# SUDAN & NUBIA

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## The Kirwan Memorial Lecture



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Front cover. General view of Site WNP-J-22\1, Al-Jabalain, White Nile State. Photo by Hamad Mohammed Hamdeen.

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# Rescue excavations at Jebel Barkal by Dongola University's Department of Archeology (Seasons 14 and 15)

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Translated from Arabic by Tohamy Abulgasim

## The site

Jebel Barkal is located on the right bank of the Nile, 23km south of the Merowe Dam, about 385km north of Khartoum, and approximately 1.5km from the Nile's bank. Jebel Barkal's height ranges between 80-90m, with a width of 200m. The mountain stands out as an exceptional feature in an otherwise flat desert plain devoid of similar features, and a floodplain extends to the east of it along the Nile's bank. The archaeological site extends on the eastern side of the plain around the mountain and contains temples, palaces, and remains of an ancient settlement. This site is considered one of the most important archaeological sites and was included by UNESCO in the list of World Heritage sites, after meeting the criteria that qualified it.

In this paper, we discuss some of the archaeological activities carried out by the Department of Archaeology at the Faculty of Arts, University of Dongola, at the archaeological site of Jebel Barkal. The department has been granted a permit for one part of this area to conduct rescue and training excavations for 4$^{th}$ year students as a graduation project. The paper focuses on the most significant results achieved by the mission through the analysis and interpretation of the artefacts and finds discovered at the site during the 2014 and 2015 seasons.

## Previous studies

Before organised archaeological excavations, Jebel Barkal was visited by several ancient and modern travellers and historians who wrote, described, and recorded many features of its sites. These writings about prominent landmarks were among the most important sources used by archaeological missions in their work at the site, notably the writings of Herodotus, Diodorus Siculus, Pliny, Strabo, James Bruce, Burckhardt, Frédéric Cailliaud, and Lepsius, who made drawings of most of the scenes carved inside the temples (Al-Nour 2006, 66).

### Organised archaeological work

The first archaeological mission to conduct large-scale excavations at the site was the Harvard University-Boston Museum of Fine Arts expedition led by George Andrew Reisner from 1916-1920. Reisner moved between the sites of Jebel Barkal, El-Kurru, and Nuri, then to the ancient city of Meroe. He worked in temples, palaces, and pyramids, recording numerous sites and establishing a numbering system still used by researchers today at Jebel Barkal, starting with the letter B for Barkal, followed by multiples of 100. This work was published in two phases: the first during Reisner's lifetime, before 1942, as preliminary reports; and the second by his successor and assistant, Dows Dunham, as final reports in several books published by the Museum of Fine Arts Boston (Reisner 1921; Reisner and Reisner 1933; Dunham 1970).

After Reisner's digs, excavations at Jebel Barkal ceased until 1970, when archaeological missions returned to work at the site. Since then, eight archaeological missions have worked and are still working at Jebel Barkal.

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**Italian missions**
The Italian mission began work at Jebel Barkal in 1970 when a licence was granted to the University of Rome under Sergio Donadoni. The licence then passed to the University of Turin under Alessandro Roccati and recently to the University of Venice led by Emanuele Ciampini, which is still currently working. These missions excavated in one area, the northeast side of the temples, including Temple B-1500 and its associated buildings (Ciampini 2015, 8-20).

**Museum of Fine Arts Boston mission**
The American mission from the Boston Museum of Fine Arts, led by Timothy Kendall, has worked at Jebel Barkal since 1986, continuing Reisner's work after studying his notes. Supported by the US State Department, the National Geographic Society, and the Schiff Giorgini Foundation, the mission worked for five seasons (1986; 1987; 1989; 1996; 1997) but was paused in some years due to lack of funding. In 1999, after Kendall left the museum, the team merged with the Italian mission at the University of Turin following an invitation from Professor Roccati. In 2003, the mission resumed work at the request of the Director General of the National Corporation for Antiquities and Museums with new support from the American Studies Department at Northeastern University. This work was funded by various institutions, leading to intermittent activity, and the mission eventually ceased (Kendall 1997; Kendall and El-Hassan Ahmed Mohamed 2017).

**The National Corporation for Antiquities and Museums mission (A)**
Supported by the Qatar-Sudan Archaeological Project (QSAP) through the Nubian Archaeological Development Organisation in 2013, a new mission was formed under the auspices of the National Corporation for Antiquities and Museums (NCAM). It included Kendall and his team in collaboration with NCAM, represented by El-Hassan Ahmed Mohamed as co-director. The mission, still ongoing (as of 2017), focuses on the temples and their associated buildings, site fencing, and establishing a centre for recording and analysing religious practices, drawings, and inscriptions, considering Jebel Barkal as a historically significant religious area (Kendall and Mohamed 2016, 127).

**The National Corporation for Antiquities and Museums mission (B)**
A mission started in 2013 after receiving Qatari support, led by Iglal Mohamed Osman Malik, Director of the Conservation and Restoration Department at NCAM, and Maria Concetta, Director of the Conservation and Preservation Department at the University of Rome. This mission aims to maintain and restore the wall paintings inside Temple B-300 (Mut Temple).

**Spanish Joint Mission with the University of Dongola**
A joint mission between the University of Dongola and the Ole Foundation of Barcelona began in 2002 and worked for two seasons. It resumed work in 2013 under the Wahat Project in Barcelona. Later, it became one of the missions funded by the Qatar-Sudan Archaeological Project (QSAP) support, aiming to excavate various areas between Napata and Meroe, about 700m northeast of Jebel Barkal in the Abbasiya area of modern Kareima.

**German Archaeological Institute mission**
This mission, led by Alexandra Riedel and Mahmoud Suleiman Bashir from NCAM, focused on studying, recording, and maintaining the pyramids at Jebel Barkal.

**Spanish Mission, Clos Archaeological Foundation and the Egyptian Museum in Barcelona**
Led by F. Berrenguer, this mission conducted excavations on the south side of Jebel Barkal between 1995-1996 and then stopped.

## Recent University of Dongola mission

### Reasons for the University of Dongola's mission at the site

The mission began work on the east side of Jebel Barkal in 2003 and continues to this day. It is a rescue and training project for archaeology students at the university. The mission's initial work in 2001 was led by Dr Kabashi Hussein, the project director, and members of the archaeology department in cooperation with NCAM, represented by Mr Ali Al-Mirghani. The mission responded to the need for rescue excavations after the telephone company, Sudatel, extended a cable from Kareima to the east Marawi area, which passed through Jebel Barkal, damaging part of it. An agreement was made between the company and NCAM to save the site and address the damage.

The site also became a training excavation for 4th year students as a graduation project, funded by the University of Dongola. Fifteen seasons have been conducted up to 2016. The site is divided into sectors or squares, each 20x20m, along the trench dug by Sudatel, with squares numbered by Latin letters 'A', 'B', 'C', 'D' etc.

This is a preliminary report for the 14th and 15th seasons of work by students of the 22nd and 23rd cohorts.

## 14th season at the site

The 14th season began on 2nd December 2015, with an archaeological survey of the site. Surface pottery fragments were collected, and a topographic survey of the area, including vegetation and architectural remains, was conducted. The excavation area was then mapped into grid squares.

The area under investigation was divided into 30 squares, numbered 21 to 50, and 36 students were divided into seven groups, supervised by section members led by the author, Dr Mohamed Fath al-Rahman, Head of the Department of Archaeology and the Excavation Director, with assistance from Dr Faisal Abdullah Omar and Dr Al-Rasheed Mohamed Ibrahim as field supervisors, and Mr Loai Shamsalola Ibrahim representing NCAM.

After grid mapping, numerous surface pottery sherds were collected, the top layer removed, and excavations continued to a depth of 200mm. Further work revealed oval-shaped Nubian sandstone pieces, different in colour and shape, resembling graves in Squares 24 and 25. Some crushed skeletons were found among these (Figure 1), revealing a deceased individual lying on their back with the head to the west, face to the east, and hands at the pelvis. These burials were attributed to the Christian period based on known burial patterns of that era. Seven such burials were found, mostly crushed due to their location directly under the old road connecting Kareima and Marawi before the current road was built, leading to severely damaged skeletons except for one well-preserved skeleton slightly away from the vehicle path.

Then work continued, and some architectural details appeared for some walls running from north to south and from east to west. They were built from mud bricks, each brick measuring 200x170x100mm, and the wall width ranged from 1-1.5m (Figure 2).

The excavation continued, revealing some large pottery jars containing charcoal and ash. Sometimes, they were found placed in a single row, and occasionally, some pots were found upside down inside larger containers. The area around the pots showed signs of burning, and these vessels may have been used for cooking food. A trench for the Sudatel cable, mentioned above (Figure 3), runs above them.

Grinding stones of various types and sizes were also found, which were possibly used for grinding seeds such as wheat, whose spikes were depicted on some pottery. Additionally, near the walls, large animal bones were discovered (Figure 4). A large quantity of coloured pottery was found, most of which is characteristic of the Meroitic period. This pottery is decorated with various geometric shapes and plant drawings like wheat spikes, indicating that wheat was probably a staple food. Other decorations

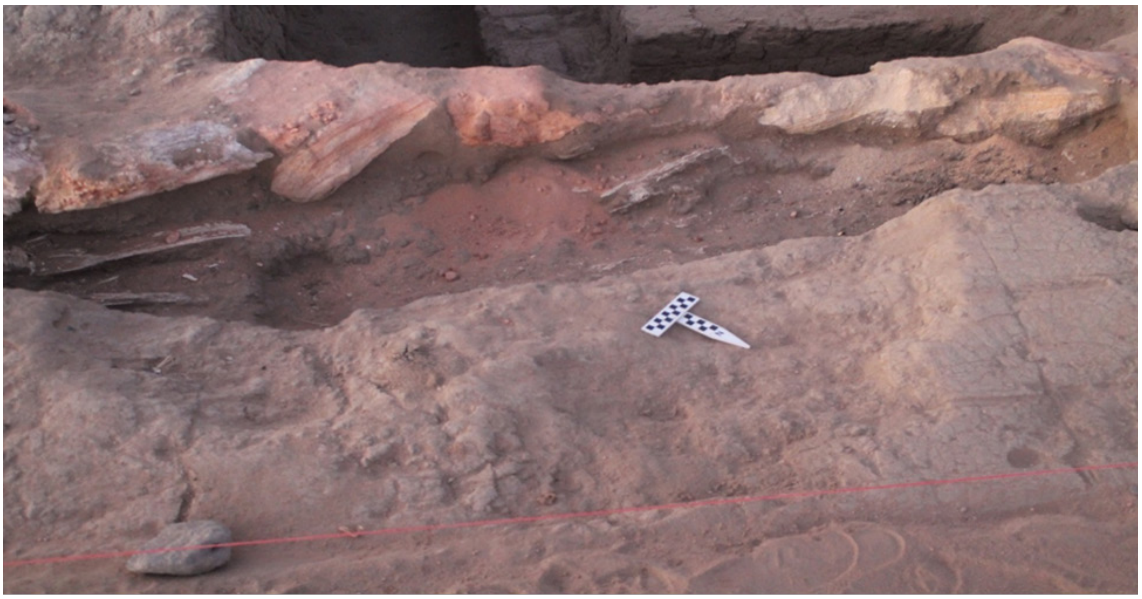


Figure 1. Arrangement of sandstone around the tomb containing the skeleton.

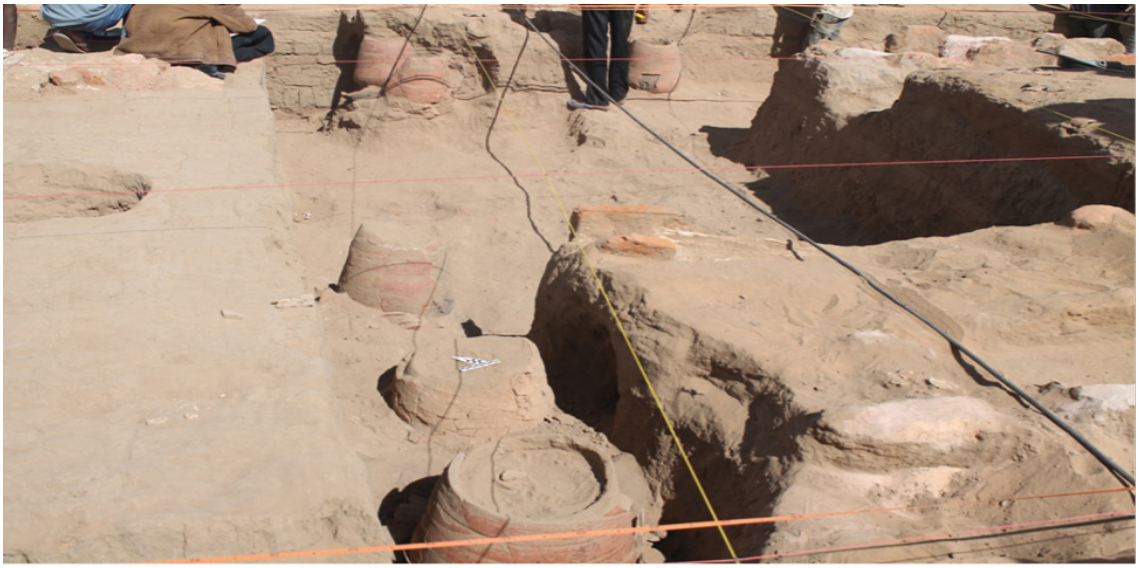


Figure 3. Pottery vessels arranged in a single row with the cable trench running alongside.

include animal motifs, such as cobra heads, which might represent certain religious beliefs since the snake symbolised protection in Kushite religion (Figures 5 and 6).

On the west side of the excavation area, opposite King Natakamani's Palace and within approximately 20m, two brick-lined ducts were discovered. These are steps connected to a building, possibly related to the palace (Figure 7).

The cable trench by Sudatel caused significant damage to the site, as evidenced by the excavations in Season 14 (Figure 8).

**15th season at the site**

The 15th season began on 11th December 2016. The season started by training the students how to do an archaeological survey of the site, followed by planning of the excavation using a grid system of 2x2m. The site was divided into 30 squares numbered from 51 to 75 (Figure 9).

The students were divided into five groups, totaling 34 students in the cohort. The work was conducted under the supervision of department members, led by Dr Mohammed Fath al-Rahman Ahmed Idris, the department head and excavation director. Also involved were Dr Faisal Abdullah Omar as a field supervisor, Dr Rashid Mohammed Ibrahim as a field supervisor, Dr Jamaluddin Babikir as a field supervisor, and Mr Osman Khalf Allah Mohammed as an NCAM representative.

After planning, the surface layer of backfill was removed, and excavation began, reaching a depth of 200mm. Some scattered pottery pieces were collected from the surface layer and the backfill, which were documented, and stored in bags.

Work continued reaching a depth of 300mm, uncovering some brick walls extending from north to south, which were an extension of the structures excavated in the previous season (Figure 10).

Near the walls, some pottery fragments, charcoal, and ash appeared, in addition to some large animal bones, including a lower jaw with some teeth (Figure 11).

Work continued at the site and many scattered pottery fragments were found at various depths across the site. Some small complete vessels were also found (Figure 12), but there were no large vessels filled with charcoal and ash as were present in previous seasons.

Also, some pottery fragments were found incised with geometric shapes, vertical and horizontal lines, wavy lines, decorated with various colours such as red, yellow, and white, and with shapes of plants (Figures 13 and 14).

Excavation continued to a depth of 700mm, where large quantities of grinding stones were found of various types and sizes (Figures 15, 16). The walls began to appear clearly, mainly concentrated on the east side of the site. Additionally, a piece of faience was discovered, representing the upper feathers of the crown worn by kings and sometimes goddesses (Figure 17).

The excavation continued for 10 days during which 10 squares, each measuring 2x2m, were excavated. The final depth of the excavation reached 1.2m. Clear structures were revealed oriented from north to south: three walls, one in the western part of the site, another in the centre, and a third in the eastern part. These walls varied in thickness; the eastern wall was 0.87m thick; the central wall was 1m thick, and the western wall 0.98m thick. The distance between the eastern and central walls was 2.46m, and the distance between the central and western walls was approximately 0.7m (Figure 18). Additionally, a floor or bench was found on the eastern side, with a width of 1.27m.

During this work, students were trained in excavation techniques, documentation, recording, and architectural drawing (Figure 19) for all buildings and layers, as well as classification, drawing, documentation, and interpretation of archaeological phenomena. This was followed by the preparation of a report containing the results of Season 15, after reviewing the previous work conducted at the site

Figure 4. Animal bones from the lower layers of the site.

Figure 5. Coloured pottery with wheat head/spike decorations.

Figure 6. Well-made pottery with stamped cobra head decoration.

Figure 7. Brick steps extending towards the western side of the excavation.

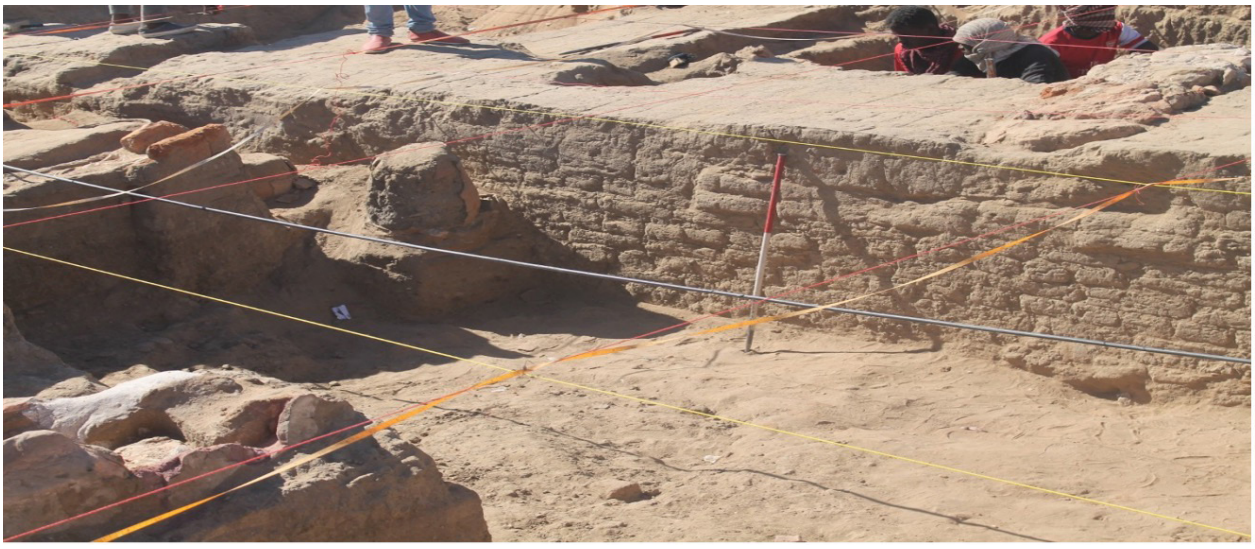


Figure 8. Archaeology destroyed by the construction of the Sudatel cable trench.

Figure 9. Season 15's excavation plan laid out in its grid system.

Figure 10. Appearance of walls at a depth of 300mm, an extension of the walls discovered in the 2014 season.

Figure 11. Lower jaw bones of an animal with some teeth, found beside the wall.

Figure 12a. Small pottery vessels found intact.

Figure 12b. Small intact pottery vessel

Figure 13. A ceramic vessel decorated with wavy white lines and a carved plant motif.

Figure 14. Some of pottery fragments decorated with different colours.

Figure 15. Different types and sizes of grinding stones.

Figure 16. Two saddle quern fragments.

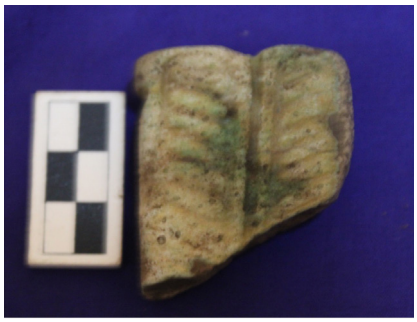


Figure 17. Faience fragment of feathers from the upper part of a crown.

Figure 18. Appearance of three walls built of mud bricks oriented from

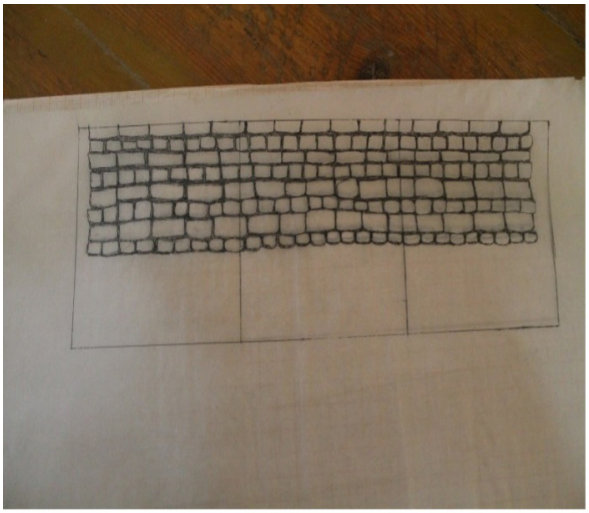
through examining reports from previous seasons.

## Analysis and results

It is noticeable that most of the archaeological studies conducted at Jebel Barkal have focused on visible archaeological landmarks or buildings associated with rulers, authorities, and kings, and their architectural achievements (pyramids, temples, palaces). These have overlooked and neglected the study of the governed class (the general population), even though all ancient civilisations arose and developed through the efforts of such people.

Several questions have been raised regarding the settlement of local people. Assuming that the temples, pyramids, and palaces were built by the people, there must be settlement sites nearby. The current site where we are working (east of the mountain) can potentially answer these questions.

Work began at this settlement site in 2003. The archaeological discoveries consist of buildings constructed of mud bricks. The buildings vary in wall thickness and extend from north to south, sometimes with extensions on the west side. Large pottery vessels are lined up in a row filled with charcoal and ash, alongside various types of pottery sherds (handmade and wheelmade) adorned with diverse decorations in different colours, featuring geometric shapes, animals and plants. The layers of earth are noted and are



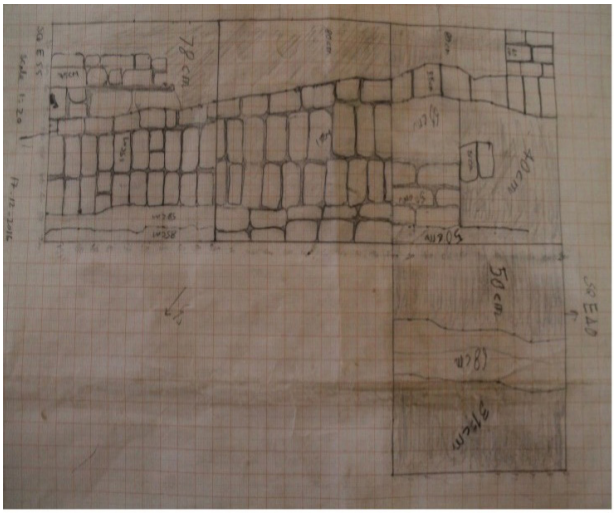


Figure 19. Examples of training students' architectural drawings of walls on-site.

Figure 20. Tombs cut inside the walls.

usually mixed with ash due to intense burning. In addition to decorative items, there are various types and sizes of millstones. The site also contains many animal bones, especially upper and lower jaws.

Through the work conducted during previous seasons, the site appears to exhibit a sequence of historical periods, starting with the Napatan period, followed by the Meroitic period as indicated by the presence of Meroitic ceramics in the middle layers. This was followed by the Christian period, indicated by the presence of Christian graves above these, approximately 0.4m below the surface. Sometimes, the graves are cut into the walls (Figure 20). Below the graves, walls appeared, beside which jars were found, and beneath some walls, another layer was found unrelated to the upper layers, containing ash and charcoal. This suggests repeated habitation of the same site in different periods.

An important observation from Season 15 was the absence of large pottery vessels and the probable absence of graves, which were present on the west side of the site. Consequently, in this season, excavations turned towards the east side to cover the area remaining unexcavated from Season 14.

Through the analysis and interpretation of the findings from Seasons 14 and 15 and those before them, the function of the site can be interpreted as a residential area for the general population during the Napatan period or possibly a specific area for a group living near palaces – maybe a food production area. The site contains evidence suggesting it might have been associated with food production and residential buildings nearby to the west. Thus, this addresses the posed question regarding locations of public settlement areas.

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