The Polish-Egyptian archaeological expedition pursued activities to the west of the Djoser pyramid complex in the period between August 21 and October 18, 1999.¹)

¹) The expedition was staffed by the following: Prof. Dr. Karol Myśliwiec, director; Prof. Dr. Maria Kaczmarek, anthropologist; Prof. Dr. Andrzej Niwiński, Mr. Andrzej Ćwieck, Mr. Kamil Kuraszkiewicz, Mr. Mariusz Jucha, Ms Dorota Czerwińska, Ms Agnieszka Kowalska, egyptologists; Ms Anna Wodzińska, ceramologist; Mr. Zbigniew Godziejewski, Ms Anna Kłosowska, Ms Joanna Lis, Ms Monika Rzegocińska, conservators; Mr. Tomasz Herbich, geophysicist; Ms Jowita Marys, Ms Małgorzata Radomska, Mr. Krzysztof Dymkowski, archaeologists; Ms Daria Tarara, Ms Marzenna Olejniczak, documentalists; Mr. Marek Puszkarski, artist; Mr. Stefan Sadowski and Mr. Maciej Jaworki, photographers. The Supreme Council of Antiquities was represented by Mr. Tawfik Abd El-Latif.

Our task would have been impossible to accomplish were it not for the efficient and friendly assistance on the part of the highest authorities of the Supreme Council of Antiquities of Egypt, its Secretary General, Prof. Dr. Gaballa Ali Gaballa and the Giza Plateau Director, Dr. Zahi Hawass, to whom we address herewith our deepest gratitude. We are also indebted to Saqqara District Director Mr. Mohamed Hagras and Chief Inspector of South Saqqara, Mr. Magdi El-Ghandour, for their personal involvement in the progress of our work.

Sharing in the success of the expedition thanks to their competence, friendliness and helpfulness are our Inspector, Mr. Tawfik Abd El-Latif, and our Rais, Mr. Ahmed Abdou Kereti.
Once again the conservation and preservation of discovered antiquities was the most important task facing the expedition. A team of four conservators (from the National Museums in Warsaw and Cracow, and from Toruń University) continued the task of preserving the tomb paintings for posterity. Their choice of methods and materials were aided by the results of the past few months of rigorous chemical, geological, physical and other analyses that were conducted at specialized institutes in Poland on samples taken from the local rock, as well as pigments used in the decoration of the funerary chapel of the vizier Fefi.

Thanks to considerable financial assistance from the Rector of Warsaw University, the expedition was able to construct a shelter designed to protect the entire funerary chapel of Meref-nebef from any external climatic influence (Fig. 1). Built of limestone bricks and covered with a multi-layered insulated concrete roof, this structure should provide effective protection for long years to come. Ventilation holes in the roof and walls will assure sufficient air circulation for maintaining a specific microclimate that is essential for retaining the integrity of the reliefs and paintings inside the tomb. Shelter height was governed by

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Fig. 1. Shelter built to protect the funerary chapel of the vizier Meref-nebef (Photo M. Jawornicki)
what remains of a mudbrick wall atop the southern part of the facade, originally belonging to the superstructure. A brownish-gray finishing mortar coat on the shelter walls was designed to harmonize the structure with the surrounding landscape.

This season the excavations were concentrated in three areas adjoining the sectors investigated in previous years (Fig. 2):  
- To the east, the work was focused in square H, which adjoins sector G excavated in 1998, and square I in its central part, extending the explored area further in the direction of the step pyramid;  
- To the south, explorations concentrated on an area abutting on the south the wall with recesses of Shaft 1 (southern extension of Area D and D1);  
- Finally, a 30 x 3 m trial pit (F1) was dug to the west of the northern end of Area F.

**AREA H**

Area H measures 10 x 20 m, the longer side running longitudinally. Area I, while supposed to measure a corresponding 5 x 10 m, had to be extended beyond the planned limits in view of the overlying sand, which demands a wide security border to be left around each trench. The excavation of the area revealed it to be an extension of the necropolis dating from late Old Kingdom times, possibly also the First Intermediate Period, a necropolis that is located between the tomb of Merefnebef and the pyramid. Twelve new shafts have been discovered, representing a variety of shapes and dimensions (Fig. 3). Some are broad and deep, opening at the bottom into a simple funerary chamber, which is positioned off the west side of the shaft as a rule (e.g. shafts 28, 31); others are less broad and deep, and end in an irregular or leveled floor, there not being any chamber at all (e.g. shafts 26, 34). Shafts of the latter category have yielded archaeological evidence, mainly pottery, but also remains of a wooden box (Shaft 34). It is still difficult to say whether they had originally housed any burials. Almost every shaft preserves some remnants of the superstructure in the form of irregular stone-block and mudbrick walls erected in 1998.

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**References**

Fig. 3. Late Old Kingdom shafts and funerary chapels in Areas H and I
(Drawing M. Puszkarski)
on top of the rock, into which the shaft had been hewn. The deepest of the shafts investigated this year (nos. 28 and 31), have a kind of "floor" with an irregular hole pierced in it providing access to the lower part underneath. These shafts obviously never housed coffins of any kind.

All of the shafts explored this season turned out to have been plundered in antiquity, but with no clear evidence of exactly when. The intrusion may have occurred in Ptolemaic and Roman times, for instance, when several mummies were deposited not only in the sand and gravel strata overlying the Old Kingdom necropolis, but sometimes also inside the ancient walls and in the upper sections of various shafts. It is equally possible, however, that the plundering took place as early as the end of the Old Kingdom period, as there is precious little pottery of later date recorded from inside the shafts.

Objects that escaped the eye of the thieves include miniature limestone models of a variety of objects, usually retrieved from the bottom of shafts, and inscribed stone fragments, such as a false-door stele in two pieces of the lady Kheti, priestess of Hathor (Fig. 4), discovered at the bottom of Shaft 14 (Area G), also explored this year. Current work provided new insight into the necropolis topography. The cemetery apparently consisted of several units, each comprising an oblong "chapel" or N-S oriented court fitted with a "false door" inserted in the western part of the retaining wall, that is, facing east. Outside the western limit of such a chapel, one finds shafts, usually three, belonging to this unit. The shafts are covered with a layer of dense tafl, comprising gravel and mudbrick debris, as well as potsherds in quantity. To the west of the shafts there is a big wall running parallel to the chapel and enclosing the compound.

All of the described elements are quite well preserved in a compound unearthed in the northeastern part of Area H, where it joins Area I. A fragmentary "false door" still stands in situ near the northern end of the west wall of the "chapel". The upper part of this stele is missing and the limestone, of which it is made, is very friable; enough is preserved of the hieroglyphic inscription to identify the nobleman as one Peh-en-Ptah (Pehi being the short name). The stele is mounted in a mud-brick structure encasing it on three sides, the two side jambs projecting forward. The red coloring of this facade is partly preserved on the stele and the mudbrick frame. Indeed, the extent to which this surface was considered a single entity is indicated by the figure of the deceased in our left-hand corner, which is represented partly on the stele and partly on the jamb. The object underwent extensive conservation treatment over the course of the campaign this year and will be left in situ, protected by another newly-erected shelter, built this time of mudbrick. This particular compound, considered as representative for the others, comprises a "chapel" measuring 8.2 m from north to south and 1.3 m from east to west. The unit, including the compound wall on the west, is 8.7 m long (N-S) and 7.2 m wide (E-W). An observable eastward inclination in the eastern face of the compound's west wall, which is some 0.65 m thick, may constitute evidence for a mudbrick vault once rising above the dense tafl layer superimposed on the shafts.

Interestingly, the described compound wall, which is of a yellowish-gray brick, is doubled with another thick wall (measuring 0.62 m) added onto its west side, this wall made of a black-colored brick and delimiting the enclosure of yet another chapel (no. 2) on the east.
Fig. 4. False door of Kheti, priestess of Hathor. Limestone. Found in Shaft 14 (Photo M. Jawornicki)
To the south of this funerary compound, i.e., in the southern end of Areas H and I, a study of the stratigraphy revealed a succession of layers comprising structures dating to various periods. The upper stratum, which is 2.10 m deep and which yielded loose blocks of a white limestone lying in sand, ends with a horizontal platform built of large-size bricks (32-34 x 16 x 10 cm) of a black color, topped with clay pugging. It was erected without foundations, directly on a 1.04 m thick layer of pure yellow sand. A sloping ramp-like mudbrick wall running E-W can be seen along the northern border of the platform, separating it from the Old Kingdom necropolis lying 1.47 m below its level. None of the other edges of this platform have been explored, the western part having been destroyed, the southern located dangerously close to the modern storeroom for excavations to be possible, and the eastern one continuing eastwards under still unexcavated strata, to be investigated in the coming season. In its present state, the platform measures 8.5 m from east to west and 10 m from north to south. At the southern end, the platform surface is disturbed, with many of the bricks found lying out of their original context. The "ramp" at the northern side is 0.7 m high at its eastern end and slopes westwards at an angle of c. 5°.
While its function remains to be ascertained, it appears that at least in terms of the stratigraphy this monumental structure should be associated with the large structure of reused limestone blocks unearthed slightly further west (in Area G) in the previous campaign. The level of that structure was only slightly lower than that of the platform, and both were set on a layer of pure sand. The burials and pottery deposits of the Ptolemaic period found within the former may be considered as diagnostic of the platform as well.

A study of the stratigraphy below the platform on the west has shown that the thick level of sand below the platform meets a thinner (43 cm) layer of compact taf, found reposing on a black mud floor (4 cm thick) overlying the Old Kingdom structures (Fig. 5). Also the Old Kingdom walls and floors reveal a complex stratification that is witness to numerous repairs and rebuilding undergone by the "chapels", courts and other structures whilst they remained in use.

This is particularly the case of an unique structure that was uncovered near the southwestern corner of Area H. The southwestern part of its floor was found to be destroyed and filled with rubble that included limestone blocks and architectural elements from tomb superstructures. Two of these, a jamb and a lintel in two fragments showing four representations of the deceased, are inscribed for a nobleman named Ni-Pepi (Fig. 6). Although discovered in a secondary context, these fragments should most probably be connected with one of the shafts abutting this curious mudbrick structure on the west (nos. 32 and 33). The titles of this Ni-Pepi are different from those of the nobleman of similar name, whose tomb had been found in South Saqqara, west of the pyramid of Pepi II.3)

Fig. 6. Lintel of Ni-Pepi. Limestone. Found east of Shaft 32
(Drawing K. Kuraskiewicz)

3) PM III2, fasc. 2, 686.
AREA D

The large trial pit (5 x 5 m) in the southern part of Area D and its southern extension (D1) brought to light one more shaft (no. 27) dating to the times of the Late Old Kingdom. Simple in design, it has a small western funerary chamber at the bottom. Finds included nine miniature limestone models of various objects (e.g. grindstones, braziers, basket, vessels etc.) and three wooden figurines. Two of these, extremely fine in form, preserve some of the original painted decoration on a white-wash coating (Figs. 7-8). Most of these objects were found lying inside the funerary chamber, a few came from the shaft filling.

Figs. 7-8. Two different wooden figurines found in Shaft 27 (Area D1) (Photos M. Jawornicki)
AREA F

The 3-m wide pit extending the excavations in sector F westwards runs for a distance of some 30 m from the west wall of the court belonging to the tomb of Meref-nebef. In its eastern part, this trial pit brought to light the leveled surface of the rock extending 13-14 m westwards, even with the "upper court" that adjoins the funerary chapel of Meref-nebef. Two parallel rows of large irregular limestone blocks cross this area from north to south. The first row, comprising blocks standing directly on the rock, is found at a distance of 5.80 m from the "upper court" wall. The second one, located 6.20 m further west, is more sophisticated in construction: The blocks are set on a simple floor of mudbrick, which may be all that remains of a destroyed wall. Just behind this structure, at a distance of 13-14 m from the western wall of the "upper court", the rock breaks off vertically. At a depth of 1.40 m, it reaches a lower platform, which extends to the west. The edge of the "upper plateau" is quite irregular in shape, although it does not seem to be a natural geological formation. Also the "lower plateau" is not a homogeneous structure. A shaft (Fig. 9), which is quite big at the top (2.40 x 2.30 m), hewn in the rock some 9.5 m away from the east edge of this "lower plateau", narrows considerably at 1.40 m down, at which point it measures 1.65 x 1.80 m, and continues to diminish in size to reach 1.10 x 1.20 m at the bottom, 8 m down.

The place must have been well known and frequented in Ptolemaic times to judge by the many burials of this late date that were found accumulated in the vicinity of the shaft.

At least 29 burials have been found during this campaign. Some still preserve remains of cartonnages, featuring elements like in the intact example found in 1987 near the tomb of the vizier, i.e., gilded mask, intense blue-colored headdress, broad collar with the typical attributes. Fragments of such cartonnages were discovered, e.g. next to the three mummies deposited near the east edge of the shaft.

The sudden narrowing of the shaft at a depth of 1.40 m seems to have been necessitated by the presence of an earlier monumental tomb in the immediate vicinity. Just above the place where the sudden narrowing occurs, there is a hole in the northern side of the shaft leading to a large empty space. The hole is too small to permit entry, but a hand can be inserted. Measurement of the space with an electronic device has shown its length from east to west to exceed 80 m; a broader "corridor" appears to cross this one at its eastern end.

FIELD STUDIES

Further research was carried out on two categories of finds: mummies and pottery. A team experienced in the study of mummies in Polish collections, Prof. Dr. Maria Kaczmarek and Prof. Dr. Andrzej Niwiński, examined the mummies, coffins and cartonnages found in the previous and current seasons.

Ms. Anna Wodzińska pursued her study, complete with documentation, of the rich ceramic assemblage, comprising mainly Old Kingdom pottery.

5) See the contribution by M. Kaczmarek in this volume.
Fig. 9. Shaft 37 in Sector F1
(Drawing M. Puszkarski)