

## TELL EDFU

### Nadine Moeller and Grégory Marouard

The 2016 season at Tell Edfu primarily focused on the Fifth Dynasty (ca. 2494–2345 BCE) in Zone 2 situated to the west of the Ptolemaic temple, which contains the earliest settlement remains so far discovered (fig. 1). The season started on October 12, 2016 and finished on November 15, 2016. This year's team members were Nadine Moeller (director), Grégory Marouard (co-director), Valerie Le Provost (Old Kingdom pottery), Aaron de Souza (Nubian pottery), Kathryn Bandy (sealings and small finds), Oren Siegel (enclosure walls), Natasha Ayers (pottery), Emilie Sarrazin (archaeology), and Sasha Rohret (faunal remains). Our inspector for this season was Amal Abdallah.

The main aim of this season has been to investigate the precise nature of this settlement quarter and its function. Another objective has been to determine the long-term evolution of this early urban center during the third millennium BCE. Several of the buildings we excavated this season were founded directly onto the natural bedrock and constitute the first settlement in this area of the tell. According to the ceramics and a clay sealing inscribed with the Horus name of king Djedkare-Isesi (ca. 2400–2375 BCE), this settlement quarter can be considered an *ex nihilo* foundation during the Fifth Dynasty. It is now clear that the town developed from the south and the east and spread towards the northwest. The oldest parts of the town and temple dating back to the earlier the third millennium BCE are now mostly covered by the later Ptolemaic temple and Mammisi. A recently conducted ground-penetrating radar analysis in



Figure 1. General view of Zone 2 towards the east

the surroundings of the Ptolemaic temple during the Groundwater Lowering Project funded by USAID has revealed to the eastern side of the temple complex the existence of a cliff, which probably marked the eastern limit of the settled area and suggests that the tell of Edfu might have initially stood on a sandstone island formation with an early occupation on its eastern edge. Over the following millennia, the Nile moved gradually eastwards to its modern position but its precise location during the Pharaonic period is still unknown and will be part of a geomorphological study next season 2017. The maximum limit of the ancient city towards the west and north was already reached during the transition between the end of the Old Kingdom and the beginning of the First Intermediate Period (ca. 2100 BCE). In the following millennia to come the site never grew any further in these two directions, which is most likely linked to the annual floodwaters that affected the lower-lying areas beyond the tell.

Also this season, thanks to the Fund for Innovating Research in Egypt (FIRE), we started to use photogrammetry software for the first time in order to record archaeological remains. Agisoft PhotoScan software allowed for easy processing and assembling of 3D images and orthophotographies, which are images that have been geometrically corrected so that the scale is uniform and the image can be used for drawing on without any distortions. We used this software to record smaller rooms in Zone 2 but also for several of the monumental enclosure walls. The results turned out to be extremely promising and provide a much more efficient way to record the ancient structures with the highest precision. In addition to photogrammetry, we also used a 3D handheld scanner for the first time in the field, the Artec Space Spider model, mainly for the recording of smaller objects from the excavation. The advantage of using such a scanner is its high accuracy (<1 mm) and speed, which generates a 3D model of the actual object showing texture and color. There is also the possibility to 3D print these kinds of models later, if desired. This tool provides an important improvement for efficiently recording small finds from the excavation, especially when repeated access to them once they are in storage can be difficult.

Concerning the excavation on site, we continued the study of the ancient town walls last season for which several test trenches were excavated with the aim to investigate its foundations. This operation was led by Oren Siegel (department of NELC) who has been studying these walls, their architecture, function, and date for his PhD research. The study of small finds by Kat Bandy and faunal remains by Sasha Rohret (department of NELC) was mainly conducted in the official Ministry of Antiquities storage magazine at Elkab but also on site. Furthermore, we engaged in some site management work supporting the local Edfu inspectorate, which included replacing and repairing the neon lights inside the temple of Edfu, the clearance of trash along the southern side of the tell, and the adding of more white gravel along the pathway of the visitor center. We also trained one local inspector in ceramic analysis and fieldwork methods.

## Excavation in Zone 2

At the beginning of the season, we continued excavating numerous small domestic courtyard installations covering the entire zone east of the Old Kingdom enclosure walls (Zone 2). According to the ceramic finds, this settlement phase can be dated to the transition of the late Fifth to the early Sixth Dynasty. Most of these courtyards were enclosed by thin mudbrick walls, measuring only one brick in width (about 15 cm). They are part of rather informal, domestic installations which developed in this part of the town (fig. 2). Most of them were open



Figure 2. Excavation of small domestic courtyard installation dating to the late Old Kingdom

yard areas including smaller storage and food production installations. Further characteristics of these courtyards were that they had covered much of the area without any clearly visible streets or pathways through the settlement. The general character can be described as an agglutinated form where many of the walls separating the yard areas were shared by multiple installations. In addition, it was also difficult to identify any more substantial structures that would have been used as dwellings. This occupation level marks a complete change in organization and function from the previous settlement remains underneath it. In the central part of Zone 2, a small complete alabaster cosmetic vessel and several small stone weights were found on top of the floor level of one of the courtyards (fig. 3), which is also marked by numerous traces of production of objects in copper. All those open spaces are also equipped with small round bins marked by mudbricks laid in a circle. One of the courtyards contained a reused large storage vessel that was turned upside down and had been placed on the floor level of the courtyard (fig. 2). An intentional hole had been cut into its base that served as the opening in order to be used as a small short-term storage bin. Additional light



Figure 3. Small alabaster vessel and overfired bread mold piece



Figure 4. Overview of southern half of Zone 2 showing burnt courtyards of domestic character

walls and a small corridor between various open spaces can be seen on the southern side of the excavation area (fig. 4). This settlement area has been affected by several incidents of fires, which damaged and destroyed these structures filled with massive demolition layers of burned construction material. Another large room to the south contained the fallen bricks of a collapsed wall and a complete spouted bowl lying on its surface (fig. 5).

The previous phase of settlement remains, which is below the occupation levels discussed above, shows very different characteristics and function in comparison to the light domestic courtyard installations. Two large buildings occupied most of Zone 2, which were separated by a thick perimeter wall, partially recognized at this point of the excavation. All the well-built walls of the two structures and perimeter wall had been founded directly onto the natural bedrock and can therefore be considered the very first architectural installations in this area. Along the northern side, comparable installations have already been excavated in 2014; showing very similar characteristics in terms of quality and layout, they



Figure 5. Collapsed wall and complete bowl on the floor of a courtyard





Figure 6. Southeast corner of large Old Kingdom building with thick and sloping walls

surface (fig. 6). A small entrance is situated on its eastern side, which was already discovered in the previous seasons (see *Annual Report 2012–2013*, p. 118, fig. 7). It contained a preserved lintel and the wooden door in situ, which also means we have almost the full elevation of this structure, down to its threshold. Unfortunately, this building is mainly preserved on its eastern side; the interior was completely destroyed except for the entrance area by seabkh digging. This year we focused our efforts on excavating the area on the southern and northern side of this building in order to better understand its layout and function within the settlement area of Zone 2. We were able to confirm that the foundation level of the southeastern corner was built directly on the natural sand which means it is the oldest structure built *ex nihilo* here.

Even though we have little evidence so far that could tell us something about its precise purpose, we were able to observe that it must have been considered an important feature in this settlement area since the later enclosure walls situated north of this building made an ef-

were also founded directly on the natural sand (see details below and *Annual Report 2015–2016*, pp. 151–52).

The precise function and nature of the two newly discovered building complexes is not clear yet and will be the main focus for next season since we still have to excavate much of the settlement remains above this more monumental phase. In any case, the construction details and the architectural organization of this first occupation level here does not resemble any domestic architecture but clearly belongs in the sphere of some kind of official/administrative/cultic installation. For example, this can be clearly seen at the large building on the western edge of Zone 2 which has walls that measure more than 2.3 m in thickness and which were well-preserved and even regularly renovated. The southern façade was, for example, rebuilt with a second wall showing a distinct slope, a feature that has never been associated with domestic dwellings, and covered with a thick layer of fine mud plaster creating a well-finished exterior



Figure 7. Perimeter wall (W 1210) separating two monumental building complexes



Figure 8. Rooms with fireplaces and activity areas on the northern side of Zone 2 (late Fifth Dynasty)

fort to avoid it by being constructed with several turning angles northward. Furthermore, it is evident that the larger mudbrick perimeter walls on the southern and eastern sides (W 1210 and W 1170) clearly separate this large building from another building complex to the south (fig. 7). The foundation layer of Wall W 1210 was directly built into the natural sand layer. To the eastern and northern sides, this unusual building was surrounded by an open space without any mudbrick structures, possibly a large courtyard. Last season we only started to excavate the thick fill layers that gradually covered this open space and hopefully next year we will reach the corresponding outer floor levels, which might contain some trash deposits or abandonment layers that could shed some light on the function of this complex. According to the pottery it dates to the Fifth Dynasty, and in stratigraphic terms, it belongs to the same settlement phase as the rooms located further north, underneath the later enclosure walls (see further details below and fig. 8). Therefore, it can also be related to layers which date back to the

reign of Djedkare Isesi, which marks the time when this settlement area started to be occupied and developed, probably as an extension from an older center to the east which is now covered and/or most likely destroyed by the Ptolemaic temple foundations.

Along the exterior of the late Old Kingdom enclosure walls on the northern side of Zone 2, we also continued the excavations of several well-built rooms with corresponding floor levels that were covered in many areas with fireplaces and deposits of white and grey ash including traces of metallurgical activity such as crucible fragments and copper ore (see *Annual Report 2015–2016*, p. 152 and fig. 3). Most of these layers were carefully sieved because of the presence of a large number of broken clay sealings from baskets, boxes, doors, and storage jars, which can be seen from the negative imprints on the back. So far, only two pieces with inscriptions were found, one of which is exceptionally well-preserved (accidentally burned in a fireplace) and shows the Horus name of king Djedkare-Isesi, the penultimate ruler of the Fifth Dynasty (ca. 2414–2375 BCE) (fig. 9). These rooms and their corresponding walls were also built directly on the natural sand and can therefore be considered the earliest structures in this part of the site, clearly in connection (possible annexes) with the main building described before. In fact, it is now clear that the settlement in Zone 2 was only founded in the second part of the Fifth Dynasty and might be an extension westwards of the early town at Edfu.



Figure 9. Clay sealing with the Horus name of Djedkare Isesi

## Study of the Enclosure Walls

This season we continued the investigation of the ancient town walls at Tell Edfu. Along the southern side, we cleaned four visible enclosure walls that are exposed in the large, almost vertical seabakh cuts of the tell. For all these walls, it was also important to take a closer look at their foundations in order to establish architectural details and the archaeological layers into which these walls were built. In most cases, it turned out that these walls had been built directly onto the natural bedrock with no visible foundation trench. Oren Siegel prepared profile drawings of the layers underneath and against the walls and collected small pieces of pottery from these layers for dating these walls, which is probably the biggest challenge in this investigation. The overall aim is to link the different parts of the exposed areas through structural comparison in order to establish the expansion and long-term development of city at Edfu. There is evidence that at the end of the third millennium BCE (late Sixth Dynasty) the ancient city was surrounded by two separate town wall systems: an outer and an inner one. On the northern limit of the tell, we cleaned a large stretch of about 70 m of three consecutive enclosure wall phases that marks the northern limit of the site and consists of three different wall phases (fig. 10). All of the enclosure walls were also documented intensively with photographs using photogrammetry software to create orthophotos and 3D models, which are particularly useful given the monumental scale of these walls systems that would make any recording with the usual Total Station a very long and tedious process.





Figure 10. Enclosure walls dating to the First Intermediate Period and Middle Kingdom along northern side of Tell Edfu

## Work in the Elkab Magazine

This season we worked for about four weeks in the magazine of Elkab where most of our small finds are stored as unregistered and registered objects from the previous seasons. Sasha Rohret specifically focused her work on the study of animal bones (faunal remains) from the past excavations in Zones 2 and 3, dating to the Old Kingdom and First Intermediate Period, for her future dissertation project, which will be part of a wider comparative study of the faunal remains assemblages from Edfu and Dendera dating to the third millennium BCE. Kathryn Bandy continued updating our database and taking additional photos of the stored objects. She also started to use the 3D scanner for some of the most important objects, recording with high-precision a variety of artifacts such as figurines, some ostraca, and other small finds, which had been excavated previously and are currently stored in the magazine (fig. 11).



Figure 11. Kathryn Bandy and Emilie Sarrazin using the 3D scanner in the Elkab magazine





Figure 12a-b. Installation of new lights in the temple of Edfu

## Site Management Efforts

This season we conducted several site management activities in the temple of Edfu and in the southern area of the visitor center on behalf of the local inspectorate. We purchased new glass tubes and transformers for replacing the broken lights inside the Ptolemaic temple, which had left a considerable portion of the inner rooms in darkness (fig. 12). The new lights are now fully functional and provide reasonable lighting conditions inside the side rooms and chapels.

We also cleaned the trash dumps that had accumulated over many years along the southern side of the tell. All the trash, which was mainly old building material from prior construction work, was cleared out and the still useful materials were organized into clean piles with the support of the Edfu inspectorate. We also bought two truckloads of white pebbles in order to fill the ground along the main tourist pathways in order to make them look clean and attractive for the numerous visitors coming to the site, who often venture to the various stelae and statue fragments on display in the open-air museum area around the temple and tell.

At the end of the season, Nadine Moeller gave a presentation of the recent results at Tell Edfu to the inspectors of the local inspectorate (fig. 13). The aim was to teach the young in-



Figure 13. Nadine Moeller presenting the recent results to members of the Edfu inspectorate

spectors about archaeological fieldwork and research questions. This received an enthusiastic response, and we would like to thank Ramadan Hassan for his help with translating English into Arabic.

The directors and entire Tell Edfu team would like to thank the Edfu inspectorate for their help and collaboration this year, especially Susi Samir Labib (Chief Inspector), Ramadan Hassan Ahmed, Dr. Sami, and of course Amal Abdallah and Marwa Hassan Abd el-Rassul. We would also express our gratitude to Nasr Salama, general director of Aswan and Nubian Antiquities Council. We also thank Jane Smythe and Mary Sadek (ARCE Cairo office) for their help with the paperwork and MoA related matters. Last, but not least, we thank especially the Oriental Institute and Gil Stein for the ongoing support in addition to the many supporters amongst the OI membership for making the annual fieldwork in Egypt possible, in particular the Fund for Innovating Research in Egypt (FIRE).

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