



The Al Khudairah Necropolis (Sharjah, UAE) Reflections from the 2023 Field Season


CARMEN DEL CERRO LINARES, CARLOS FERNÁNDEZ RODRÍGUEZ,
PAULA GÓMEZ SANZ, ALICIA ALONSO GARCÍA,
ARMANDO GONZÁLEZ MARTÍN


Abstract: The necropolis from Jebel al Khudairah, located in the Central Region of the Emirate of Sharjah (United Arab Emirates) witnessed excavations in 2020 and 2023 from members of the Spanish Archaeological and Archaeobiological Mission at Sharjah, drawn from Universidad Autónoma de Madrid. In this paper we present a preliminary overview of the results from these two field seasons after completing excavations of five tombs of very diverse types, located in several sectors of the *jebel*. Only one of them provided remains of burials of at least two individuals accompanied by a metal arrowhead. Nevertheless, the preliminary comparative analysis of the architecture of the structures as well as of the only datable find, allows one to make some suggestions concerning the chronological span of the necropolis.


Keywords: al Khudairah, Sharjah, necropolis, burial mound, anthropological studies

Carmen del Cerro Linares, Universidad Autónoma de Madrid, Madrid; carmen.delcerro@uam.es;
 0000-0003-0084-0096

Carlos Fernández Rodríguez, Universidad Autónoma de Madrid, Madrid; carlos.fernandez01@uam.es;
 0000-0003-1629-0893

Paula Gómez Sanz, Universidad Autónoma de Madrid, Madrid; paula.gomez@uam.es;
 0000-0002-0065-347X

Alicia Alonso García, Universidad Autónoma de Madrid, Madrid; alicia.alonsog@estudiante.uam.es;
 0000-0003-4680-9107

Armando González Martín, Universidad Autónoma de Madrid, Madrid; armando.gonzalez@uam.es;
 0000-0001-9216-1220

The Spanish Archaeological and Archaeobiological Mission at Sharjah (SAAMS, henceforth) research team from Universidad Autónoma de Madrid (UAM) is a transdisciplinary group that includes historians, archaeologists, curators, zoologists, botanists and anthropologists who have been working in the area since 1994. The team was created to study

the Iron Age (1300–300 BC) in the Central Region of the Emirate of Sharjah, an area of the Oman Peninsula well known for its outstanding richness in archaeological remains. The area of al Madam, on the southern fringe of that region, has been the subject of an intensive programme of research that has resulted in the discovery of the village of al Madam 1-Thuqeibah, dated to the Iron Age II.¹

In 2019, commissioned by the Sharjah Archeology Authority (SAA, henceforth), the team began work in the al Khudairah necropolis that, during the first survey carried out in 2020, revealed the existence of dozens of funerary structures. By doing this, the team contributed to the study of Iron Age societies in the area. That same year, given the probability of discovering a large number of tombs and the need for a wider group of specialists, the former Archaeological Mission of UAM turned into the SAAMS, broadening the scope of research with the incorporation of scholars from several research institutions at UAM, including the Institute for Near Eastern and Egyptian Studies from the Department of Ancient History, Medieval History and Paleography and Diplomatics (Faculty of Fine Arts), and the Laboratories of Archaeozoology and of Populations of the Past from the Department of Biology (Faculty of Science).

Al Khudairah is located between the oases of Mleiha and al Dhaid (**Fig. 1**). The region is crisscrossed by seasonal *wadiān* and by extensively eroded elevations arranged in an east-west direction, which contrasts with the north-south arrangement of the Mountains of Oman and the hills towards the south-east that extend through central Sharjah. Survey in 2020 allowed us to subdivide the area into sector AKh 1 (Jebel al Qulayda) and AKh 2 (Jebel al Khudairah), which lie 1km away from each other. In both sectors tombs were readily identified. These were made with local stone (i.e. igneous rock with orthosilicates, feldspars, micas, olivines and iron oxides) and built as dry-stone masonry walls without mortar.² In typological terms they vary. This may imply different chronological spans for each tomb, though a precise chronology of individual types will only be possible after an in-depth study.

Sixty-nine tombs, thirty-two possible burials and seven rock shelters were noted in these sectors, but the focus was laid on AKh 2/Jebel al Khudairah. This is a 1,450m long and 650m wide elevation with an estimated maximum height of 25m above the alluvial plain. In contrast to AKh 1, altered by the construction of shooting galleries on Sharjah's police academy facilities, sector AKh 2 did not exhibit much recent disturbance.

Forty-nine tombs, twenty-one putative burials and four rock shelters were recorded on the summit, northern and southern slopes, and the foothills of AKh 2. In addition, seven areas of interest for future investigations were recognised that we hope to gradually incorporate into the necropolis research project (**Fig. 2**). Except for Area 1, all of them are included in sector AKh2.

Area 2 incorporates a group of three large and conspicuous tombs (T18–20) on the Jebel al Khudairah crest, whose visibility rendered them prone to looting. This encouraged us

¹ Del Cerro Linares, Córdoba Zoilo 2018: 88.

² Del Cerro Linares, Hervás Herrera 2020: 89.



1. Map of the Oman Peninsula with location of the al Khudairah and al Madam archaeological sites (base image: Google Maps; processing: P. Gómez Sanz).

to excavate them during the 2020 and 2023 campaigns. This ensemble was deemed ideal for a restoration project that envisions a four-stage methodology:³

a. Comprehensive assessment of the construction and structure of the tombs. This implies an in-depth study of remains, as all tombs feature an initial collapse towards the interior of the burial chamber followed by an outwards collapse of the highest portions of the walls. During excavation, we marked the original materials of each tomb, and stacked them in quadrangular structures lying next to the original ones to estimate the original height of the tombs.

b. Characterisation of the original construction materials, to select the new conservation materials.

c. Environmental study of the al Khudairah area, including analyses on the variation of temperature and rainfall, to better grasp the type of degradation these structures presently face.

³ Presented in detail by P. Gómez Sanz, C. del Cerro Linares and P. Guerra García, through a poster at the I Conference of Junior Heritage Researchers held on 2nd and 3rd March, 2023 at the National Archaeological Museum of Madrid.



2. Jebel al Khudairah, with location of the excavated areas; Area 1 is outside Jebel al Khudairah (processing: M.A. Hervás Herrera, A. Alonso García, P. Gómez Sanz; SAAMS).

d. Design of a specific restoration project, following the criterium of minimal intervention and maximum respect for the original construction materials and techniques.

Area 3 features at least ten tombs (T44–53) that were identified in the 2020 survey, although additional stone concentrations recorded during the 2023 campaign suggest that this number may increase substantially with future surveys (**Fig. 2**). All tombs are small and located in the foothills of the *jebel*, along a runoff from the south-eastern slope, on both sides of the ravine. This is one of the largest concentrations of funerary structures on this hillside, some of which are highly visible due to the contrast of the dark colour of the tombstones with the white of the calcareous formation on which they were placed. Indeed, the white of this rock formation caught the attention of the SAA team who used it as the Zero Point for the insertion of the tombs on the future topographic plan.⁴ Given such visibility, priority was given to their excavation in 2023, when tombs T48 and T49 were excavated.

Area 4 contains four tombs (T55–58) placed next to a ravine on the south-eastern slope of the *jebel*. In terms of their typology, these are similar to those from Area 2. Lying close

⁴ The graves were located on a map, the basis for the future topographical survey, carried out thanks to the SAA by Roney Leo Wakit, under the supervision of Eisa A. Yousif, Director General of the SAA, Kamyar Kambab, engineer at Historic Conservation Section and Adil Alhosany, Head of Archaeological Excavations.

to a recently built oryx farm, future excavations will need to contend with the fact that some structures may lie under the enclosure where these antelopes presently roam.

Area 5 consists of four large tombs (T62–65) placed at the foot of the hill and along a runoff on the northern slope. Typologically, they resemble smaller tombs from areas 2 and 4 although here they surround a mound, which will also require excavation.

Area 6 contains three tombs (T11 and T14–15) on the eastern end of the *jebel* slope. These are very large and visible from the plain and in typological terms resemble those from Area 2. Unfortunately, they may have been damaged during the construction of an esplanade, the only anthropogenic disturbance recorded on this mountain.

Area 7 consist of two rock shelters on the northern slope. Rocksh 6 was excavated during the 2023 field season.

T16 is the only tomb from Area 8. This is a huge structure isolated on the summit of one of the mountain tops running southwards. It is also one of the largest funerary structures of the necropolis and the highest placed one. The partial excavation of this tomb included the removal of the external collapse and the delimitation of its outer perimeter. The funerary chamber awaits excavation.

Thus far, five tombs (T18–20, T48 and T49) have been fully excavated to which one must add the delimitation of tomb T16 and the probe of rock shelter Rocksh 6. As the research of the latter is in a preliminary stage and the excavation of T16 in progress, this paper will only assess data gathered on the excavated tombs.

AREA 2

Work in Area 2 took place on a 14.96 x 13m square grid incorporating the three tombs, where previous aerial photography had generated a 3D digital model of the area.

TOMB T20

T20 was the only tomb excavated in 2020, when our team carried out the survey of the *jebel* (**Fig. 3**).⁵ The original cairn measured 10 x 7.9m and was 1.91m high. Placed on the slope of the hill, it formed part of the group with tombs T18 and T19, which were excavated in 2023.

Excavation of T20 started with the removal of stones that had collapsed on its western face to document the perimeter of the structure. This collapse consisted of rounded stones between 20–40cm in diameter. While removing them, we found that the stones that crowned the burial chamber had been recently raised, perhaps as a bulwark. Among the collapse debris we found fragments of non-perforated and perforated shells, the latter possibly part of an ornament. Once the top of the collapse had been removed, a level with stones and fine-grained, slightly clayish sand, with some very small stones and scarce archaeological material (i.e. a small bone and coral fragments) was reached. Once this filling was removed,

⁵ Del Cerro Linares, Hervás Herrera 2020: 93–96.



3. Tomb T20 (Phot. A. Alonso García; SAAMS).

one could distinguish the perimeter and masonry of the tomb, with regularly-placed stones, arranged as a cylindrical structure. The cleaning of the outer wall revealed fragments of a flint item and bone. The tomb was situated on a small rocky promontory that was clearly visible in the area around it.

The upper part of the filling of the burial chamber consisted of a sandy, yellowish, very fine-grained layer devoid of stones, where dental fragments, bones, flint and quartzite flakes were recovered. Beneath it, we documented a sandy filling with stones concentrating along the northern, southern and eastern perimeters. Once screened, a tibia, several teeth and the skull of a child were found. The tomb had been emptied or reused in later times. The excavation of this level, *c.* 38cm below the preserved top of the tomb, allowed us to spot two smaller compartments within the main chamber: chambers N (larger) and S. A higher concentration of bones appeared in the central and south-eastern flank of the main chamber. The screening of the upper filling of chamber N also provided a smaller assortment of bones. Below, a homogeneous, 8cm-thick level of light-brownish sand with a low proportion of clay was reached. This was mixed with a more compact gravel than that recorded on the

upper level. Bone fragments, including some from a skull, clustered in the northern part of the chamber. This filling sits directly on the floor of the grave. The S chamber was filled with a 3.5cm-thick deposit of light brownish fine sand mixed with large amount of gravel. It also sits directly on top of the rocky substrate that constituted the bottom of the tomb. No human remains or objects were documented here.

Tomb T20 had clearly been emptied. Dental remains corresponding to a minimum of two individuals were recovered. These represent an adult with severe dental wear and a child aged four to six years.⁶ The possibilities of studying the grave goods are minimal since these were reduced to flakes of flint and quartzite, shells and two coral fragments. Based on the volume of stones collected from tomb rubble, we could estimate that the tomb may have originally been twice the preserved height (i.e. *c.* 2m).

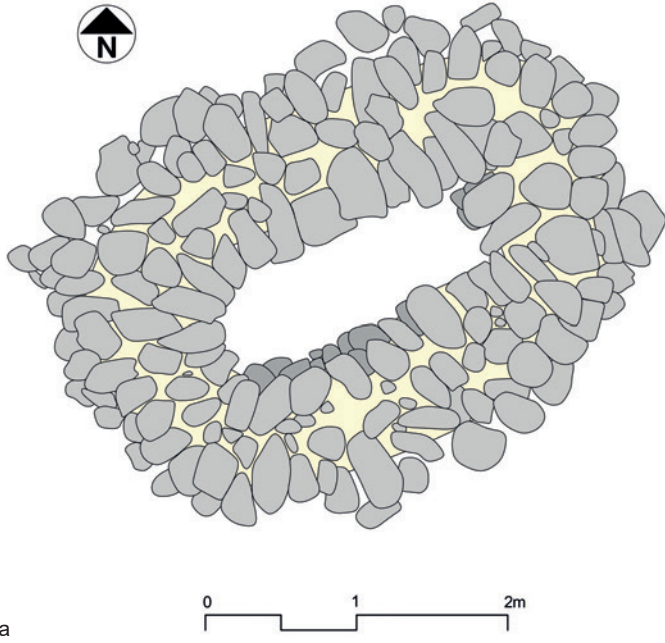
TOMB T19

Tomb T19 is placed a few meters east of T20. Prior to excavation, this was a 7.0 x 7.20m and 0.68m-high cairn, with a sloping southern fringe that reached the hillside of the *jebel* (Fig. 4).

Excavations of T19 featured two sequential stone collapses. The removal of the first one started on the southern flank of the tomb. It consisted of different-sized rounded stones, the largest 40–60cm long and the more abundant smaller ones, 20–30cm long and 10–20cm thick. Their removal exposed a sandy, compact, sloping ochre-coloured layer corresponding to the original collapse of the structure. In this collapse a fragment of red quartz was retrieved. The removal of this collapse allowed us to locate the south-western external face of T19. Here, the structure's original perimeter was preserved. The tomb is a 4.15 x 3.0m oval structure whose interior consists of four rows of stones. On the outer face, three or four courses of rounded stones are visible. The highest course consists of more elongated stones that reach to the margins of the burial chamber, constituting the lowest layer of its covering. The oval chamber measures 1.78 x 0.75m.

The burial chamber was filled with a 16cm-thick sandy sediment mixed with small and medium-sized stones beneath which one could distinguish a 35cm-thick filling of aeolian sand with small stones, where microliths, animal bone fragments and a bullet cartridge were retrieved. The latter provide evidence that the upper part of T19's collapse occurred when the tomb was used as a firing range in modern times. The 5cm-thick third layer of chamber filling is composed of blown sand almost devoid of intrusions, with documented microliths, human molar fragments and several very small bone fragments. Before reaching the bottom of the tomb, a filling of very fine and compact sand with microliths was found. In the eastern and central part of the bottom of the chamber, a well-preserved flat slab

⁶ Bone samples from Tomb 20 and Tomb 18 have been sent to the Accelerator mass spectrometry facilities of the Spanish Research Council (University of Seville). In February 2020 the sample from T20 provided no results, as the bone did not conserve the necessary amount of collagen. Consequently, ¹⁴C dating measurement was not possible. T18's sample is currently being analysed.



4a-b. Tomb T19 (Phot. A. Alonso García; drawing: O. de Diego Pérez; SAAMS).

pavement was documented. The tomb had thus been raised on the bedrock and paved. The walls of the burial chamber were made of rounded stones.

T19 had been emptied. Only a few unidentified human bone splinters and the crown of a human adult molar (probably an M3) were recovered. Grave goods are restricted to several flint flakes, among which we noted a bi-faceted flake with multiple extractions in one of its percussion planes, a visible cortex and a percussion bulb. Considering the volume of stones collected during the removal of the collapse the minimum original height of T19 has been estimated at 1.30m.

TOMB T18

Prior to excavation, this cairn, a few meters to the north of T19, was a 1m-high, 7.30 x 8.20m structure (**Fig. 5**). After removal of the collapsed, round-shaped stones, of similar dimensions as those from T19, we looked for the external face of the tomb. The wall was made up of stones laid in such a way that their shorter, rounded, sides pointed to the outer face and inside of the tomb. The tomb proper was 3.55 x 3.10m.

The burial chamber was almost round (1.12 x 1.19m), its upper portion filled with a 30cm-thick layer of sand mixed with small and medium-sized stones, as documented in T19. The second layer contained a far lower number of intrusions and yielded bone splinters and human bones, some of which were in anatomical position (**Fig. 6**). Next to them was a copper arrowhead (**Fig. 7**). Beneath the human remains, a third layer of darker, coarser sand was detected. It was deposited directly on the bottom of the chamber.

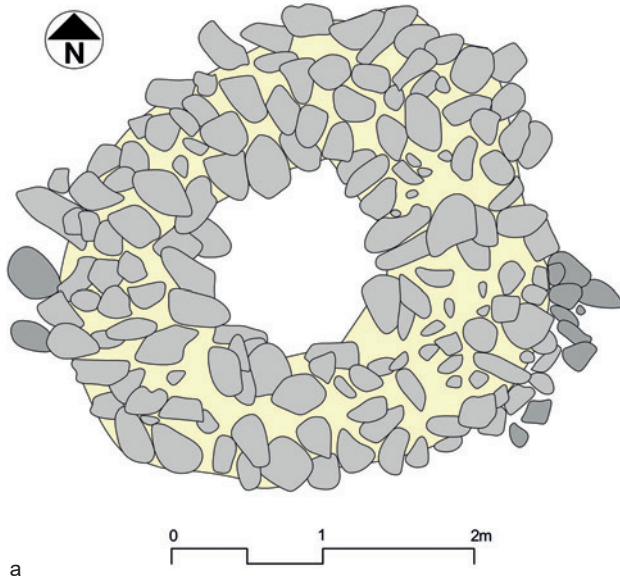
T18 was probably emptied and/or reused. The skeletal remains appeared in three clusters. Cluster 1 consisted of an individual in a supine position with flexed arms. On the right arm the ulna and radius was laid parallel to the humerus. This arm was flexed, the hand lying close to the jaw. The left arm laid over the abdominal region forming a right angle with the forearm. The lack of complete limb bones and pelvis precluded age and sex determination. In cluster 2, only femora and tibiae were identified. One cannot rule out that these belonged to the cluster 1 individual. The bones recovered in cluster 3, lying below cluster 1, were identified as part of an arm from a second individual. The minimum number of individuals at T18 is two.⁷

Retrieved items include microliths, shells and a carnelian bead in the outer collapse, plus a microlith and an arrowhead from the burial chamber. The arrowhead (inv. no. AKh2-AKh23-T18-M43) is composed of copper (86.30%), osmium (7.90%), nickel (2.785%), iron (1.238%), with minimal traces of iridium, tin, thallium, gold, cobalt, indium and molybdenum.⁸

Considering the volume of stones collected during the removal of the collapse, the minimum original height of T18 has been estimated at 1.80m.

⁷ A sample for ¹⁴C dating was sent to the CNA (Accelerator mass spectrometry facilities of the Spanish Research Council – University of Sevilla) in March 2023.

⁸ The arrowhead is currently undergoing restoration at the facilities of the SAA.



5a-b. Tomb T18 (Phot. A. Alonso García; drawing: O. de Diego Pérez; SAAMS).



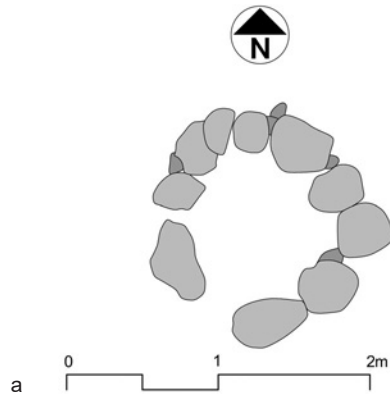
6. Human remains in anatomical order unearthed in tomb T18 (Phot. A. Alonso García; SAAMS).



7. Copper arrowhead (before restoration) found in tomb T18 (Phot. C. del Cerro Linares; SAAMS).

AREA 3

All tombs in this area are small above-ground structures of unworked local stone, marked with large irregular boulders and sealed with stones arranged into small circular or oval burial mounds. During the 2023 campaign we opened the two graves (T48 and T49) located closest to the slope of the hill. They represent different types and lie on opposite sides of the runoff, c. 7m apart from each other.



8. Tomb T48 (Phot. C. Fernández Rodríguez; drawing: O. de Diego Pérez; SAAMS).

TOMB 48

The small cairn that constitutes T48 was apparently circular (**Fig. 8**). This is a 1.50 x 1.50m above-ground tomb marked by stones that rest on the bedrock and would have been surmounted with additional stones to form a small burial mound. The chamber is almost round (1.0 x 0.90m) and 0.25m deep. It was filled with very fine sand with pebbles. Below it lies the rocky floor of the chamber. T48 was never used or else thoroughly emptied.

The cairn slopes toward the east with its stones rolling to the south of the slope, its north-eastern corner being damaged by a runoff. It seems obvious that the tomb suffered from its closeness to this runoff and for this reason its outer wall was difficult to trace completely. The stones that were removed during the excavation, but were clearly part of the structure, have been placed to the west of the tomb awaiting restitution.

While removing the collapse, we found microliths and small flint flakes. Also, within the collapsed stones, we found microlithic fragments, among which we noted a bi-faceted sheet-type with an asymmetric axis and denticular touches on one of the edges, possibly due to pressure. A multifaceted flake with multiple extractions, visible cortex and a high degree of rolling was also documented.

TOMB 49

Prior to excavation, the small cairn T49 was easily recognised as an oval-shaped structure (**Fig. 9**). The tomb was sloping southwards. After clearing the outer outline, the structure measured 2.5 x 2.0m. It consisted of two stone alignments. Some of the stones forming them were of a remarkable size (60 x 35 x 60cm). The chamber, recognisable from the beginning and measuring 1.78 x 1.12m, was filled with a 25cm-thick deposit of aeolian sand mixed with pebbles and stones collapsed from the north-eastern wall. After the removal of another 15cm-thick fill of very fine sand, the bottom of the chamber was reached. This was paved with a layer of gravel placed directly on top of the bedrock. The chamber is 0.4m deep. It was faced by very smooth stones that were intentionally arranged with their flat surface oriented inwards, forming a much smoother wall than would be expected with unworked stone. Some of these large stones were wedged with small stones. The removed stones that made part of the structure have been deposited to the north of the tomb for future restitution.

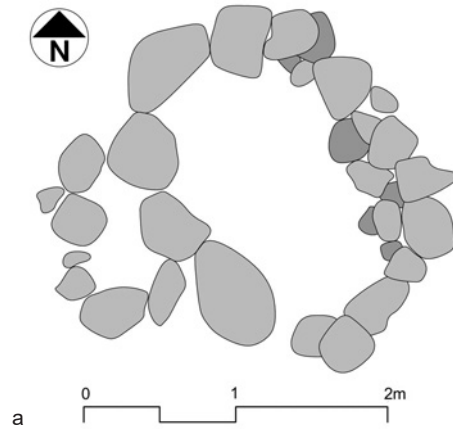
Attached to the south-western wall of the above-mentioned structure was a 0.3m-high circular structure (0.42 x 0.50m). Its aeolian sand filling did not yield objects and had very few intrusions. The north-western wall of T49 was placed directly on the bedrock but the south-eastern one was dug slightly into the ground and the floor of the structure was levelled and flattened.

Except for the finding of a flint flake in the collapse of the structure, we thought that the tomb had either been emptied or never used; in any case, no material was provided.

PRELIMINARY COMPARATIVE ANALYSIS

Not much can be said about the chronology of these tombs since hardly any well-dated material has been retrieved. The preliminary comparative analysis presented below aims at delimiting a general chronological span of the excavated tombs. Tombs T18, T19 and T20 are structurally similar to so-called Early Iron Age (EIA) hut tombs from eastern Oman.⁹ However, the comparative structures from other parts of the Oman Peninsula, discussed below, might suggest a slightly different chronological range for the al Khudairah tombs, namely from the zenith of Wadi Suq period to the Iron Age II (i.e. c. 1600–600 BC). Some of the al Khudairah tombs could also be reused third millennium BC tombs, as is the case for some of the Jebel al Buhais tombs (see below).

⁹ Yule, Gaudiello, Lehner 2021: 292–297.



9. Tomb T49 (Phot. C. Fernández Rodríguez; drawing: O. de Diego Pérez; SAAMS).

T18 is quite similar to several funerary constructions from the Jebel al Buhais necropolis, lying close to al Khudairah. Notable among these are the tombs BHS 50,¹⁰ BHS 59¹¹ and BHS 82.¹² Tomb BHS 50 was defined as a ‘Bronze Age (Hafit Period)’ tomb. It has a 1.4m-long oval chamber where Wadi Suq-type ceramics were found.¹³ Tomb BHS 59, which has a slightly oval chamber (1.5 x 1.1m), was dated by Sabah Abboud Jasim as ‘probably Hafit (reused)’ based on an arrowhead typologically characteristic of the Iron

¹⁰ Jasim 2012: 143, Fig. 174.

¹¹ Jasim 2012: Fig. 190.

¹² Jasim 2012: Fig. 280.

¹³ Jasim 2012: 143, Fig. 143.

Age.¹⁴ Lastly, BHS 82 is a circular chamber tomb dating from the Iron Age where fragments of soft stone vessels and stone beads were recorded.¹⁵

Tomb T18 also shares features with cairn T1 from Traif, Area B (Kalba, Sharjah),¹⁶ which has a slightly oval chamber and a height of 0.60m. Based on a few coral beads, the excavators dated it to the Wadi Suq period.¹⁷ A similar tomb, D014-002, was discovered in Dhofar (Oman), and tentatively assigned by its excavators to the Hafit period.¹⁸

The arrowhead from tomb T18 has typological parallels in material from other sites in the Oman peninsula, the Gulf and the south-west Iran. These analogies set it firmly within the Iron Age. Similar arrowheads were found in the above-mentioned Jebel al Buhais (BHS 3,¹⁹ BHS 28,²⁰ BHS 30,²¹ BHS 52,²² BHS 84,²³ BHS 91),²⁴ Qarn Bint Sa'ud,²⁵ al Qusais,²⁶ Lizq,²⁷ the hoard of Al Khawd Area²⁸ and at Saruq al-Hadid.²⁹ Close parallels come also from Bahrain (i.e. tomb 9 A/B of the al Hajjar necropolis),³⁰ and the Inshushinak temple in Susa.³¹

Tomb T19, with a more elongated burial chamber, show similarities with tombs T2 and T3 from Traif Area B,³² that feature an outer perimeter and oval chamber very similar in size to the example from al Khudairah. The two Traif graves provided neither grave goods nor skeletal remains.³³ T19 resemble also tombs K7 and K9 from Kalba, which were tentatively dated to the first centuries AD.³⁴ Other parallels in Oman include tomb 1029 of Adam North³⁵ and tomb JS4_G3 at Jebel Salut,³⁶ both dated to the Wadi Suq period.

¹⁴ Jasim 2012: 157, Fig. 190.

¹⁵ Jasim 2012: 234, Fig. 280.

¹⁶ Jasim 1992: Fig. 7.

¹⁷ The Traif tombs are associated with a huge platform that Jasim dates to the first half of the second millennium BC (Jasim 1992: 13).

¹⁸ McCorrison *et al.* 2014: Fig. 4.

¹⁹ Jasim 2012: 37, Fig. 39. Although the BHS 3 tomb is a Wadi Suq structure, the arrowheads we are referring to were found in an Iron Age reuse of the tomb.

²⁰ Jasim 2012: 97, Fig. 121.

²¹ Jasim 2012: 103, Fig. 128/11, 14.

²² Jasim 2012: 149, Fig. 178. Although the BHS 51 tomb is an Umm an-Nar structure, the arrowheads come from an Iron Age pit to the east of the tomb.

²³ Jasim 2012: 247, Fig. 296/15, 18.

²⁴ Jasim 2012: 281, Fig. 329/12, 13.

²⁵ Lombard 1984: Fig. 3/2.

²⁶ Taha 2009: Pl. 44.

²⁷ Döpfer 2021: Fig. 5o.

²⁸ Al-Jahwari *et al.* 2021: Fig. 4/11–13.

²⁹ Weeks *et al.* 2017: Fig. 19/SF0042, SF21716.

³⁰ Lombard 1985: Fig. 127d.

³¹ De Morgan 1905: Pls 185, 187.

³² Jasim 1992: Fig. 9.

³³ Jasim 1992: 5; the tombs were assigned to the Wadi Suq period because they were associated with the Traif platform.

³⁴ Phillips 2018: Figs 16, 18.

³⁵ Gernez, Giraud 2019: Fig. 6/27.

³⁶ Degli Esposti *et al.* 2022: Figs 2, 5.

Tomb T20, as T18, bears similarities in shape to several tombs from the Jebel al Buhais necropolis, in particular tombs BHS 50 and BHS 59 (see above). It is structurally comparable to tomb T2 from Traif Area B in Traif (see above).³⁷ In Oman, T20 finds parallels with structures T2, T3 and T7 from the Shiya site,³⁸ whose dating remains controversial.³⁹ It is similar also to the adjoining structure of the Wadi Suq tomb at Bawshar.⁴⁰

Tombs T48 and T49 exhibit their parallels with small structures, either isolated or added to much older Umm an-Nar or Wadi Suq period tombs. Tomb T 48 resembles structures BHS 4 and BHS 5,⁴¹ BHS 7,⁴² BHS 11,⁴³ BHS 47,⁴⁴ BHS 49,⁴⁵ and BHS 52–55,⁴⁶ all small Iron Age-dated above ground tombs from Jebel al Buhais necropolis. In Oman it is the Wadi Suq JS4_G5 tomb from Jebel Salut 4, the one which resembles T48 from al Khudairah.⁴⁷

Tomb T49 bears parallels with some subsidiary Iron Age structures attached to Bronze Age tombs, such as BHS 2⁴⁸ and BHS 12,⁴⁹ as well as with BSH 14, an isolated structure dated to the Iron Age.⁵⁰ Among parallel structures from Oman, one should mention Samad tomb S2189, with Wadi Suq period grave goods⁵¹ and JS4_G7 from Jebel Salut 4, dated to the same period.⁵²

SUMMARY

The discovery of human skeletal remains in anatomical position in T18 during the 2023 campaign has confirmed that at least some of the studied structures were places of primary burials. Due to the sub-desertic conditions of the region, all skeletal remains found thus far are poorly preserved and extremely fragile. In tomb T18, human remains appeared accompanied by certain goods, amongst which a copper arrowhead is worth remarking. This – for now the only datable small find – as well as analogies to the tombs architecture, suggests a Wadi Suq to Iron Age date for the investigated structures.

The collected samples currently being studied at the laboratory will hopefully allow us to address some specific analyses, such as dating, archaeozoology, preservation and micro-anatomy and paleodiet. The results will enhance the interdisciplinarity potential

³⁷ Jasim 1992: Fig. 8.

³⁸ Munoz 2022: Fig. 6.

³⁹ McCorrison *et al.* 2014: 128.

⁴⁰ Cleuziou, Tosi 2020: Fig. 248.

⁴¹ Jasim 2012: 37–38, Fig. 51.

⁴² Jasim 2012: 41, Fig. 46.

⁴³ Jasim 2012: 55, Fig. 67.

⁴⁴ Jasim 2012: 139, 141, Fig. 169.

⁴⁵ Jasim 2012: 143–144, Fig. 172.

⁴⁶ Jasim 2012: 145–152, Figs 180, 181.

⁴⁷ Degli Esposti *et al.* 2022: Fig. 2.

⁴⁸ Jasim 2012: 20–27, Fig. 10.

⁴⁹ Jasim 2012: 57, Fig. 68.

⁵⁰ Jasim 2012: 63–64, Fig. 78.

⁵¹ Yule, Gaudiello, Lehner 2021: Fig. 17g.

⁵² Degli Esposti *et al.* 2022: Fig. 2.

of the SAAMS research group, which has only started investigations of the al Khudairah necropolis. As was already the case of al Madam 1-Thuqeibah, this joint effort will allow us to deepen the knowledge of the human groups inhabiting the Oman Peninsula during the second and first millennium BC.

Acknowledgements

We are grateful to His Highness Dr Sultan bin Mohammed al Qasimi, Emir of Sharjah, for his personal commitment to our team since 1994, and to Dr Sabah Abboud Jasim, former Director General of the SAA, for his unconditional support for our projects and to Eisa Abbas Yousif, current Director General of the SAA, for his constant help in the field. We would also like to express our sincere gratitude to Roney Leo Wakit, member of the SAA, Kamyar Kambab, engineer at the Historic Conservation Section, and Adil Alhosany, Head of Archaeological Excavations. Finally, we would like to thank Pablo Guerra García, Miguel Ángel Nuñez Villanueva, Olmo de Diego Pérez, Oscar Cambra Moo and Josefina Rascón Pérez, members of the SAAMS.

References

- Al-Jahwari, N.S., Yule, P.A., Douglas, K.A., Pracejus, B., Al-Belushi, M.A., Elmahi, A.T. 2021: The Early Iron Age Metal Hoard from the Al Khawd Area (Sulyan Qaboos University) Sultanate of Oman, *The Archaeological Heritage of Oman* 7, Muscat
- Cerro Linares, C. del, Córdoba Zoilo, J.M^a. 2018: Archaeology of a falaj in al Madam Plain (Sharjah, UAE); a study from the site, *Water History* 10, 85–98
- Cerro Linares, C. del, Hervás Herrera, M. 2020: Vida en el oasis-muerte en las colinas. La misión arqueológica y arqueobiológica en Sharjah (SAAMS); un proyecto nuevo dentro de un concepto maduro. La necrópolis de al Khudairah, *Isimu* 23, 87–97
- Cleuziou, S., Tosi, M. 2020: In the Shadow of the Ancestors. The Prehistoric Foundations of the Early Arabian Civilization in Oman, Muscat
- De Morgan, J. 1905: Trouvailles de la Colonne de Briques, [*in:*] de Morgan, J. *et al.*, *Recherches Archéologiques* 2, *Mémoires de la Délégation en Perse* 7, Paris, 49–59
- Degli Esposti, M., Tagliamonte, E., Ramorino, P., Spano, S. 2022: Funerary Architecture in The Wadi Suq Period and an Unusual Type of Third/Second-Millennium Grave: Initial Results from The Excavation of Prehistoric Burials in the Salut Archaeological Park, Central Oman, *Journal of Oman Studies* 22, 73–98
- Döpper, S. 2021: The Middle and Late Bronze Age in Central Oman: New Insights from Tawi Said, Al-Mudhairib and the Wilayat al-Mudhaybi, *AAE* 32/S1, 313–327
- Gernez, G., Giraud, J. 2019: Taming the Great Desert. Adam in the Prehistory of Oman, *The Archaeological Heritage of Oman* 3, Muscat
- Jasim, S.A. 1992: Excavations at Traif-Kalba, the Emirate of Sharjah. A seventh report, *Annual Sharjah Archaeology* 7, 7–50
- Jasim, S.A. 2012: The Necropolis of Jebel Al-Buhais. Prehistoric Discoveries in the Emirate of Sharjah, United Arab Emirates, Sharjah

- Lombard, P. 1984: Quelques éléments sur la métallurgie de l'Age du Fer aux Emirats Arabes Unis, [*in:*] Boucharlat, R., Salles, J.-F. (Eds), *Arabie orientale, Mésopotamie et Iran méridional : De l'âge du fer au début de la période islamique*, Lyon, 225–235
- Lombard, P. 1985: *L'Arabie orientale à l'âge du Fer*, unpublished PhD thesis, Université de Paris 1 Panthéon-Sorbonne, Paris
- McCorriston, J., Harrower, M., Steimer, T., Williams, K.D., Senn, M., Al Hādhari, M., Al Kathīrī, M., Al Kathīrī, A.A., Saliège, J.-F., Everhart, J. 2014: Monuments and Landscape of Mobile Pastoralists in Dhofar: the Arabian Human social Dynamics (AHSD) Project, 2009–2011, *Journal of Oman Studies* 12, 117–144
- Munoz, O. 2022: Protohistoric cairns and tower tombs in South-Eastern Arabia (end of the 4th–beginning of the 3rd millennium BCE), [*in:*] Laporte, L. *et al.* (Eds), *Megaliths of the World, Vol. II*, Oxford, 905–920
- Phillips, C. 2018: Excavations at Kalba 1993–95, *Annual Sharjah Archaeology* 13, 13–31
- Taha, M.Y. 2009: The Discovery of the Iron Age in the United Arab Emirates, Dubai
- Weeks, L., Cable, C., Franke, K., Newton, C., Karacic, S., Roberts, J., Stepanov, I., David-Cuny, H., Price, D., Bukhash, R.M., Radwan, M.B., Zein, H. 2017: Recent archaeological research at Saruq al Hadid, Dubai, UAE, *AAE* 28/1, 31–60
- Yule, P., Gaudiello, M., Lehner, J. 2021: al-Salayli Valley in Eastern Oman, Early Iron Age Burial and Multi-Period Copper Production, *Zeitschrift für Orient-Archäologie* 14, 276–317