

Khirbet Al-Batrawy in North-Central Jordan: New Discoveries in the Early Bronze Age Palace, 2018-2020

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Abstract

After 16 seasons (2005-2020) of excavations and restorations at Khirbet al-Batrawy in north-central Jordan, a clear picture of the history of the site and its major monuments has been obtained. In the last three seasons, works by Sapienza University of Rome and the Department of Antiquities of the Hashemite Kingdom of Jordan resumed the exploration of the “Palace of the Copper Axes”, leading to the discovery of a monumental entrance hall and a further western wing. Many finds, including several imports from Egypt, Syria, Anatolia and farther east, allow us to understand the functioning and socio-economic role of the palace in the southern Levantine scenario of the Early Bronze Age, and contribute to a better definition of urbanism in this region of the ancient Near East.

Introduction

The site of Khirbet al-Batrawy, a previously unknown city of the 3rd millennium BC, has been systematically explored by the Expedition to Palestine & Jordan of Sapienza University of Rome directed by Lorenzo Nigro since 2005 (Nigro ed. 2006; 2008; 2012).² Batrawy is located in the Upper Wadi az-Zarqa Valley, on the top of a rocky hill dominating over the bent of the river, where a series of smallest unfortified settlements constituted the productive basis of the Early Bronze Age fortified city. Furthermore, the city controlled a ford through the upper course of the river, connecting the Zarqa and the Jordan Valleys. The Early Bronze Age city was in a strategic position for the exploitation of a large portion of fertile land, and for a long-distance trade network connecting the site of Batrawy with the main urban civilizations of the 3rd millennium BC (Fig. 1).

Sixteen seasons of systematic excavations and restorations allowed to reconstruct the layout of the EB II-III urban centre, characterized by the presence of impressive monuments and public buildings, such as the Broad-Room Temple on the eastern terrace (Nigro ed. 2008: 66-76), the four parallel city-walls and the “Palace of the Copper Axes” on the northern slope of the acropolis (Nigro 2016: 136-142). The 2018-2020 seasons were devoted to the exploration of the northern slope of the site, where the monumental fortification system was completely brought to light (Area B North), and the resumed excavations at the so-called

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“Palace of the Copper Axes” (Area B South) led to the discovery of a further extension of the public building westwards (Fig. 2).

Architecture of the “Palace of the Copper Axes”: the monumental Entrance Hall and the Western Wing

The large building excavated in Area B South since 2010 has been interpreted on the basis of the architecture and the meaningful finds as a public building, now known as the “Palace of the Copper Axes” (Nigro 2010a; 2010b; 2010c; 2010d; 2011; 2012a; 2012b; 2012c; 2013a; 2013b; 2014a; 2014b; 2014c; 2015; 2016; Nigro ed. 2008: 127-240; 2012: 145-332; Nigro and Sala 2010; 2011; 2012; Nigro *et al.* 2020).

The palace was erected upon a series of terraces on the northern slope of the site, descending from the acropolis (Fig. 3). The lowest terrace hosted two symmetrical pavilions, divided by a central passage (L.1050), which have been carefully explored during four seasons in 2010-2013 (Nigro 2013b: 198-204, figs. 13, 15-22; 2016: 139-149; 2017: 162-164). The Eastern Pavilion included a rectangular hall (L.430), with a staircase (W.421) on the eastern short side leading to the upper storey, and a rectangular court (L.1046). The latter was accessible through a door from Hall. L.430, while a pillared passage (L.1144) opened on the central corridor separating the two pavilions (Nigro ed. 2008: 148-162). Aside the eastern side of Hall L.430 a large oven (T.413), paved with reemployed basalt grinders and querns, occupied a portion of an open yard (L.936) where manufacturing and craft activities managed by the palatial institution were concentrated. The Western Pavilion had a more articulated plan and included a major Pillared Hall (L.1040) to the north, connected to the south-east and to the south-west respectively to Storeroom L.1120, an elongated rectangular room, and Hall L.1110, the central squared hall of the pavilion. West of Hall L.1110 there was another large inner court (L.1250), connected through a ramp (L.1240) with the upper terrace of the palace, where another group of rooms stood (L.1230).

The exploration of the palace was resumed in season 2018 and revealed the westward continuation of the building, characterized by the presence of a monumental entrance hall (L.1100) and a further western wing. The overall plan of the building proved to be organized according to a symmetrical rule, with the central main entrance separating two wings, the eastern one almost fully excavated and subdivided into the Eastern and Western Pavilion, the western one only partially investigated in the last seasons and characterized by the presence of a northern main hall (L.1340), symmetrically arranged to Pillared Hall L.1040 and completely explored during the 2019 season (Figs. 4-5).

Entrance Hall L.1100 had a roughly squared plan (7.20 x 8.20 m), of about 60 sq. m, and was flanked to the east by Pillared Hall L.1040, to the south by Court L.1250 and Porch L.1292,³ to the west by Hall L.1340, while to the north it directly opened onto the peri-pomerical street (L.1060) running inside the Main Inner City-Wall. The bedrock was used as pavement of the hall in the southern upper part, while in the centre and to the north the hall had a floor (L.1330) of thick and compact yellowish clay mixed with limestone, laid over a marl-pebbles preparation regularizing the bedrock surface. Four limestone blocks⁴ were uncovered under the thick destruction layers (F.1324 and F.1327), and used as bases of wooden

3 Porch L.1292 connected Entrance Hall L.1100 with the second line of large rooms (Hall L.1110 and Room L.1230) on the southern and uppermost terrace of the palace.

4 B.1285 (NE pillar base), B.1329 (SE pillar base), B.1331 (NW pillar base), B.1339 (SW pillar base).

pillars supporting the at least 3.5 m high roof of the hall. The pillar bases were set in front of four symmetrical doors, two on the eastern side (L.1150 and L.1272) and two on the western side (L.1338 and L.1332) of the hall, giving access to the facing wings of the palace. Pillars and doors were placed in order to emphasize the palace monumentality.

Works in season 2019 led to the complete exploration of the northernmost hall of the Western Wing, the so-called Hall L.1340. Even if very damaged by later structures (such as EB IVB Silos S.1363 and Islamic Pit P.865), Hall L.1340 had a clear rectangular plan, with two pillar bases (B.1367 and B.1369) aligned along the main east-west axis, and discovered under a thick layer of destruction (F.1334) composed by charcoals, burnt ceilings, plaster, and fragmentary bricks.

Finds from the 2018-2020 seasons of excavations at the “Palace of the Copper Axes”

Like the other portions of the palace, Entrance Hall L.1100 and Western Wing suffered a violent fire, which provoked the sudden collapse of the ceilings supported by wooden beams. On the floor and within the destruction layers several finds were collected, some of them originally deposited on the floor of the rooms, other fallen down from the upper storey or balconies during the collapse of the burning palace.

Pottery vessels belonging to the EB III southern Levantine horizon (Sala 2016) were found buried under the thick destruction layers. In Entrance Hall L.1100 two big *pithoi* (KB.18.B.1324/1 and KB.18.B.1324/3), one medium-size jar (KB.18.B.1324/25), one *amphoriskos* (KB.18.B.1324/24), and a small bottle (KB.18.B.1324/26) were found. Pottery vessels of different shapes and dimensions were also found in Hall L.1340, even if heavily damaged by the latest superimposition and by the violent fire: some vessels show black spots and stains deriving from the combustion of a liquid stuff, apparently olive oil, which transformed the fire into a very dramatic and destructive conflagration. Nevertheless at least 50 vessels were excavated, including six *pithoi* (KB.18.B.1334/1, 6, 7; KB.19.B.1334/2, 5, 27), nine hole-mouth jars (KB.18.B.1334/8; KB.19.B.1334/4, 7, 11, 18, 22, 24, 33, 36), two metallic handled jars (KB.18.B.1334/3; KB.19.B.1334/6), ten Red Burnished jugs and juglets (KB.18.B.1334/4, 11; KB.19.B.1334/8, 10, 14, 19, 28, 30, 35, 37), two bowls (KB.18.B.1334/5 and KB.19.B.1334/9), two *amphoriskoi* (KB.18.B.1334/26 and KB.19.B.1334/23), four miniature vessels (KB.19.B.1334/1, 13, 25, 34), and a unique ovoid squat vase (KB.18.B.1334/2) probably used as a complement with another container (Fig. 6).

The typical pottery repertoire found in previous seasons returns in Entrance Hall L.1100 and Hall L.1340 excavated in 2018-2020. This ensemble is characterized by the presence of some diagnostic types, such as: Red Burnished jugs and juglets, attested to in several sub-types, and perhaps the most distinguishing feature of the Batrawy Palace repertoire (Fiaccavento 2014; Sala 2016: 125-127, figs. 7-8); *amphoriskoi* (or double-handled jars), with large globular body and elongated tapering neck, or with slender body and cylindrical neck (Sala 2014a: 267, fig. 11:5; 2016: 142, figs. 4:6-4:7); medium-size jars for daily deposit, with squat ovoid body, flaring neck, short everted rim, and a couple of pushed-up ledge handles applied on the middle of the body (Sala 2014a: 267, fig. 12); hole-mouth jars for medium-term storage, with piriform or ovoid body and plain, swollen or flattened rims (Sala 2016: 128, fig. 5); *pithoi* for long-term conservation, with elongated ovoid body, flaring neck, and rope-like plastic decorations applied at the base of the neck and on the middle of the body (Nigro 2016: 142-143; Sala 2014a: 268, figs. 16-17; 2016: 129-131, figs. 10-11).

Together with pottery vessels, numerous items were found, related to daily activities (flint blades, grinding stones, mortars, and pestles), to craft activities (polishing pebbles and bone tools), or linked to the economic and political role played by the palatial institution (pottery disks interpreted as tokens and possibly used as administrative tools/counters).

One of the most remarkable item was found in the north-eastern quadrant of Entrance Hall L.1100, just aside the foot of the NE pillar base (B.1285), where a broken Egyptian palette (KB.18.B.30) was found upside down, probably fallen from an upper storey or balcony. The palette, preserved only in the upper left part, was originally rectangular in shape (10×9.7 [15] cm, 0.9-1.2 cm thick), with a double-line grooved frame all around it (Fig. 7). It belongs to the square/rectangular type, around 1 cm thick, with a grooved frame of one or at least three incised lines on the polished front side, commonly attested to in Egypt since the early Naqada III Period (Petrie 1974: 38, pl. LIX) and imported to the southern Levant during the Early Bronze Age IB-III (Sowada 2009: 36-37, 109, 127; Sala 2012: 277-279; 2014b: 66-67). The palette was made of green talc-schist, as confirmed by the X-Ray diffraction pattern (Nigro *et al.* 2020: 5, figs. 9-10), which was extracted from quarries of the Eastern Desert in Egypt (Stevenson 2007: 150-152; Klemm and Klemm 2008: 307-309). The palette was used to prepare makeup powders, in particular umber, a natural pigment mainly composed of red ochre, as revealed by SEM analysis, X-ray diffraction pattern, and Raman spectrum carried out in the Biology and CNIS Labs of Sapienza University on coloured spots identified on the surface of the palette (Nigro *et al.* 2020: 5-6, figs. 11-13). Together with another specimen (KB.11.B.100) uncovered in 2011 season in the south-western corner of Pillared Hall L.1040, the green schist palette depicts the role of the palace as a place of exchange and gathering of luxury and imported items. Moreover, the discovery of this cosmetic item once again shows how the members of the ruling class of a southern Levantine city replicated Egyptian elite life-style to mark their rank.

At the opposite corner of Entrance Hall L.1100, aside the foot of the SW pillar base, an amazonite gemstone (KB.18.B.50) and a small pierced bead of fluorapatite (KB.18.B.63) were found (Fig. 8), and both identified through Raman spectrography (Nigro *et al.* 2020: 7, figs. 14-17). The amazonite gemstone is rectangular in shape (3.0×1.55 - 0.4×1.3 cm), with smoothed edges and a tooth-like apex, and it had been apparently worked to become a major pendant in a necklace. The fluorapatite bead shows a roughly square shape ($0.62 \times 0.58 \times 0.2$ cm) and an eccentric round hole (0.18-0.20 cm of diameter). Amazonite was one of the most used gemstone in Egypt during the Predynastic and Dynastic Periods, frequently mentioned in the Dynastic texts (Hayes 1965: 95), while in Mesopotamia amazonite beads were found in the Royal Cemetery of Ur (Rapp 2009: 104). The presence of amazonite in the "Palace of the Copper Axes" of Batrawy again testifies to the existence of long-distance trade routes devoted to the exchange of semi-precious stones to be transformed into beads. While the smallest bead was made of a somewhat rare but not so precious stone, which is present in the majority of geological deposits of the southern Levant, amazonite sources were far from Batrawy and amazonite reached the site through different routes. Ores of amazonite active in pre-classical periods are known at Gebel Migif in Wadi Shait and at Gebel Hafafit in Wadi Fayrouz in the Eastern Desert of Egypt (Harrell and Osman 2007; Harrell and Storemyr 2009: 18), in the south-eastern Libya's Egheï Mountains (De Michele and Piacenza 1999), and in the southern Urals in Russia (Ostrooumov 2015: 14.).

A third meaningful finding is an unfinished barrel-shaped carnelian bead (KB.19.B.140) found in 2019 season (Fig. 8) at the south-western quadrant of Courtyard L.936.⁵ The bead (30.1 mm long and 17.08 mm in diameter) has a very small incision in the centre of the top circular face, where the piercing had been started and then interrupted perhaps after the damage of the gemstone. The Raman spectrography and diffractometry analyses carried out in the laboratories of the Department of Earth Sciences of Sapienza University revealed that the bead is made of raw carnelian (orange chalcedony), before a careful firing treatment made it redder and more lustrous. It is similar to the beads belonging to necklace KB.11.B.101 found in Hall L.1110 (Nigro 2012a). The barrel-shaped type is a quite common bead type well known from the Royal Cemetery of Ur (Woolley 1934: pl. 134, U.8569), and was widely spread during the mid-3rd millennium BC over Mesopotamia (Moorey 1994: 97-98), Syria (mentioned in the Ebla Royal Archives; Peyronel and Vacca 2013: 443-444), and the major cities of the southern Levant (Nigro 2012a: fn. 9). Ores of carnelian are located in Wadi Abu Gerida and Wadi Saga in the Eastern Desert and near Gebel el-Asr in the Western Deserts of Egypt (Sowada 2009: 236), in the southern Sinai and Wadi ‘Arabah, and on the western mountainous region of Saudi Arabia (Sowada 2009: 94-95, 236; Nigro 2012a: 231, fig. 7; 2014a: 44).

Conclusions

Excavations at the “Palace of the Copper Axes” bring about a distinguished set of data which contributed to a deeper and more detailed knowledge of Early Bronze Age urbanism in Jordan. A major indicator of the central role played by the palace of Batrawy is related to wealth accumulation, suggested by the presence of storage facilities and vessels used to collect agricultural surplus in a quantity largely overwhelming the community needs. Technological innovation and centralization of goods are exemplified by two of the most important discoveries from the palace of Batrawy. The copper axes, as well as small weights, attest to trade, technological control and exchange of this precious metal, moving along the south-north main trade route (the so-called “Copper Route”), running upon the Jordanian Highlands from the Sinai, the Aqaba Gulf and Wadi ‘Arabah (Nigro 2014a; 2014b). Furthermore, the discovery of two complete potter’s wheels (Fiaccavento 2013), together with a third fragmentary,⁶ witness the collection of innovative technological tools from the central palatial administration in order to facilitate the material culture standardization and specialization, as attested to by several specimens of specialized palatial wares, first of all the Red Burnished Ware (Fiaccavento 2014) imitating copper originals (Fig. 9).

Finally, some special finds from the “Palace of the “Copper Axes”, including the items discovered in the 2018-2019 seasons, again testify to the network of international exchange with which the palace was connected (Fig. 10). The gemstones of the four-string necklace discovered in 2011 season are one of the best example of the long-distance trace promoted by the Batrawy urban authority (Nigro 2012a: 230-231, figs. 15-16; 2014a: 44, figs. 1, 8). The bi-conical amethyst bead in the centre of the uppermost string of the princess’ necklace was most likely extracted in Egyptian ores located in Wadi Abu Had, in the northern part of the Eastern Desert, a source used for amethyst mining as early as in the I Dynasty (Astor

5 The exploration of the Eastern Pavilion and Courtyard L.936 was resumed in 2019 season and also continued in 2021 season. Last excavations revealed that the south-eastern corner of Court L.1046 was occupied by a round structure (L.976), probably hosting a stair, and Court L.1046 was directly connected by a blocked door to Courtyard L.936.

6 A fourth fragmentary potter’s wheel (KB.21.B.35) was found in Courtyard L.936 in the 2021 season.

et al. 2000: 50-52). Moreover, the Egyptian green talc-schist palette, the fragmentary grey schist incised palette found in season 2011, together with pottery finds, as like as “lotus vase” KB.11.B.1128/76 (Nigro 2014a: 46, fig. 11; Sala 2014b: 60-70.), speak about the inclusion of Batrawy among the centres trading with the Pharaonic Kingdom between the IV and the VI Dynasty through the “Copper Route” (Nigro 2014a: 49). The amazonite gemstone was probably extracted in Egypt, following the same route of copper and other precious stuff traded across the Sinai and along the Wadi ‘Arabah. Conversely, if the Russian origin is hypothesized, a track across Caucasus, Armenia, Anatolia, and Syria should be reconstructed, and in this case it might be the same with the one followed by the bear’s skin (Nigro 2014b: 265-266) found in Pillared Hall L.1040 along with the copper axes.

Even if most common, the barrel-shaped carnelian bead is particularly important because it appears unfinished, as the amazonite gemstone. The shapes and surfaces of these stones, examined on a microscope, show that the process of cutting, polishing and piercing was interrupted, probably at the moment of the enemy attack which destroyed the city (Nigro 2017). The discovery of these finds suggests that Batrawy was not only a centre importing gemstones – as the finding of the necklace from Hall L.1110 well demonstrated – but also as a working station for semi-precious stones.⁷

Ten years of systematic excavations and restorations at the “Palace of the Copper Axes” of Khirbet al-Batrawy revealed a monumental building, characterized by an inner layout with spatial and functional distinctions. Finds from the palace revealed a system of economic specialization, social organization, technological innovation, centralization of luxury and symbolic goods from long-distance trade, testifying to the central role of Batrawy in the general framework of the Early Bronze Age southern Levantine urbanization.

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⁷ Two unfinished beads were also found in season 2021 in Courtyard L.936, confirming the hypothesis that manufacturing activities took place in this sector of the palace (Nigro *et al.* 2020).

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Fig. 1: View of the northern slope of Khirbet al-Batrawy, from north-west



Fig. 2: View of the EB II-III (3000-2350 BC) multiple fortifications (Area B North, to the right) and “Palace of the Copper Axes” (Area B South, to the left), from east



Fig. 3: View of the “Palace of the Copper Axes” at the end of the 2019 season, with Entrance Hall L.1100 and Western Wing in the foreground, from north-west; in the box view of the five copper axes

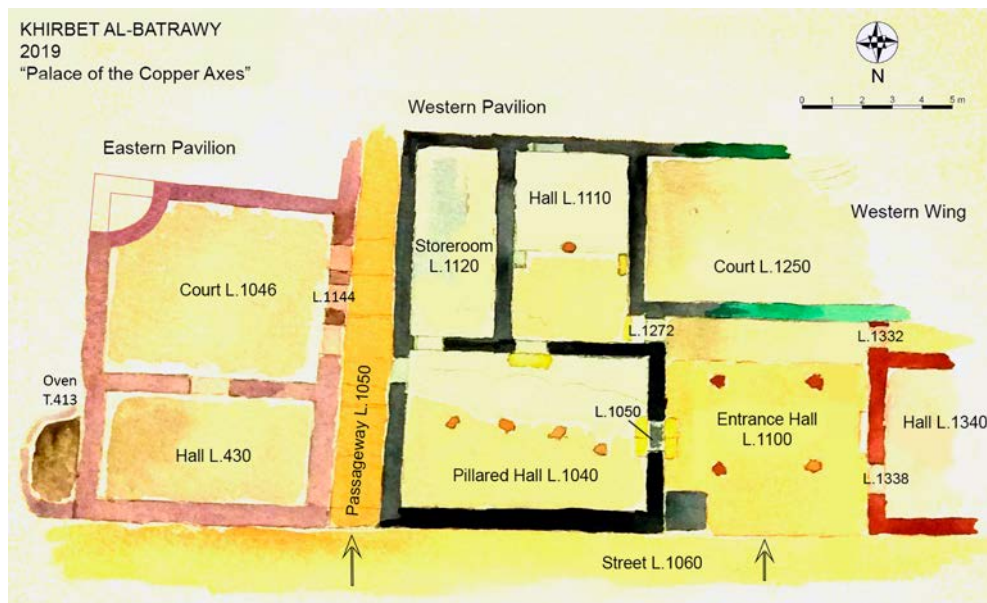


Fig. 4: Reconstructive drawing of the “Palace of the Copper Axes” with Entrance Hall L.1100 in the middle of two symmetrical wings



Fig. 5: View of the “Palace of the Copper Axes” at the end of the last (2021) season of excavations and restorations, from south



Fig. 6: Squat vase and Red Burnished jugs/juglets from destruction layer F.1334 in Hall L.1340



Fig. 7: Palette KB.18.B.30 (on the left the front side, the reverse on the right)

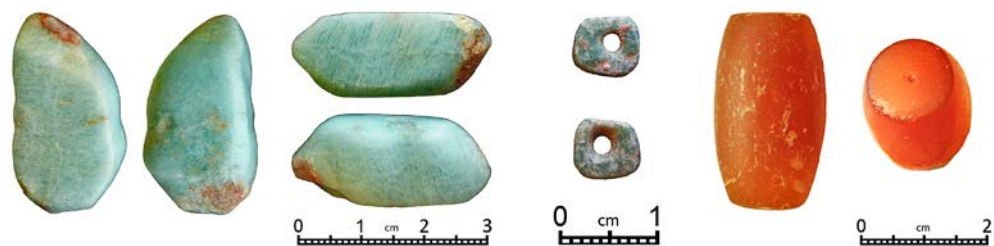


Fig. 8: Amazonite gemstone KB.18.B.50, bead KB.18.B.63, and carnelian bead KB.19.B.140, not yet pierced, baked and polished

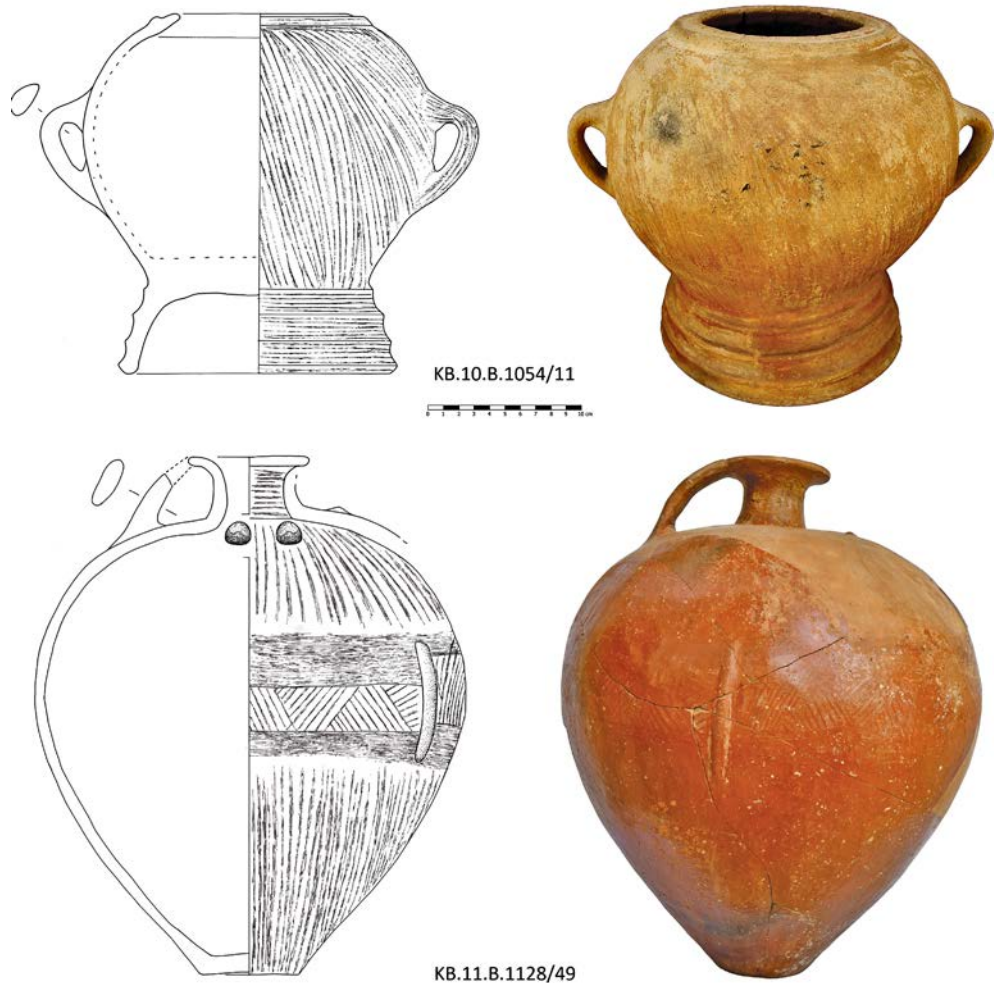


Fig. 9: Red Burnished ceremonial vase KB.10.B.1054/11 and jug KB.11.B.1128/49

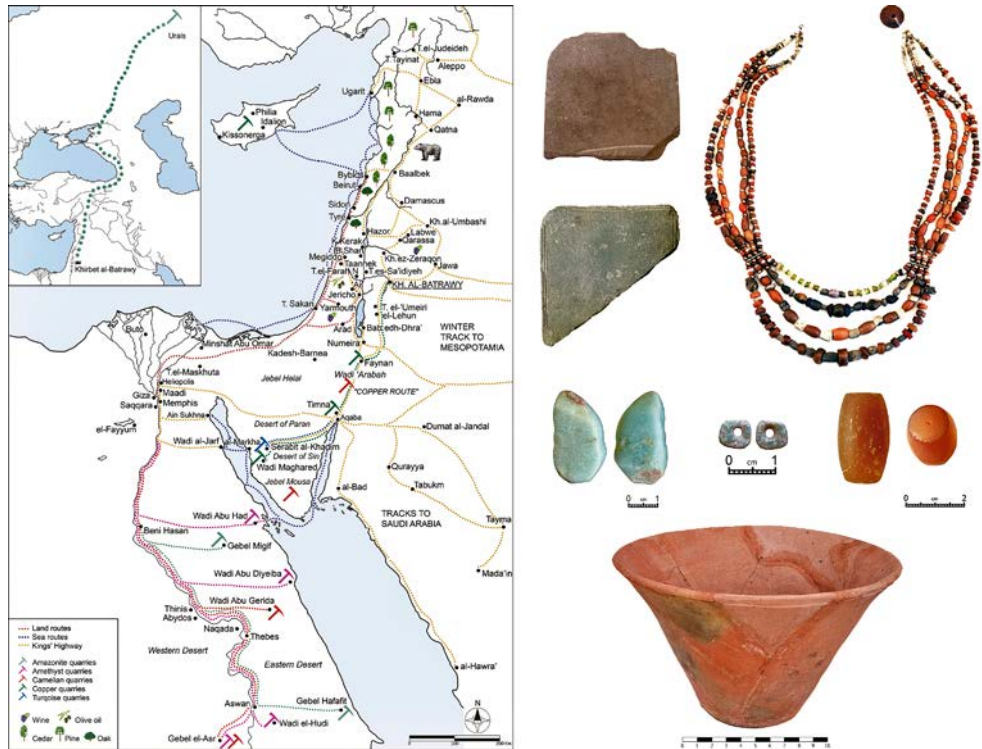


Fig. 10: Imported and Egyptian-style items found in the “Palace of the Copper Axes” and map with supply point for precious stuff and trade routes passing through the city of Batrawy

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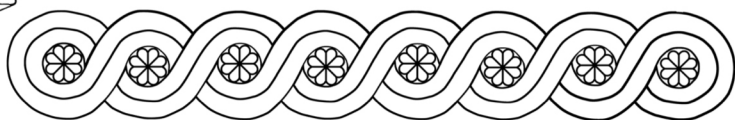
Volume 2

Field Reports

Islamic archaeology



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