to the 6th century AD, for a total depth of occupational layers of more than 14 meters. The 4m high Kura-Araxes sequence, including six main architectural phases, was completely excavated in the Eastern sounding (Field B). 14C determinations suggest an occupation between the 31st and the 28th centuries BC, i.e. in the later part of the period, late KA II and KA III, which is confirmed by preliminary analysis of the discovered pottery (Passerini et al. 2016, 2018).

Doghlauri cemetery was investigated at different times, since the late 1970s, in the course of salvage excavations. In 1979–1982 an expedition of the S. Janashia Georgian National Museum directed by Iulon Gagoshidze carried out excavations in the southern part of the cemetery, close to a Soviet rabbit farm which was being built at that time, whose ruins are still visible in the area (Gagoshidze et al. 1981). They unearthed a Late Bronze Age kurgan, 56 pit graves of the Late Bronze/Early Iron Age and 13 Kura-Araxes graves. The latter were subsequently published, in English language, by Koridze and Palumbi (2008) and Jalabadze et al. (2012).

In 2012–2016 the cemetery was fully excavated by a Georgian team headed by I. Gagoshidze, as a result of the construction of the Ruisi-Agara section of the new Tbilisi-Senaki-Leselidze highway, which crossed it and caused its almost complete loss (Fig. 2). A first excavation season, between September 4th and November 4th, 2012, concerned the SE portion of the cemetery, in the centre of which the highway presently runs (Gagoshidze 2012). It brought to light 153 burials, 36 of which of the Kura-Araxes period. A second excavation season, between October 8th and December 8th, 2013, affected a 4.5ha area in the NW part of the cemetery, from which the company was to obtain the inert materials needed for construction. 257 burials were excavated, 28 of which of Kura-Araxes date (see Gelashvili 2014). The construction, in 2015, of artificial terraces flanking the path of the new highway caused the excavation of 29 additional graves, 3 of which of Kura-Araxes date. Finally, one additional Late Bronze grave was excavated in 2016. During the 2015–2016 seasons, members of the Italian team collaborated in the excavation, analysed the human remains and took palynological and bone samples from the graves (Gagoshidze, Rova 2018a, see also preliminary reports in Georgian-Italian Shida Kartli Archaeological Project). In spite of the difficult working conditions (the 2012 and 2013 seasons in particular took place in winter under rain and snow) and of the severe time pressure, salvage excavations were very successful and unearthed nearly 450 burials.

Materials and Methods

Excavated Early Bronze graves from Doghlauri amount to 80, 67 of which came to light during the 2012–2015 salvage excavations. All of them, except for one, belong to the Kura-Araxes culture and represent one of the largest corpora of Kura-Araxes graves ever excavated, and definitely the largest one in the Shida Kartli region of Georgia (Fig. 3). The finds and documentation of the 2012–2015 seasons, presently stored at the Dedoplis Mindori fund

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3 The total number of graves and the numbers of those attributed to the various periods are slightly different in the various preliminary publications, due to the inclusion or exclusion of damaged graves and of so-called “cenotaphs” (pits filled with pottery vessels) and to the changing attribution of a few graves. In fact, according to the excavators, Early Bronze and Late Bronze/Early Iron burials belonged to the same types, thus preventing a precise chronological attribution of those devoid of any grave goods.
in the S. Janashia Georgian National Museum, were fully processed in the course of the 2017 field campaign of the “Georgian-Italian Shida Kartli Archaeological Project”. Burial goods amounted to 128 pottery vessels, which were fully restored, and 191 object catalogue numbers, many of which consisted of multiple items, such as strings of beads, etc., from 63 different burials (four graves did not contain any artefacts). All material was photographed, drawn, measured and described and the relevant data were inserted into a dedicated database. Original excavation plans were digitised, re-drawn and, as far as possible, georeferenced; original grave plans were digitised and re-drawn and unpublished excavation reports and field notes were scanned and translated into English. In addition, human osteological material from the 2012 campaign (among which the remains from 22 Kura-Araxes graves) was also analysed at the Institute of History and Ethnology of the Ivane Javakhishvili Tbilisi State University in Tbilisi.

The following paragraphs describe the Kura-Araxes cemetery, present the preliminary results of the 2017 study season and offer a summary evaluation of Kura-Araxes funerary customs in Shida Kartli based on the comparison of the Doghlauri graves with those from other sites of the region previously published by the “Georgian-Italian Shida Kartli Archaeological Expedition” (Puturidze, Rova 2012, cf. also Rova 2018) in the general framework of Kura-Araxes funerary customs in the culture’s distribution area (Poulmarc’h et al. 2014; Sagona 2017: 243–248; see also Palumbi 2008: 157–179, 190–192). Special attention is devoted to the comparison with the cemetery of Khashuri Natsargora, located at a distance of only 15km in a NW direction from Aradetis Orgora (Puturidze, Rova 2012). Furthermore, the presence at Doghlauri of a single Bedeni grave offers the opportunity for some considerations about the evolution of funerary customs from the Kura-Araxes to the following Early Kurgan period.

**Topography, Burial Types**

The location of the cemetery, close to the settlement but separated from it by a small course of water, is paralleled at other sites of the Shida Kartli region, for example at Natsargora (Puturidze, Rova 2012; cf. Rova 2018: fn. 27–28), and suggests a clear distinction between the “space of the dead” and that of the living population. Interestingly enough, excavated Kura-Araxes graves (cf. Fig. 2) do not appear to be homogeneously distributed on the cemetery surface, but to cluster into two different groups. This could suggest either that the cemetery shifted its location in the course of time, as attested at Kvatskhelebi, where it moved to Tistlepis Tsqaro a few hundred meters away to leave space for the expanding settlement (Jalabadze et al. 2012: 60–70) or, maybe, that different groups of population were buried in separate areas within the cemetery. Currently, neither hypothesis can be confirmed.

The cemetery is situated on a flat area on the second terrace of the Kura, which consists of 3–4m of river conglomerate covered by a 1.5m thick loamy layer. The burial pits had been dug into the loamy layer from a level which must have lain quite close to the present surface, as their top was met just under the 30–40cm thick layer of humus. Before the beginning of the excavation, this horizon had been removed by mechanical tools by the highway construction company, an operation that had slightly affected the top of the underlying loamy

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4 This part of the work was presented at the Munich ICAANE in a separate poster by F. Bertoldi et al. For the 2015 season, see Bertoldi et al. 2016. Unfortunately, the osteological material from the 2013 season had been disposed of and could therefore not be analysed.
layer. As a consequence, nothing certain can be concluded about roofing systems and the possible presence of graves markers. However, a considerable number of burial pits (two thirds or even more) appear to have been covered by a group of river pebbles; in a few cases this was still visible on the surface of the cultivated area before the beginning of the highway construction. Stone-covered graves are attested at other Kura-Araxes sites of Shida Kartli, e.g. at Natsargora, where they seemed, however, to be less frequent (six reported cases out of 26).

Most common at Doghlauri are simple pit burials in rectangular pits with rounded corners oriented N-S or with only slightly diverging orientations. These often, though not always, hosted the skeleton of a single adult in a crouched position fifth (Fig. 4). A higher variability, still to be analysed in detail but apparently not sex-determined, was observed in the position of the head (to the N or to the S, with a clear prevalence for the N), and in the side of deposition (left or right). Except for these details, the position of the bodies appears to be quite constant and standardised, as is the rule for Kura-Araxes graves in Shida Kartli.

About one third of the graves exhibited a stone-lined pit (Fig. 5); these were generally of larger dimensions and were often better furnished than the other ones. In numerous cases (35–40%) they contained the remains of more than one individual (up to 7 in the cases where osteological remains could be analysed), but there were also examples of individual stone-lined graves and, possibly, of multiple graves in simple pits. The skeletons in multiple burials were often incomplete and represented only by a few elements (mainly long bones and skulls). They belonged to individuals of different age and sex. In several cases only one skeleton, which lay in the central part of the grave, was articulated, while the sparse bones of the remaining ones were lying along the grave’s sides, as if they had been put aside at the time of the last deposition. This suggests that one is dealing with family graves, which were often re-opened to accommodate different members of the family.

**Burial Goods**

Burial goods do not show substantial differences either in number or in quality. They mainly consist of pottery, sometimes joined by a few ornaments and/or weapons and tools, with a diffuse presence of metal items. All items belong to very characteristic Kura-Araxes types, which are well known from Kura-Araxes graves in the Shida Kartli province and elsewhere.

Vessels belong to four main functional types: large open pots, large bowls, mugs and jugs, all of them almost invariably provided with one of two handles (Fig. 6, Fig. 7). The first two types compose the basic burial set, consisting of an open and a closed vessel, which can be integrated by additional items. Graves equipped with three vessels are relatively common, while those with one, or with more than three, are rare. Up to nine different vessels were recovered in one grave, but all the graves equipped with a large number of vessels contained the remains of more than one individual. There is no evident correlation between graves with the highest number of vessels and those which contained a higher number of other finds. Vessels were generally located near the head of the dead, suggesting that they were symbolising a meal laid out for the deceased.

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5 Individual graves of children are apparently not attested, though remains of juveniles occur relatively often in double and multiple graves.
Most of the remaining items (Fig. 8) were ornaments: pins, bracelets, spirals (hair-rings), pendants, and beads of necklaces, which were apparently worn by the deceased, since when their exact location could be recorded they were mostly found near the head and neck, on the wrists, or in the chest/shoulder area.

Metal objects generally belong to well-known types, such as double-volute pins, bracelets, hair-rings, anchors, lozenges and drop-shaped pendants, with numerous parallels from cemeteries of the Kura-Araxes period in Shida Kartli (Natsargora, Kvatskhela, Tvelpia Tsqharo, Dzaghina, as well as in previously excavated graves at Doghlauri) and elsewhere. There is, however, also a small number of finds without known comparisons: e.g. a pendant in the shape of an animal claw and two shells-shaped pendants (Fig. 9). Sampling of metal objects for archaeometric analyses could not be carried out: according to some preliminary analyses made at the Georgian National Museum after the 2012 salvage excavation, there was a considerable variety in metal composition, as is often the case in later Kura-Araxes contexts (Stöllner, Gambashidze 2014: 103–105): different copper alloys, as well as silver and lead, being all represented besides the most common arsenical bronze.

The remaining grave goods include beads of carnelian, rock crystal, bone and “paste” (ca 240 items in total), a flint spearhead, 36 flint and obsidian arrowheads, and some bone spindle-whorls, all rather common finds in similar contexts. An interesting discovery is a group of 25 small flint arrowheads from grave 2012-121, which had apparently been stored in a leather quiver, as suggested by the recovery of fragments of organic material near them. They belong to a common Kura-Araxes type, featuring a stemmed base and a triangular head. The presence of animal bones (possibly funerary offerings rather than remains of a funerary banquet) was only occasionally observed in the graves.

**Description of Individual Burials**

* A Kura-Araxes multiple grave

Especially interesting results were obtained from one burial, 2015-2 (Fig. 5, right), from which specialists of the Italian team excavated the human remains and took samples for palynological analysis. The stone-lined grave contained a 35–45 years old female individual affected by severe oral and skeletal pathologies in primary position, crouched on the right side, and sparse bones of two other individuals: a young male and an older female (Bertoldi et al. 2016; Bertoldi et al., poster presented at the Munich ICAANE). Grave goods consisted of two pottery vessels, four metal spirals of different shapes and dimensions and three bone cylindrical beads.

The palynological sample collected beneath the skull of the main individual contained some light blue fibres of flax cloth, which may represent the remains of a coloured scarf. In the sample collected from the abdomen area a huge amount of pollen of edible plants (a.o. walnut, nut) was joined by pollen of medicinal plants, e.g. *Achillea*, *Centaurea*, *Serratula*, *Cirsium*, possibly the remains of some sort of a tisane or potion. Samples from both the accompanying vessels contained pollen of sowing cereals and weeds, phytoliths and paren-

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6 For discussion and parallels, see Puturidze, Rova 2012: 49–52 et passim.
7 For discussion and parallels, see Puturidze, Rova 2012: 53–56 et passim.
8 Microlithic finds from Doghlauri were discussed by F. Amato at the Munich ICAANE within a general presentation of the chipped lithics from Aradetis Orgora.
chymal cells of wood. This suggests that these vessels had contained food which had been cooked on an open fire (E. Kvavadze, personal communication).

**A Bedeni Grave**

A single grave (2013-175) stands out from the remaining ones as it does not contain any typical Kura-Araxes material, but only artefacts which can be attributed to the Early Kurgan period (Fig. 10). It is a stone-lined pit grave, which does not differ at all in shape and dimensions from the Kura-Araxes graves presented above, although it is oriented differently. It contained a partially preserved skeleton equipped with a moderately rich assemblage of burial goods: three pottery vessels (a fragmentary jar, a small biconical mug and a handled bowl), five metal objects (two axes, a gouge, and two awls), and a flint blade. Pottery vessels, in particular, show all characteristic features (fabric, shape, surface treatment and decoration) of the Bedeni ceramic production.

**The Date of the Cemetery**

$^{14}C$ analysis on human bones from the cemetery is still in progress. A preliminary analysis of the finds suggests, however, that the cemetery, with the exception of the just discussed Bedeni grave, is contemporary to the Aradetis Orgora Kura-Araxes settlement which, as we saw, can be dated between the 31st and the 28th centuries BC, and thus slightly later than the neighbouring settlement and cemetery at Natsargora (Passerini et al. 2016, 2018; see also Rova 2014: 65–67). The ceramic assemblage, in particular, besides a significant (later) KA II component, includes a certain amount of KA III materials (Fig. 7). Its majority (63%) consists of typical Red-Black Burnished Ware, while 16% can be described as Black Burnished Ware. Vessels usually show carefully burnished, shiny surfaces. They are generally undecorated, the most notable exception being a Black Burnished Kura-Araxes mug (Fig. 7, below right) with impressed (low relief) geometric decoration including hatched elements, spirals and a stylised vegetal design.

**Discussion and Conclusions**

A preliminary comparison of the quantity and quality of burial goods from Doghlauri with those from the other Kura-Araxes cemeteries of Shida Kartli and of other areas of diffusion of the Kura-Araxes culture confirms the lack of significant differences in burial wealth between individual graves which is characteristic of this culture, and is generally interpreted as reflecting an egalitarian ideology (Puturidze, Rova 2012; Sagona 2017: 243–248; Rova 2018). It is worth stressing, in this respect, that the graves which contained a larger number of finds often correspond to those which contained multiple skeletons.

On the other hand, if compared with other Kura-Araxes cemeteries of Shida Kartli, in particular with Khashuri Natsargora, Doghlauri stands out for the fact that its graves are slightly wealthier in average, both in the number of finds and in their morphological variety. This may be due to a combination of different factors: 1) the larger number of excavated graves at Doghlauri, 2) the special role of the Aradetis Orgora settlement (while Natsargora was a village occupied for a rather short time and located slightly off the Kura River valley, Aradetis Orgora was a regional centre with a long continuity of occupation, located in a dominant position on the Kura) and, possibly, 3) the slightly later date of Doghlauri cemetery.
At both cemeteries, but especially at Doghlauri, richer, better equipped, graves, tend to correspond to not only to later graves and to larger, stone lined graves, but also to graves which host more than one individual. This suggests a possible local trajectory toward the radical change in burial customs which characterises the post-Kura-Araxes (Early Kurgan) period, when rich individual barrow graves become widespread in the Southern Caucasus (Sagona 2017: 298–320). We could hypothesise that, in Shida Kartli at least, this happened through a transitional stage, corresponding to the Late Kura-Aaxes period, when wealthier family graves make their appearance. The emergence of individual chief figures would thus have been preceded, or mediated, by the emergence of richer family groups.

Recent research in Shida Kartli, on the other hand, suggests a higher continuity between the Kura-Araxes and the Bedeni culture than in other regions of Georgia. This concerns first of all settlement patterns: not only is Berikldeebi, located a few hundred meters away from Aradetis Orgora, one of the few known settlements of this culture, which is characterised by an apparent abandonment of settled occupation, but Bedeni levels have now been proved to exist at Aradetis Orgora itself in both soundings (A and B) on the Main Mound (Gagoshidze, Rova 2018a; Georgian-Italian Shida Kartli Archaeological Project, 2016 preliminary report).

In the field of funerary customs, it can be observed that Bedeni kurgans in Shida Kartli are generally smaller, and less wealthy, than the monumental kurgans which characterise Eastern Georgia (Rova 2014: 64–65). A typical example is Kurgan No. 1 at Okherakhevi, excavated by our expedition in 2010, which measured 10×4.50m and was 70cm high. It was equipped with a small square-shaped stone chamber which contained a few fragments of human bones, two pottery vessels and numerous fragments of obsidian (Rova et al. 2011: 17–25). Similar Bedeni kurgans are also present at Bebnisi, close to Berikldeebi and Aradetis Orgora (Jalabadze et al. 2012: 90–94).

On the other hand, the single Bedeni grave from Doghlauri cemetery shows that traditional Kura-Araxes funerary customs had not been completely abandoned in the region during the Early Kurgan period. Thus, evidence from the Aradetis Orgora site suggests that the transition between the Kura-Araxes and Early Kurgan cultures in Shida Kartli was less abrupt and more gradual than generally believed, and involved both transitional situations, and a certain degree of hybridisation.

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Fig. 1: Satellite view of the Aradetis Orgora complex with location of Doghlauri cemetery (base from Google Earth)

Fig. 2: Satellite view of Doghlauri cemetery (from Google Earth) with approximate location of the 2012-2015 excavation areas and graves
Fig. 3: Approximate location and number of excavated Kura-Araxes graves in the Shida Kartli province (base modified from Sagona and Abramishvili 2008)

Fig. 4: Doghlauri cemetery: pit graves (Nos 2013-8, 2013-94, 2013-95)

Fig. 5: Doghlauri cemetery: graves with stone-lined pit (Nos 2012-51, 2015-2)
Fig. 6: Kura-Araxes vessels from Doghlauri cemetery: main functional types

Fig. 7: Kura-Araxes vessels from Doghlauri cemetery
Fig. 8: Metal ornaments from Doghlauri cemetery

Fig. 9: Pendants in the shape of an animal claw and of two shells
Fig. 10: Grave No. 2013-175, grave and gravegoods