

DEIR EL-BAHARI

CLIFF MISSION, 2000

Andrzej Niwiński

with contributions by

Mikołaj Budzanowski, Maciej Pawlikowski and Sławomir Rzepka

In its second field season (October 16-December 14, 2000), the Polish-Egyptian Cliff Mission¹⁾ working in the area located high in the cliff overhanging the temple of Hatshepsut at Deir el-Bahari, focused on archaeological research meant to verify in the field last season's hypothesis about the existence of a tomb in the area, while continuing the graffiti survey project.

1) As last year, the mission was, co-directed by Prof. Dr. Andrzej Niwiński from Warsaw University and Prof. Dr. Shafia Bedier from Ain Shams University in Cairo. The team comprised: Mr. Mikołaj Budzanowski, Ms Joanna Hartwig, Mr. Tadas Rutkauskas, Mr. Sławomir Rzepka, Ms Monika Sadowska and Ms Katarzyna Tempczyk, Egyptologists; students of archaeology Mr. Marek Gizmajer and Ms Magdalena Muraszko; Mr. Hubert Chudzio and Mr. Robert Pencak, documentalists. Prof. Dr. Maciej Pawlikowski, geologist and mineralogist from the Academy of Mining and Metallurgy in Cracow, worked in association with the mission.

The work of the Mission would not have been possible without financial assistance from sponsors, institutional and private, to whom we are duly grateful. A very special word of thanks goes to the Late Barbara Zatorska for helping out in a tight spot.

EXCAVATIONS

Four sectors were distinguished for excavation after the last season (*Figs. 1, 2*):

Sector A, which is a narrow strip of slope descending from the “jamb” (or protruding rock massif bordering the “niche” on the east (where excavations were conducted in 1999), down to a spot opposite Butehamun's graffito no. 6;

Sector B, situated in the “gate” and directly behind it towards the north. Butehamun's graffito no. 1 is engraved here;

Sector C, corresponding to the area directly bordering the “niche” and the western part of Sector A on the south; it is naturally limited by a series of huge boulders marked here with letters of the Greek alphabet: β , γ , δ , ϵ , ζ ;

Sector D, situated directly to the south of Sector C; actually, a fairly steep slope strewn with stones collapsed from the *gebel*, with a dangerously inclined boulder (marked as α on the sketch in *Fig. 1*) superposed on top.

Excavations proceeded in sectors A, B and C successively; in D the boulder will have to be removed first, before any archaeological explorations can be carried out.

SECTOR A

From the eastern wall of the “jamb”, descending downwards, hence between the spots with graffiti nos. 5 and 6 of the Royal Scribe Butehamun (Twenty-First Dynasty), a trial pit 3 m wide was dug to bedrock or else to the compact layer of natural primary accumulation preceding any human activity. Goat coprolites and bee nests testify to there being vegetation occasionally in the area at remote times in the past. With the exception of a few pottery sherds found in the uppermost

layer of debris, putative secondary deposits fallen from the *gebel* or washed down by rainfalls, there were no finds in the east part of the trench.

The upper layer of accumulated debris at the top end of the area, immediately east of the “jamb” and just below graffito no. 5 of Butehamun, consisted of Naville's *redim* originating from his explorations of the “niche” at the very beginning of the 20th century. Butehamun's graffito could hardly have been made from the original surface of the accumulation existing here in the period preceding Naville's activity by almost three millennia; it is rather too high even for somebody standing on the top of Naville's *redim*. An artificial platform may have conceivably been constructed here, the site offering excellent supervising opportunities for any ancient activity taking place in the area designated as our sectors A, C and D.

A Coptic pottery jar was found in situ, some 1.5 m below the present surface.

SECTOR B

Excavations conducted inside the “gate” ruled out the artificial nature of this unique rock formation. It is a natural structure, the consequence of a tectonic fissure lying underneath, which our excavations have exposed on bedrock level. At a depth of c. 1 m from the current surface, the middle part of a royal-style ceremonial dagger of the Seventeenth-early Eighteenth Dynasties was discovered (*Fig. 3*), opening new prospects for excavations in the area.

Only a part of the bronze piece survives (H. 8.3 cm; W. 3.5 cm; Th. 1.1 cm). The pommel and blade are broken off, and the original inlaid ornamentation of the handle is missing. The narrow circular handle is

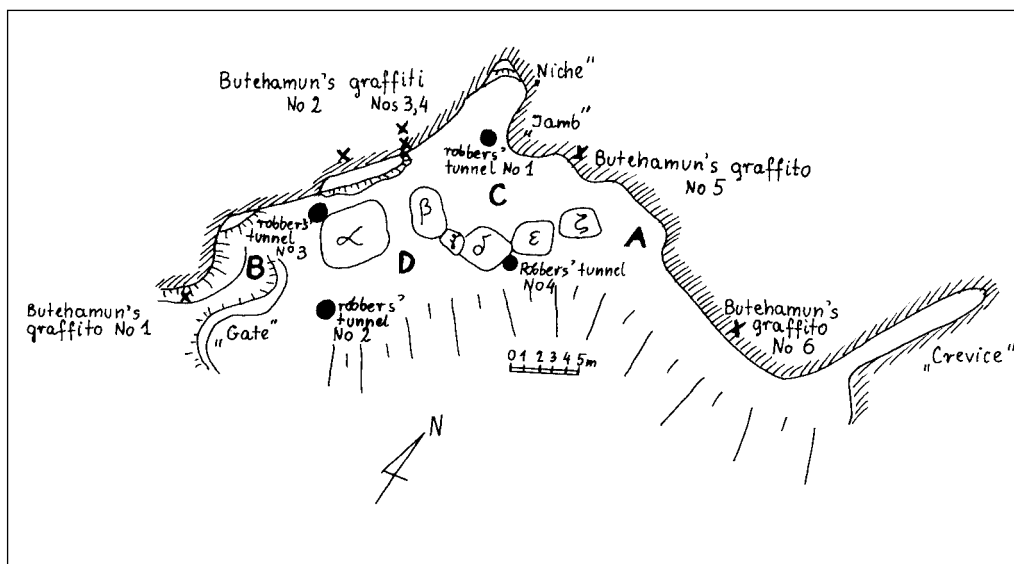


Fig. 1. Sketch plan of the investigated area, showing location of sectors and position of the boulders, Butehamun's graffiti and robbers' tunnels (Drawing A. Niwiński)



Fig. 2. General view of the site from the top of the gebel (Photo M. Muraszko)

provided with two long side-clutches for attachment of the (golden?) blade. The rear part of the handle, consisting of two crescent-shaped clutches and four straight nails, held the pommel, originally made of gilded wood. The frame of the pommel was ornamented. Judging from openings on both sides (four triangular and two rectangular), the pommel mounting had been decorated, possibly with a black substance and golden buttons.

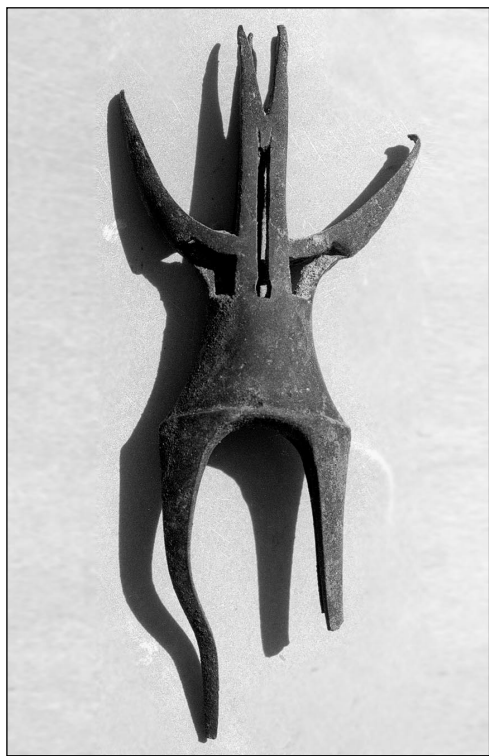


Fig. 3. Part of a ceremonial bronze dagger found in Sector B (Photo A. Niwiński)

According to M. Budzanowski, a very similar dagger – both in shape and size – was found in 1859 in the tomb of Ahhotep, mother of king Ahmose in Dra Abu el-Naga.²⁾ Judging by parallels from other burial-assemblages, this type of ceremonial dagger seems to have been in use during the Seventeenth and early Eighteenth Dynasty.³⁾ In the light of our investigations on the rock-shelf, the dagger, although not found in a datable stratum, should be attributed to the second half of the 16th cent. BC (reign of Amenophis I).⁴⁾

SECTOR C

Excavations this season were largely concentrated in this sector, lying between the “niche” and “jamb” on the north, the cliff face on the west and a line of big boulders, which had collapsed from the *gebel* above and now stand interlocked, delimiting the sector on the east.

The area was considered promising in view of a number of things. First of all, the rock face of the mountain had been cleared of weathered substance to the west and north (an activity that usually preceded tomb cutting operations in order to eliminate the danger of vibration-generated rock falls). Then, a cracked shelf adjacent to the cliff face, where Butehamun (or somebody acting on his behalf) had once stood writing graffiti nos. 3 and 4, had been removed apparently intentionally, most probably in antiquity, since a “technical” graffiti consisting of several horizontal lines had been made directly

2) F. W. von Bissing, *Ein thebanischer Grabfund aus dem Anfang des neuen Reichs*, (Berlin 1900), 3-4, No. 5, pl. 2 and No. 20, pl. VIII.

3) J. Garstang, *El Arabah* (London 1901), pl. X, No. 6.

4) W.M. Flinders Petrie, *Tools and Weapons* (London 1917), 29, pl. XXXIII, Nos. 11-12; W. Wolf, *Bevaffnung des altägyptischen Heeres* (Leipzig 1926), Table 4, 12-14. Also, N. Thomas, *The American Discovery of Ancient Egypt* (Los Angeles 1995), 168, fig. 72.

above the edge of the removed shelf. Three of Butehamun's graffiti (nos. 3-5) were left in the area, and, finally, a robbers' shaft (no. 1) had been executed nearby.

The excavations were encumbered by the need to remove stones, some of considerable size (the biggest one measuring 2.5 x 2 x 4 m), which had fallen from the cliff face. Ancient limestone chips, obviously manmade, found in the area, corroborate the hypothesis of a tomb being located somewhere in the vicinity (see *excursus* below by the geologist associated with the expedition).

While no entrance to the alleged tomb has been found as yet, its existence should by no means be excluded. It may be located somewhere in the bordering area, just to the east of the investigated sector, under or

slightly to the east of the stones ε and ξ , or else just to the south, under stones β - γ , which make it inaccessible at present. Under stone δ , an unfinished robbery shaft was discovered, its entrance concealed with a big flat stone and a considerable accumulation of debris. It is not to be excluded however, that this ancient robbery shaft was used in modern times as a cache (by a robber?), since a piece of glass was found inside it.

A graffito was discovered on the southern surface of stone δ . It seems to represent the plan of a tomb, with a vertical shaft on the right and a horizontal gallery going west (*Fig. 4*). The graffito is no doubt ancient in date. Perhaps it can be related in some extent to the aforementioned robbery shaft.

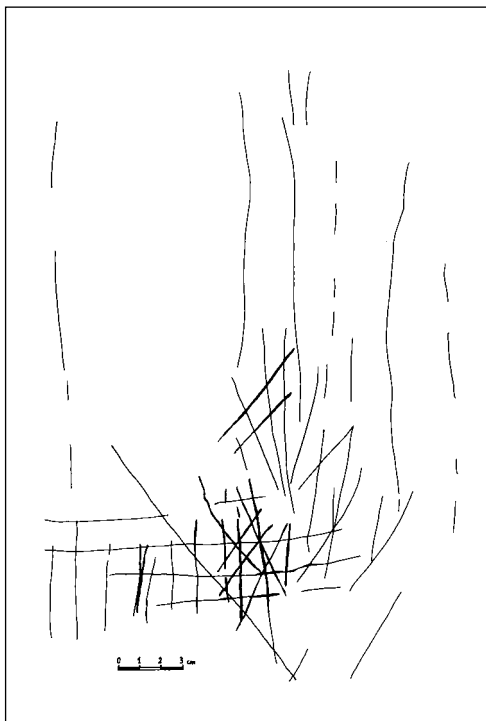


Fig. 4. "Technical" graffito found on stone δ (Drawing K. Tempczyk)



Fig. 5. View of Sector D from the east. On the left, boulder α (Photo A. Niwiński)

Excavations under stone δ have revealed the presence of a horizontal platform. It is probably a natural rock formation about 7 meters below our "0-level", which roughly corresponds to the top of the debris accumulation prior to the excavations in sector C. A considerable number of white limestone chips lay on the platform.

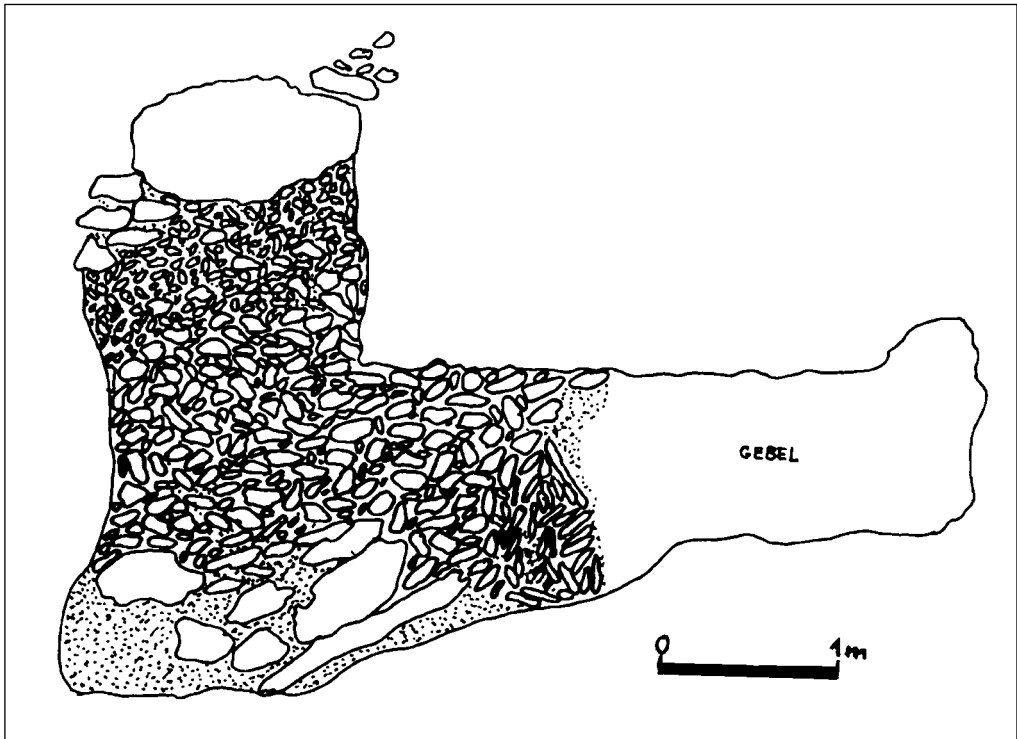
SECTOR D

Although no regular excavations could be carried out in this area (*Fig. 5*), because of the dangerous position of stones α and β , two further robbery shafts, structurally related to this sector, have been localized.

Shaft no. 2 (*Fig. 6*) was revealed on the eastern slope, 5 m down from stone α , and approximately flush with the platform

found under stone δ . It consists of a vertical section leading to a horizontal tunnel, pierced through the debris accumulation in the direction of stone α . In structure, it resembles robbers' shaft no. 1, discovered in the previous season. At the end of the tunnel, which was given up after hitting on the vertical face of the *gebel*, a flint-tool fragment was found, supporting an ancient date for the tunnel. The shaft was, however, searched also at the beginning of this century (by Naville?), as proved by fragments of newspapers of those days.

Shaft no. 3 was localized west of stone α and northward of the "gate". Newspaper fragments suggest it, too, had been searched before by Naville. A number of man-made chips come from this shaft.



*Fig. 6. Cross-section through robbers' shaft no. 2
(Drawing M. Muraszko)*

PROSPECTS FOR FURTHER RESEARCH

The three newly discovered robbers' shafts illustrate repeated attempts to localize a potential tomb, suggested also by the presence of several graffiti with the name of the Royal Scribe Butehamun, usually accompanying ancient tombs. Excavations have brought to light a considerable amount of ancient man-made limestone chips, no doubt originating from some rock cutting process in antiquity, as well as, more importantly, a part of the handle of a ceremonial royal dagger of the Seventeenth-early Eighteenth Dynasty style, undoubtedly robbed from a tomb. Considered together, this evidence is indicative of the existence of a tomb in the area.

Sector D seems to be a highly probable place for a tomb. It is covered with fallen

stones, most probably remnants of a catastrophic rockfall that destroyed the temple of Tuthmosis III and damaged the temple of Hatshepsut sometime during the Twenty-First Dynasty. Indeed, the boulders still resting on the slope in sector D pose a threat to the reconstructed temples below and should be removed, especially stones α and β . The mission has already taken steps in preparation for this task, starting work on a protective platform that needs to be made on the slope below the stones, before they can be broken up.

Further excavations in sector D could lead to the discovery of the entrance to a putative tomb of the early Eighteenth Dynasty that had probably been robbed and reused during the Twenty-First Dynasty.

SURVEY IN THE NORTHERN DEIR EL-BAHARI CIRCUS

A survey in the northern branch of the Deir el-Bahari circus searched for traces of potential human activity on the level on which our excavations were made. Six spots, bearing some characteristics of places where tombs can usually be expected, have

been identified. The rock faces above these spots had been cleared of weathered substance and stone chips appear on the ground. Probes to verify whether there had been any human activity in these places will be carried out in the next season.

CLIFF RESEARCH

by Mikołaj Budzanowski

The alpine survey of the cliff-face over the Hatshepsut Temple was continued, the work focusing on searching for new graffiti in inaccessible parts of the cliff.

Earthquakes and human activity have changed the form of the original rock shelf. The ancient ground level has disappeared completely in many places, making the higher parts of the rock-shelf inaccessible. The survey concentrated on the 45 m of cliff face over the main rock-shelf (section

C) and on the lower shelf, some 20 meters above the casing wall of the Hatshepsut Temple (section G).

The team made several descents on rope from the upper ridge of the cliff down to the rock-shelf, not finding, however, any new graffiti or chisel marks. The lower shelf proved far more promising. Several rock inscriptions were found (cf. below in this report, section on the graffiti survey).

In the course of a reconnaissance in the area around the cliffs of Deir el-Bahari, an unexpected discovery was made in the nearby valley of the Royal Cache. In the chimney above the shaft, the author came across a hitherto unpublished and unknown hieratic graffito, apparently belonging to the famous Royal Scribe of the Necropolis Butehamun and his son Ankhefenamun (11th cent. BC) (*Fig. 7*). The style of the graffito and its unique setting are both outstanding. The inscription is distinguished by its monumental appearance – it is 65 cm long and 53.5 cm high, and is situated on the western wall of the chimney, which itself measures some 3.5 x 3.5 x 8.5 m. The first two letters in the name of Butehamun: *sš* and *b*, are 21 cm high each. This is by far the largest graffito of this type in the neighborhood.

Another striking feature is the position of the inscription some 4.85 m above the shaft of the tomb, in a place reached nowadays only with the aid of special climbing equipment. The question, of course, is how did Butehamun and his son reach the place. A study of the rock face in the chimney revealed a thick layer of debris, left untouched since ancient times, in the northwestern corner of the chimney. Its upper ridge reaches up to 4 m above the shaft (i.e., 1 m below the newly found inscription). It is from this level that Butehamun and his son had scratched their names.

To conclude, observations made in the chimney of the Royal Cache might have far reaching implications for the history of the site. The closest parallel is provided by sections C-D of the Deir el-Bahari rock-shelf. Its northwestern corner takes on the

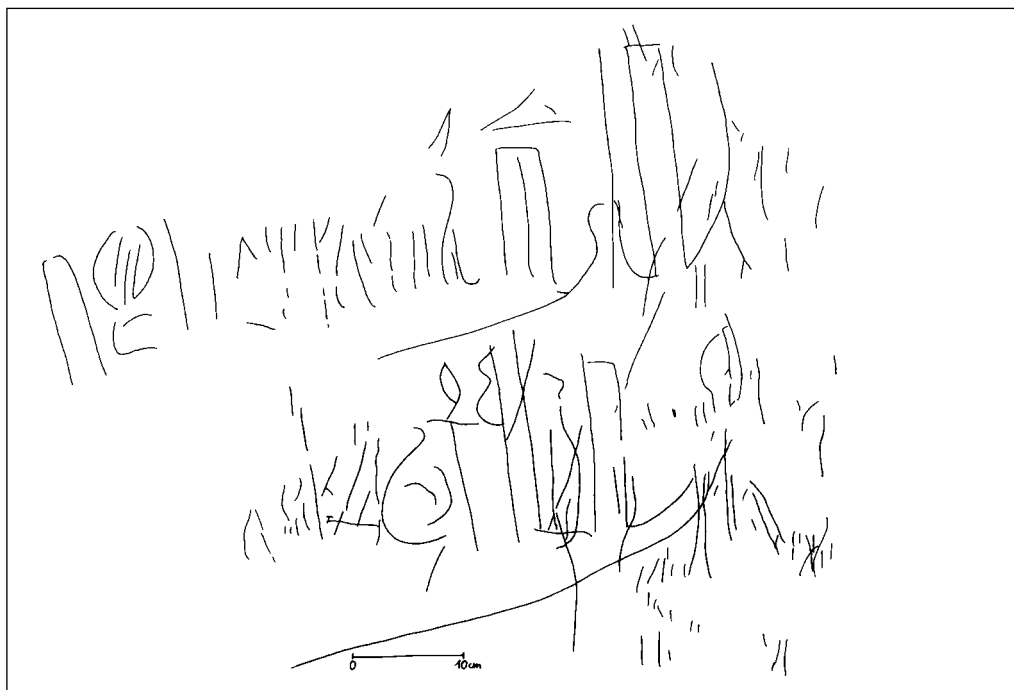


Fig. 7. Graffito of Butehamun found above the Royal Cache in Deir el-Bahari south (Drawing M. Budzanowski)

form of a deep niche, which is very similar in shape and size to the chimney of the Royal Cache. At the entrance to it, Butehamun had scratched his names twice on a very high level, which today is situated 4 m above ground level. The

graffiti were made evidently from a layer of debris or a narrow rock-shelf that was later removed. The similarity to the Royal Cache site is striking, providing an indirect suggestion of a tomb being present somewhere in the close vicinity.

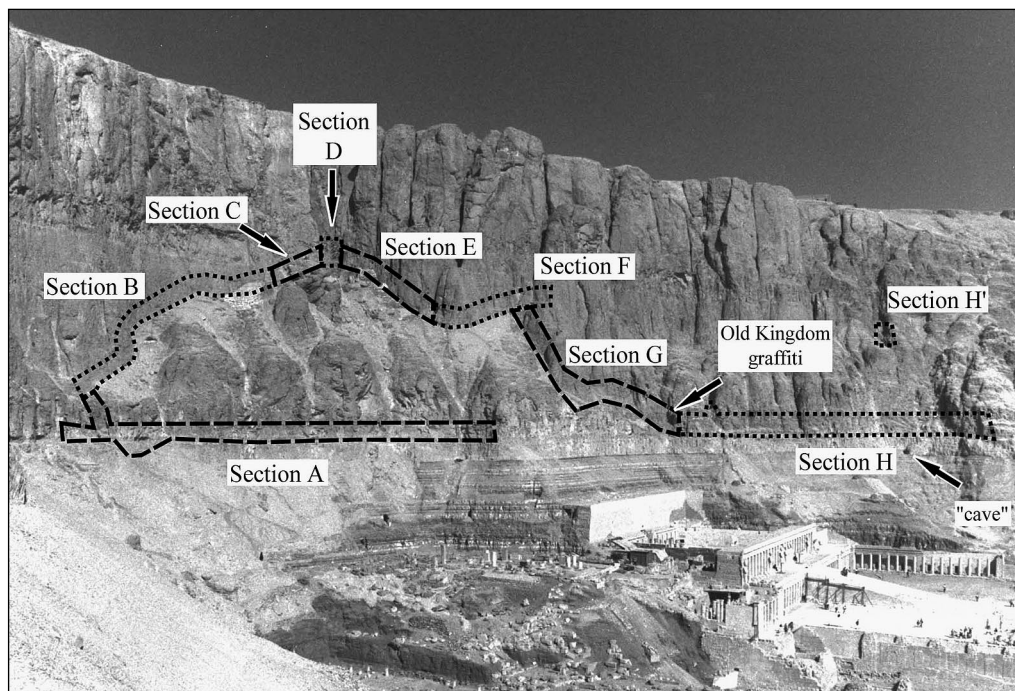
GRAFFITI SURVEY

by Sławomir Rzepka

During the season the mission continued documentation of graffiti preserved on the rocks surrounding the temple of Hatshepsut. The area under consideration was divided into 8 sections: A-G (*Fig. 8*), of which B, C, D, E, F had been completed last year and the southern part of section A, in the “chimney” (vertical shaft leading to the upper parts of our area) and its vicinity, was started.

This year we concentrated on 3 areas, documenting altogether more than 60 graffiti:

- 1) in the central and northern part of section A (continuation of previous work);
- 2) on the rocks directly above the western part of the temple of Hatshepsut (section G);
- 3) in the area north of the temple of Hatshepsut (section H and H').



*Fig. 8. General view of the surveyed area, divided into sections A-H
(Photo A. Niwiński)*

SECTION A

Most of the graffiti in this section is from the Coptic period. Many of them are short inscriptions, giving only the names and

functions of their authors as a rule (A 24a, A 26). There are also some drawings: crosses, human figures, animals (A 43). The abundance of Coptic graffiti is not

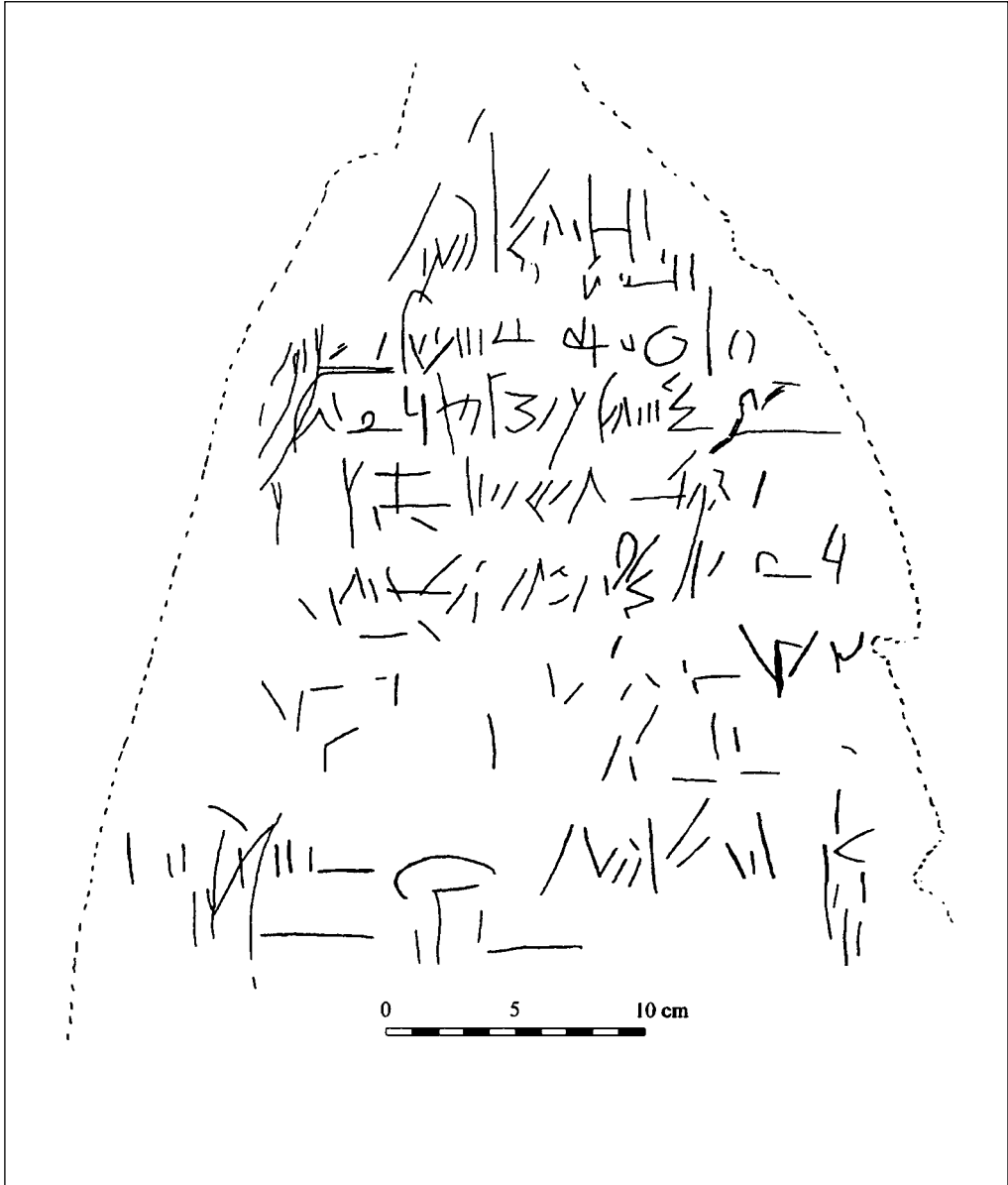


Fig. 9. Graffito A 41. Demotic inscription
(Drawing S. Rzepka)

surprising, considering that the tomb cut below the “chimney”⁵⁾ had been used as a dwelling by Copts, probably monks from the cloister which functioned in the ruins of the Hatshepsut temple.⁶⁾ There are, however, also some traces of earlier visitors in the form of demotic inscriptions (A 41, Fig. 9), which should be linked with the functioning of a “sanatorium” in the temple of Hatshepsut during the Ptolemaic period.⁷⁾ One hieroglyphic inscription, as well as a drawing of an eye (A 39) should be dated to the dynastic period (New Kingdom or later?).

SECTION G

Only seven graffiti were found in this large, but barely accessible area. Three of them are short Coptic inscriptions, quite obvious in this place, right above the cloister. Three others, however, came as a real surprise, being hieroglyphic inscriptions from the Old Kingdom. A big inscription, G 6 (Fig. 11, top), reads: *njswt bjtj Mrj-n-r^c nh dt, pr-dt hrj-hb*. We have here the name of the third king of the Sixth Dynasty, *Mrj-n-r^c*, who ruled for only a few years and was buried in a pyramid in South Saqqara. A second graffito (G 7, Fig. 10, bottom) again gives the name of the same king: *njswt bjtj Mrj-n-r^c*. Below the cartouche there are some

faint lines, which do not seem to be, however, a continuation of the inscription. The third graffito (G 8) is only partly legible. The title is clear: *pr-dt hrj-hb*, i.e., “lector priest of the funerary estate”.⁸⁾ It is the same title as found in graffito G 6. *Pr-dt* is usually translated as “funerary estate”, although there is some evidence that it should be understood as “private property”.⁹⁾ In any case, it belongs not to the royal, but to the private sphere. Our *pr-dt hrj-hb* (possibly it should be read *hrj-hb n pr-dt*)¹⁰⁾ was a lector priest in the funerary cult of an unknown official. Below and to the right of the title *pr-dt hrj-hb* further hieroglyphs are visible (most of them, however, very faintly). They must have belonged to other titles and to the name of the author of the graffito. He may have had a basileophoric name – the cartouche ring (?) is recognizable in the lower left corner. The signs inside the cartouche, however, are illegible.

The discovery of three Old Kingdom graffiti provides us with new and unexpected evidence concerning the early history of Thebes. Of the almost 4000 rock-graffiti documented so far in Western Thebes,¹¹⁾ the oldest had been dated to the Eleventh Dynasty. The three graffiti described above are thus the oldest rock-inscriptions known from the Theban area.

5) The tomb is not recorded in PM.

6) Cf. W. Godlewski, Le monastère de St Phoibammon, *Deir el-Bahari V* (Varsovie, 1986).

7) Cf. E. Laskowska-Kusztal, Le sanctuaire ptolémaïque de Deir el-Bahari, *Deir el-Bahari III* (Varsovie, 1984).

8) The title *pr-dt hrj-hb* is attested on several monuments, all of them dated to the Sixth Dynasty: ? Cairo CG 1400: L. Borchardt, Denkmäler des Alten Reiches (ausser den Statuen) im Museum von Kairo Nr 1295-1808, Teil I (Berlin, 1937), 61, Bl. 16; ? Cairo CG 1643: L. Borchardt, Denkmäler des Alten Reiches (ausser den Statuen) im Museum von Kairo Nr 1295-1808, Teil II (Berlin, 1964), 106, Bl. 85; ? false door from the tomb of Pepi-nefer Qar in Edfu: M.G. Daressy, “Inscriptions du mastaba de Pepi-nefer a Edfou”, *ASAE* 17 (1917), 135; ? rock graffiti from El-Kab: LD II, 117 [h, k, p, u]; G.W. Fraser, “El Kab and Gebelén”, *PSBA* 15 (1893), 494-500, fig. III; J. Janssen, A. Mekhitarian, “Mission épigraphique a El Kab (janvier-mars 1950)”, *ASAE* 51 (1951), 313-316.

9) J.J. Perepelkin, Privateigentum in der Vorstellung der Ägypter des Alten Reichs (Tübingen, 1986), 193-198.

10) Ibid.

11) Cf. Ch. Desroches-Noblecourt, “La quete des graffiti”, *Textes et langages de l'Égypte pharaonique*, *BdE* 64,2 (Le Caire 1972), 151-83.



*Fig. 10. Old Kingdom inscriptions: G 6 on top and G 7 on bottom
(Drawing S. Rzepka)*

SECTION H

This section lies north of the Hatshepsut temple. The surveyed area extends from the point above the solar complex in the west to the tomb of the Middle Kingdom in the east (it is the first of a row of Middle Kingdom tombs overlooking the Asasif Valley). In the eastern part of the section there is a “cave” cut in the rock. It is apparently an unfinished tomb, used as a temporary dwelling by workers engaged in the construction and decoration of the Hatshepsut temple. The workers (and later visitors) left numerous graffiti inside the cave,¹²⁾ most of them painted, but some

also carved. The only published¹³⁾ graffito from this assemblage is no 4052.¹⁴⁾ This graffito is dated to the Nineteenth Dynasty, so the “cave” must have been visited also after the works in the temple had been completed. The New Kingdom inhabitants (visitors) of the “cave” could have also left some of the graffiti found in section H: a drawing of a man making an offering (to the goddess Meretseger?) (H 19, *Fig. 11*), drawings of a boat and a male head (H 21, *Fig. 12*), and of a horse (H 15a). From the same period come hieroglyphic (H 23) and hieratic (H 16) inscriptions. The place was also visited in later times, as indicated by one demotic (H 15) and fairly common Coptic inscriptions.

Section H extends along a rock ledge, a few meters above the level of the Esna shales. The higher parts of the cliff in this

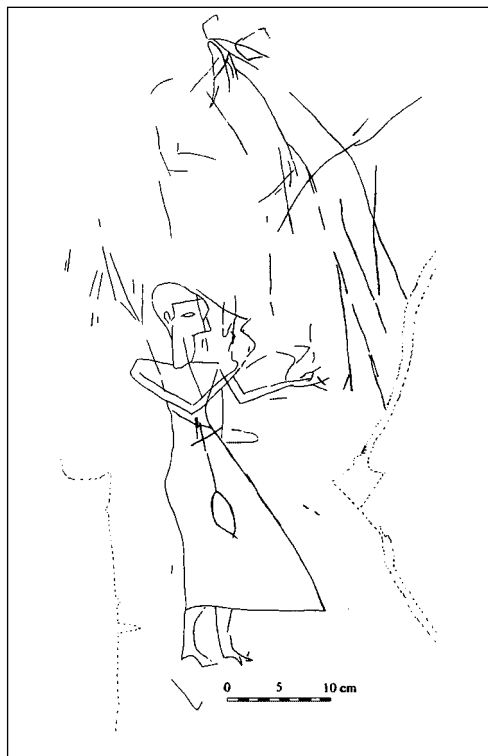


Fig. 11. Graffito H 19. New Kingdom drawing (Drawing S. Rzepka)

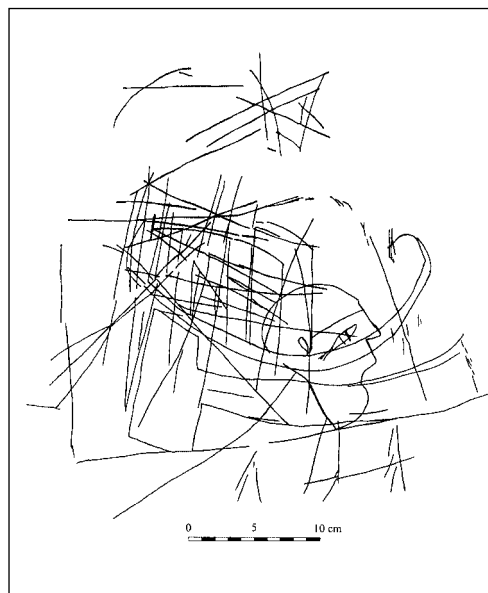


Fig. 12. Graffito H 21. New Kingdom drawing (Drawing S. Rzepka)

12) The Graffiti de la Montagne Thébaine project had already recorded the cave graffiti under nos. 4025-4064.

13) Last one published is no. 3970, cf. M. Shimy, *Graffiti de la Montagne Thébaine III*, 7 (Le Caire 1977).

14) M. Marciniak, “Une inscription commémorative de Deir el-Bahari”, *MDAIK* 37 (1981), 299-305, Taf. 17.

area were also surveyed. The terrain is not easily accessible and graffiti were hardly expected in number. Indeed, only two were found (marked as H'1 and H'2, for their position see *Fig. 8*). Both are New Kingdom (or a bit later?) hieratic inscriptions: one (H'1) is a date, "Year 10" (unfortunately without the royal name), the other (H'2) is a group of signs putatively interpreted by J. Černý¹⁵ as "*marques d'ouvrier (?)*". The presence of these two graffiti in a spot that is quite inaccessible may be indication of some

works being conducted in this place – possibly the preparing of a tomb.

UNKNOWN GRAFFITO OF BUTEHAMUN

A survey of the rocks above the Royal Cache brought to light an unknown graffito of Butehamun, "Scribe of the Necropolis" (cf. *Fig. 7*).¹⁶ This graffito (especially its unusual position) yields new important evidence for the reconstruction of the history of the Royal Cache (see above in this report, section on cliff research).

EXCURSUS GEOLOGICAL INVESTIGATION OF A CLIFF ARCHAEOLOGICAL SITE ABOVE THE HATSHEPSUT TEMPLE IN DEIR EL-BAHARI by Maciej Pawlikowski

Investigations were conducted at the base of a vertical cliff just above the Temple of Hatshepsut, about 60 m below the upper edge of the mountain face. The objective was to study various phenomena possibly testifying to the presence of tombs in this area. The program included:

1. Determination of tectonic phenomena in the cliff of Theban limestone at the spot of the archaeological site.
2. Macroscopic examination of Theban limestone, especially rock structure and texture.
3. Determination of grain-size composition of slope taluses.
4. Sampling for mineralogical examination.

Observations of the morphology of the limestone wall revealed the presence of

many generations of tectonic faults, which have deformed and crushed the rocks. A non-continuous deformation is visible in places, as well as the translation of elements of faults. These tectonic phenomena lead to faster weathering of limestone at the places of destruction and, as a consequence, to their columnar weathering. Eroded columns are dangerous for all the temples located below the cliff.

A general observation of tomb locations suggests frequent positioning in the vicinity of tectonic faults. Crushed limestone was much easier to cut and remove.

The wall of limestone behind the site is tectonically crushed by a few faults. This may suggest the presence of a tomb at the tested site.

15) J. Černý, *Graffiti hieroglyphiques et hieratiques de la necropole Thebaine* (Le Caire 1956), 8-9.

16) For the identity, dating and other problems concerning Butehamun, cf., e.g., A. Niwiński, "Butehamon - Schreiber der Nekropolis", *Studien zur altägyptischen Kultur* 11 (1984), 135-156; K. Jansen-Winkel, "Der Schreiber Butehamun", *Göttinger Miszellen* 139 (1994), 35-40; B.G. Davies, "Too many Butehamuns? Additional observations on their identity", *Studien zur altägyptischen Kultur* 27 (1997), 49-68.

The limestone here contains many horizons of flints, which are present in the form of elongated modules. The limestone reveals a macroscopically homogeneous texture and a not-orientated structure. The direction of the best cleavage is parallel to the layers. This feature made cutting in the limestone relatively easy.

Determination of grain size composition of slope taluses was conducted at geological sections nos. I-IV.

Section I was located about 15 m to the east of the "niche". The destroyed slope talus here contains clay minerals. Section II reveals typical slope sedimentation. It is located under a big block of limestone, about 25m east of the "niche". Observation and granulometric analyses both showed increasing grain size from section top to bottom. The third section is located in a 5 m deep pit, about 35 m to the south of

the "niche". Big blocks of limestone can be observed at the top of the section. Below the size of material is reduced. Finally, section IV, just about 5 m south of the "niche", where the sequence of slope sediments was tested.

Examination of the sections disclosed the presence of two genetic types of stones, i.e., natural and chipped. Grain-size analyses of talus sediments were performed every 0.5 m starting from the top of the sections. The obtained data will be calculated and presented in a separate publication.

Theban limestone and fine talus sediments were collected for mineralogical examination. Small fragments of chipped flakes of limestone were taken for analyses and comparison with limestone from the cliff. The fine clay material will be examined for its genesis and for similarity to either the Esna shales or Nile silt.