Early Uruk Expansion in Iraqi Kurdistan: New Data from Girdi Qala and Logardan

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Abstract

Until very recently, the accepted idea was that the Uruk expansion began during the north-Mesopotamian LC3 period, with a first phase characterized by the presence of BRBs and other sporadic traces in local assemblages. Excavations at Girdi Qala and Logardan in Iraqi Kurdistan, west of the Qara Dagh range in Chamchamal District (Sulaymaniyah Governorate) instead offer clear evidence for a massive and early Uruk presence with monumental buildings, ramps, gates, residential and craft areas from the very beginning of the 4th millennium BC.

Excavation on the sites of Girdi Qala and Logardan started in 2015. The scientific purpose of this new project is to study the formation of complex societies, the appearance of territorial polities and long-term intercultural processes. Indeed, despite recent developments (Kopanias and MacGinnis 2016), Southern Kurdistan remains poorly documented, although it seems an ideal laboratory for investigating these research questions. It is no exaggeration to say that the region is at the very heart of the Near East, a crossroads between Northern and Southern Mesopotamia as well as between Mesopotamia and Iran. The project is more specifically focused on the Chalcolithic period and on the Bronze Age, two periods for which the redefinition of cultures on a regional basis is a major issue[2].

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The sites are located in the eastern part of the Chamchamal plain, on the west bank of the river Tavuq Cay that runs to the south-east, parallel to the Djebel Qara Dagh and then to the south-west to join the Nahr al Uzaym that itself flows into the Tigris. The river has many tributaries, mostly on its west bank, and both sites are built at the junction of two of them, the Tchachma Spi and the Tawer Hamid. Two brief surveys of the sites in April 2014 and June 2015 had convinced us of their scientific potential. According to the surface material that we were able to identify and excavations made since, Girdi Qala displays a sequence ranging from the Ubaid to Middle Islam, and Logardan, less than 1.5 km to the north, from the Halaf to the Late Bronze Age (with very few later remains such as Parthian tombs and Islamic pits).

Girdi Qala (Lat. 35°30'59.10''N/S – Long. 44°53'00.93''E/W) is a typical tabular tell, 14m high with a diamond-shaped flat top. The base of the Tell covers an area of approximately 1.3

1 C.N.R.S. – I.F.P.O (Iraq).

2 The Excavations Committee of the French Ministry of Foreign Affairs (MEAE), the IFPO and the cultural service (SCAC) of the French embassy in Iraq, the University of Liège (Belgium), the University of Paris 1 and the CNRS sponsor the project.

ha, but the site is not limited to the Tell proper and extends much further, particularly to the north, over a secondary low mound. The total surface of the site is about 5.5 ha. Logardan (Lat. 35°31'42.17"N/S – Long. 44°52'34.78"E/W) is quite different. It is not a regular tell. The site, 27m high, lies on top of a natural hill, roughly triangular with steep slopes, except to the east where the ground gently slopes down through three successive terraces that proved to be partly artificial. It covers around 3.7 ha in total.

Three short seasons of four or five weeks have been conducted so far[3], whose main goal was to begin to establish the sequence of the sites, by excavating well-preserved *in situ* levels. At both sites, after geophysical and archaeological survey, we opened four or five trenches (labelled 'A' to 'E')[4]. The Uruk presence is documented by a series of installations that excavations are just starting to reveal: a craft area and an Uruk enclave at Girdi Qala, a stone ramp and a small acropolis at Logardan.

At Girdi Qala, Trench C (10 × 5m) was positioned on the southern slope of the Main Mound. This choice was justified by the concentration of Late Chalcolithic ceramic materials collected in this area during the preliminary surveys. Indeed, during the first half of the 4th millennium B.C., the southern slope was intensely settled and this sector was the center of large-scale pottery production. The excavation has enabled us to identify ten well-preserved overlapping layers close to the surface and almost the whole sequence has shown traces of pottery production or firing structures. These are remarkable for their quantity (16 kilns), technical features, concentration and permanency within a same area. Levels 10 and 7 in particular yielded especially interesting structures. Level 10 has produced five large pottery kilns (Fig. 1) connected to each other by a ventilation duct. Their average dimensions, with diameters around 1.8m, are quite exceptional for the Chalcolithic period. In Level 7, the main complex of kilns is represented by three circular structures (Fig. 2) connected by an internal ventilation duct and by an external duct, built as a chimney to evacuate all the smoke. From a technological point of view, all the firing installations belong to a two-storey up-draught type of pottery kiln well known since the Halaf-Ubaid period (Hansen Streily 2000). However, multiple kilns like those of Girdi Qala Trench C have never been previously documented and therefore attest to a hitherto unknown Uruk firing technology (Vallet *et al.* 2017).

Indeed, the large majority (70%) of the ceramic assemblage from Trench C belongs to South-Mesopotamian Uruk classical traditions, and all of the *in situ* material is Uruk. The local Late Chalcolithic pottery (30%) is found exclusively in the infill layers. While there is no doubt that Girdi Qala was an indigenous Late Chalcolithic settlement, it is clear that Uruk pottery was made on-site by resident artisans. The two distinct traditions, the indigenous one characterized by North-Mesopotamian shapes and chaff-faced fabrics and the South-Mesopotamian one by mineral pastes and Uruk-related shapes, coexist throughout the sequence. However, a difference is quite clear between Levels 7–1 (Fig. 3), dating back to the beginning of the LC3 North-Mesopotamian horizon, and Levels 10–8 (Fig. 4), whose ceramic assemblage belongs to the late LC2 North-Mesopotamian repertory. As for the

3 The results of the fourth season (2018) that just ended as we are writing this article are not yet fully processed. We mention here some of them nonetheless.

4 I shall only present here the trenches that provided Chalcolithic remains, but we also collected many data on other periods, Islamic, Sasanian and Hellenistic. See our annual reports for a full account of the results, Vallet (ed.) 2015, 2016 and 2017, available at: https://cnrs.academia.edu/RegisVallet.

Uruk assemblage proper, it covers the end of the Early Uruk phase (Eanna XII–IX) and the beginning of the Middle Uruk period (Eanna VIII–VI). In other words, it seems that this sequence documents the oldest Uruk presence known in Central and Northern Mesopotamia.

As elsewhere, the pottery assemblage in the Qara Dagh shows some specific micro-features. In Levels 10–8, late LC2, the rarity of flaring rim jars with beaded rims, cannon spouts with trumpet-like edges or double-rimmed jars with quite short rims if compared with the samples from Gawra X–IX or Hamoukar (Rothman 2002, Abu Jayyab 2012). On the contrary, very close parallels exist with nearby sites like Yorghan Tepe (Starr 1939). The Early Uruk horizon is characterized by proto-BRBs with loosely cut rims and upwards spouted jars with bevelled rims, as in Susa Acropole III, Eridu, or Uruk Eanna XII (Wright 2014). In Levels 7–1, during the early LC3, beside some persistent inwards bevelled-rim or carinated bowls, grooved-rim jars, club-headed bowls and some very rare carinated casseroles are also present. Amongst south-Mesopotamian shapes, pierced handles become more frequent, true mature BRBs appear, as well as incisions and knobs on the shoulders of the jars.

After this discovery, the search for the residential area of the South-Mesopotamian settlers was one of our main goals, and the settlement located on the North Mound was opened in 2016. A comprehensive survey of the site, both geophysical and archaeological, was carried out. Its combined results enabled us to identify an Ubaid-LC1 settlement in the west part of the mound (probably the original village that moved to the Main Mound during the LC1 period), but also, and more important, the precise limits of an Uruk enclave. It covers the elongated summit and northern slope of this low mound, over less than 1 ha[5]. The geophysical image is very homogenous, and perfectly matches the pottery distribution (Darras, Benech, Vallet 2017). Three denser areas can be seen, one of which was selected for a first test trench (Trench D), on the north slope of the mound, not far from a ramp (perhaps natural) leading down to the river along the abrupt north flank of the mound.

Trench D, 35m long (5m wide), produced ten successive levels of Middle-Uruk domestic occupation[6], most of them yielding architecture (Fig. 5). From top to bottom, Level 2A is represented for the moment by three (fragmentary) small constructions, of which two perhaps tripartite in plan, and a drainage system with a main collector linked to several sump pits. Level 3 contained a large building, with stone foundations up to 1.2 m in width. The building was provided with pottery pipes (similar to those found in the Late Uruk colonies) to drain wastewater through its northern façade (Fig. 6), and some clay cones were found in the associated layers. It was severely levelled and followed by a period of abandonment (Level 2B), not of the entire site but of that specific place, during which a tomb was dug through one of its walls. It also gave a C14 dating, consistent with its assemblage, around 3600/3550 BC[7]. The numerous floors of level 4A provided most of the findings of the trench (Fig. 7), while level 4B contains a building with an especially wide entrance (1.1m wide). Level 5 is a carefully pebbled open space, entirely covered with stones and sherds, cut in the north by a large pit full of pottery, especially BRBs. Immediately below the floor covering of level 5,

5 The later occupations (Early and Late Bronze, Sassanian) are concentrated on the south slope, except some Islamic structures to the west. The North Mound, partly destroyed by modern fields (especially to the west and south), covers at least two hectares.

6 Under an evanescent Early Bronze layer at the very top of the mound (Level 1), attested so far by external floors and a few small pits.

7 Poz-91136 (sample GQD 1264.2 – charcoal): 4790 ± 40 BP uncal. 3653-3515 BC (92.7%), 3596-3527 BC (57.8%) cal. (OxCal v4.2.3).

another series of large pits, communal tips set at the periphery of the settlement, appeared (Level 6A). Finally, level 6B, deeply damaged by the pits of the two following levels, is attested by another building provided with stone foundations (but thinner walls than level 3). Its plan, that we began to follow by enlarging the trench, develops in all directions and includes at least two courtyards, a large L-shape and a smaller squared one (4.1 m wide). This compound was founded in the hard-packed earth fill of a terrace, delimited to the north by a wide retaining wall made of *pisé* (at least its base) resting upon the natural sub-soil, and constitutes the foundation level of the settlement.

The most significant feature is that local shapes or wares are virtually absent throughout the sequence: 98% of the pottery of Trench D belongs to the South-Mesopotamian Middle Uruk horizon[8]. In terms of absolute chronology, the assemblage dates around the middle of the 4th millennium, contemporary with a mature LC3 and early LC4. The whole panoply of the Middle Uruk assemblage is documented (Fig. 8), with massive amounts of bevelled-rim bowls, V-shaped bowls with pouring lips, shallow basins and several types of interior-angled rimmed jars with or without pierced lugs. Spouts can be conical or slightly drooping, while strongly drooping spouts or twisted handles, typical of the Late Uruk phase, are extremely rare. Decoration includes finger-impressed cordons and triangular or crescent-like incisions. Some containers have a thick reddish or grey slip: the hallmark of the so-called Uruk red and grey ware. So it was clear that the sequence matches very partially that of Trench C (possibly with its Levels 1–2 only), and that we had to look elsewhere to find the original dwellings of the Uruk potters.

At Logardan, the excavation also provided clear evidence for a very early Uruk presence. Here, beside a stratigraphic operation in the eastern terraces (Trench C), we chose to open first a small test trench (Trench A) on the south-west flank of the mound, where Chalcolithic finds were so abundant, to clarify the issue of the site's substratum, rather than starting with a time-consuming deep sounding at the top. As we thought, the finds had moved down from the top and the site is set on a natural hill. Yet we discovered a completely unexpected feature: the retaining stone-wall of a ramp, provided with a 2m wide causeway cut into the hill, and gently mounting the steep slope to provide access to the high terraces to the east. Some of the stones were visible on the surface higher to the east, where we placed a second trench (Trench B; Fig. 9). According to the South-Mesopotamian Uruk sherds found amongst the stones and in the bottom level, the ramp dates back to the first half of the 4th millennium. Much later, during the Late Bronze period, a battery of limekilns blocked it (in Trench B). At the same time, some Uruk clay cones were found at the top of the mound, so we knew exactly what to do next.

Trench D, opened in 2016 on the western edge of the summit, with ten occupation levels, was excavated over a surface area of about 500 sq.m in 2017, with a height difference of about 6m between the surface and the deepest remains (Fig. 10). Five Early Bronze Age levels, labeled 1 to 3b (3a being divided into two phases), saw the construction and use of more than 80 pottery kilns, some of them offering a unique perspective on firing technologies that were not documented for the 3rd millennium. For example, at Level 2, a huge furnace (8m

8 As at Uruk Eanna VIII-VI (von Haller 1932; Sürenhagen 1986), Abu Salabikh Uruk Mound (Pollock 1987; 1990), Nippur Inanna XX-XVII (Hansen 1965), Nineveh 'Uruk B' (Gut 1995), Sheikh Hassan 6-13 (Boese 1995), Hacınebi B2 (Stein 2001), Godin VI (Badler 2002) or Gurga Chiya (Wengrow *et al.* 2016).

in diameter) was connected to a series of chambers through a complex system of ducts. The pottery assemblage finds the most consistent parallels in the Akkad to 'Ur III' phases of the Tigridian Region, with connections with the neighboring areas, such as the Hamrin and the Upper Diyala, as well as the Khabur Valley (Tell Brak). Differently, parallels with Southern Mesopotamia are limited but important (Zingarello 2016: 77–88 and 2017: 67–80). Levels 3a and b provided two C14 dates consistent with their respective assemblage[9], as well as a cylinder-seal of an Akkad imperial official (Paladre 2016: 39–44), who probably supervised the huge industrial facility that the site had become in the Akkad period.

The earlier ceramic workshop area was built through a Level 4 building (Fig. 11), whose ruins were reused and partly adapted: a monumental Early Uruk public building, provided with massive stone foundations (Fig. 12) resting upon a recessed mudbrick terrace decorated with clay cones (Fig. 13). Moreover, unlike Trench C at Girdi Qala, where a local LC2–LC3 tradition was also documented, Level 4 of Logardan Trench D contained exclusively south-Mesopotamian-related shapes. The presence of such early and massive Uruk architecture in central-northern Mesopotamia is an unexpected discovery. For the moment, it has no parallel north of Tell Uqair. Level 4 comprises three distinct architectural phases. The Early Uruk buildings of Levels 4b–4c yielded the same assemblage collected in the bottom levels (8–10) of Girdi Qala Trench C, while the early Middle-Uruk assemblage of Level 4a matches with Levels 7–3.

The first Early Uruk phase so far recognized, Level 4c, that sees the initial building of the mudbrick terrace (without buttress during this phase), is still poorly known but may well contain small, closely-packed structures rather than the much larger structures that characterize the next level. During a second phase (Level 4b), the terrace is rebuilt and raised to constitute the base of a large complex. For the moment, the plan of this huge edifice, with almost 1m wide walls, is only partially exposed. We have the west wing (with a main room of 7m × 3.5m, i.e. 24.5 sq.m) of a possibly bi-partite building, integrated in an acropolis covering the whole summit of the site (see Trench E, below). Level 4a represents the last stage dating back to the 4th millennium occupation and a major phase in the development of the area. The monumental building of Level 4b no longer exists as such but is reused for activities that are more domestic. Its main room is turned into a kitchen, provided with a set of ovens, flanked by small adjoining units, with narrow doors through very strong walls, suggesting that the complex became some kind of stronghold.

As the trench was enlarged to the east in 2017–2018 we discovered, almost nested within the ruins of the Uruk building and systematically taking advantage of it, two additional Early Bronze Age levels: Levels 3d and 3c, Early Dynastic IIIb in date, were provided with massive architecture which represents, after a long gap, another stronghold overlooking the site. The Level 3d building is still very little known, but an entrance with a stone threshold was located to the south, through its massive enclosure wall (2.5m wide, equipped with a stone socket). Level 3c saw the layout of a large raised courtyard, provided with superb stone paving (Fig 14), above the former building, along a new building to the east (with two large rectangular rooms for the moment). The access to the courtyard was moved to the west, through a staircase going down, set in a room of level 3d kept for this purpose. There is no

9 Level 3a (Late Akkad): Poz-91139 (sample LOGD 266.1 –charcoal) 3740 ± 35 BP uncal., 2211–2033 BC (88.8%), 2201–2131 BC (48.1%) cal.; Level 3b (Akkad): Poz-91138 (sample LOGD 262.1 –charcoal) 3860 ± 35 BP uncal., 2463–2273 BC (81.7%), 2351–2286 BC (35.9%) cal. (OxCal v4.2.3).

need here to describe the associated material, but the discovery of an undecorated "fruit stand" base is noteworthy, as this vessel shape is typical of the Early Dynastic period in Southern and Central Mesopotamia, but rarely found in the northern area.

Finally, Trench E, on the upper terrace of the site, right next to the hilltop further to the east, was originally devised to provide information on the Bronze Age occupation of the site, following a detailed geomagnetic and archaeological survey. The survey indicated a probable occupation of the Halaf and Ubaid periods in the northern part of the terrace (and a possible Uruk occupation at the junction of the upper and the middle terraces), but the entire central part of the terrace appeared to have been lastly occupied by Bronze Age structures. Indeed, Late and Early Bronze material, and architecture, were found, but it turned out that the Uruk occupation was much closer to the surface than expected (Fig. 15).

Trench E encountered the same sequence as Trench D, except that it is topped here by two Late Bronze levels, with pottery kilns (Level IA – 27 units identified so far) and housing (Level IB), immediately resting upon an early third millennium building (Level III), 'Early Dynastic I' in date, still unattested in Trench D (Fig. 16). East of the gate of the ED III castle, here labelled Level II (with two sub-phases, corresponding to Trench D Levels 3c-d), the terrace was actually clear of construction[10]. The entrance proper of the ED III stronghold, equipped with a stone threshold and door-socket, was set at the top of a stone staircase between two massive squared bastions (5.7m wide), covering the ED I and Uruk paved passageways towards the summit, rebuilt at the same place through time. Immediately below the Early Bronze levels are two Uruk levels, IVA and IVB, respectively Middle and Early Uruk, contemporaneous with their counterparts of Trench D[11].

In front of the gate, the slope is quite steep, and leads in Level III to a large compound comprising at least two rectangular courtyards, surrounded by rows of small storage rooms, some of them equipped with a very narrow opening (0.2m) flanked by outward walls, possibly silos for grain storage. Hence the 'ED I' assemblage is mostly represented by medium and large-sized vessels, found *in situ* in one of the storage rooms (L.2020) and in a mud-brick chest along the walls of the south courtyard[12]. Even more than in Trench D, the Early Dynastic building was nested into the Uruk ruins, systematically taking advantage of it, especially its long walls. Therefore, it is possible that the Uruk layout was quite similar, but this will have to be confirmed by more evidence. In any case we observed that, as in Trench D, the Early Uruk settlement of Level IVB loses its monumental character during level IVA and is turned into a craft area. The numerous firing installations (16 identified so far) included in particular a massive multiple kiln in the south courtyard (3m in diameter for

10 The ED III to 'Ur III' occupations of the summit are represented on the terrace by few traces of external floors, between the numerous kilns and foundation trenches of the Late Bronze levels.

11 The next season should be able to produce a unified stratigraphy for the entire site, from the Late Halaf levels (on the natural subsoil) of Trench C to the last notable Bronze Age occupation of Trench E.

12 Room L.2020 in particular contained a fine series of ED I roped jars. A jar, featuring an applied notched crescent-shaped rope along with a ceramic raised circle, still had a lump of clay attached just below the rim, aimed at sealing the vessel's content. Others jars show a deeply and spaced notched rope applied on the shoulder with the edges facing downwards, representing most likely a snake. One of the roped jars had a hole at its base, probably a clue to its function: it may have been used in a drink manufacturing process, most likely beer (Zingarello 2017: 77).

the main chamber), as well as a storage room to the east a triple kiln of the same type as in Girdi Qala C level 7.

It is probably too early to attempt to draw any definitive conclusions, but despite long-standing assumptions that the Uruk expansion began during the late LC3 phase, it seems now clear in the Qara Dagh area that contact with Southern Uruk people occurred from a very early period (late LC2). In terms of absolute chronology, the Uruk expansion at Girdi Qala and Logardan appears at around 3900 BC, rather than 3600 BC.

Moreover, the data collected so far begin to shed light on the history and organization of the South-Mesopotamian presence on the two sites. At the beginning of the 4th millennium BC, the upper part of Logardan was occupied by a monumental acropolis, while artisans were used to produce South-Mesopotamian ceramics at the foot of the Main Mound of Girdi Qala (GQC Levels 10–8), a high mound that probably housed a Late Chalcolithic village. Later, at the beginning of the Middle Uruk, the top of Logardan was reused for small-scale domestic activities, while Uruk ceramics were still produced at the Main Mound of Girdi Qala (GQC levels 7–3). Finally, a little later, during the mature Middle Uruk, Logardan was abandoned and South-Mesopotamian settlers lived in a small village (1 ha) on the North Mound of Girdi Qala, but still produced pottery, at least for a while, at the foot of the Main mound (GQC levels 2–1). Needless to say, much more work remains to be done to corroborate this scenario. We do not yet have the foundation level of the Uruk settlement at Logardan, and only have part of the Uruk occupation sequence at the foot of the Main Mound of Girdi Qala, but the available data point in this direction.

Finally, it is most probable that the Early Uruk diaspora was not confined to our sites, but spread over the whole Chemchemal plain and neighbouring areas (Kirkuk, Nuzi). However, it is possible that the Qara Dagh represented the limit of expansion in the late LC2, as there is not (yet) evidence of a Southern Uruk manifestation east of this range before the LC3. It seems that during these early stages of the Uruk expansion, the area east of the Tigris River played a role as influential as the one documented later for the Euphrates basin. The valleys of the Zagros Piedmont in the Qara Dagh area were part of a crucial exchange zone centred on a main road network: the so-called Great Road of Khorasan. Girdi Qala and Logardan could represent initial steps of the building of the Uruk network in that direction.

Acknowledments

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Fig. 1: Girdi Qala Trench C (Main Mound), Early Uruk pottery kilns of Level 10 (detail)

Fig. 2: Girdi Qala Trench C, triple kiln of Level 7

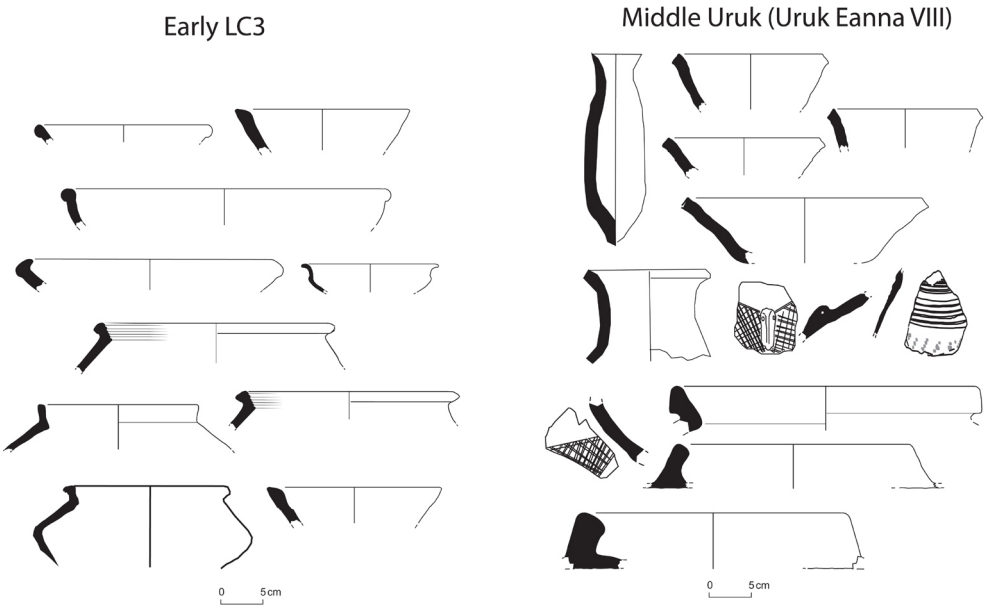

Fig. 3: Girdi Qala Trench C, sample of the ceramic assemblage of Levels 8-10 (J. S. Baldi)

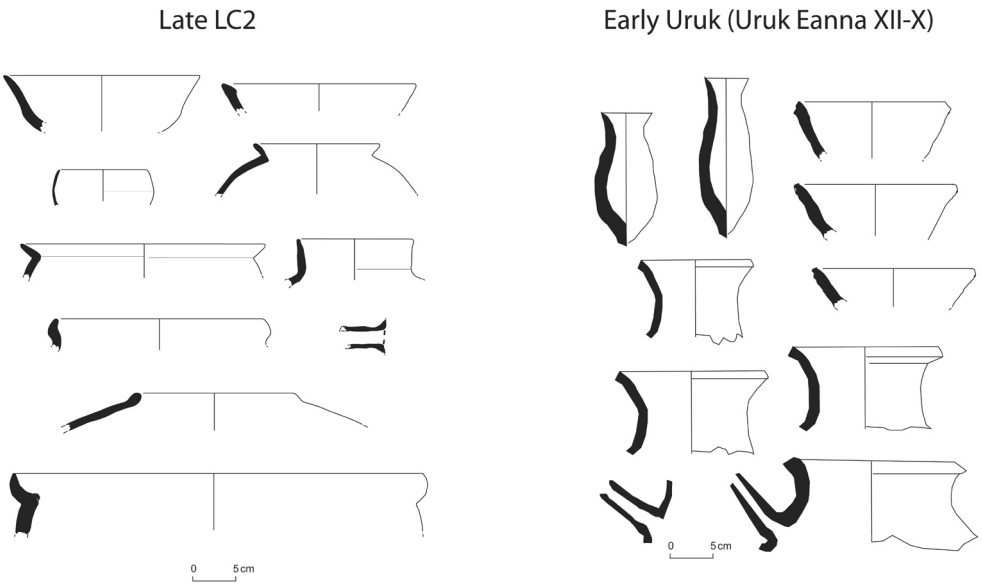

Fig. 4: Girdi Qala Trench C, sample of the ceramic assemblage of Levels 1-7 (J. S. Baldi)

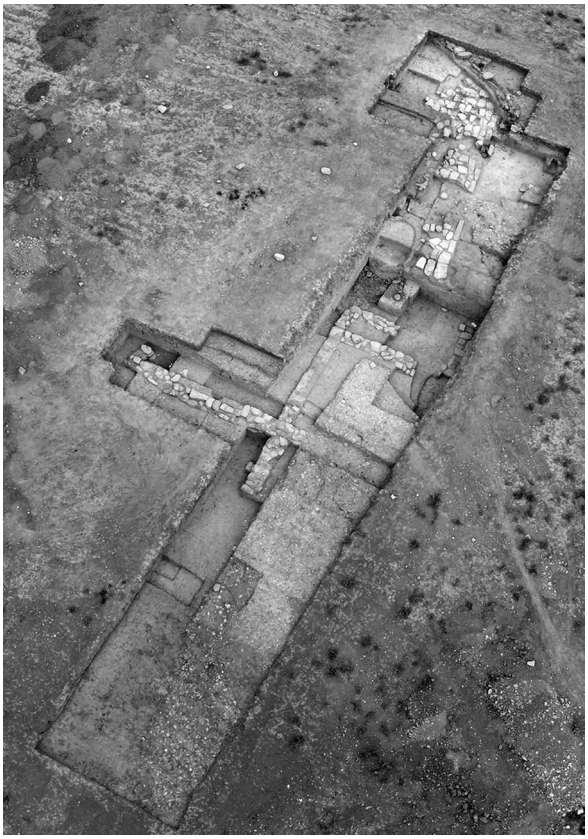

Fig. 5: Girdi Qala Trench D (North Mound), aerial view, from the north-west (2018)

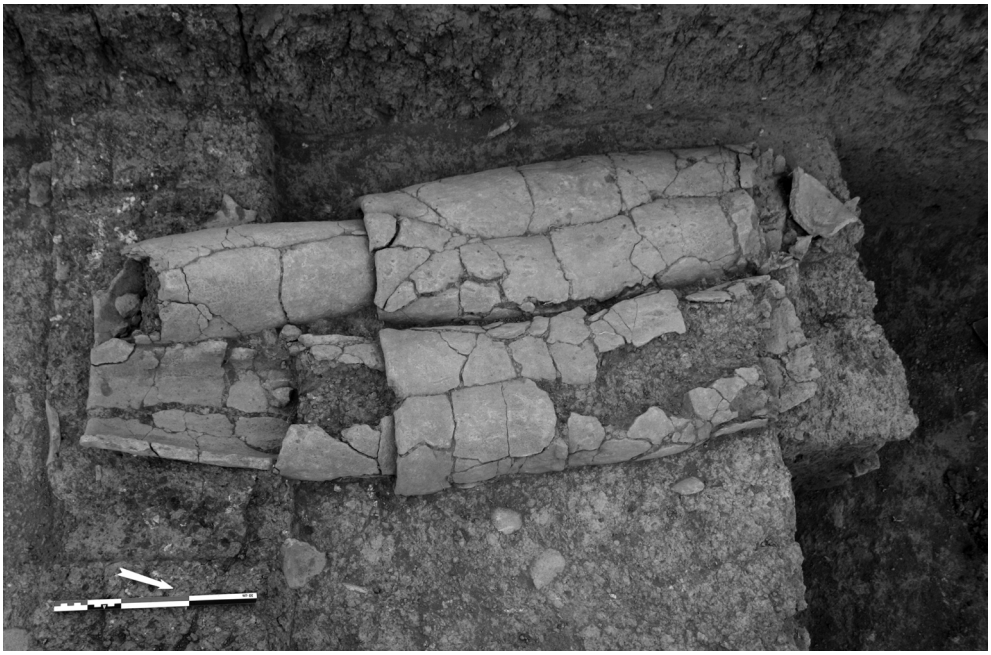

Figure 6: Girdi Qala Trench D, the pottery pipes of Level 3, in situ.

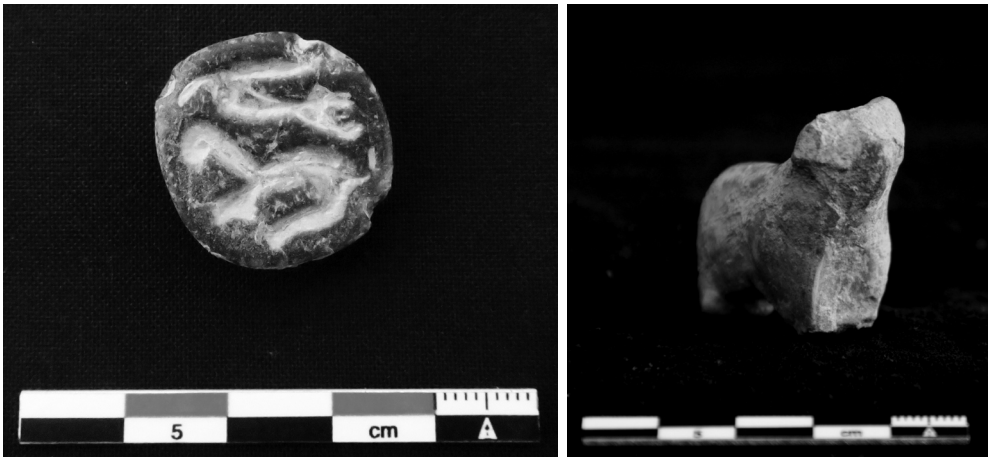

Fig. 7: Girdi Qala Trench D, two small finds from Level 4, a stamp seal (a), an animal figurine (b)

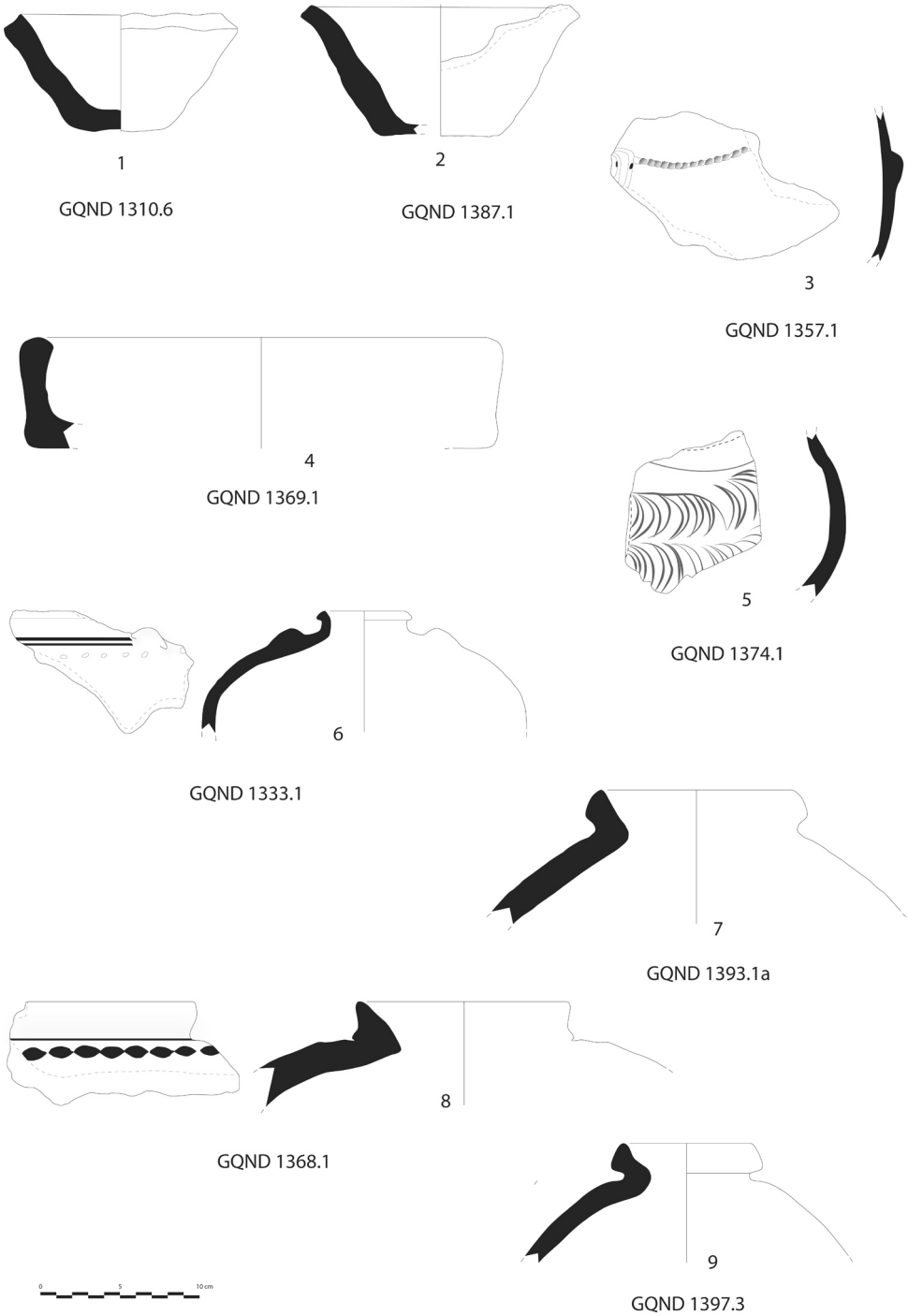

Fig. 8: Girdi Qala Trench D, sample of the Middle-Uruk assemblage (J. S. Baldi)

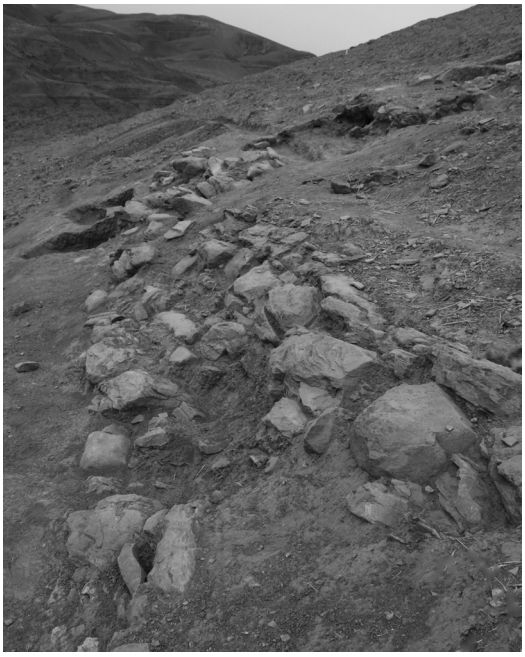

Fig. 9: Logardan, the Uruk ramp near Trench B, from the east

Fig. 10: Logardan, aerial view of Trench D, at the west edge of the summit, from the south (2018)

Fig. 11: Logardan Trench D, plan of Level 4

Fig. 12: Logardan Trench D, the foundations of Level 4 Uruk building (detail)

Fig. 13: Logardan Trench D, in situ clay cone in the façade of the mud-brick terrace of Level 4b

Fig. 14: Logardan Trench D, Level 3c building (ED III) in the forefront, with its well-preserved paving, Level 4 Uruk building in the background (2018)

Fig. 15: Logardan Trench E (upper terrace), general orthostatic view (2018)

Fig. 16: Logardan Trench E, preliminary plan of the ED and Uruk levels