City Beneath the Sand

Excavating the Ancient Settlement at Jebel Barkal, Sudan

By Geoff Emberling

The Kelsey Museum's Jebel Barkal Archaeological Project has been focused on site protection and support for our archaeological colleagues in Sudan since the civil war began there in April 2023, as Suzanne Davis and I reported in the Kelsey Museum Newsletter last fall. But we have also been engaged in more traditional archaeological research at Jebel Barkal since the end of 2018 (with a yearlong break for the pandemic), and we would like to present an update on what we are learning about the ancient site itself.

Background

Located close to the Nile River in northern Sudan, Jebel Barkal—"jebel" means "mountain" in Arabic—is a rock outcrop just over 100 meters high (FIGS. 1–2). It is distinguished by a pinnacle of rock facing the river that resembles several symbols of kingship in the Nile Valley, including the White Crown of Upper Egypt and the uraeus-serpent often shown on Egyptian and later Kushite royal crowns.

The earliest cultural remains from the site are those of the early kingdom of Kush (ca. 1700 BCE). We suspect that the jebel itself would have been important in that early period; evidence suggests that Kushites thought one or more gods resided in the rock outcrops.

After 1500 BCE, Jebel Barkal was captured by the invading army of Egypt's New Kingdom, which built a fortified settlement there called Napata. The site would be the southernmost outpost of the Egyptian empire—perhaps in part because of the religious significance of the jebel itself, but likely also for its political and economic importance due to its location on trade routes across the surrounding deserts.

Figure 1. Kush around 600 BCE, including the location of Jebel Barkal. Map by Lorene Sterner.

After the collapse of the Egyptian empire by 1170 BCE, the site was renewed by a new dynasty of Kush beginning in about 750 BCE, with constructions by the kings Kashta and his successor, Piankhy. These kings conquered Egypt successively and began what would be known as the 25th Dynasty of Egypt (ca. 750–663 BCE). But they were very much part of a Kushite dynasty that we call the Napatan Dynasty, which continued to rule Kush for centuries after. The Napatan Dynasty brought not only wealth to Kush from its conquest of Egypt but also architects, scribes, and sculptors who built palaces and temples (particularly the massive

Figure 2. Jebel Barkal from the East Mound, with our second excavation area (Area B) in the foreground. Photo by Henrik Brahe, 2023.

Figure 3. This 10-foot-high monumental statue of King Anlamani, who reigned about 620–600 BCE, was found by George Reisner in 1916 excavations next to the Amun Temple at Jebel Barkal. Photo courtesy of the Museum of Fine Arts, Boston.

temple dedicated to the ram-headed god Amun of Napata), inscribed monumental stone stelae using Egyptian hieroglyphic script, and crafted monumental royal statues (FIG. 3). They would later use the site for the pyramid burials of kings and queens of Kush.

Until our project at Jebel Barkal, the later history of the site had been somewhat less well-known. The locations of Kushite royal burials—after having been in the area of Napata for nearly 500 years—were moved 250 kilometers southeast to the site of Meroe for what is known as the Meroitic period (ca. 270 BCE–300 CE). Because the Kushite court was highly mobile, the idea of a fixed "capital city" is perhaps not fitting for this empire. But even with the move of the royal burials, Napata remained an important urban center in the Meroitic period with monumental constructions, including a group of royal pyramids mostly dating to the 1st century BCE—some for queens who reigned as sole rulers—and a new palace built by King Natakamani in the 1st century CE.

During this period, Kush was in trade contact with Ptolemaic Egypt—and later, with Roman Egypt—as well as the wider Mediterranean. Soon after the Roman conquest of Egypt in 31 BCE, the Kushite army fought against Rome for control over the border region near Aswan in Egypt. As the Roman historian Strabo wrote, the Kushite army was led into battle by "Queen Candace—a masculine sort of woman and blind in one eye." This was a mixing of her name and title; "Kandake" was a Kushite title for queen.

Napata had declined as an urban center by 300 CE. It was later inhabited by a small community of Christians who built their homes inside the grand Temple of Amun and buried their dead outside it.

Research Questions

Jebel Barkal had been documented by European and American travelers since the 1820s and excavated by archaeologists as early as the 1890s. The first major excavation was that of George Reisner, who excavated the site on a large scale on behalf of the Museum of Fine Arts, Boston, and Harvard University from 1916 to 1920. After Reisner, excavations resumed at the site following a lapse of more than 50 years: starting in the 1970s, an Italian team focused on the area of the Natakamani Palace, and an American team led by Tim Kendall beginning in the 1980s—which later became a joint US-Sudanese project—resumed more careful work in the area of temples that had been Reisner's focus.

In 2016, Tim Kendall offered me a chance to take his place as the US-based codirector at Jebel Barkal. It was thrilling to think about working

at such a large and important urban center of ancient Kush. We formed a joint project between the Kelsey Museum and the National Corporation for Antiquities and Museums (Sudan's antiquities department), with El-Hassan Ahmed Mohamed as my codirector and with a multidisciplinary team of international and Sudanese specialists and students.

Because of the history of excavation at the site—with its focus on temples, palaces, and pyramids—some scholars had assumed that Napata was essentially a religious center. But my immediate impression, as an archaeologist initially trained in working on the mounds of ancient Mesopotamian cities, was that the larger urban settlement at Barkal had not yet been adequately investigated or even located. As a result, there was a great deal that we did not know about the inhabitants of ancient Napata. What did they eat, for example? Where did they live? Where were their workshops? Did the kings and queens entirely control the ancient economy, or was there any independent economic activity? Were diverse ethnic groups represented within the population? Was there evidence of ancient urban planning?

These questions structured our initial investigations, which first aimed to locate at least one area of ancient occupation that was not previously known. A large, flat area next to groves of date palm trees (FIG. 4)—eventually termed the East Mound—was promising, even though its surface was covered by sand, grasses, and some modern garbage. A brief magnetic gradiometry ("magnetometry") survey in 2016 by U-M graduate student Gregory Tucker showed that the area preserved an urban density of remains. Greg returned to complete a full survey of the area in 2018 (FIG. 5).

The results of the magnetometry survey showed a large urban settlement with a number of clearly visible buildings, some apparent streets, areas with remains that were not entirely clear, and other blank areas on the map. We subsequently learned that the magnetometer was only able to read about 30 centimeters below the surface and that the blank sections on the magnetic plan were areas where the overlying sand was thicker than that.

Figure 4. View from the top of Jebel Barkal onto the ancient city. The Amun Temple is in the foreground; the East Mound is a rounded area next to the palm groves. Photo by Raymond Silverman, 2016.

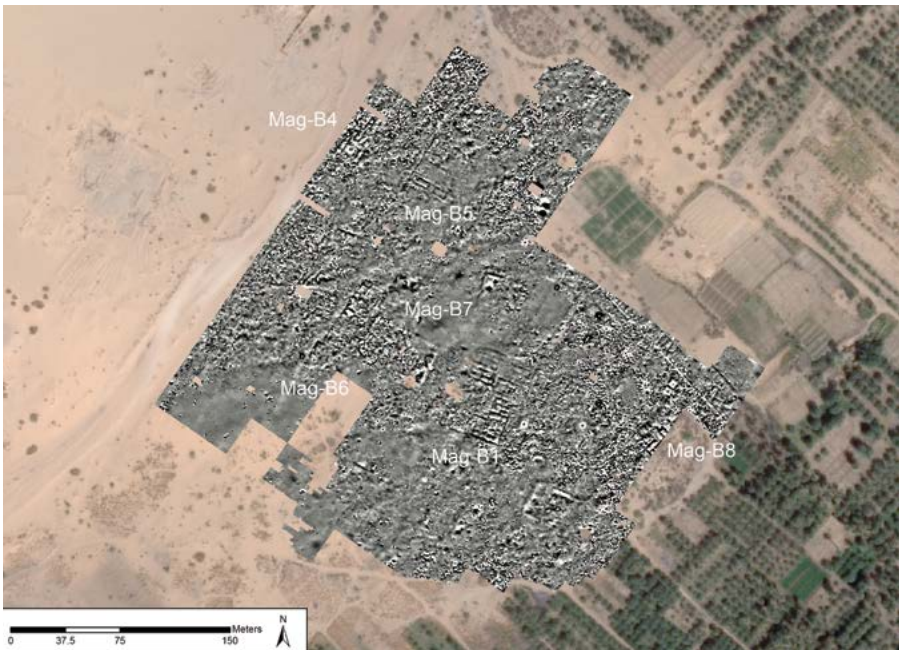

Figure 5. Magnetic gradiometry plan of the East Mound at Jebel Barkal. Plan by Gregory Tucker, 2019.

Excavations and Findings

Of course, there were many questions of interest that we could not resolve from a geophysical plan (including the date of these structures), so we began to dig on the East Mound. Our first

excavation in this area focused on the clearest building in the magnetometry survey. After three seasons of work (FIG. 6), we were able to clear a large area of mudbrick architecture and identify a complex pattern of building and rebuilding that is typical of urban stratigraphy (termed Area A). The largest building in the area was preserved only as a foundation, but it would have been built on a platform measuring about 30 by 20 meters. To the north was an area of small rooms with a high density of small cooking facilities, including cooking pots and hearths. To the southeast was a smaller freestanding house.

Finds from this area were all Meroitic in date (2nd century BCE–1st century CE). Ceramics showed regular trade with Egypt and less frequent exchange with the wider Mediterranean. Analysis of animal bones from this area was conducted by our beloved Kelsey colleague Richard Redding, who sadly passed away last year. Richard found that 85 percent of the animal bones were cattle, showing a strong focus on high-status food. Analysis of botanical remains revealed a focus on the northern grain crops of wheat and barley rather than the southern grains (sorghum and millets). These archaeobotanical analyses were the first done at Barkal—allowing us to begin identifying how the city was fed.

Our excavation also recovered a large deposit of nearly 3,000 pieces of sealing clay. Of these, 300 had been stamped by seal rings, an innovation of Meroitic-period Nubia that resulted from contact with the Mediterranean. The clay had been used to seal jars or other containers—likely filled with grain, oil, and perhaps wine—that were delivered to the large building from other parts of the city. The seals were marks of authority by the people who oversaw the filling and closing of the jars and thus give an impression of the structure of the site's administration. Coincidentally, we also found an ancient bronze seal ring with an elephant design (FIG. 7) on the surface of the site near our excavation.

In our other main excavation area (Area B), we focused on what appeared on the magnetometry plan to be a long street. Excavation showed that was indeed the case. In two seasons of work, we have cleared over 70 meters of the street, measuring up to 6 meters wide and lined with large buildings (FIG. 8). This area has an industrial or commercial character rather than a residential one since we have not found

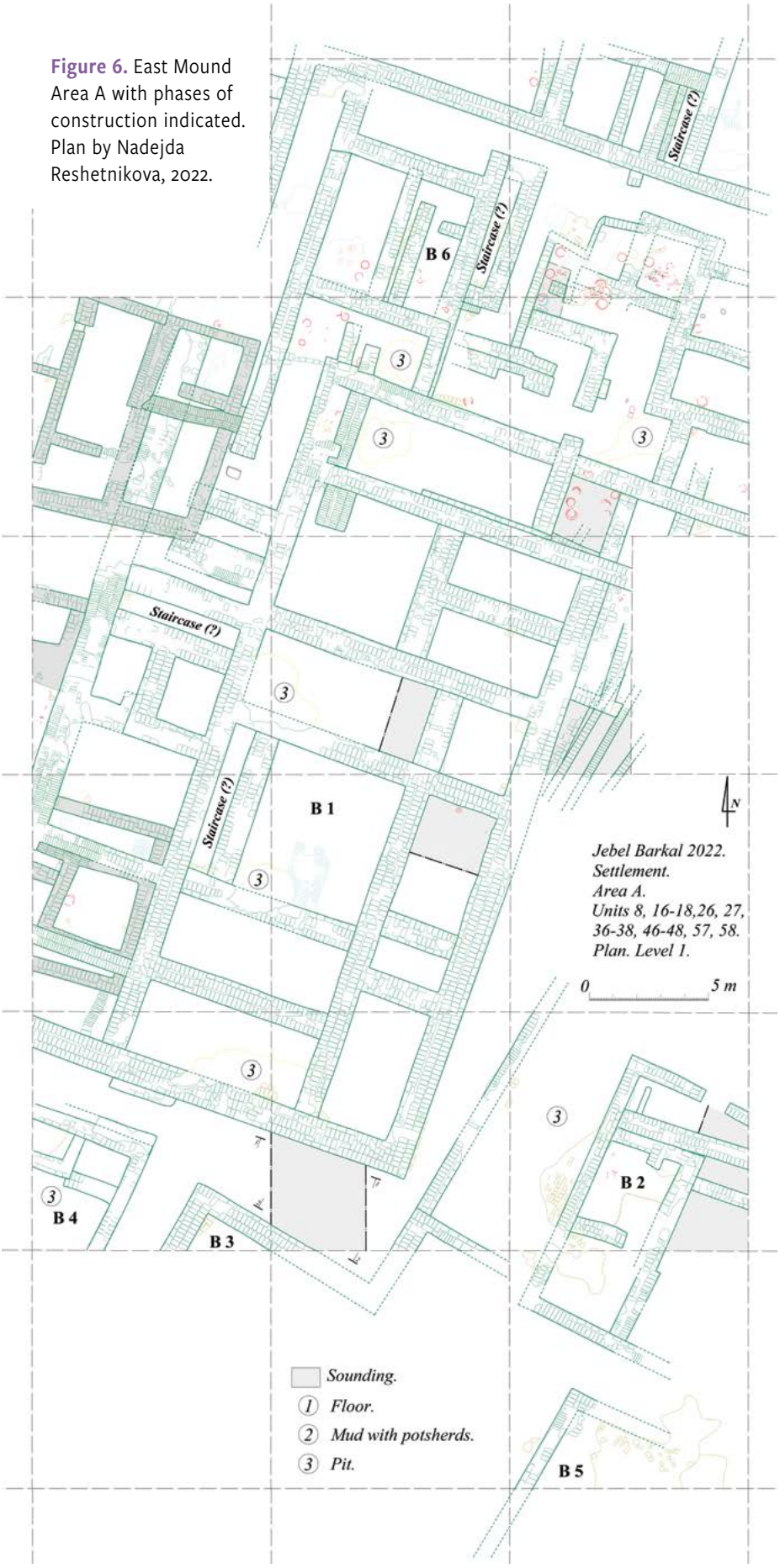

Figure 6. East Mound Area A with phases of construction indicated. Plan by Nadejda Reshetnikova, 2022.

Figure 7. Bronze seal ring with an elephant design. Meroitic period (ca. 200 BCE–100 CE). Surface find, East Mound, Jebel Barkal. Photo by Suzanne Davis, 2023.

Figure 8. Long street and buildings in Area B, looking to the northwest. Photo by Sami Elamin, 2022.

many objects that would be typical of domestic occupation. Rather, where we have excavated one of the large structures in more detail, we have found a concentration of cooking features similar to what we had seen in our first excavation area. Since both areas seem to focus on producing food—but not on housing people—we are considering the possibility that they were used to make food for others. Perhaps these spaces were like restaurants that fed workers and traders, or perhaps they produced food for temple or palace staff.

In one of the structures in Area B, we excavated a sounding 1.5 meters deep that produced a sequence of layers extending from about 100 BCE to 700 BCE—into the Napatan period. This suggests that even though Napatan pottery is scarcely visible on the surface of this part of the city, it must have been part of the ancient settlement of the Napatan kings.

A related but separate project has involved exploring the area surrounding the temples and palaces at the site to understand better how they fit into the broader ancient city. A ground penetrating radar survey (FIG. 9) showed that the Napatan palace at the site was not isolated, as previous approaches to excavation had suggested, but was rather in the midst of a dense urban settlement, with streets and large, well-constructed elite houses (which we called "villas") providing a neighborhood for the palace.

Conclusions

This brief overview only scratches the surface of our research at Jebel Barkal over the past eight years. Even with the civil war in Sudan still raging as I write, our team—both in Sudan and abroad—is continuing to think about, analyze, and write on what we are learning about the ancient city of Napata, as well as the broader implications it has for understanding the structure and history of the ancient empire of Kush.

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Figure 9. Ground penetrating radar plan of the Napatan Palace (B1200) at Jebel Barkal, showing dense urban occupation. Plan by Pawel Wolf, 2024.