Explorers Club Flag Report

Flag #81

Elkab Desert Survey Project
Yale University/Royal Museums of Art and History, Brussels
John Coleman Darnell, Prof. of Egyptology, Yale University

April 14 – May 6, 2018

Flag #81 at a newly discovered rock inscription site in the Wadi Hilal
I. Introduction

The Elkab Desert Survey Project conducted its fourth field season in 2017-2018, and from April 14 through May 6, 2018 carried Flag #81 in the field. During this period of work, we made several important new discoveries within our survey area, and continued epigraphic and archaeological work at various sites at which we had begun work during previous seasons. At el-Khawy, where we discovered Egypt's earliest monumental hieroglyphic inscription in May 2017, the Dynasty 0 tableau has received international press attention, and we have published two articles about the inscription and its implications for understanding the origins of writing in Egypt, including an article in The Explorers Journal. This season, we expanded our survey between el-Khawy and Sharawna, locating two new sites, and began recording the epigraphic and ceramic remains in that area. East of Elkab, we continued working at Umm Buyut, a Late Roman settlement that we discovered in January 2017, and identified a significant satellite site (also of Late Roman date), several concentrations of rock inscriptions, and a Predynastic tumulus at Bir Umm Tineidba. Our work this season has contributed much to our understanding of the desert hinterlands of Elkab, expanding our knowledge of the history of the area between Sharawna and Edfu (parts of the Second and Third Nomes of ancient Egypt) from prehistory through the Roman era. The following report, with but few adjustments, is derived from the final report for the 2017-2018 field season submitted to the Ministry of Antiquities in Egypt.

Members of the Expedition

Permanent Members:

- John Coleman Darnell (FN ’16), Yale University, Director
- Dirk Huyge, Royal Museums of Art and History, Brussels, Co-Director
- Colleen Manassa Darnell (FN ’16), Egyptologist
- Alberto Urcia, Digital Archaeology Expert
- Abdou Abdullah Hassan, Driver and Reis
- Ahmed Abdou Abdullah, Driver and Excavator
- Mohammed Abdou Abdullah, Chief Excavator
- Mahmoud Abdou Abdullah, Driver and Excavator
- Ahmed Ali, Excavator and Chief Cook

Additional Members during the 2016-2017 Field Season:

- Marco Cavallazzi, Digital Archaeologist
- Massimiliano Montanari, Digital Archaeologist
- Reed Morgan, Archaeologist and Flint Specialist
- Susanne Wilhelm, Archaeologist and Osteologist

1 Compare the January/February issue of Archaeology Magazine, published by the American Institute of Archaeology, in which the el-Khawy early monumental hieroglyphic inscription is listed as one of their top ten archaeological discoveries for 2017; see the on-line article at https://www.archaeology.org/issues/281-1801/features/6172-egypt-elkab-early-hieroglyphs.

Inspectors from the Ministry of Antiquities:

Ashraf Mohammed Ahmed
Mohammed Sabr

II. Sites Between Elkab and Sharawna

Sebaiya

At Sebaiya, our inspector Ashraf Mohammed Ahmed discovered a concentration of rock inscriptions, consisting primarily of depictions of watercraft (Figure 1). Although heavily eroded, these boats represent an important collection of Predynastic iconography. The weathering of the inscriptions contributes to our understanding of the site as well: the boulders on which the boats are carved are located in a portion of the desert that juts down to the banks of the Nile (no cultivation is possible in this area), and the ancient artists may have located their boat inscriptions precisely so that during the high Nile, the ritual vessels would appear to float on the rising waters of the river. In especially high inundations, the rock inscriptions would have been fully flooded, resulting in the heavily weathered appearance of the pecked images. Similar uses of rocky surfaces in contact with the inundation waters are known from the pharaonic rock shrines at Gebel Silsila,3 and the Sebaiya rock inscription site could be a Predynastic precursor to this interaction between inscribed landscape and the flooding river.

Figure 1: View of the main boulder with inscriptions at Sebaiya

3 For the cultic significance of the Gebel Silsila shrines (with particular reference to desert rock inscription sites), see J.C. Darnell, Theban Desert Road Survey II: The Rock Shrine of Pahu, Gebel Akhenaton, and Other Rock Inscriptions of the Western Hinterland of Qumila, Yale Egyptological Publications 1 (New Haven, 2013), pp. 74-75 (and n. 514).
This season, we completed the photographic recording of the entire site and its individual panels. Using our digital recording technique\(^4\) and tracing the outlines of the eroded pecked areas on a tablet computer, we were able to produce final, publication-ready drawings of several panels (Figures 2, 3).

**Figure 2:** Drawing of Sebayia, Panel 4 featuring a flotilla of Predynastic vessels

**Figure 3:** Photography of rock art at Sebayia (team members Alberto Urcia and Massimiliano Montanari)

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The large number of vessels at Sebaiya is remarkable, and the size of the resulting flotilla is almost certainly unique for a single rock art site, and particularly at one of such relatively constricted size. A vessel with a hooked stern and bifurcated prow predominates at the site; this is a type of vessel that appears in Old Kingdom texts as the maaty-bark, associated with the god Sokar and royal festivals during the Early Dynastic period. Several parallels for the shape of the Sebaiya maaty-barks are extant, perhaps the best being at the Borg el-Hammam site (the final recording of which was also completed this season). Several panels at Sebaiya show that the earlier ritual nautical images were overlaid by bovid depictions, a practice that also appears at el-Khawy and within the Wadi Hilal. This surcharging may represent another example of the transition in ancient Egyptian rock art from images of ritual to depictions of particular royal-associated rituals to more specific royal images, concluding with the emphasis on the royal serekh that we see at the Sheikh Uthman and Borg el-Hammam sites.

Maliya

Along a low desert terrace to the south of Sebaiya (Figure 4), we identified a previously unrecorded site with a wealth of ceramic material from two distinct periods: the Predynastic and Late Roman. Some of the most significant diagnostic ceramics from this site included a range of Marl A1 sherds from bowls and jars (Figure 5). A large rough ware vessel with simple rim and flat base (base is only partially preserved) and two extant repair holes (assembled from over 60 sherds to form a complete profile—Figure 6) was found on the slope between the low and high desert, and was probably once part of a burial; similar ceramic vessels from a late Predynastic cemetery at Elkab suggest a Naqada III date for the jar at Maliya.


6 Compare H.A. Winkler, Rock Drawings of Southern Upper Egypt 1, ASE 26 (London, 1938), pls. 34 (figs. 19-21) and 35 (fig. 26); P. Cervicek, Felsbilder des Nord-Ethai, Oberägyptiens und Unternubiens (Wiesbaden, 1974), nos. 120 and 267.

7 See D. Huyge, De Rotstekeningen van Elkab (Boven-Egypte): Registratie, Seriatie en Interpretatie I: Tekst (unpublished PhD dissertation, Katholieke Universiteit Leuven, 1995), pp. 174-175, 197, 201, 269, and 276 (no. 77.35 = C Type IV); ibid, 2, pl. 149B.

8 Support for depictions of the early vessels as evocations of ritual events comes in the form of the Early Dynastic inscription and accompanying depiction of a large boat containing a smaller maaty-vessel in the Wadi of the Horus Qa-a—it essentially labels, updates, and explains the dozens of the Predynastic boats at the site (see Darnell, in Friedman and Fiske, eds., Egypt at its Origins 3, pp. 1151-1194).

Figure 4: View of the low desert at Maliya, looking northwest

Figure 5: Marl A1 jar rim from Maliya (drawing by Ashraf Mohammed Ahmed)

Figure 6: Nile C jar from Maliya (drawing by Reed Morgan)
The next documented phase of burials at the site belongs to the Late Roman era. Several large round tumuli were constructed ca. 450 – 650 CE, as indicated by the abundance of Late Roman Amphora 7 sherds on the surface, as well as diagnostic fine wares, such as a kaolin clay bowl sherd (Figure 7). One sherd of Eastern Desert Ware (EDW) was also collected from the surface near another set of tumuli; the fabric is a fine silt-like clay with rare medium quartz, flakes with silvery appearance, and rare red inclusions. The single EDW sherd from Maliya complements the complete bowl profile and additional EDW sherds from the Late Roman settlement of Umm Buyut, as we reported last season.

![Figure 7: Roman bowl (kaolin clay) from Maliya](drawing by Ashraf Mohammed Ahmed)

El-Khawy

In May 2017, we identified a previously unknown concentration of rock inscriptions at the site of el-Khawy, about 7 km north of Elkab (Figure 8). The el-Khawy sites reveals evidence of almost continuous activity from the Naqada I Period (4000-3500 BCE) through the late Old Kingdom (ca. 2300 BCE) and includes the oldest monumental hieroglyphic inscription (Figure 9). Whereas the rightmost/southern portion of the site reveals a carving of a “herd” of elephants of late Naqada I/early Naqada II date, at least partially overlapping an earlier Naqada I group of zoomorphic images, the far left (northern) portion of the site contains a later Predynastic collection of carved images.

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As H. Barnard, *Eastern Desert Ware: Traces of the Inhabitants of the Eastern Deserts in Egypt and Sudan during the 4th-6th Centuries CE* (Oxford, 2008), p. 45 notes, it is visually similar to Nile A.
Prominent amongst the elements in Panel 8 are two large bovids, depictions of Naqada III/Dynasty 0 date, overlapping a large vessel with high upturned prow and stern, of Naqada II date. The relative absence of bovid depictions prior to the Naqada III period, and their frequent appearance in rock art during the Naqada III period, are features also apparent.
in the rock art at Vulture Rock in the Wadi Hilal (EK 48).\textsuperscript{11} We see this superimposition of bovids over earlier boat depictions also in the rock art at the Sebaiya site (see above).\textsuperscript{12}

This season, we completed our recording of Panel 8 using our newly-developed epigraphic technique involving 3D modeling and tracing of an orthoimage on a tablet computer (\textbf{Figure 10}).\textsuperscript{13} Using specific conventions for pecked and/or smoothed areas and incised lines, we have been able to create epigraphic drawings that reflect the diversity of ancient rock art techniques as well as an easily interpretable representation of the significant iconographic elements within the tableaux. Particularly significant is the use of layers within the drawing program, which enables us to see each phase of a panel, detangling often elaborate palimpsests and allowing the progression of images to be seen as discrete elements. Since ancient Egyptian rock artists often interacted with, commented upon, and augmented earlier images, recording the superimpositions of the inscriptions is key to understanding these complex processes.\textsuperscript{14}

\textbf{Figure 10: Predynastic tableau (Panel 8) at El-Khawy}

\textbf{Sheikh Uthman}

Approximately four kilometers north of Elkab is the rock inscription site of Sheikh Uthman, where we have completed nearly all of our epigraphic recording. This season, we

\begin{itemize}
\item Huyge, \textit{De Rotstekeningen van Elkab (Boven-Egypte)}, pp. 430-431 and 434.
\item Compare as well the addition of two bovids of probable Protodynastic or Early Dynastic date to the left of an earlier vessel with human occupant at the MLM-I site in the Wadi Mineh—see D. Rohl, ed., \textit{The Followers of Horus: Eastern Desert Survey Report 1} (Basingstoke, 2000), p. 95.
\item A. Urcia, J.C. Darnell, C.M. Darnell, and S.E. Zaia, “From Plastic Sheets to Tablet PCs,” \url{https://doi.org/10.1007/s10437-018-9297-z}.
\end{itemize}
finalized the epigraphic copy of the large Panel 7, notable for its complex overlapping of images from the early Predynastic through the New Kingdom (Figure 11).

Figure 11: Scaffolding in progress at Sheikh Uthman  
(team members Mahmoud Abdu, Ahmed Ali, and Mohammed Abdu)

At the lower right corner is the serekh of Qa-a, last king of the First Dynasty, in association with a ritual boat. In the central portion of the tableau is a flotilla of large Naqada II period watercraft exhibiting a range of carving techniques, including smoothing, pecking, and pecking with small incised details, such as hull decoration and oars. Several animal tableaux, particularly wild donkeys and canids hunting donkeys, show the early development of zoomorphic imagery. The small, curly-tailed canids represent human control, substituting for anthropomorphs in many rock art scenes. Among the dozens of separate images within Panel 7, no human figures are represented: hunting scenes, boats, and later the First Dynasty serekh all serve to express the dominance of the (properly ordered) human world over the chaotic forces of the natural world (Figure 12).
Important stages in the transition from representation of ritual to depiction of the chief ritualist appears at the el-Khawy site, with the addition of the early Dynasty 0 monumental hieroglyphic inscription, which furthermore represents a transitional stage between iconographic syntax and early phonetic hieroglyphic writing. The early Dynasty 0 inscription includes a graphic and partially phonetic representation of the solar cycle equated with a totemic depiction of royal power in the form of the bull’s head on a pole. Much of Egyptian rock art and early rock inscriptions appear to present a development from images of ritual hunting through images of a larger ritual cycle that includes both ritual hunting and a nautical procession, becoming syncopated versions of various episodes of the larger ritual cycle, ultimately including representations of a chief ritualist actor. The early hieroglyphic inscription at el-Khawy straddles the worlds of depiction and inscription, leading finally to the seal-like serekh of the individual ritualist/ruler at Sheikh Uthman and the Borg el-Hammam, who physically puts his stamp on the territory.

III. Wadi Hilal: Vulture Rock

As part of our continuing work on the material in the Wadi Hilal, we examined the top of the so-called Vulture Rock (EK 48), the large piece of detached gebel that is one of the two major concentrations of rock art and rock inscriptions in the area. Our recording of a set of rock-cut stairs near the top of Vulture Rock suggest that the rock itself was part of a complex of natural and perhaps man-made structures that formed a complex in the Wadi Hilal (Figure 13, 14).
Figure 13: Total Station work atop Vulture Rock (team members Colleen Darnell and Ahmed Ali)

Figure 14: Three-dimensional model of the ancient stairway atop Vulture Rock
A Predynastic depiction on west side of Vulture Rock depicts a per-wer structure (the classic shrine of Upper Egypt), perhaps alluding to the former presence of such a shrine in the Wadi Hilal during the second half of the fourth millennium BCE. More explicitly, Old Kingdom inscriptions in the Wadi Hilal explicitly mention a hw.t-ntr hr.t, “desert (high) temple” as a goal of priestly activities in the wadi, and some of those inscriptions refer to "this temple," as though the establishment is at or near one of the two large inscription sites near the New Kingdom temple. Pottery and other remains—including inscribed objects such as offering tables—of Old Kingdom date occur in some quantity approximately 100 meters west of the temple of Thutmose IV and Amenhotep III.

At the end of last season we noticed traces of steps at the top of Vulture Rock, and a clearance at the site early this season revealed twelve steps—a line of three converging with a longer line of nine steps—assisting in access to the narrow high point of the rock. Atop the few horizontal surfaces at the top of the rock are a few surviving graffiti, also unnoticed like the stairs. At least two of these graffiti are outlines of feet, the so-called vestigia of Graeco-Roman votive inscriptions, a form of graffiti popular on the roofs of temples. In essence, the activities and inscriptions of human worshipers, and the stairs at the top of the rock turning a natural surface into a temple roof, have transformed Vulture Rock into a natural temple.

Access to a temple roof for astronomical observations, necessary for festival calculations, would be an important element of a temple complex. Somers Clarke noted the presence of "a tank … sunk into the rock and steps leading down" at a point just opposite the northeastern tip of Vulture Rock, a feature that would be consistent with the areas of ritual purification one would expect for priests in a ritual setting (compare for such a desert site the ritual bath tanks at Serabit el-Khadim in Sinai). We have relocated these steps this season, along with other evidence for human alteration of the rock in the floor of the wadi at this point, opposite Vulture Rock, and we hope to clear and plan the area next season.

This evidence taken together—Vulture Rock with steps for astronomical observations, and a basin in the wadi nearby with steps for priestly bathing access—provides two important elements of a temple, being the areas for astronomical observations and ritual purification, and we believe this information, together with rock inscriptions at the two rocky eminences in the wadi referencing "this temple," indicates that the temple in the Wadi Hilal was an ensemble of natural features—foremost among them Vulture Rock itself—augmented and transformed by human agency into a great venue for ritual activities, the prime purpose and governing architectural concept behind Egyptian temples.


16. Located on the plan in S. Hendrickx and D. Huyge, Topographie, Elkab 4, fascicle 2: Inventaire des sites archéologiques (Brussels, 1989), p. 19 and pl. 3, sites 71 and 72; see J.E. Quibell, Elkab, Egyptian Research Account 1897 (London, 1898), p. 16 and pl. 4; A. H. Sayce, "A New Egyptian King: the Predecessor of Kheops," PSBA 21 (1899): 108, Elkab VI p. 15 n. 43; H. Vandekerckhove and R. Müller-Wollermann, Die Felsinschriften des Wadi Hilāl, Elkab 6 (Turnhout, 2001), p. 17 (the inscription to which Sayce refers is N 129); according to Elkab VI, p. 17 n. 59, the find spot of the offering table should correspond to Elkab IV location 71, but that location refers to the higher area of pottery on the eastern spur of the hill, and the designation of an origin in the “stream bed” makes location 72 the more probable findspot.

17. Compare J.C. Darnell, Theban Desert Road Survey II, p. 15 n. 96.

Inscriptions of Old Kingdom date in the Wadi Hillal (roughly mid-third millennium BCE) may link songstresses and chiefs of cattle herds, a probable indication of the presence of ḫnrt-songstresses of the pr-šnd.t (acacia house) and butchers. Textually the Old Kingdom inscriptions appear, with this connection, to indicate the practice of an ancient hunting ritual for meat offerings. Inscriptions suggest a time for at least one major festival in the wadi being rnpw rnp.t, “rejuvenation of the year.” Such a New Year celebration, marking the return of the goddess of the Eye of the Sun, would indicate an early association of the local goddesses Nekhbet and Shemytat with the Hathor-Sakhmet theology. The later temples in the wadi actually reveal this festival interaction as an architectural ensemble—the small temple of Thoth, who brings the goddess of the eye of the sun back to Egypt from the desert of the south, sits facing the Eighteenth Dynasty temple of the local form of the goddess as Nekhbet, and in front of the Graeco-Roman hemispeos of another local form of the goddess (Shemytat/Smithis), a temple that literally emerges from the desert.

IV: Wadi Hilal East

As part of our continuing investigation of the desert tracks connecting the greater Wadi Hilal and Wadi Mahamid complex to areas farther in the Eastern Desert, we investigated a series of tracks that ascend the escarpment just southeast of the point where the Wadi Hilal and Wadi Mahamid come together (Figure 15, 16). The tracks are well defined, and reveal a considerable amount of activity through the abundant ceramic remains, especially at the point where the tracks reach the high plateau.

Close to the mid-point of the ascent the tracks cross a layer of smooth, water worn sandstone. All along this layer, to either side of the main route, are rock inscriptions (Figure 17). Though some earlier animal images are present, including an early Predynastic pecked animal and several late Predynastic/Protodynastic images of hunting dogs and their quarry, the most common depictions at the site are carvings of sandals and hands (Figure 18). The sandal “prints,” or vestigia, are well attested in Egyptian rock art, being particularly

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22 Vandekerckhove and Müller-Wollermann, *Felsinschriften des Wadi Hilâl*, pp. 36-37, 43-44, and 47.


common on temple roofs. Although some have the appearance of footprints, or of feet seen from above, at least one of the sandal depictions at the site has the appearance of a pair of unlaced sandals. Such depictions appear to mark a desire of the rock artist to remain spiritually in an area, often one with a particular religious association. The depictions of human hands are more unusual; although painted hands are attested at a few very early sites in the Western Desert, carved hands are not a usual feature of ancient Egyptian rock art.

Figure 15: Panoramic view (looking west) of the eastern portion of the Wadi Hilal

Figure 16: Flag #81 above the newly discovered rock inscription site in the Wadi Hilal


Figure 17: Pharaonic figure at Wadi Hilal East

Figure 18: Rock inscription panel, featuring multiple sandal outlines, at Wadi Hilal East
As we discovered this site at the end of the current season, we have not had time to complete the facsimiles copies, although all photography and 3-D modeling images are in hand. We look forward to completing work on this site, and continuing our surveys along this newly identified, ancient track, during our next field season.

V: Wadi Umm Tineidba

As part of our survey of the Wadi Hilal track to the east, the Wadi Abbad, and the tributaries thereof—including the Wadi Schaghab—we began investigating the northern portion of the Wadi Umm Tineidba (WUT). Marked on earlier maps as the location of a *bir*, no previous archaeological survey has been conducted in the area and no ancient remains from the wadi appear in any previous publications. Our survey was rewarded with the discovery of an important series of Predynastic rock art sites as well as a large Late Roman period settlement site (Figure 19, 20).

Figure 19: Map of sites in the Wadi Umm Tineidba
Figure 20: View of the Wadi Umm Tineidba, near the site of the ancient well

Rock art sites of Predynastic and Protodynastic Period date occur at the far northern (WUT 3) and southern (WUT 4) portions of the main concentration of ancient remains, with two smaller central sites (WUT 1 and 2) between the two, but somewhat closer to the southern site (Figure 21, 22). Early tumuli appear in the southern and middle portions of the broader area, and the Late Roman remains are concentrated in the southern portion of the site.

On the west edge of the wadi, to the southwest of the main southern concentration of activity, are additional early tumuli, and associated linear structures, composed of lines of single stones, with some set as uprights, arranged in large, open U-shapes, the opening facing in toward the wadi. This association of early Predynastic material and such linear structures is apparent in the Western Desert, at the Arqub el-Baghla, the Rayayna Desert, over Kharga
Oasis, and over Kurkur Oasis. We hope to investigate this ensemble of features in greater detail next season.

Figure 21: Photographing Rock Art in the Wadi Umm Tineidba (Team Members Alberto Urcia and Reed Morgan)

Figure 22: Recording Rock Art at WUT 3 (Expedition Director John Coleman Darnell)

Rock Inscriptions in Wadi Umm Tineidba

The rock inscriptions in the Wadi Umm Tineidba are almost exclusively of Naqada I-III date, with the majority probably clustering around the latter portion of this range. This season we were able to complete photographic documentation of the three largest and most significant sites, WUT 2, WUT 3, and WUT 4, and began epigraphic copies of the tableaux. At WUT 2, we copied a panel with several large animals, including an addax, bull, barbary sheep, giraffe, and donkey (Figure 23). The elaborately rendered horns of the addax in particular make this petroglyph a pre-eminent example of Predynastic art. Palimpsests are visible at the site, and the larger animals appear stylistically to be of Protodynastic date. Human control is visible through the presence of ropes attached to the base of the horns of the bovid and the addax.28

The inscriptions at WUT 3 and 4 are often faint, lightly pecked into very hard stone. Without the digital epigraphic technique we have developed (see above), these rock inscriptions would be extremely difficult to copy. Thanks to the efficiency of our technique, we have been able to complete the facsimile documentation of several important tableaux at both WUT 3 and 4 (Figure 24, Figure 25). These reveal both Pre- and Proto-Dynastic images, including several depictions of nautical vessels, an elephant, and a number of human figures in at least two distinct styles. Stylistically the inscriptions appear to blend Eastern Desert styles with those more familiar from the Nile Valley—like the young woman buried in Tumulus 1 (see below), the artists of Bir Umm Tineidba appear to bridge the worlds of desert and Nile, and combine the traditions of the region of Elkab and Hierakonpolis with those of the Eastern Desert.

28 For the rope attached to the base of the horns compare Darnell, Archéo-Nil 19 (2009): 95-96; Rohl, ed., Followers of Horus, pp. 30 (fig. 1), 105-106 (fig. 17), 148 (fig. 6), and 114-115 (fig. 1). The lassoing of the ng3-bull is an opening sequence in the later, pharaonic meat offering ritual (W. Decker, “Lasso,” in W. Helck and W. Westendorf, eds., Lexikon der Ägyptologie 3 [Wiesbaden, 1980], col. 938; Otto, JNES 9 [1950]: 172-174). The addax, also roped in the Bir Umm Tineidba rock art panel, is the meat offering animal par excellence in the imagery of Naqada II D-Ware vessels (G. Graff, Les peintures sur vases de Nagada I - Nagada II. Nouvelle approche sémiologique de l'iconographie prédynastique, Egyptian Prehistory Monographs 6 [Leuven. 2009], pp. 91-99).
Figure 23: Drawing of a large Predynastic tableau (WUT 2)

Figure 24: Drawing of a man lassoing a bull (WUT 4)
Flint Ateliers at Bir Umm Tineidba (Reed Morgan)

During the 2018 season, large scatters of flint were identified at multiple locations throughout the Wadi Umm Tineidba, both along the wadi sides and on the gebel surface. Surface survey demonstrated the presence of a wide range of forms of completed tools and extensive debitage; exemplars of notable forms were selectively collected for photography, drawing, and identification, with coordinates recorded for collection sites (Figure 26).

In order better to understand the extent and nature of the scatters, three especially dense sites were selected for targeted comprehensive surface sampling: one in the open area directly in front of the most northerly rock art cluster on the east side of the wadi, another lower down towards the wadi bottom on the west side, near a small cluster of rock art and a small tumulus; and finally in front of the southern concentration of rock art. At all sites, 3.70 x 3.70 meter squares were marked out with cairns at each corner. Within the area of the squares all pieces of stone with signs of anthropogenic alteration were collected. Pottery, bone, charcoal, and shell material, present in significantly lower quantities, was also collected. Back at the magazine, the finds were washed and sorted.

The pottery from Sampling Site 1 included: four body sherds from a Marl A1 jar, a single body sherd from a fine silt vessel resembling Nile A, with burnished (but not slipped)
exterior and fully blackened interior, possibly Badarian; six Nile C Old Kingdom ledge-rimmed bowl sherds, including one rim piece.\textsuperscript{29} The pottery from Sampling Site 2 included: two small Marl A1 body sherds, and one thick (1 cm) handmade body sherd with uneven, fairly deep exterior burnishing and fine silt fabric (possibly also from a Badarian vessel). We are still in the process of analyzing the material from Sampling Site 3. Sampling Site 1 also contained two bone fragments of uncertain species and date, fourteen small charcoal fragments, and 104 shells of either \textit{bulimus} or \textit{subulinidae}, found together in a single small deposit. Sampling Site 2 contained no bone, charcoal, or shell material.

Chart 1 presents the amount of flint from each of the sample sites. The large debitage from Sample Site 1 (including both cortex and internal fragments) weighed 5.25 kg, and the small debitage weighed 0.5 kg. The large debitage from Sampling Site 2 (likewise, including both cortex and internal fragments) weighed 2.25 kg, while the small debitage weighed 0.1 kg. The chart presents the percentage of the total flint collected represented by each flint type, excluding the debitage. In both sampling sites, the largest percentage of determinate worked flint was made up by the straight blades—both narrow single ridged blades, and wider double ridged blades—followed by pointed flints, and then scrapers.

The cultural affiliation and industry represented by this corpus will be determined upon further examination.\textsuperscript{30} Currently, the industries of Eastern Desert flints remain relatively understudied, and the lithic corpus of Wadi Umm Tineidba represents an exciting opportunity to further develop the typology of the region.

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Chart 1: Number and percentage (discounting debitage) of each flint type

\textsuperscript{29} Compare Z. Hawass and A. Senussi, \textit{Old Kingdom Pottery from Giza} (Cairo, 2008), p. 231.

\textsuperscript{30} While material similar to some of the Wadi Umm Tineidba lithics appears at Bir Minayh, the Wadi Umm Tineidba corpus appears to represent a slightly different set of forms, and apparently a somewhat wider range of periods, than that appearing in U. Luft, ed., \textit{Bi’r Minayh, Report on the Survey 1998-2004} (Budapest, 2010), pp. 33-58.
Within the Wadi Umm Tinedba, three large tumuli are located on a terrace above the bottom of the wadi. While all had clearly been disturbed, the northernmost tumulus had less visible debris and modern activity, so we chose that tumulus (WUT 5 T1) for planning and clearance (Figure 27, 28). No pottery was observed on the surface around the tumulus, but a few pieces of worked flint were present. After initial clearance of debris, we removed successive levels of wadi deposit and dirt fill, exposing a circular pit that formed part of the original burial. Within the debris, we recovered several sherds from a single Marl A1 bowl (Figure 29); joining sherds were found in varying depths, which—along with the scattering of the bones (see below)—indicates the extent to which the burial was disturbed, probably already in antiquity (as suggested by the amount of wear on the edges of the sherds).
fragment of an elaborately worked flint was also present in the fill; the closest parallels to the WUT 5 T1 flint fragment are zoomorphic flints, such as those attested from Hierakonpolis. In association with the right scapula of the human remains (see below) were a collection of beads, of both carnelian and pierced shells; the latter appear all to derive from the Red Sea, and include *nassarius*, *nerite*, and *columbella* shells, as well as an as yet unidentified member of the *nassariidae*. The complete absence of later ceramic remains combined with the Marl A1 bowl sherds and worked flint suggest that the burial in WUT 5 T1 dates to the Naqada II-III period.

Figure 27: Photographing WUT 5 T1 for a 3D model of the tumulus

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31 For general remarks on Red Sea shells in ancient Egyptian contexts, with selected references to Predynastic through Early Dynastic material (although focusing more on the Old Kingdom), see G. Mumford, “Ras Budran and the Old Kingdom Trade in Red Sea Shells and other Exotica,” *British Museum Studies in Ancient Egypt and Sudan* 18 (2012): 107-145.
Tumulus 1 yielded the remains of a single individual, preserved as a partial, but mostly complete skeleton in a secondary context. The burial had apparently been disturbed by grave robbers, who scattered the bones they encountered, though most of them remained within the matrix that eventually backfilled the robbed pit. No bones were found outside the fill.

The first bones encountered were clustered along the northwestern edge of the pit and consisted of broken long bones of the leg from both sides of the body. They were stacked roughly parallel and above each other, though with no uniform orientation. Most of them exhibited breakage and flattening due to pressure from the surrounding matrix, which consisted of backfilled wadi accumulation containing a lot of pebbles within rather loose dirt that had hardened in places to form dense patches that stuck firmly to the bones.

The skull was found somewhat lower in the fill along the southern edge of the pit in close association with the mandible, which had been crushed together laterally, and fragments of the sacrum and some lumbar vertebrae. Since the mandible is missing about half of its teeth, and none were found in the immediate vicinity, the loss must have occurred at the time the bones were moved from their primary context (assuming they were only moved one time).
Only one cluster of bones was found in what looks to be original anatomical position, although the cluster’s position within the pit was also clearly secondary. The cluster consisted of the upper half of the right scapula in connection with fragments of the ribs located immediately below, all set within a matrix of very fine soil of silty consistency that had hardened considerably. Within this matrix, in the area of supraspinoius fossa, were found two carnelian beads and a number of pierced shells, which further support the assumption of original anatomical context.

The individual originally buried in the tumulus was a young adult female. Sex was established from markers on both the pelvis and the skull, all of which unequivocally support the identification (wide greater sciatic notch, pronounced preauricular sulcus, shallow nuchal crest, small mastoid processes, sharp supraorbital margin, and little glabellar prominence). Aging situates the individual in the range of ca. 25 to 30 (35) years. All postcranial epiphyses were fused, including the iliac crest, which typically closes around the age of 25. The spheno-occipital synchondrosis appears to have been fused, but may have still retained remnants of the fusion scar (25+ years), as may be suggested by the postmortem break in this area that seems to be due to pressure exerted by the enclosing soil matrix (there is some slight overall warping to the skull). Articular surfaces of the pelvis (auricular), sternal ends of the ribs (2 instances preserved), and left clavicle (sternal) all fall within the range of appearance commensurate with the age range of young adult. Since dental abrasion is highly dependent on diet and does not necessarily reflect age at death, it played no major role in age determination, though the general appearance fits in with the assessment derived from the indicators mentioned above (M1 moderately abraded, M2 slightly abraded, M3 no wear visible).

The skeleton displayed two congenital anomalies: the agenesis of the left mandibular third molar and the failure of closure of the posterior arch of the first cervical vertebra (atlas). Additionally, each parietal bone of the skull showed a small oval depression in the area between the respective euryon (widest point of the skull) and the sagittal suture. Both depressions seem to exhibit slight porosity, perhaps as a reaction to (sustained?) low-level infection. An interpretation of this kind of lesion as a reaction to the continued carrying of heavy loads on the head is possible; however, if this individual had often carried heavy loads, one would expect additional morphological changes to the skeleton (more pronounced mastoid process and nuchal crest indicating strong neck musculature) that are not present in this individual.

VI: The Late Roman Period Settlements of Umm Buyut and Bir Umm Tineidba

In January 2017, we discovered a previously unknown Late Roman site at the eastern end of the Wadi Hilal, to which we have given the name Umm Buyut. In the past two work periods, we created an overall plan of the site, which contains just over one hundred dry-stone structures (buildings, storage areas, and ovens). The preservation of the structures is quite remarkable, with some walls over two meters in height. Umm Buyut and the newly discovered satellite site at Wadi Umm Tineidba find parallels for their architecture and ceramic corpora in several other Eastern Desert sites often labeled “enigmatic.” (Figure 30)


As we reported last season, our work at Umm Buyut suggests that these far-flung settlements were constructed by Eastern Desert dwelling groups identified in Graeco-Roman sources as “Blemmyes.”

Figure 30: Map showing the location of Garayat, Wadi Umm Tineidba, and Umm Buyut, with parallel late Roman desert sites indicated Umm Buyut

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This season, we cleared three structures at Umm Buyut: Structures 68, 71, 73. As with Structure 51, cleared during the third season of work, the deposits within the three additional structures revealed only a single period of activity (Figure 31). The lack of chronological differentiation in the stratigraphy is in keeping with the ceramic remains from the site, which all date to between 450 and 650 CE. In Structure 68 a thick layer of windblown debris (Level 1) covered a loosely packed surface (Level 2) and a harder-packed surface with several hearths (Figure 32). This season we were also able to complete a detailed plan of Structure 68, showing the placement of each stone, as well as the use of natural rock shelves as foundations of the eastern and western walls of the building (Figure 33). We have completed the mapping of the site, and during future seasons we hope to clear additional structures, and turn our attention to the series of robbed burials to the northwest of the main concentration of structures.

Figure 31: Recording at Umm Buyut (Team Members Colleen Darnell, Ahmed Ali, Alberto Urcia, and Ahmed Abdu)
Figure 32: Section through Structure 68 at Umm Buyut

Figure 33: Plan of Structure 68 at Umm Buyut (drawing by Susanne Wilhelm)
Wadi Umm Tineidba

The Late Roman “enigmatic” settlement at Wadi Umm Tineidba, which we identified when we discovered the “lost oasis” of the Wadi Umm Tineidba site in January 2018, is smaller than that at Umm Buyut. Most of the structures are located near the southern rock inscription location at the site (WUT 4), on both sides of the wadi, with the best preserved and largest of the structures occupying a high point on the east side of the wadi. The structures are primarily single rooms of dry stone construction, of both rectilinear and rounded ground plans, with some ovens present (Figure 34).

Figure 34: Late Roman structures at Wadi Umm Tineidba

Two structures that we cleared this season reveal centrally positioned mastabas built against large stones. The mastabas are formed of three lines of essentially rectangular stones—in one chosen for their dark, almost black color—with a stone outcropping forming the fourth boundary of the mastaba. The interior of the bench-like construction is filled with small, water rounded gravel stones, transported from the wadi bottom. These benches appear in many of the buildings at Umm Buyut, are ubiquitous at the main Mo’alla “Enigmatic Site,” and represent one of a number of features linking the Enigmatic Sites. The structures revealed an upper living floor with some ceramic remains—consistent with those at the Mo’alla and Umm Buyut Enigmatic Sites—above a layer of habitation remains consisting primarily of wind and water borne debris, suggesting that the structures were kept relatively well swept until the end of the activity at the site.

We cleared one oven at Bir Umm Tineidba (Figure 35). It consisted of the lower remains of a tapering cylinder of clay—the tanmur-oven proper—surrounded by the surviving
base of a formerly beehive-shaped pile of stones separated from the clay lining by about 10 cm, the space between the two filled by gravel and sand as insulating material. Several roughly flat stones formed the bottom of the oven, which was still filled with very fine ash. A gap at the bottom of the stone ring, on the south side, gave access to a hole in the bottom of the clay lining, through which the oven could be stoked. A great plume of ash on the west side of the oven represented the remains of ash and charcoal cleaned from the oven. This revealed that the fire was fed by dried camel dung, as well as local brush and wood, including the seed pods of *acacia ehrenbergiana*, a drought resistant acacia frequently encountered in the southeastern desert of Egypt, and still present at Bir Umm Tineidba.

Figure 35: Plan of an oven (Structure 27) at WUT 4

The work of the Elkab Desert Survey Project continues to reveal the wealth of material still awaiting discovery in the desert hinterlands of Elkab. Our work has also demonstrated that a great triangle of the Eastern Desert, between Luxor in the north, Edfu in the south, and the Red Sea Hills to the east, is not archaeologically barren, but rather an archaeological *terra incognita* rich in ancient remains. We hope to continue our exploration of the important and heretofore neglected region during future seasons of the Elkab Desert Survey Project.
Flag #81 in the Wadi Umm Tineidba

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