



Fig. 1 An overall view of tomb AC 31 from the north-east (photo J. Krejčí)

## Archaeological excavation of tomb AC 31 in Abusir Centre. A preliminary report

*Jaromír Krejčí*

During the spring of its archaeological season in 2016, the Czech archaeological expedition to Abusir unearthed the last remaining unexcavated mastaba in Nakhtsare's cemetery, tomb AC 31 (fig. 1). This particular cemetery comprises a north-south oriented row of four tombs, dated to the middle and second half of the Fifth Dynasty and located on the southern edge of the royal pyramid necropolis in Abusir (fig. 2; Krejčí 2010: 187–189). The first mastaba (from north to south), ascribed to Prince Nakhtsare (AC 25; Krejčí 2008), the second tomb, attributed to the dignitary Kakaibaef (AC 29; Krejčí 2013), and the third structure, ascribed to Queen Khentkaus III (AC 30; Krejčí – Arias Kytarová – Odler 2015 and Krejčí 2016) were already excavated in the years 1994, 2013 and 2014.

Before the commencement of the archaeological work, tomb AC 31 appeared as an oblong, north-south oriented mound which was covered with destruction layers consisting of limestone debris. A rather large number of weathered sherds of coarse pottery covering its surface clearly showed that tomb AC 31 was repeatedly robbed and plundered in the past. The mound reached some 1.5 m above the contemporary desert surface. Before the beginning of the archaeological research of tomb AC 31 – as was the case of the other three tombs – the following tasks were determined: to identify the name of the tomb owner and his (or her) social status and to explore its immediate surroundings (especially the spaces between

tombs AC 30 and AC 31 and to the south of AC 31). Due to the extensive damage of the tomb, unambiguous answers to the first two questions were not found. Even so, the archaeological research of tomb AC 31 can be considered successful.

### Archaeological excavation of tomb AC 31

Tomb AC 31 is located at the southern edge of Nakhtsare's cemetery and in the area where the terrain of the desert begins to drop off into a shallow wadi delimiting the Abusir royal necropolis from the south. It was thus the most easily accessible tomb for tomb- and stone robbers. A fact that

was also reflected in the bad state of preservation in which this monument was before the research was started and which was even worse than that of other monuments in this part of the royal necropolis. With regard to this aspect, the research work was rather difficult, and it had – for safety reasons – to be done very carefully. The Czech archaeological expedition to Abusir also made, besides the excavation of the tomb itself, a test trench between the mastaba of Queen Khentkaus III and tomb AC 31, another along the northern, eastern and southern outer walls, as well as a small test trench far to the south (see below). The areas along all three façades of the tomb were filled with layers of wind-blown sand and up to only 5–10 cm high contact layers above the mud floor of these open areas. These consisted of sand mixed with ash and included Old Kingdom pottery, miniature vessels and organic material. These contact ceramic contexts were deposited during the functioning of the cult in this area, which is documented by the fact that their heights – in the case of the areas along the tomb's northern and southern façades – gradually decrease to zero from the east (*i.e.* from the area where the mortuary cult activity was concentrated).

During spring 2016, the archaeological work in tomb AC 31 began with cleaning of the eastern part of the superstructure – from outside as well as from inside. The fill of the spaces inside the mastaba was of different character than was the case of other structures in Nakhtsare's cemetery, and this shows that the course of its destruction might have been different. Besides several apparently minor robbers' incursions (clearly documented

in the fill of the construction pit and chapel), there was one major incident, which was represented by a large crater that reached the area of the burial chamber, *i.e.* the lowermost level of the construction pit. Its main purpose was to enable access to a white limestone sarcophagus which was located in the western part of the chamber. The crater occupied almost the whole area of the construction pit, for the burial chamber was filled with layers of sand mixed with smaller fragments of local limestone and pottery sherds (and in some cases also whole vessels), which apparently originated from the fill of the mastaba's core masonry. The sand composing a substantial part of the crater's fill seems to document the fact that it was open for a long time and that it was filled gradually. The find of a small pottery fragment made of very fine, orange-red material (terracotta) and decorated with cross-décor enables us very preliminarily to date this robbers' incursion to a later epoch of Egyptian history, probably to the Roman Period or even later.

Besides the crater, one of the most prominent features in the fill was a tomb robber's wall, whose main function was to prevent the fill from the partially damaged core masonry to slide inward towards the robbers' path (fig. 3). The wall, which was constructed with loose masonry made of fragments of local limestone, thus created a corridor giving access from the area of a (much destroyed) chapel to the centre of the construction pit, in which the burial chamber, the main objective of the robbers' incursion, was built.

The interior spaces of mastaba AC 31 were filled with layers consisting of local limestone blocks and fragments,



Fig. 2 Nakhtsare's cemetery from the top of Neferirkare's pyramid (photo M. Frouz)



Fig. 3 The stone robbers' wall built in the area of the offering chapel and construction pit, view from the west (photo J. Krejčí)

pottery sherds, and in the lower levels of fill, broken mud bricks. During the research, it was clear that the greater part of the contexts of pottery discovered inside (and outside) the tomb were secondary in nature. On the other hand, intact contexts were discovered in the lowermost portion of the fill of the burial chamber and vertical shaft; they are thus the most important archaeological contexts (see below) excavated in the mastaba.

After not more than three and half weeks of work, the major features of the mastaba itself were unearthed and showed that tomb AC 31 is a mastaba type tomb, oriented along its north-south axis, which was  $16.40 \times 10.50$  m large (see fig. 1). The masonry of the tomb is preserved to a height of 4.10 m above its projected zero elevation. The appearance of the tomb is very similar to that of other tombs in this line of mastabas, especially to those of Kakaibaef (AC 29) and Khentkaus III (AC 30).

Not only are the architecture and dimensions of tomb AC 31 very similar to those of other tombs in Nakhtsare's cemetery, but also the methods used for its construction are comparable, although some slight changes in tomb AC 31 are provable. The outer walls of the mastaba's core masonry were built of small, well-shaped ashlar made of grey and yellow local limestone joined with grey-brown (mud) or pink (lime) mortar. Its internal parts – the core masonry of the mastaba – consist of the fill, including low quality masonry with some additions of pottery sherds. In the case of tomb AC 31, the proportion of the pottery used in the core masonry is markedly lower than in other tombs of Nakhtsare's cemetery, especially

than that in neighbouring tomb AC 30. The tomb's casing was built of extraordinarily large blocks of white limestone of an average quality, and it was not – as is the case with tombs AC 29 and AC 30 – finished. The angle of the mastaba's outer wall was apparently planned to be  $81^\circ 30'$  as clearly shown by only commenced smoothing of the casing in the area of the northern wall of the entrance to the offering chapel (see fig. 4). As it was with other monuments in this area, the casing was damaged by stone robbers to a rather large extent.

The layout of tomb AC 31 is simple and also very similar – both in its superstructure and in the substructure – to other tombs in Nakhtsare's cemetery. The entrance to the superstructure of the tomb is situated in the eastern façade (see fig. 4). Even though the southern side of the entrance has been destroyed, its width can be reconstructed, thanks to its imprint on the pavement, to 0.85 m. It was followed by an L-shaped chapel, which was 3.60 m long and 1.60 m broad, with side walls preserved maximally to a height of 1.20 m (fig. 5). The majority of the chapel's pavement was also destroyed. Its western wall is completely missing, however, two false doors can be surmised to have been in it – analogically to the situation in Khentkaus' III and Kakaibaef's mastabas (Krejčí 2016: 32). Contrary to the situation in the chapel of AC 30 (where a lower part of a false door was preserved and another false door was detected by masons' lines), there were no construction lines documented which would delimit the position of at least one false door. No fragment of the chapel's decoration was found and this was the case of the

whole tomb. The offering chapel can be listed as type 3 in Reisner's typology (Reisner 1942: 203) and dated to the second half of the Fifth Dynasty (Bárta 2002: 88, 92–93).

In connection with the evaluation of the tomb's architecture, the question of the existence of a serdab remains unresolved. According to the arrangement of the core walls in the area between the chapel's western wall (although not preserved, its position is clearly indicated by red construction lines preserved on the chapel's northern and southern side walls) and the burial chamber, there is an indication that there was no place for a serdab and its existence is thus not presumable. The same situation was attested in the case of tombs AC 25, 29 and 30.

The substructure of tomb AC 31 was accessed through a vertical shaft (see its position on fig. 4), which was 5.60 m deep. Its side walls are rather well-preserved, and only its southern wall was partially destroyed by stone robbers. Some 0.3 m above its bottom (with a rhomboidal shape, its dimensions were 1.68 × 1.60 m), on a layer of construction waste (limestone chips, crushed mud bricks, small fragments of wood) mixed with sand and ceramic sherds, offerings in the form of a head and four lower leg parts of a calf (young bovine), pottery (stands, *bd3* forms and other types) and wood fragments were found. A similar situation was documented in the mastaba of Queen Khentkaus III (Krejčí 2016: 30). An interesting fact is that the remains of the calf from AC 31 bore signs of the mummification process.

In the same level and also in the shaft's fill above this context, some items from the burial equipment of the



Fig. 4 The area of the offering chapel from the south (photo J. Krejčí)



Fig. 5 The entrance to the chapel and its surroundings (photo J. Krejčí)

**Fig. 6** The partition wall built in the entrance to the access passage leading to the burial chamber (photo J. Krejčí)



deceased were found – e.g. three copper models (a model of a libation basin and two models of adzes: 296/AC31/2016, 315/AC31/2016 and 317/AC31/2016), some textile fragments and fragments of plant remains. Following the provenance of these items, it is apparent that these objects were brought in from the burial chamber by tomb robbers. The same counts for other finds which were once part of the deceased's burial equipment – an almost complete wooden stand (for an object with a circular base – probably for a stone or copper model vessel; 182/AC31/2016 and 182a–e/AC31/2016), which was found in slightly higher levels of the shaft's fill.

At the shaft's bottom, in its southern wall, there is an entrance to a passageway leading to a burial chamber. The passageway is 0.86 m long, 1.01 m wide and 1.43–1.50 m

high. From the shaft's side, a partition wall consisting of a large block of local limestone and mud bricks was erected (fig. 6); this wall was removed during the archaeological work. The burial chamber is an east-west oriented chamber, 3.93 × 2.38 m large and 2.15 m high. Due to the repeated incursions of tomb- and stone robbers, its roof is totally missing. The side walls of the burial chamber were built of well-worked regular blocks of grey limestone, which were joined by grey-brown, mud and pink, calcareous mortar (fig. 7).

Also in the architecture of the tomb's substructure, one can confirm the uniformity of the architecture of the individual monuments in Nakhtsare's cemetery. The substructure in AC 31 can be assigned to types 3 or 4 of Reisner's typology (Reisner 1942: 87, figs. 21–22).



**Fig. 7** The burial chamber from the south-west (photo M. Frouz)

A white limestone sarcophagus, which was positioned in the western half of the chamber, was entirely destroyed by stone robbers. Besides larger fragments of white limestone, only a layer of white limestone splinters and small fragments attest its existence. Two of the sarcophagus' fragments document that its lid, which was 20 cm high (overall dimensions of the sarcophagus cannot be reconstructed), was equipped with handles for facilitating the manoeuvring of it. The stone that the sarcophagus was made of is characterized by high hardness, so it must have been a challenging undertaking to destroy it. The position of the sarcophagus was delimited by a low wall, which is preserved at its northern and southern ends (*i.e.* by the northern and southern side walls of the chamber).

The functional floor of the burial chamber was created by a levelled layer of limestone chips covering a layer of limestone detritus, crushed ceramic sherds and dark brown sand. The overall height of this floor, which lay on the afore-mentioned pavement of the chamber, varied from 5 to 15 cm. On this bevelled layer – in the eastern part of the burial chamber together with the connecting part of the entrance passage – a rather large number of items that once made up the burial equipment of the tomb's owner were found (fig. 8): three limestone canopic jars (fig. 9; 118–120/AC31/2016; *cf.* Callender 2008), three lids for the canopic jars (131–132/AC31/2016 and 136/AC31/2016), four large pottery vessels (with their fillings still inside; 114–116/AC31/2016 and 207/AC31/2016), 24 travertine model bowls (128a–x/AC31/2016), five travertine model tubular vessels (247a–e/AC31/2016) that were found together with part of a wooden support or box in which they were originally placed (272/AC31/2016, see pl. 1),<sup>1</sup> a complete and very carefully worked *psš-kf* knife made of flint (271/AC31/2016, see pl. 3),<sup>2</sup> a travertine model of a conical vessel (267/AC31/2016, see pl. 3), 24 copper models of instruments (blades of adzes, chisels, axes, and a saw), bowls and libation basins, moreover animal bones and in addition to these, fragments of textiles and bandages, as well as pottery. Furthermore, a large number of ecofacts was found – especially seeds, parts of plants, fragments of wood, ropes, owls' pellets,<sup>3</sup> beetles, *etc.* The archaeological excavation of the burial chamber, the access passage and lowermost part of the vertical shaft was carried out with utmost care and the archaeological documentation (both plan and photographic) was done very carefully.

This collection of finds represents an important result of the archaeological unearthing of tomb AC 31 – mainly because it shows that the tomb owner was a member of high social standing of Fifth Dynasty Egyptian society. One of the most important finds among the items coming from the deceased's burial equipment is certainly represented by the *psš-kf* knife and the model conical vessel found in the passage connecting the burial chamber and vertical shaft (see pl. 3). They were apparently – as has already been discussed – transferred to this spot by the tomb robbers. This find is not purely unique in the Abusir royal necropolis as examples from Neferirkare's and Raneferef's mortuary complexes show – however, it does not diminish its importance. More analogical – in its form, material and the technology with which it was made – is the *psš-kf*

knife from Neferirkare's complex (van Walsem 1978–1979: 201–202) which was made – as is the case of the knife from tomb AC 31 – by means of chipping flint (*cf.* Svoboda 2006). The *psš-kf* found in Raneferef's mortuary temple (Verner 2006: 61, fig. 1.2.49) was made of basalt with polished surface. Nevertheless, the dimensions of these finds are similar. The method which was used for these three individual items was determined by the material which was used for their manufacture. The find of the travertine miniature vessel with a high neck and plain flat rim very close to the *psš-kf* knife enables us to suppose that it represents a *hnt* vessel, which was part of the set of objects connected with the Opening of the Mouth ritual (*cf.*, for example, Roth 1992: 115–116, fig. 1). An analogical example (although from a temple inventory) is represented by two beakers with conical sides and direct rims and flat bases, which were found together with the above-mentioned *peseshkef* knife in Raneferef's mortuary temple (Verner 2006: 61, fig. 1.2.49; Vlčková 2006a: 351, fig. 2.6.12; Vlčková 2006b: 63). These two vessels were, however, made of materials of higher quality – basalt and quartz. All three (the one from tomb AC 31 and two from Raneferef's mortuary temple) model vessels can be listed as type XIV of Aston's typology of stone vessels (Aston 1994: 180).

Unfortunately, the precise function of *psš-kf* knives within the framework of the Opening of the Mouth ritual is still a matter of discussion, and this question has not been answered satisfactorily yet (van Walsem 1978–1979; Hikade 2003; Grave-Brown 2015: 24–25). There are two textual sources mentioning *psš-kf* knives. Firstly, the Abusir papyrus archives (Posener-Kriéger – Cenival 1968: pls. 12–14; Posener-Kriéger 1976: 190–191), secondly, the Pyramid Texts (Allen 2005). The *peseshkef* knife was used during the Opening of the Mouth ritual (Otto 1960) as one of the instruments that touched the mummy or the statue of the deceased in order to restore his/her senses. The contents of the Pyramid Texts led René van Walsem to the conclusion that this instrument was used to support the lower jaw of the deceased (to “make firm the jaw” of the deceased; see van Walsem 1978–1978). Nevertheless, this explanation is rather insufficient. Ann Macy Roth (1992: 124–125, 127, 146–147) supposed that the *psš-kf* knives were used to cut the umbilical cord of a new-born child. This explanation shows that the *peseshkef* might have played an important role in the earlier, constitutive stages of the Opening of the Mouth ritual. Roth supposes that its important role was its “position between the coming forth of the reborn person from the womb and his beginning to take nourishment. If that role was the cutting of the umbilical cord, both its connection with rebirth and its name would be explained.” (Roth 1992: 147). In any case, the only confident conclusion which can be made in this respect is that the literal sources mention that the main purpose of the Opening of the Mouth ritual was to “make firm the jaw”.

The inventory of tomb AC 31 also encompasses finds of wooden objects – two mirror handles, an almost completely preserved stand possibly for positioning a miniature (stone) vessel (see pl. 2) and part of a box for keeping seven miniature stone vessels (see pl. 1).<sup>4</sup> The wooden



Fig. 8 The items from the burial equipment *in situ* in the eastern part of the burial chamber (photo J. Krejčí)

objects found in tomb AC 31 represent, together with those from tomb AC 29, important attestation of the components of the funerary equipment of the then elite, which has not yet been evidenced on a large scale through the results of the archaeological excavations.<sup>5</sup> Besides this, the collection of copper models found in tomb AC 31 represents a complete set of models, which is standard for the period

in which the tomb came into existence (Martin Odler, personal communication). Nevertheless, the quality of the travertine model bowls is not the highest (the tubular model vessels are exception in this respect and were made of material of a higher quality and precision). The same may be said for the canopic jars, which are not made with the utmost accuracy and also show traces of surface repairs –



Fig. 9 The canopic jars and lids found in the burial chamber (photo M. Frouz)

a fact which is not unusual for the inventories unearthed in the tombs belonging to the higher levels of the Egyptians during the period when the tombs in Nakhtsare's cemetery were built.

Despite the total destruction of the sarcophagus, some parts of the mummified body of the tomb's owner – a lower jaw, pelvis, a lower part of the legs (in anatomical position, see fig. 8), vertebrae, femurs, and other parts of the skeleton – were found. This anthropological material gained through the excavation of tomb AC 31 shall be analysed by specialists later. The sex of the tomb owner, which might have helped with the ascription of the tomb to a particular person, will not be known until this is done. Contrary to the situation documented around the other three tombs in Nakhtsare's cemetery, no secondary burial was unearthed during the archaeological work in tomb AC 31 and its immediate surroundings.

### Masons' marks and construction lines

Because of the large-scale destruction of the offering chapel with its false door(s), as well as the (supposed) relief decoration, the only epigraphic source of information concerning the owner of tomb AC 31 are the masons' inscriptions. Not more than fifty of them were, together with construction lines, documented on the core masonry in the area of the chapel, as well as the side walls of the shaft and of the burial chamber of the tomb. Among other types, the inscriptions include not only construction instructions, but also dates – however, without entries of cattle counting. The number of preserved masons' inscriptions is much smaller than in the neighbouring tombs, especially in the mastaba of Queen Khentkaus III (Krejčí 2016: 32–33). It is difficult to determine whether this is a consequence of the fact that the tomb's interior spaces were left open for a long period after their destruction. Thus, the inscriptions on their side walls might have faded out due to weathering (tiny remains were documented on the side walls of the burial chamber and of the vertical shaft). Or perhaps the high status of Queen Khentkaus III might have led the masons to endeavour to emphasise her high social status with a plethora of masons' inscriptions with her name and titles on the side walls and floor pavement of her burial chamber. Contrary to the situation in the other tombs of Nakhtsare's cemetery, the name of the tomb owner has not thus been identified among them, yet. Whether the title *ḥntj smsw (izt)*, “preeminent of the oldest ones (of the palace/office)” (Jones 2000: 691, no. 2528), which was documented *in situ* and on loose blocks on many occasions, especially in the area of the vertical shaft, belongs to the tomb owner is not clear at this moment of time.

An interesting part of the collection of masons' inscriptions are those mentioning the name of the pyramid complex of Userkaf (found both on limestone blocks *in situ* as well as on loose blocks) *W<sup>c</sup>b-išwt-Wšr-k<sup>c</sup>f*, “Pure are the cult places of Userkaf”. Similar marks were also unearthed in the nearby tomb complex Lepsius no. 25 (Krejčí – Callender – Verner *et al.* 2008: 220, 222, 224, 227–228). As has already been shown (Krejčí – Callender – Verner *et al.* 2008: 229–230), our knowledge on the circulation and usage of the building material in the construction sites

of the royal necropolis and in this way these inscriptions can produce only a *post quem* dating criterion (*i.e.* the time range for tomb AC 31's dating starts with the reign of Sahure).

On the side walls of the chapel, burial chamber and the shaft, vertical and horizontal construction lines indicating the width and length of the interior space levels above the chapel's and burial chamber's pavements were documented during the archaeological excavation, as well.

### Areas outside the mastaba

Besides the tomb itself, the areas to the north, east and south of the tomb were also excavated. Additionally, a test trench between the mastaba of Khentkaus and tomb AC 31 was excavated. In all these areas, a floor consisting of a layer of mud (10 to 15 cm high) was laid down directly on the surface of the desert. The quality of the mud floors in all these extents changed rather distinctly. In the test trench unearthed between tombs AC 31 and AC 30 (*i.e.* to the north of tomb AC 31), the quality of the floor was high; its surface was even and rather hard (see fig. 10). To the east of the mastaba itself, the surface of the mud floor was spread with a very thin layer of mud in order to make it very flat and fine. Along the southern part of the eastern façade of the tomb as well as the northern and southern façade, the surface of the floor was of a lower quality, made of a coarser material with a rather high admixture of limestone splinters and small fragments of weathered pottery and gravel. In several places, the surface of the floor was broken by debris.

Unlike other open areas in the royal necropolis with a mud floor – *e.g.* around Nakhtsare's tomb (see above) or the courtyard in neighbouring Raneferef's mortuary temple, thin mud layers with signs of regular cleaning, white-washing and repair were not documented in the space around tomb AC 31 (see also Krejčí 2013: 33). It thus makes it possible to suppose that the cultic use of these tombs was not very long which is demonstrable by the rather low number of sherds found in the contact layers above the mud floor around the mastaba. This low number of pottery finds is consistent with the fact that – as it seems from general observations of the contents of the relevant archaeological contexts – the ceramic types documented in these contact layers do not exceed the end of the Fifth Dynasty (Katarína Arias Kytarová, personal communication).<sup>6</sup> These ceramic contexts contain mainly cultic pottery, especially miniature vessels, but also fragments of vessels belonging to other types. In the mud floor of the mastaba, several fireplaces were documented. Some of them (see below) can be connected with cultic activities.

### Mud brick structures outside the mastaba

In addition to the areas around tomb AC 31 itself, two test trenches – to the north and to the south – were dug. Clearing the space between tombs AC 30 and AC 31 had to clarify the situation in this area and to document the existence of an enclosure wall of the tomb of Khentkaus III, conjectured before the excavation. The area of the test





Fig. 10 The test trench between tombs AC 30 and AC 31, with the mud flooring and the negative imprint of a (mud brick?) wall (photo M. Frouz)



Fig. 11 The mud brick annexe built in front of the entrance (photo J. Krejčí)



**Fig. 12** The mud brick altar constructed at the foot of the southern outer wall of the annexe, with the fireplace (photo J. Krejčí)

trench was covered with 2.50–3.00 m high layers of pure wind-blown sand, which were partially deposited on rather thin contact layers of brown sand mixed with broken mud bricks. Nevertheless, the contact layers were completely missing in some parts of this trench. The work in the northern test trench also unearthed a negative impression of a wall very probably built of mud bricks, which, in the part documented in this trench, was oriented along an east-west axis, in the direction between the tombs (8.80 m to the north of tomb AC 31). The wall was rather thin, as was shown by the width of its imprint, which was 0.20–0.30 m, and its foundation “ditch” was only 3 cm deep (see fig. 10). It is thus very probable that it was also rather low. This wall stood on top of an undulation of the floor, which was created apparently by the above-mentioned mud layer covering a low sand dune or undulation.

The situation in front of the entrance to the mastaba’s chapel was, however, more interesting. In this section of the trench made along the eastern façade of the mastaba, a low (max. height: 0.30 m) rectangular mud brick construction was uncovered (fig. 11). The dimensions of this north-south oriented annexe were 3.95 × 2.25 m, and its preserved height was only 24–26 cm. It was built onto the eastern outer wall of the tomb – the annexe’s northern and southern walls were built directly onto it.

Surprisingly, there was no clear entrance visible in any wall of this annexe. A 0.69 m wide (secondary) break in its eastern wall was located by the south-eastern corner. It is, however, questionable whether it might have been used as an entrance. The area delimited by the wall was completely empty, and its floor consisted of the same type of mud flooring as outside the annexe. Certainly the most important feature was found added to the outer side of its southern wing. In this place a simple altar was set (see fig. 12). It consisted of two “benches” made of at least two mud bricks each, which were 41–44 × 17–19 cm large. These “benches” were thoroughly modelled and their

upper edges were carefully rounded off. Their surfaces consisted of a layer of mud with a slight admixture of fine straw and they were connected to the mud floor of the area around the altar. The function of this tiny construction seems to be attested by a large fireplace which was detected in the surface of the mud floor in front of it. However, only a few of the other finds which can be connected with a cultic function were found in the area around the altar, and these consisted of sherds and several miniature vessels mainly. The existence of this annexe, and especially the fact that originally its very low walls did not include an entrance, do not facilitate the determination of its function – besides a cultic function, one has to consider a very practical implication: sand is accumulated rather rapidly in this part of the Abusir pyramid necropolis. The main reason for this is its unprotected position with respect to winds blowing from the south- and north-west of the constructions. It seems very probable that the annexe was meant to stop sand from filling the area in front of the entrance to the tomb and the entrance itself. In Abusir Centre, there are many analogical attestations (usually in the form of two low mud brick walls flanking the entrance to the monument) – the tomb of Khentkaus III (see below), the entrance area to the mortuary temple of Raneferef (Verner 2006: 78–82), the entrance to the mortuary temple of Khentkaus II (Verner 2001: 24–31, fig. 3a) or in front of the entrance to the chapel in the eastern mastaba of the tomb complex Lepsius no. 25 (Krejčí 2008: 162–164, figs. 5.19–5.23)

The (supposed) mud brick wall between tombs AC 30 and 31 is not the only one which was attested during the excavation of AC 31. In the 4.90 meters long trench made to the south of the mastaba, a tiny wall made of mud bricks was unearthed at the southernmost limit of the mud flooring covering the area around the tombs in Nachtsare’s cemetery. The wall constituted only one row of bricks. It is preserved only up to a height of 8 cm. The material of the

bricks is (contrary to those of the annexe) of rather low quality, with high admixture of sand and *tafl*, which shows that these bricks were not made down in the Nile valley, but on the site using older, crushed mud bricks (Čílek – Novák – Krejčí – Hladil – Lang 2010: 53). The wall delimited the area of the cemetery optically, and it cannot be excluded that it represented the southern limit of the royal necropolis. There are two reasons for this hypothesis: firstly, the terrain to the south of the tomb slopes down towards the shallow wadi delimiting the royal necropolis from the south; secondly only sand was found in the area to the south of this “border” mud brick wall and the edge of the mud plaster flooring. Unfortunately, there was no time to excavate a larger extent of this very interesting and important situation.

The archaeological excavation of tomb AC 31 also brought to light narrow bands of white colour on the mud floor of the courtyard to the east of tomb AC 31, a feature which was detected by archaeological excavations in front of the entrances to the chapels of all other three mastabas in Nakhtsare’s cemetery (Krejčí – Callender – Verner *et al.* 2008; Krejčí 2013 and 2016). As was the case with the mastaba of Khentkaus III, the results of the excavation of tomb AC 31 also show that these non-standard white stripes were used as construction lines for setting the position of additional mud brick walls constructed in front of these tombs. Remains of these stripes had already faded when they were detected along the walls of the annexe. Nevertheless, rather thick bands of white colour were documented in the area of its altar, and it seems that this was a kind of endeavour to draw attention to the altar and to underline the importance of its function (*cf.* Krejčí 2016 and Krejčí – Arias Kytarová – Odler 2015).

### The tomb owner and the dating of the tomb

Contrary to the situation in the mastabas of Nakhtsare, Kakaibaef and Khentkaus III, a name attributable to the tomb owner was not detected. Among the masons’ marks, the name of Queen Khentkaus – *mwt nšwt Hnt-k3w.š* (II or III) – was attested only once, in the masonry of the eastern wall of the burial chamber. The block with the masons’ mark was set into the wall (just above the chamber’s pavement) with the inscription upside-down. It is thus very probable that this name is not connected with the tomb owner. Due to the number of attestations, it is not improbable that the tomb owner bore the title *hntj-smsw (izt)*, a title not very frequently documented in the epigraphic material of the Fifth Dynasty. Concerning the identity of the tomb owner, it can be only hypothesized at this stage of the research that due to the position of tomb AC 31 in the royal necropolis (in Nakhtsare’s cemetery), this person might have been a member of the royal family (of Raneferef) or of the then elite. Items from the burial equipment found in the burial chamber and shaft should be considered in their level of craftsmanship as representative enough for a member of high social strata of the then Egyptian state.

The dating of the tomb’s construction can be, besides the above-mentioned title, conjectured only on the basis of circumstantial evidence, because no item that would bring

some specific epigraphic data concerning it (a cattle count date, *etc.*), was found during the research of tomb AC 31. The only exceptions are the masons’ inscriptions mentioning the name of Userkaf’s pyramid complex in Saqqara. As has been shown, this establishes only the start of the time-range into which the tomb can be dated. Given that the tomb is, in the construction technologies used and the layout and dimensions, fully comparable with other tombs on Nakhtsare’s cemetery, and given the preserved items from the burial equipment of the tomb owner as well as the horizontal stratigraphy on the site, it is therefore possible to date it, as has been done with other tombs in the cemetery, to the second half of the Fifth Dynasty (*cf.* Krejčí 2016: 38).

### Notes:

- <sup>1</sup> *Cf.* corresponding find from tomb complex Lepsius no. 25/1 (Krejčí – Callender – Verner *et al.* 2008: 192, fig. 5.83).
- <sup>2</sup> See *e.g.* Borchardt’s find from Neferirkare’s pyramid complex (van Walsem 1978–1979).
- <sup>3</sup> Compare the finds of owls’ pellets from tomb AC 29 (Sůvová – Krejčí 2016).
- <sup>4</sup> *Cf.* later finds of a slightly different function (Killen 1994: 26–28, fig. 46, pl. 14).
- <sup>5</sup> Nevertheless, finds of the wooden offering tables from the cemetery of nobles located to the east of Nyuserre’s pyramid (Borchardt 1907: 129–130, Abb. 109–110) and comparing the wooden stand (182/AC31/2016), or part of a small table or a chair (?) found in the mastaba of Kakaibaef in 2013 (Krejčí 2013) with these examples, enables us to state a very high degree of similarity in the technologies with which they were manufactured.
- <sup>6</sup> It should be emphasized here that a thorough analysis of the pottery finds from tomb AC 31 could not be undertaken due to time constraints and shall be done in the near future.

### Bibliography:

- Allen, James P.  
2005 *The Ancient Egyptian Pyramid Texts*, Atlanta: Society of Biblical Literature [Writings from the Ancient World 23].
- Aston, Barbara G.  
1994 *Ancient Egyptian Stone Vessels. Materials and Forms*, Heidelberg: Heidelberger Orientverlag [Studien zur Archäologie und Geschichte Altägyptens 5].
- Bárta, Miroslav  
2002 “The L-shaped chapels discovered by A. Mariette at Saqqara, a case for Innovation?”, in: Eldamaty, Mamdouh – Trad, Mai (eds.). *Egyptian Museum Collections around the World. Studies for the Centennial of the Egyptian Museum, Cairo. Vol. I*, Cairo: Supreme Council of Antiquities, pp. 87–98.
- Borchardt, Ludwig  
1907 *Das Grabdenkmal des Königs Ne-user-re<sup>c</sup>*, Leipzig: Hinrichs’sche Buchhandlung [Ausgrabungen der Deutschen Orient-Gesellschaft in Abusir 1902–1904. Bd. 1].
- Callender, Vivienne Gae  
2008 “Finds”, in: Krejčí, Jaromír – Callender, Vivienne G. – Verner, Miroslav *et al.* *Minor Tombs in the Royal Necropolis I (The Mastabas of Nebyemneferes and Nakhtsare, Pyramid Complex Lepsius no. 24 and Tomb Complex Lepsius no. 25)*, Prague: Czech Institute of Egyptology, Faculty of Arts, Charles University in Prague [Abusir XII], pp. 97–134.

- Cílek, Václav – Novák, Jiří – Krejčí, Jaromír – Hladil, Jindřich – Lang, Miloš  
2010 “Rocks and building materials of the Abusir area”, in: Krejčí, Jaromír. *The Royal Necropolis in Abusir*, Prague: Czech Institute of Egyptology, Faculty of Arts, Charles University in Prague [Abusir XVIII], pp. 31–64.
- Graves-Brown, Carolyn  
2015 “Dagger-like flint implements in Bronze Age Egypt”, in: Frieman, Catherine – Valentin Eriksen, Berit (eds.). *Flint daggers in prehistoric Europe*, Oxford: Oxbow Books, pp. 19–31.
- Hikade, Thomas  
2003 “Getting the ritual right—fishtail knives in Predynastic Egypt”, in: Meyer, Sibylle (ed.). *Egypt - Temple of the Whole World. Studies in Honor of Jan Assmann*, Leiden – Boston: Brill, pp. 137–151.
- Jones, Dilwyn  
2000 *An Index of Ancient Egyptian Titles, Epithets and Phrases of the Old Kingdom*, Oxford: Archaeopress [BAR International Series 866].
- Killen, Geoffrey  
1994 *Ancient Egyptian Furniture. Boxes, Chests, Footstools*, Warminster: Aris & Phillips.
- Krejčí, Jaromír  
2008 “The Mastaba of Nakhtsare”, in: Krejčí, Jaromír – Callender, Vivienne G. – Verner, Miroslav *et al. Minor Tombs in the Royal Necropolis I (The Mastabas of Nebtyemneferes and Nakhtsare, Pyramid Complex Lepsius no. 24 and Tomb Complex Lepsius no. 25)*, Prague: Czech Institute of Egyptology, Faculty of Arts, Charles University in Prague [Abusir XII], pp. 37–68.
- 2010 *The Royal Necropolis in Abusir*, Prague: Czech Institute of Egyptology, Faculty of Arts, Charles University in Prague [Abusir XVIII].
- 2013 “Das Grab des Kakaibaef in Abusir”, *Sokar* 27/2, pp. 26–37.
- 2016 “Die Mastaba der Königin Chentkaus III. (Grab AC 30) in Abusir”, *Sokar* 32/1, pp. 22–39.
- Krejčí, Jaromír – Arias Kytarová, Katarína – Odler, Martin  
2015 “Archaeological excavation of the mastaba of Queen Khentkaus III (Tomb AC 30)”, *Prague Egyptological Studies* XV, pp. 28–42.
- Krejčí, Jaromír – Callender, Vivienne G. – Verner, Miroslav *et al.*  
2008 *Minor Tombs in the Royal Necropolis I (The Mastabas of Nebtyemneferes and Nakhtsare, Pyramid Complex Lepsius no. 24 and Tomb Complex Lepsius no. 25)*, Prague: Czech Institute of Egyptology, Faculty of Arts, Charles University in Prague [Abusir XII].
- Otto, Eberhard  
1960 *Das ägyptische Mundöffnungsritual. Teil I–II*, Wiesbaden: Otto Harrassowitz [Ägyptologische Abhandlungen 3].
- Posener-Kriéger, Paule  
1976 *Les archives du temple funéraire de Néferirkare-Kakai. Traduction et commentaire I–II*, Le Caire: Institut français d'archéologie orientale [Bibliothèque d'étude 65].
- Posener-Kriéger, Paule – Cenival, Jean-Louis de  
1968 *Hieratic Papyri in the British Museum. The Abu Sir Papyri*, London: Trustees of the British Museum [Hieratic Papyri in the British Museum, 5th series].
- Reisner, George Andrew  
1942 *A History of the Giza Necropolis, Vol. I*, Cambridge, MA: Harvard University Press.
- Roth, Ann Macy  
1992 “The *psš-kf* and the ‘opening of the mouth’ ceremony: a ritual of birth and rebirth”, *The Journal of Egyptian Archaeology* 78, pp. 113–148.
- Súvová, Zdeňka – Krejčí, Jaromír  
2016 “Potrava sovy pálené (*Tyto alba*) ze starověkého Abúsíru: nálezy z Kakaibaefovy hrobky (AC 29)” (The Common Barn-owl (*Tyto alba*) diet from ancient Abusir: Finds from the tomb of Kakaibaef (AC 29)), *Pražské egyptologické studie* XIV, pp. 82–88.
- Svoboda, Jiří  
2006 “The king’s knives. Chipped lithics from Raneferef’s mortuary complex”, in: Verner, Miroslav *et al. The Pyramid Complex of Raneferef. The Archaeology*, Prague: Charles University in Prague, Faculty of Arts – Academia [Abusir IX], pp. 502–512.
- Verner, Miroslav  
2001 *The Pyramid Complex of Khentkaus*, Praha: Karolinum [Abusir III].
- 2006 “Part 1. Archaeology”, in: Verner, Miroslav *et al. The Pyramid Complex of Raneferef. The Archaeology*, Prague: Charles University in Prague, Faculty of Arts – Academia [Abusir IX], pp. 3–187.
- Vlčková, Petra  
2006a “The Stone Vessels from the Mortuary Complex of King Raneferef”, in: Verner, Miroslav *et al. The Pyramid Complex of Raneferef. The Archaeology*, Prague: Charles University in Prague, Faculty of Arts – Academia [Abusir IX], pp. 325–359.
- 2006b *Stone vessels from the mortuary complex of Raneferef at Abusir*, Prague: Czech Institute of Egyptology, Faculty of Arts, Charles University in Prague [Abusir XV].
- van Walsem, René  
1978–1979 “The *psš-kf*. An Investigation of an Ancient Egyptian Funerary Instrument”, *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* LIX–LX, pp. 193–249.

### Abstract:

The article deals with the results of the archaeological excavation of tomb AC 31, which is located in Nakhtsare’s cemetery, at the southern edge of the royal necropolis of Abusir. The tomb, built during the second half of the Fifth Dynasty, was destroyed and deprived of its decoration by tomb- and stone robbers to the extent that any ascription to a certain person is not possible. On the other hand, a relatively large part of its burial equipment was preserved.

Old Kingdom – Fifth Dynasty – Abusir – mastaba – burial equipment – *peseshkef* – copper models

**Jaromír Krejčí** ([jaromir.krejci@ff.cuni.cz](mailto:jaromir.krejci@ff.cuni.cz))  
Czech Institute of Egyptology, Faculty of Arts, Charles University