

ORIENTAL INSTITUTE NUBIAN EXPEDITION PUBLICATION PROJECT

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AL-WIDAY I

A few hundred meters north and west of the village of al-Widay (fig. 1) is a close-packed cemetery that was found to contain 111 tombs. Dating to Old Kush II (contemporary with Middle Kerma, ca. 1800–1650 BCE) and Old Kush III (Classic Kerma, ca. 1650–1575 BCE), it offered an ordered series of contexts that could serve to calibrate the dating of the period in the Fourth Cataract region. The cemetery seriation started in the north, with tombs dating to Old Kush II, and extended to the south tombs, which belonged to Old Kush III. We have mentioned our work on the materials from this cemetery in past OI annual reports, and the text and images are now in place for publication. Only the remains of the animals found in the tombs needed study.

This year, we were fortunate to obtain the assistance of Sarah Adcock to study the animal remains from the tombs at al-Widay I (AW I). Sarah is currently a visiting assistant professor at New York University's Institute for the Study of the Ancient World and has worked on faunal analysis at

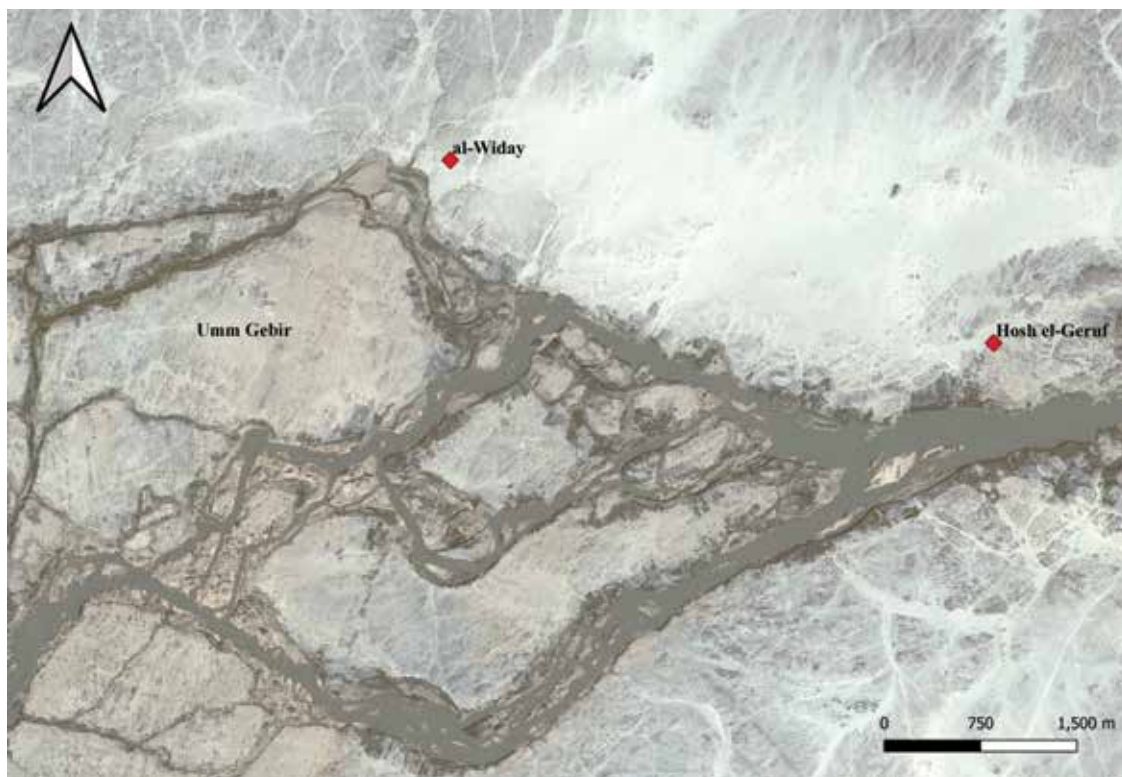


Figure 1. Fourth Cataract Nubian Expedition sites, 2007–8 campaigns.

sites throughout the Middle East. Similar animal sacrifices have been found in many burials in the Fourth Cataract region, but no analytical study has been published. Adcock's study, discussed below, will complete the work for the publication of al-Widay I as volume 19 of the Oriental Institute Nubian Expedition (OINE) series.

Preliminary Report on the Animal Remains from al-Widay I

Analysis of the animal remains from the OINE's 2007 and 2008 campaigns in the Fourth Cataract region began in June 2022. Currently, this work focuses on the animals included as funerary offerings at the large cemetery of AW I. The goal of the zooarchaeological analysis is to reconstruct the use of animals at the site and their role in local mortuary practices, with an emphasis on identifying possible diachronic changes from Old Kush II to Old Kush III. Synchronic comparison will also be made within phases to identify potential correlations between the age and species of the sacrificial animals and the characteristics of the human individuals with whom they were buried (e.g., age, sex, health, and social status as determined by other grave goods).

To date, approximately 700 diagnostic animal bone specimens have been recorded from six graves. (Unidentified fragments were weighed but not counted.) Due to a variety of taphonomic factors, including the dry environment, the young age of the animals (which tend to have fragile, unfused bones), and modern transport-related issues, the assemblage is extremely fragmented, with more than 85 percent of specimens having modern breaks and nearly 60 percent being less than half complete.

All these remains are caprines, and nearly all appear to have been young animals. In each instance, a single animal was included per grave, though in one case a horn core from a more mature caprine individual was also identified. Age categories were assigned using both epiphyseal fusion and patterns of mandibular wear. Preliminary results appear in the following table.

Tomb no.	Phase	Species	Age
4	Old Kush IIA	Ovis/capra	Young (ca. ≤12 months)
12	Old Kush IIA	Possible <i>Ovis</i> sp.	Juvenile–subadult (ca. 18–30 months)
16	Old Kush IIB	Ovis/capra	Young/juvenile–subadult (ca. 6–30 months)
21	Old Kush IIB	Ovis/capra	Perinate (ca. birth)
22	Old Kush IIB	<i>Ovis</i> sp.	Young (ca. ≤12 months)
105	Old Kush III	Ovis/capra	Young (ca. ≤12 months)

Data collection will continue in the OI's zooarchaeology laboratory in the fall, with the aim of recording all the animal remains excavated at AW I. Given the well-documented chronological sequence at the site, the analysis and publication of these data will significantly enhance our understanding of human–animal interactions in the Fourth Cataract region and shed light on the role played by animals in mortuary ritual at the site.

HOSH EL-GERUF

During the 2021–22 research period, attention focused on the remains from the site of Hosh el-Geruf (fig. 2). As discussed in articles (e.g., Emberling and Williams 2010) and OI annual reports, this site was a major processing center for gold in the Old Kush (Kerma/early second millennium BCE) and Napatan (ca. 750–656 BCE) periods. There are also significant deposits of pottery from the

Nubian Mesolithic and Neolithic periods of the eighth through fifth millennia.

The Mesolithic and Neolithic Components at Hosh el-Geruf

The mid to late Holocene saw substantial use of the Nile and Western Desert regions by hunter-and-gatherer groups. The remains from these periods are also found along the stretch of river that makes up the Fourth Cataract, indicating seasonal habitation and exploitation of

the area for wild grains and animals. Ceramics spanning the period between the later Mesolithic and early Neolithic have been found in the sherd bags so far. The date ranges are wide, since the beginning of the Nubian Neolithic varied from the beginning of the Neolithic in other regions, but some similarities in the pottery and its decoration crossed boundaries.

The earliest mid-Holocene vessels were made mostly of a mineral-tempered fabric, which is quite hard and was thus suitable for large sherds to be reused as digging and shoveling tools during the site's later periods of use (fig. 3). Nonetheless, nonworked sherds could sometimes be joined to form more complete vessel profiles, such as the late Mesolithic example reconstructed with sherds from HG-Q-2 and HG-Q-6 (2022.138) (fig. 4) and a bowl with incised horizontal bands below a rim with diagonal incisions on top from HG-G-11 (2022.002) (fig. 5). The dotted-wavy-line sherds show varieties that find parallels among the Khartoum Variant materials from Lower Nubia, as well as among sherds from Mogrart Island, upstream of Hosh el-Geruf, in addition to similar examples from



Figure 2. Hosh el-Geruf with areas of excavation.



Figure 3. Early sherd reused as tool from HG-Q-3 (2022.164).



Figure 4. Late Mesolithic vessel sherds from HG-Q-2 and H-Q-6 (2022.138).



Figure 5. Rocker-stamped bowl from HG-G-11 (2022.002).



Figure 6. Dotted-wavy-line sherds. A, chaff temper from HG-B-2 (2022.270). B, mineral temper from HG-T-3 (2022.385). C, mineral temper from HG-U-1 (2022.032).

along the Nile River farther south or in the deserts across the eastern Sahel (fig. 6). Work remains ongoing with the analysis of parallels and dating, but the Nubian Mesolithic is best positioned by the radiocarbon dates from early sites in the Dongola Reach.

The pottery remains from the Neolithic period include at least two instances of caliciform goblet rims, one with a fine, incised decoration of pendant triangles on its interior from HG-G-3 (2022.092). These fragments have not yet been drawn or photographed. These vessels are widespread across northeastern Africa and are dated by radiocarbon at the cemetery of R12, in the northern Dongola Reach, to the fifth millennium BCE.

The early examples of pottery are frequent in some areas of the site, probably washed down the rocky slopes where early occupation remains once stood.

The Industrial Site

The industrial site was a broad, sandy area on the north side of the Nile nestled among great clusters of granitic gneiss boulders and scattered with shattered rock fragments, pebbles, and the implements



Figure 7. Landscape views of Hosh el-Geruf.

of gold processing (fig. 7). The work done at the site seems to have consisted primarily in the smashing of pieces of quartz and grinding them to a powder to separate the gold. The gold appears to have been dendritic flitters located in quartz fragments that occur in veins in the granites of the Eastern Desert, the Bayuda, and along the Nile, including the islands of the Fourth Cataract.

The site had no obvious architectural features, a real challenge to exploration. The operations, all in 2007, were conducted in four stages. Preliminarily, we cataloged the grindstone bases clearly visible and surveyed their positions. Then, several surface collection points were established at roughly 5 m around a stake. Following collection, we excavated several squares, normally 5 × 5 m in size but extended where necessary. Finally, Carol Meyer carried out a detailed survey to catalog all the implements in three transects, while Jim Harrell did a geological survey of the area (fig. 8).

The processing implements consisted of granitic gneiss grindstone bases and hand-sized globular pounders, mostly of quartz (fig. 9). The site may have been selected in part because the boulders were often broken into shapes easily adapted to make the heavy bases. To carry one of them requires more than four strong men.



Figure 8. Carol Meyer with local residents.



Figure 9. *Left*, broken grindstones. *Right*, quartz pounders.

The Nile cataract flows in a single channel at Hosh el-Geruf, facilitating the transport of materials. Such transport was needed because there was no sign of mining at the site, and it appears that ore was brought to it by boat from elsewhere, possibly from several locations. Two types of mines are candidates for the gold's origin. First, the ancient hard-rock mines for gold currently known consist of narrow, trench-like shafts that follow quartz veins, sometimes for many tens of meters, and are sometimes quite deep. Although common in the Eastern Desert, no mines of this type were reported in the Fourth Cataract region (however, exploration of much of the area is incomplete). A second type of mine resulted from the deterioration of the granites, which over millions of years exposed the quartz veins and dropped fragments into the adjacent sand and other deposits, where wind and water spread them out into the wadis (fig. 10). Gangs of workers in the wadi washes could extract ore from pits dug to retrieve the fragments. Such pitted areas are known from the cataract region and upstream of Hosh el-Geruf, as clearly identified by Jim Harrell and Bruce Williams using aerial or satellite photography. Although not directly dated, one such area was flanked by cemeteries upstream at Sherari, dating to Old Kush times.

As mentioned above, no coherent remains of structures were found. The stratigraphy present in a few areas was often disturbed by pits, which were not systematically dug for collecting quartz but were desultory, irregular holes. A few areas with burned debris were probably used for cooking or processing of some sort. Gold-processing sites far to the north, in the Second Cataract area, had simple, irregular structures of fieldstone, and here similar structures must have existed before being dismantled later, possibly for raw material to build new structures.

After Old Kush times, no traceable activity was evident until the Napatan period, probably in the seventh century BCE, since the most distinct pottery types resemble those from the contemporary burials in the royal cemeteries around Gebel Barkal, at Meroë, and from Upper Egypt during the Twenty-Fifth Dynasty. While the remains are sizable, no architecture clearly relates to the pottery or objects from Napatan times.

At some time after these two main phases, almost all the grindstone bases were broken. The purpose and date of this destruction are matters of conjecture but may represent modern attempts by the authorities to stop the locals from mining gold illegally.

Gold was rarely found in the burials of the Fourth Cataract, but a few beads were recovered in two tombs at AW I,



Figure 10. Crumpling boulder with quartz vein.



Figure 11. *Left*, gold bead from al-Widay I tomb 5 (2007.023). *Right*, multiple gold beads from al-Widay I tomb 21 (2008.288).

tombs 5 and 21 (fig. 11). The examples seem to have been cut from thin, flattened rods and then bent into a bead shape. Their simplicity contrasts with the sophisticated work found in contemporary Egypt, Kerma, and Napata, but they fit well with the idea that this industry was local.

That the processing was performed by local inhabitants in the Old Kush II to III periods is strongly suggested by the absence of evidence for residents from either Egypt or northern Nubia in this region. Imported objects and some local imitations occur, but the manufacturing techniques, especially of the pottery, appear to be part of a well-defined local culture. There are, however, especially significant relationships with both the Pan Graves in the north and the culture of the Gash Delta area near the Red Sea coast in the first half of the second millennium BCE. On the other hand, the cemeteries, while certainly well organized, show none of the class differentiation found in Egypt or Kerma.

The processing center at Hosh el-Geruf thus offers two challenges, particularly for the evidence from the Old Kush II to III periods. First, the activities of extracting and processing gold could be separated by some distance and the raw materials transported. Second, the society of the Fourth Cataract was organized on a substantially regional basis and capable of coordinating and carrying out complex industrial operations without the involvement of the “big state.”

In May, Bruce Williams lectured on Hosh el-Geruf as a part of the DiverseNile Seminar Series 2022 at Ludwig-Maximilians-Universität in Munich. This lecture, and its major conclusions about the site and its evidence, intended to provide an updated picture of this remarkable place for analysis and review by a wide scholarly audience as a part of preparing the final report.

A SAD AND SOLEMN EVENT

We must note the passing of George Pagoulatos, who, with his brothers Athanasios and Gerasimos, managed the Acropole Hotel in Khartoum. As the archaeological community knows, the Acropole has been not only a hotel but also an indispensable resource for foreigners working in the Sudan. Presided over by George, it has been a place of kindness, friendship, and hospitality for many decades—since 1997 for Bruce Williams. George, his brothers, and the hotel’s staff have arranged travel documents and transportation and even helped with transactions between agencies. The entryway to the Acropole is covered by photographs of people from many of the archaeological missions

they have assisted over the years, including some who did not actually stay at the hotel. The OINE's work in the Fourth Cataract in 2007–8 would not have been possible without their aid. George will be deeply missed.

REFERENCE

Emberling, Geoff, and Bruce Williams

- 2010 "The Kingdom of Kush in the 4th Cataract: Archaeological Salvage of the Oriental Institute Nubian Expedition 2007 Season. Part 1: Preliminary Report on the Sites of Hosh el-Geruf and El-Widay." *Gdansk Archaeological Museum African Reports* 7: 17–38.
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