SUDAN & NUBIA

The Sudan Archaeological Research Society Volume 25 2021

Reports

An inscribed basin of the 18th dynasty (reign of Amenhotep III) from the fortress of Shalfak in Lower Nubia 1
W. Vivian Davies

***Angareeb*-bed production in modern Nubia: Documenting a dying craft tradition** 11
Manuela Lehmann

The biocultural heritage and historical ecology of date palm cultivation in Nubian villages, northern Sudan 24
Philippa Ryan, Mohammed Hassan, Mohamed Saad, Marcus Jaeger, Caroline Cartwright, Dorian Fuller and Neal Spencer

The archaeological and heritage survey of the Northern el-Mahas region. First season's report (2020) 40
Abdelrahman Ibrahim Said

Preliminary report for the Western Desert of the Third Cataract Region Project (Wadi Gorgod - first season 2018-2019) 49
Hamad Mohamed Hamdeen, Altayeb Abdalla Hassbrabo, Safa Gamal Idres, Samar Salah Mustafa, and Fatima Idris Mahmoud

Starting anew at Old Dongola 67
Artur Obłuski and Dorota Dzierbicka

From development displacement and salvage archaeology in Nubia to inclusive sustainable heritage and development crafting in Old Dongola 82
Peter Bille Larsen

Dialogue Community Project in Old Dongola (2019-2021) 95
Tomomi Fushiya

Wadi Abu Dom investigations: El Rum Oasis 108
Tim Karberg and Angelika Lohwasser

Goldmines, nomad camps, and cemeteries: The 2018 season of the Atbai Survey Project 121
Julien Cooper

Archaeological report on the excavation of a post-Meroitic necropolis at el-Madanab (Shahid Rescue Archaeological Project) 135
Fakhri Hassan Abdallah, Romain David and Iwona Kozieradzka-Ogunmakin

The archaeological site of Damboya in the Shendi Reach. Second season 154
Marc Maillot

Building E at Damboya, second season 168
Gabrielle Choimet

(Re)examining the tomb of Queen Yeturow at Nuri 184
Meghan E. Strong, Susan Doll, Fakhri Hassan Abdallah, Helen O'Brien, Simone Petacchi, Abagail Breidenstein and Pearce Paul Creasman

Dental insights into the biological affinities of the inhabitants of Gabati over a period of cultural transition 195
Emma L. W. Phillips, Joel D. Irish and Daniel Antoine

Jebel Hawrā, a new archaeological site in Eastern Sudan 209
Enrico Giancristofaro

Studies

Was the individual buried in MOG012.4 a Christian, a pagan, or both? Evidence for the appropriation of Christianity from a Late Antique-Early Medieval tumulus grave on Mograt Island 221
Claudia Näser, Alexandros Tsakos and Jens Weschenfelder

After 'InBetween': Disentangling cultural contacts across Nubia during the 2nd millennium BC 230
Aaron de Souza

Skeuomorphism in Kerma metal vessels 243
Carl Walsh

Heart scarabs and other heart-related objects in New Kingdom Nubia 252
Rennan Lemos

***Sheikh* and *Melik* 1925: A short note** 270
Paul T. Nicholson

Book reviews 274

Obituaries

Peter MacKenzie Smith (1946-2020) 279

Professor Abdelgadir Mahmoud Abdallah (1937-2021) 279

Sandro Salvatori (1948-2020) 280

George Hart (1945-2021) 283

Biographies 284

Miscellanies 289

Front cover. Cattle and two goats\gazelle from Site GRD-14 in the Wadi Gorgod (photo Hamad Mohamed Hamdeen).

Goldmines, nomad camps, and cemeteries: The 2018 season of the Atbai Survey Project[1]

Julien Cooper

The Atbai Desert of eastern Sudan is a vast landscape and, unlike the Nile Valley, much of its archaeological heritage is under or unexplored. This is especially the case in the central region of the Atbai east of Abu Hamed and Berber, away from Kassala (southern Atbai) and the deserts east of Lower Nubia (northern Atbai). Like other parts of the Eastern Desert, this region is littered with goldmines and is also important as the homeland of ancient pastoralist nomads, who were given various monikers like 'Medjay', 'Blemmyes', and 'Beja' in antiquity. As part of a larger project aimed at documenting the archaeological heritage of the Atbai and understanding the relationship between indigenous nomads and urban states in Egypt and Nubia, in 2018 the Atbai Survey Project surveyed key sites in the deserts north of Musmar and along the Wadi Amur in the central Atbai. By the relative standards of deserts in the Sahara, this region is veritably fertile. Surface water is relatively common after rains as are wells. In the major drainage beds of the Wadi Arab, Wadi Amur, and Khor Agwampt, vast grasslands and acacia groves allow pastoralism to the present day. In the midst of this region is the site of Khor Nubt, one of the most important political centres for the Blemmyes-Beja in the 1st millennium AD, likely the burial place of Beja rulers and their capital (Hagen 2009, 116; Krzywinski *et al.* 2020).

The region has undergone some archaeological surveys but has attracted less attention than the deserts east of Lower Nubia (Castiglioni *et al.* 1998; Davies and Welsby 2020). Most 'major' sites in the region date to the 1st millennium AD and may be attributed to the Blemmyes and Beja of Graeco-Roman, Coptic, and Arabic sources. The aforementioned site of Nubt, home to some of the earliest Arabic inscriptions in Sudan, was visited by a number of scholars throughout the 19th and 20th centuries (Sandars and Owen 1951; Oman *et al.* 1998) and is currently undergoing investigation. Not far from Nubt, an extensive 1st millennium AD settlement has been identified at the site of Tabot in Khor Agwampt (Magid 2004). The area around the modern Ariab goldmine has undergone rescue documentation and surveying, identifying a number of cemeteries, settlements and ancient gold workings, as well as rock art sites (Bonnet and Reinold 1993; Reinold and Ahmed 2003-2008). Many ancient and medieval goldmines in the region were documented by an extensive geoarchaeological project of Dietrich and Rosemarie Klemm (Klemm and Klemm 2013). Additionally, surveys by the National Corporation for Antiquities and Museums, Sudan, and Mahmoud Suliman Bashir (2017) have traced numerous habitation sites and burials on the caravan route between Berber and the Red Sea harbour of Suakin. What follows is a description of some sites visited and documented by the 2018 season of the Atbai Survey Project (Figure 1).

Gebel Togni (AS18.1)

The site of Gebel Togni, just northwest of Musmar on the Port-Sudan to Atbara road, is a vast goldmine and settlement situated adjacent to the major artery of the Wadi Habob. The site was described in the unpublished manuscripts and notes of Sir Douglas Newbold (Newbold MSS) and later identified in maps

[1] The work was a joint expedition between the University of Oxford, Yale University, and SARS, and was carried out with the permission and encouragement of Dr Abdelrahman Ali, Director General of NCAM. The team consisted of Julien Cooper (director), W. Vivian Davies, Pierre Meyrat, Hozaifa Abdelmagid (archaeologist, representing NCAM), Mubarak Adam, and Osman Dafalla. Funding and support for the project was provided by the Egypt Exploration Society, the Gerald Avery Wainwright Fund and the William K. and Marilyn M. Simpson Endowment for Egyptology. The rock art discovered east of Lower Nubia was separately published in a previous issue of this journal (Cooper and Vanhulle 2019). The 2018 Atbai Survey took place between the 24th November and the 14th of December. I also wish to thank Aaron de Souza for commenting on a draft of this paper.

DOI: 10.32028/Sudan_and_Nubia_25_pp121-134

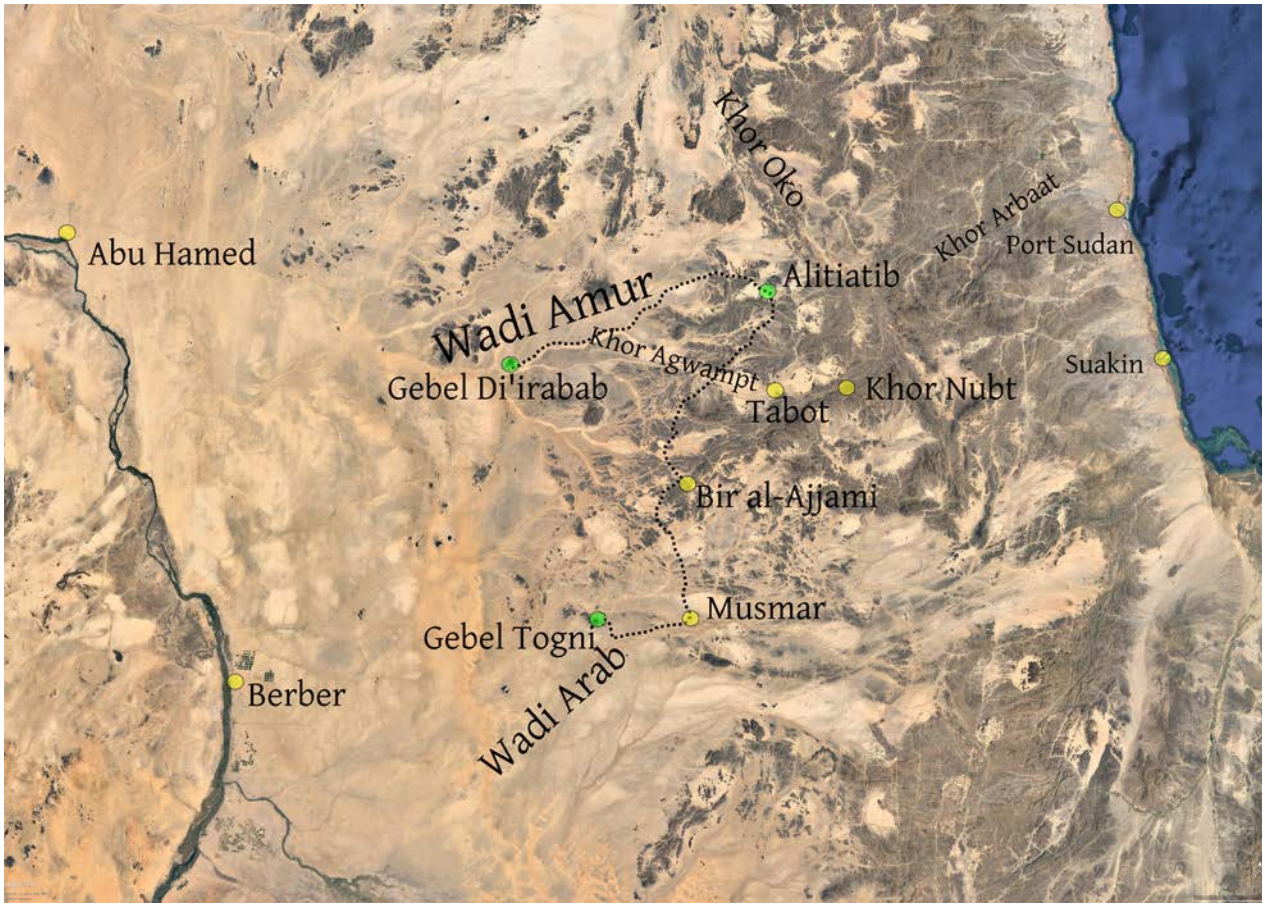

Figure 1. Map of the central Atbai deserts with survey route, sites surveyed (green) and other sites mentioned in text (yellow).

and satellite photography (Figure 2).[2] Newbold's notes and map mention a goldmining settlement and/or working-area ('barracks') laid out on a central street and a ridge of quartz to the northwest, as well as numerous finds of pottery ('thick coarse' and 'thin ribbed') and green glass. Unfortunately, our survey was unable to record the site and follow up Newbold's discovery as the site had been ruined by contemporary goldmining, destroying almost the entire central settlement area. Judging from the 'street' plan present on Newbold's map and the older satellite photos, the mine likely dates to the same period as other 'street' mines present in the Atbai like Uar (War), Omar Kabash, and Bir Kiaw (Klemm and Klemm 2013, 392, 419, 551). Most of these sites were dated to the Arab period by the Klemms' survey. Further confirmation of this broad date for these sites can be ascertained by the presence at these sites of a distinctive ceramic type bearing stamped impressions in Arabic, 'Nabi Samwil Ware' (Gascoigne and Pyke 2011), dating to approximately *c.* 800-1000 AD. This ware is present at Uar amongst other goldmining sites in Eastern Sudan.[3] Arab histories narrate that the goldmines in the Atbai were opened as a result of the adventuring of the Arab general Al-Omari who, after securing the mines from the Beja and Nubians in 868 AD, invited Aswani merchants to participate in this enterprise (Vantini 1975, 636, 709). Togni would constitute one of the more southerly outposts of Arab goldmining, although it is perhaps best to attach caution to this interpretation given our inability to more closely analyse the site.

[2] Sudan Survey Department, 1:250,000 map sheet 45-H Musmar marks 'ancient village and gold mine'.
[3] Sherds of Nabi Samwil ware have been identified from the sites of Uar, Deraheib, Idarib, and Shoshoba in the ceramic collection of Dietrich and Rosemarie Klemm, now housed in the British Museum. At Idarib there is an Arabic tombstone dated to 307 Muharram (=918 AD), see Klemm and Klemm (2013, 541).

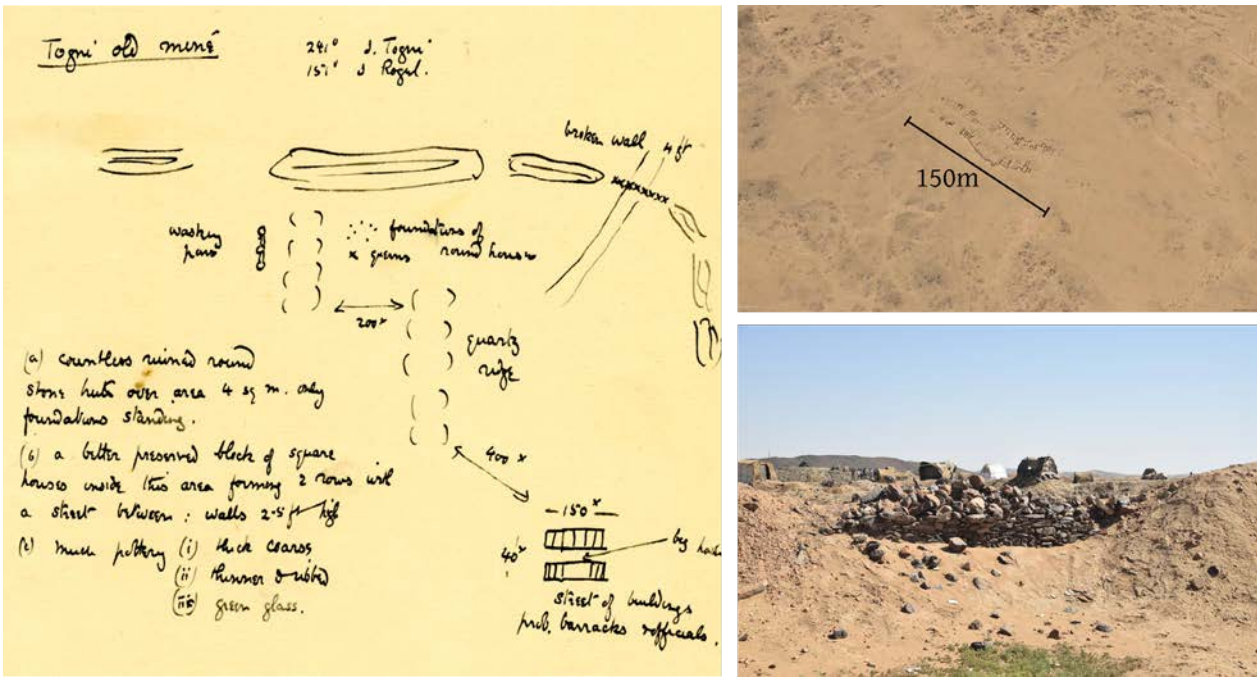

Figure 2. Left: the site plan of Douglas Newbold (copyright Griffith Institute, University of Oxford); top right: Gebel Togni in satellite photos before 2006 (Google Earth); bottom right: the present condition of the central structure.

Alitiatib (AS18.5-16)

From Togni, the survey turned north on a track leading from Musmar to the upper vales of the Wadi Amur. The Wadi Amur is one of the largest drainage basins in the Atbai and is heavily used by local Beja for both grazing and some cereal agriculture. In the midst of the upper Wadi Amur is a site identified by Dietrich and Rosemarie Klemm as 'Aliakateb', cited by them as a goldmining site (Klemm and Klemm 2013, 372-375). Discussions with local nomads at the site identified its likely name as rather 'Alitiatib', a name with a likely Beja etymology meaning 'Place of Ali's Goats'.[4] The site is situated in the middle of the wide basin near where the main artery of the Wadi Amur bifurcates with the Khor Towoikwan. The area, by desert standards, is very fertile and cultivation of sorghum is still practiced in the wadi bed after seasonal rains – in the not too distant past the area was even self-sufficient in cereals in years with good rain (Morton 1989, 195). This fertility was partly achieved by artificial means through the erection of small 'sand-dams' across the khor that slow the drainage of water down the wadi-bed (Krzywinski 2001, 50-51). The main bed of the Wadi Amur frequently contains pools for long parts of the year after summer rains.

Alitiatib is an extensive settlement located on a gravel terrace above the wadi bed, situated just to the south of a small granite hill (Figure 3). South and north of the settlement are small cemeteries with dispersed burials and tumuli. The main feature of the site is the settlement, consisting of dry-stone architecture in the form of the bases of dwellings, none of which appeared to be more than 400mm high above the ground. The shapes of these structures are mainly rectilinear, often forming multi-room structures. The original form of these dwellings is unclear; they could all be ruined but the consistency of preservation in their present height might suggest they functioned as bases for tents or for perishable materials to be placed on (Figure 4). Similar 'nomad architecture' is still used in the Eastern Desert to the present day, where a stone base can act as an outline or support for a transportable roofing structure consisting of wood, animal skins, or matting from palm-fibres (Magid 2008). Such an architectural pattern has been inferred for the structures at a similar Blemmyean settlement at Bir Minayh in the Eastern

[4] Likely *Alitiyateeb*. For assistance with parsing the Beja placename, I wish to thank Martine Vanhove and Mohamed-Tahir.

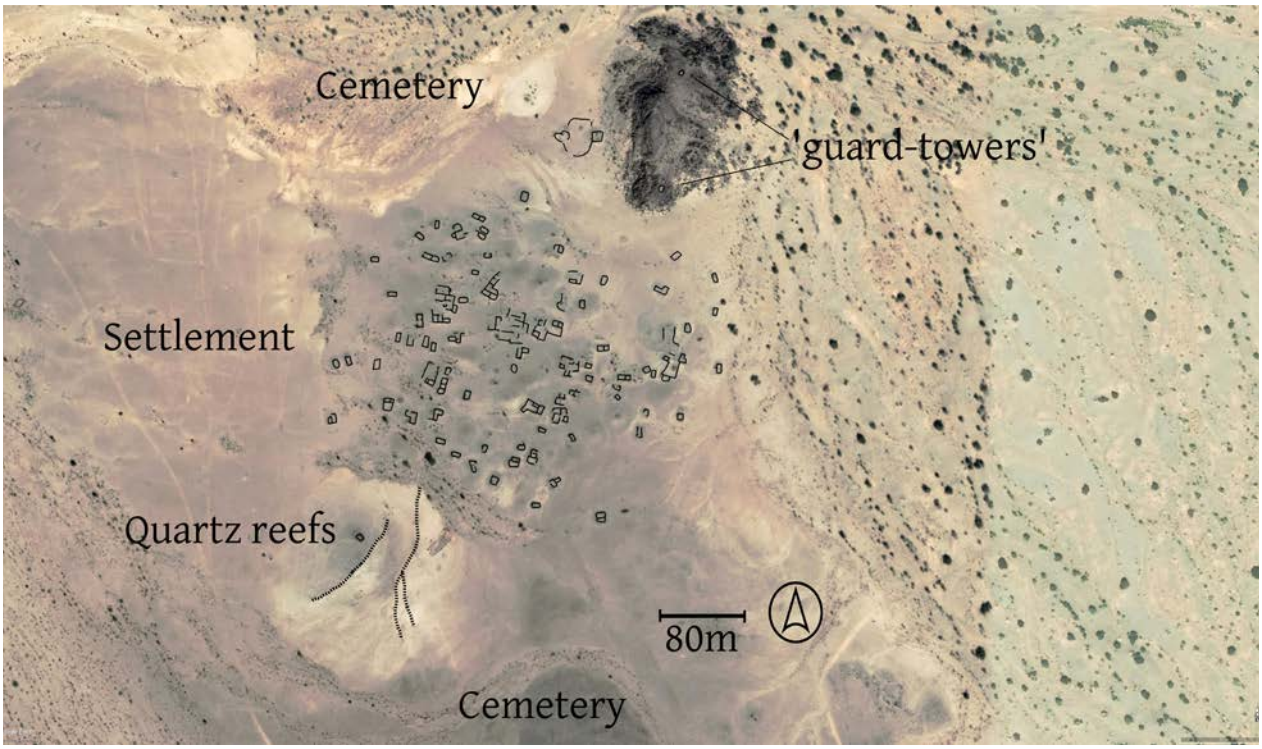

Figure 3. The site of Alitiatib (Google Earth).

Figure 4. Standard one-roomed dwelling at Alitiatib.

Figure 5a (left) and b (right). Structures marked with a single course of stones at Alitiatib (photos by W. Vivian Davies).

Desert of Upper Egypt (Luft 2010, 14; Vasáros and Lassányi 2010). In these examples, the outlines of a stone base might support the inner-wall of wooden branches or a matting roof held up by sticks.

Returning to Alitiatib, the outlines of two buildings with walls preserved to a higher level were also found on the granite outcrop at the north end of the site, possibly functioning as lookout or guard-posts. Just underneath the granite outcrop is an area marked out by a single course of stones situated between two buildings. There appear to be several other similar structures throughout the site marked with a single course of stones (Figure 5a, b). Such a feature has an uncertain function but has a good parallel in identical 'platform' features noted at the nearby settlement of Tabot (Magid *et al.* 1995, 169, pl. III; Magid 2004, 155). Similar features consisting of a single course of stone placed on the desert surface are sometimes interpreted as Muslim 'praying sites' at mining centres (Klemm and Klemm 2013, 61; 436) although there is no obvious sign of a mihrab in the features here. Other comparable structures are also present further north in the Eastern Desert of Upper Egypt, and have been interpreted as animal tethering lines near Graeco-Roman forts and quarries (Sidebotham *et al.* 2019, 111).

Many such comparable settlements are known throughout the Eastern Desert of Upper Egypt, sometimes called 'enigmatic' settlements (Sidebotham *et al.* 2002) as their initial purpose and cultural affiliation was uncertain. Due to their architecture, settlement plan, and general situation, sites in this region of Sudan such as Tabot and Nubt have also been grouped together with the 'enigmatic' sites of the Egyptian Eastern Desert. These sites are dated chiefly by ceramic finds to between *c*. 300-700 AD and some sites were clearly active in the early Arab period based on the presence of Arabic inscriptions. They are usually situated near or around wells and trade routes and are now generally considered to have served as settlements for Blemmyean-Beja pastoralists (Lassányi 2012), concording well with regions known to be inhabited by Blemmyes in historical texts. There is a large 'geographic gap' in this map of such settlements, however, as very few are known to exist between the area of Berenike and this central part of the Sudanese Atbai. This is probably due to lack of surveys but could also be attributable to the fact that the many dry-stone walled settlements known in this intervening desert (Onib and Gabgaba regions) are all generally categorised as goldmining settlements. These settlements are quite large and due to a lack of gold-working or millstones have, on occasion, been speculated to have functions other than the mining and working of gold, as is the case with Techol West (Klemm and Klemm 2013, 434).[5] Such 'towns' probably belong to a similar type of 'enigmatic' settlement, or indeed were multifunctional in nature.

Based on the Arabic inscriptions, ceramics, and carbon dates for sites at Tabot and Nubt (Krzywinski *et*

[5] The site of Techol, identical to the Castiglioni site R68, also exhibits Eastern Desert Ware, see Manzo 2020, 76.

al. 2020, 28), it would seem these 'nomad settlements' in Sudan have a slightly wider date-range than their counterparts in the deserts of Upper Egypt, perhaps dating *c.* 200-1000 AD. The well-known goldmining 'city' at Deraheib (Allaqi) might also be placed in this group (Castiglioni *et al.* 1998), but its history extended much later in the Arab period and is of a larger size altogether.[6] It is generally unclear in these desert contexts if these settlements are architecturally and functionally distinguishable from goldmining settlements. Alitiatib is quite comparable to these other enigmatic settlements in size (350x350m) and number of buildings (~70, many multi-roomed) but is laid out slightly differently. Instead of the settlement being spread out longitudinally along a wadi it constitutes a dense almost circular nucleated core of buildings. The largest structure in the centre of the settlement is approximately 30x20m while the average smaller single or double-roomed structures are approximately 8x4m.

Numerous surface ceramics were found throughout the site (Figure 6), including large amounts of Eastern Desert Ware (*c.* 300-700 AD), a handmade ceramic with incised geometric decoration and a familiar repertoire of motifs (Barnard 2008). This pottery is encountered at many sites throughout the Eastern Desert of Egypt and Sudan as well as locales known to have been visited by the Blemmyes in the Nile Valley and Red Sea coast.[7] The Klemm's survey (Klemm and Klemm 2013, 372-375) previously collected many such sherds from this site and our walking survey identified approximately 56 sherds in one day, meaning that more than 100 Eastern Desert Ware sherds have been documented from surface recording at the site. While this might not be a remarkable figure for standard ceramic repertoires at settlement sites in the Nile Valley, it should be stressed that at almost all sites where Eastern Desert Ware has been documented it is a minor component of the ceramic assemblages and frequently found in very small numbers. The largest numbers occur at the well-excavated Blemmyean cemeteries at Wadi Qitna and Kalabsha south (n=64) as well as from the excavations at Tabot in the central Atbai (n=66) (Barnard 2008). This raises questions as to why such a large number are found at Alitiatib and whether sites in the central Atbai may have been involved in its manufacture or distribution. Outside this 'local' handmade

Figure 6. Surface finds at Alitiatib: Eastern Desert Ware, seashells, a fragment of a ribbed amphora, and a millstone (photos by Pierre Meyrat).

[6] From an inspection of the Klemm collection at the British Museum, the author was able to confirm the presence of Eastern Desert Ware at Deraheib, see also Lassányi 2012, 300.
[7] A dedicated publication on these Eastern Desert Ware finds is in preparation with Hans Barnard.

ware, a few fragments of imported wares such as amphorae were noted. Late Roman amphorae have been recently documented at several sites further north in the Eastern Desert and are also known in the Kassala region (Manzo 2017, 59; Massa 2020), indicating the interregional connections of sites in the distant desert away from the Nile. Surface surveys also revealed Red Sea shells in the form of mother of pearl, scallop, and a cockle (?), almost certainly evidence of exchange with the Red Sea coast.[8] It is possible the site acted as a way station for east-west routes between the Nile and the Red Sea. Not far east of the site is the main range of the Red Sea Hills, which can be traversed through the Khor Yudeb and then Khor Arbaat leading to the coastal plain near Port Sudan.[9] A north-south route crossing this part of Wadi Amur is also known in modern times, leading north to Khor Oko and Wadi Diib system and eventually the Red Sea coast near Aidhab and Berenike. There is also a pass leading south towards Khor Agwampt and Tabot and eventually the southern Atbai around Kassala.[10]

The site is littered with quartz chippings and at the southern part of the site there is a prominent quartz outcrop protruding from the gravel terrace, possibly a focus of mining operations (Klemm and Klemm 2013, 374). Slightly strange in this respect is that our walking survey only noted a small number of millstones, all of a broad concave type, and did not find any of the distinctive 'rotary mills', anvils, and other regular gold working features like washing tables, so ubiquitous at many other goldmines in the Eastern Desert. It is not always clear if such millstones at desert sites were used solely for the crushing and working of gold ore rather than other domestic tasks (cf. Rega 2020). Many other gold sources are known in the upper Wadi Amur basin, some very close to Alitiatib like Tibiri (14km), Hadanaib (8km), and Amur (15km) so it is plausible that Alitiatib was a 'supply hub' for the local gold industry, including gold mined at the site itself. As the major cultural affiliation of the site seems to be connected to Eastern Desert Ware and thus likely the indigenous nomads, the site raises many questions about the nature of indigenous Blemmyean-Beja involvement in the goldmining industry. The coexistence of trade objects, gold ores, and fertile wadi beds at this single site might argue for it having a multifunctional role as a node in the central Atbai desert. Along with other desert sites like Tabot and Deraheib, the site also suggests that there was a new kind of embryonic 'desert semi-sedentism' in the Late Antique and medieval Atbai. This distinctive desert-settlement pattern would arise at a time broadly coeval with the emergence of a new Blemmyean-Beja confederation in the 1st millennium AD (Cooper 2021).

Small cemeteries occur both at the southern and northern end of the site, and satellite photography has revealed the presence of many cemetery sites in the surrounding basin of the upper Wadi Amur. The cemetery at the north of the site appears to largely consist of Muslim graves (Figure 7) while at the southern end of the site is a dispersed cemetery zone that consists of different burial types; some are simple round 'mound' tumuli while others contain a 'ring' course around the burial with an erect 'stela' stone facing east. These different types of tomb structures are well attested at other Eastern Desert sites, although their relative and absolute chronology is still uncertain due to a lack of excavated examples (Krzywinski 2012; Lassányi 2012, 297; Manzo *et al.* 2011, 19-23; Adam 2019, 494-496), with some types given to extend well into the medieval period. The presence of different tomb types at the one site tends to suggest a long occupation at Alitiatib, transitioning between the pre-Islamic and Islamic periods.

In the southern cemetery, our survey revealed some interesting finds in the form of ceramic figurines

[8] For assistance in these identifications I wish to thank Eric Lazo Wasem (pers. comm.).
[9] For this route, see Gleichen (1905, 90). Sherds are reported along this route at Gebel Dahaman and Khor Arbaat (Hinkel 1992, 198-200, NE 37-A). A personal inspection of the Dahaman sherds in the Sudan National Museum Khartoum (SNM 11378) revealed a fragment of a Mediterranean amphorae.
[10] Older maps have a path bisecting the area of this site, going north towards Tomala and Oko-Diib system as well as one leading over a pass south to Bir Maua (Anglo-Egyptian Sudan, Wadi Amur, 1:250,000).

Figure 7. Tombs from the northern cemetery at Alitiatib, including likely graves of Islamic Age.

dispersed around the remains of a low circular tumulus (Figure 8).[11] Most of the figurines were broken and found scattered at different distances from the tomb itself. The likelihood is that this was the result of a robbing incident although a votive deposit cannot be wholly discounted. A local nomad informed us that these objects are known from other sites throughout the nearby desert. The exact meaning and ritual related to these figurines can only be guessed. Many of these figurines are phallic in shape, but others depict the female body or perhaps animals, so a catch-all explanation of 'fertility figurines' is perhaps oversimplifying the complexity of their origin and purpose. Some contain decoration in the form of patterns with repeated dots, perhaps representing body art. Almost identical figurines (~700 fragments) were found by Reinold at the nearby site (75km away) of Bir al-Ajjami in a workshop context with a kiln (Bonnet and Reinold 1993, 33-38; Reinold and Ahmed 2003-2008, 72). Another deposit of these figurines was found in a small stone box near the rock art site at Bir Nurayet, *c.* 250km to the north of Alitiatib.[12] Carbon dates from the kiln associated with the Ajjami finds returned a result of the early

[11] 19 of these figurines were collected and registered in the Sudan National Museum (SNM 40156).
[12] The finds were discovered by the Polish mission to Bir Nurayet and have not yet been published.

Figure 8. The figurines found at a tomb in the southern cemetery, with plan of the tomb.

medieval period (1200 ± 100 BP, cal. 656-1021 AD) and they appear to be associated with Eastern Desert Ware sherds, while the figurines found at Nurayet are reported to date to the 6th century AD (Paner 2021, 1104) based likewise on the carbon dating of associated deposits. Such figurines have a long tradition in Nubia and are well-known since the Neolithic (Garcea 2020, 132-133) but given the parallels from other Eastern Desert sites, these examples almost certainly date to the mid-1st millennium AD. Judging from these discoveries, it seems that these figurines constitute a standard part of the Blemmyean-Beja religious assemblage. The finds from Alitiatib, being found in a votive or funerary context, demonstrate the likely use of these figurines as part of a funerary practice.

Very little is known of the indigenous Blemmyean-Beja religion as practiced outside their Nile holdings at Kalabsha and Philae, where they worshipped the god Mandulis among other Graeco-Egyptian deities (Dijkstra 2008, 131-151). This evidence of Blemmyean religion in stone temples and priestly hierarchies is perhaps not the standard expression of their outward religious practice in the interior desert (Cooper 2021, 21-23; Lassányi 2012, 293). The name of an indigenous Beja deity, Ḥājājwā, is described in the writings of Yaqubi while Ibn Sulaym al-Aswani records the Beja using oracles to foretell and announce raids (Vantini 1975, 79; Kheir 1989, 64-65). Describing the Arab campaign of AD 856 against the Beja and the subsequent capture of the Beja King Ali Baba, the historian Al-Tabari remarks how the Beja king carried a ‘small stone idol in the form of a child’ to which he would prostrate himself in worship (Vantini

Figure 9. The cemetery at Site 18.19 with surface finds.

1975, 103).[13] Perhaps this is indicative of a similar religious tradition where small figurines were the foci of some ritual act of worship, although we certainly should not overly rely on the 'outside' perspective of this Arab historian's account for our reconstruction of this ritual.

In many respects Alitiatib seems similar in layout, design, and possibly function to the nearby site of Tabot, *c.* 35km away. Tabot contains numerous sherds of Eastern Desert Ware, graves of pre-Islamic and Islamic dates, similar domestic architecture, and evidence of trade with the Red Sea and Nile worlds, and is situated in the midst of a wide and fertile wadi basin (Barnard and Magid 2006; Magid *et al.* 1995). It might be that along with sites like Nubt and the cemeteries at Ajjami, this central part of the Atbai desert had a higher population density than surrounding regions of the Atbai.

Gebel Di'irabab (Sites 18.17-19)

Following the Wadi Amur back to the Nile through the flat steppe west of the Red Sea Hills, the massif of Gebel Di'irabab rises *c.* 300m above the flat plain of the Awliib (the Beja word for the plains west of the Red Sea Hills). Our surveys registered a number of sites on the eastern and southern escarpments of the massif, including a large cemetery on a southern spur (Site 18.19) of the mountain, as well as a multi-period site on the eastern side of the mountain (Site 18.18). The cemetery on the southern spur contains a number of ring or circular tombs, a common grave type in the Eastern Desert, but not quite identical to the 'platform tombs' (*akerataheils*) of the 1st millennium AD in that they do not bear the well-formed vertical sides or flat tops (Figure 9). Some of these tombs are conical mounds while others appear as flat rings with holes in the middle and are not too dissimilar to several tomb types attested in the Sudanese Nile Valley (Borcowski and Welsby 2012).[14] It is unclear if the sand-filled recesses and holes in these tombs are the result of extensive looting or are rather a deliberate feature of this tomb type. Our brief reconnoitre encountered no surface artefacts in the vicinity of the cemetery except a few small sherds characterised by ribbed bands (Figure 9). The closest parallels known to me are a type of ware characterised by deep incised horizontal lines recorded at sites at the 4th Cataract, Kassala, and the Eritrean lowlands and given a 2nd millennium BC date (Emberling and Williams 2010, fig. 26b; Manzo 2012, fig. 10b; Manzo 2014, 1151;

[13] It is likely that the name Ali Baba is an Arabised form of a Beja name Olbab, see Morin 1997, 33.
[14] Some caution should be placed in linking distinctive tomb architecture from the Nile Valley and the Red Sea – it was once relatively commonplace to identify Late Antique *akertaheils* with the 2nd millennium BC C-Group burials based on a superficial similarity in construction, cf. Hinkel (1992, 76-77).

Figure 10. Archaeological features at Sites 18.17-18.18 with surface finds.

Säve-Söderbergh 1989, pl. 36).[15]

Site 18.18 is a gravel terrace in a protected valley on the east side of Di'irabab. The site was evidently occupied over multiple periods and was both a cemetery and habitation site. A handful of circular-mound tumuli were scattered over the slopes of the hills and there were also the outlines of dwellings in the form of 'hut' bases. Artefacts point to multiple periods of occupation throughout the terrace, including some Mesolithic sherds as well as a single sherd possibly ascribable to a Middle Nubian tradition (e.g. Kerma, Pan-Grave) of the 2nd millennium BC (Figure 10). The Mesolithic sherds exhibit a herringbone pattern, a tradition attested at other sites in the Atbai across the 7th millennium BC (Gatto 2012, 52-53). The status of Middle Nubian sherds in the Atbai desert is uncertain, but enough similar sherds to this example have been found in the desert to demonstrate the presence of ceramic traditions similar to that of the Kerma, Pan-Grave and Gebel Mokram cultures (Manzo 2012, 98; 100). A large stone grinding base with a hole was also found in the bottom of a wadi bed. The sheltered nature of the site, protected from the prevailing northerly wind, no doubt made it well-suited for local pastoralist groups.

Discussion

Considering the vastness and fertility of the region, as well as its gold wealth, there is great potential for the discovery of new sites, a task which should be undertaken with some urgency due to the deleterious effect of modern goldmining practices. From the standpoint of historical archaeology, a general pattern observed in our survey and other archaeological reports of this region (Reinold and Ahmed 2003-2008) is the prominence and ubiquity of 1st millennium AD settlements and cemeteries. One possible explanation for the change in settlement dynamics in this period is the emergence of a new type of camel nomadism and associated development of new seasonal migrations and transhumance patterns (Manzo 2004, 80-82). We are long away from being able to 'map' the ancient nomadism practiced by the ancient Blemmyes

[15] For assistance in identification of these sherds I am indebted to Aaron de Souza (pers. comm.).

and the Beja but, if modern ethnographic parallels are any guide (Dahl and Hjort af Ornäs 1991, 135), it seems that the central khors of the Red Sea Hills were instrumental in the ecology of nomadism, allowing camel herders to access the coastal plains for salt-bush while also giving them proximity to the grasses and bushes along the watersheds leading to the Nile after summer rains. With such nomadic pathways and increased mobility and range, people in the distant interior desert far from the Nile could more easily participate in long distance exchange networks linking Egypt, Nubia, and Aksum, as well as the world of the Red Sea.

References

Adam, A. 2019. 'New perspectives on the archaeology of the Medieval period in the Red Sea area of the Sudan', *Azania* 54 (4), 487-500.

Barnard, H. 2008. *Eastern Desert Ware: Traces of the Inhabitants of the Eastern Deserts in Egypt and Sudan During the 4th-6th Centuries CE*. Oxford.

Barnard, H. and A. A. Magid 2006. 'Eastern desert ware from Tabot (Sudan): more links to the north', *Archéologie du Nil Moyen* 10, 15-34.

Bashir, M. S. 2017 'Archaeological Survey along the Berber-Suakin caravan route: Preliminary report', *Sudan & Nubia* 21, 204-210.

Bonnet, C. and J. Reinold 1993. 'Deux rapports de prospection dans le désert oriental', *Genava, nouvelle série* 41, 31-38.

Borcowski, Z. and D. Welsby 2012. 'The Merowe Dam Archaeological Salvage Project (MDASP): Provisional type series of monuments', in H.-P. Wotzka (ed.), *Proceedings of the Third International Conference on the Archaeology of the Fourth Nile Cataract: University of Cologne, July 2006*. Köln, 15-32.

Castiglioni, A., A. Castiglioni, and J. Vercoutter 1998. *Das Goldland der Pharaonen: die Entdeckung von Berenike Pancrisia*. Mainz.

Cooper, J. C. 2021. 'A Nomadic State? The 'Blemmyean-Beja' polity of the ancient Eastern Desert', *Journal of African History* 61, 1-25.

Cooper, J. C. and D. Vanhulle 2019. 'Boats and routes: New rock art in the Atbai desert', *Sudan & Nubia* 23, 3-12.

Dahl, G. and A. Hjort af Ornäs 1991. *Responsible Man: The Atmaan Beja of Northeastern Sudan*. Uppsala.

Davies, W. V. and D. A. Welsby (eds) 2020. *Travelling the Korosko Road: Archaeological Exploration in Sudan's Eastern Desert*. Oxford.

Dijkstra, J. 2008. *Philae and the End of Ancient Egyptian Religion: A Regional Study of Religious Transformation (298-642 CE)*. Leuven.

Emberling, G. and B. Williams 2010. 'The Kingdom of Kush in the 4th Cataract: Archaeological salvage of the Oriental Institute Nubian Expedition 2007 season (part I). Preliminary report on the sites of Hosh el-Guruf and El-Widay', *Gdańsk Archaeological Museum and Heritage Protection Fund African Reports* 7, 7–38.

Garcea, E. 2020. *The Prehistory of Sudan*, New York.

Gascoigne, A. and G. Pyke 2011. 'Nebi Samwil-type jars in medieval Egypt: Characterisation of an imported ceramic vessel', in D. Aston, B. Bader, S. Buckingham, C. Gallorini and P. Nicholson (eds), *Under the Potter's Tree: Studies Presented to Janine Bourriau on the Occasion of her 70th Birthday*. Leuven, 417-431.

Gatto, M. 2012. 'The Holocene prehistory of the Nubian Eastern Desert', in H. Barnard and K. Duistermaat (eds), *The History of the Peoples of the Eastern Desert*. Los Angeles, 42-57.

Gleichen, E. 1905. *The Anglo-Egyptian Sudan: A Compendium Prepared by Officers of the Sudan Government. Volume I: Geographical, Descriptive, Historical*. London.

Hagen, J. 2009. 'Districts, towns and other locations of medieval Nubia and Egypt, mentioned in the Coptic and Old Nubian texts from Qasr Ibrim', *Sudan & Nubia* 13, 114-119.

Hinkel, F. W. 1992. *The Archaeological Map of the Sudan: Volume 6: The Area of the Red Sea Coast and Northern Ethiopian*

Frontier. Berlin.

Kheir, E. H. M. 1989. 'A contribution to a textual problem: Ibn Sulaym al-Aswāni's Kitāb Akhbār al-Nūba wa-l-Maqurra wa-l-Beja wa-l-Nīl', *Arabica 36 (1), 36–80.*

Klemm, R. and D. Klemm 2013. *Gold and Gold mining in Ancient Egypt and Nubia: Geoarchaeology of the Ancient Gold Mining Sites in the Egyptian and Sudanese Eastern Deserts*. Berlin-Heidelberg.

Krzywinski, K. 2001. 'Cultural landscapes: An introduction', in K. Krzywinski and R. Pierce (eds), *Deserting the Desert: A Threatened Cultural Landscape between the Nile and the Sea*. Bergen, 9-60.

Krzywinski, K. 2012. 'The Eastern Desert tombs and cultural continuity', in H. Barnard and K. Duistermaat (eds), *The History of the Peoples of the Eastern Desert*. Los Angeles, 140-155.

Krzywinski, K., G. Andersen and R. Pierce 2020. 'At the crossroads of kingdoms and empires: RPAS mapping of Nubt in the land of the Beja', in I. Mæhle, P. Ravnå and E. Seland (eds), *Methods and Models in Ancient History: Essays in Honor of Jørgen Christian Meyer*. Athens, 15-34.

Lassányi, G. 2012. 'On the archaeology of the native population of the Eastern Desert in the first-seventh centuries CE', in H. Barnard and K. Duistermaat (eds), *The History of the Peoples of the Eastern Desert*. Los Angeles, 248-269.

Luft, U. 2010. 'Introduction', in U. Luft (ed.), *Bi'r Minayh: Report on the survey 1998 - 2004*. Budapest, 13-20.

Magid, A. A., R. Pierce, and K. Krzywinski 1995. 'Test excavations in the southern Red Sea hills (Sudan): cultural linkages to the north', *Archéologie du Nil Moyen* 7, 163-190.

Magid, A. A. 2004. 'The site of Tabot: An old waystation in the southern Red Sea Hills, Sudan', in S. Wenig (ed.), *Neueste Feldforschungen im Sudan und in Eritrea: Akten des Symposiums vom 13. bis 14. Oktober 1999 in Berlin*. Wiesbaden, 155-172.

Magid, A. A. 2008. 'History of the nomadic architecture of the Hadendowa in Northeast Sudan', in H. Barnard and W. Wendrich (eds), *The Archaeology of Mobility: Old World and New World Nomadism*. Los Angeles, 441-464.

Manzo, A. 2004. 'Late Antique evidence in Eastern Sudan', *Sudan & Nubia* 8, 75-83.

Manzo, A. 2012. 'From the sea to the deserts and back: New research in Eastern Sudan', *British Museum Studies in Ancient Egypt and Sudan* 18, 75-106.

Manzo, A. 2014. 'Beyond the Fourth Cataract: Perspectives for research in eastern Sudan', in J. Anderson and D. Welsby (eds), *The Fourth Cataract and Beyond: Proceedings of the 12th International Conference for Nubian Studies*. Leuven, 1149-1157.

Manzo, A. 2017. *Eastern Sudan in its Setting: The Archaeology of a Region far from the Nile Valley*. Oxford.

Manzo, A. 2020. 'The Nubian and pharaonic ceramic materials', in W. V. Davies and D. A. Welsby (eds), *Travelling the Korosko Road: Archaeological Exploration in Sudan's Eastern Desert*. Oxford, 68-83.

Manzo, A., A. Coppa, A. Beldados Aleho and V. Zoppi 2011. 'Italian Archaeological Expedition to the Sudan of the University of Naples "L'Orientale": 2010 Field Season', http://opar.unior.it/460/.

Massa, S. 2020. 'Imported wares in the Sudanese Eastern Desert: finds from the CeRDO survey 2004', in W. V. Davies and D. A. Welsby (eds), *Travelling the Korosko Road: Archaeological Exploration in Sudan's Eastern Desert*. Oxford, 84-98.

Morin, D. 1997. 'Mimetic traditions in Beja poetry from Sudan', *Research in African Literatures, The Oral - Written Interface* 28, 15-34.

Morton, J. F. 1989. *Descent, reciprocity and inequality among the Northern Beja.* Thesis (unpublished), University of Hull.

Newbold, D. MSS, *History and Archaeology of the Beja Tribes of Eastern Sudan*, Oxford, Griffith Institute (unpublished files).

Oman, G., V. Grassi, and A. Trombetta 1998. *The Book of Khor Nubt: Epigraphic Evidence of an Islamic-Arabic Settlement in Nubia (Sudan) in the III–IV Centuries AH/X–XI AD.* Napoli.

Paner, H. 2021. 'Nubian rock art', in G. Emberling and B. Williams (eds), *The Oxford Handbook of Ancient Nubia*. Oxford, 1091-1126.

Rega, F. 2020. 'Preliminary study of the macro-lithic tools collected by CeRDO in the Sudanese Eastern Desert', in W.

V. Davies and D. A Welsby (eds), *Travelling the Korosko Road: Archaeological Exploration in Sudan's Eastern Desert*. London, 99-124.

Reinold, J. and S. Eldin Mohamed Ahmed 2003-2008. 'Rescue survey and excavations in the region of Ariab (Eastern Desert) 1996-1998: A preliminary note', *Kush* 19, 67-85.

Sandars, G. and T. Owen 1951. 'Note on ancient villages in Khor Nubt and Khor Omek', *Sudan Notes and Records* 32 (2), 326-331.

Säve-Söderbergh, T. 1989. *Middle Nubian Sites: The Scandinavian Joint Expedition to Sudanese Nubia 4*, 2 vols.

Sidebotham, S., H. Barnard, and G. Pyke 2002. 'Five enigmatic Late Roman settlements in the Eastern Desert', *Journal of Egyptian Archaeology* 88, 187-225.

Sidebotham, S., H. Wright, J. Gates-Foster, R. Tomber, J.-L. Rivard 2019. 'Gazetteer of sites', in S. Sidebotham, J. Gates-Foster, and J.-L. Rivard (eds), *The Archaeological Survey of the Desert Roads between Berenike and the Nile Valley: Expeditions by the University of Michigan and the University of Delaware to the Eastern Desert of Egypt, 1987-2015*. Boston.

Vantini, G. 1975. *Oriental Sources Concerning Nubia*. Heidelberg-Warsaw.

Vasáros, Z. and G. Lassányi 2010. 'Architectural remains', in U. Luft (ed.), *Bi'r Minayh: Report on the Survey 1998 - 2004*. Budapest, 197-269.