

## EXCAVATIONS AT SZELETA CAVE BEFORE 1999: METHODOLOGY AND OVERVIEW

Zsolt MESTER\*

### **Abstract**

*The Department of Prehistory and Ancient History of the University of Miskolc started a research project in 1999 to revise the Szeletian and Aurignacian cultures of the Bükk region. The research is based on the new excavations of Szeleta and Istállós-kő caves and on the reinterpretation of assemblages originating from previous excavations. It was of essential importance in this project to identify the previous excavated areas, including the circumstances in which the artefacts were found. In order to reconstruct the previous excavations carried out at Szeleta Cave, a database has been created for the consistent data management of old documents (plan and section drawings, find-inventories, reports, publications). With the use of a 3D system of coordinates, it was possible to virtually interpret the data of the excavation units. The paper will first give an outline of the methodological problems along with some general remarks, then will go on to give a brief summary of the 18 excavations that had been carried out in the cave between 1906 and 1999, providing the date, the excavator, the aim, the cave area and the main results.*

### **Introduction**

Szeleta Cave, situated in the northeastern part of the Bükk Mountains, was the first site in Hungary where Palaeolithic stone tools were found in Pleistocene layers. Therefore, Hungarian Palaeolithic research has always paid particular attention to the site and its assemblages. The first excavations were extremely intense. Researchers planned to remove the entire cave deposit (Kadić 1909b, 1911: 169, 1912b), but they were unsuccessful even after seven long years of digging between 1906 and 1913. Thus younger generations were also given the chance to excavate at the site, and to try and find answers to diverse archaeological problems.

Kadić published the results of the geological and archaeological investigations made between 1906 and 1913 in a site monograph (Kadić 1916). This became a basic documentation for every research carried out later at Szeleta Cave. In the monograph, Kadić distinguished four layers chronologically (Kadić 1916: 251): Evolved Solutrean (*Hochsolutréen*); Early Solutrean (*Frühsolutréen*); intermediate layer (*Übergang*) situated between the former two; and a layer containing archaeologically unclassified (*Unbestimmt*)

assemblage at the bottom of the sequence of lithic industries. However, the artefacts of the intermediate layer and those of the unclassified assemblage were classified with the two Solutrean assemblages in the monograph's archaeological description. Thus two "cultural layers" had been created, and the finds were catalogued into the museum collections according to this division. Later studies were also carried out according to these two cultural layers (Kadić 1934; Hillebrand 1935; Gábori 1953; Vértes 1965, 1968; Allsworth-Jones 1986; Adams 1998). This integration of assemblages did not generate difficulties, because the studies dealt with the chronological and evolutionary problems connected to the two stages of Hungarian Solutrean, later renamed Szeletian, and the relationship with other Upper Palaeolithic cultures.

New problems came to the foreground of academic interest and novel approaches were developed in international quarter-geology and Palaeolithic research, starting in the 1970's. These changes occurred in Hungarian research attitudes as well. It came to light that the publications of several Palaeolithic sites were not detailed enough and needed revision. The archaeological review of these sites, as well as of old field documents, and the appearance of

\* Department of Prehistory and Ancient History, University of Miskolc, H-3515 Miskolc-Egyetemváros.  
E-mail: h8009mes@ella.hu

new studies on knapped stone artefacts and faunal remains attempted a reinterpretation of the assemblages and the sequence of the embedding layers (Dobosi 1995; Dobosi & Vörös 1979, 1986, 1987, 1994; Gábori-Csánk 1993; Mester 1989, 1995; Simán 1995; Vörös 1982, 1984). Researchers experienced many difficulties and uncertainties during the comparison and interpretation of information given in the old publications (e.g. Svoboda & Simán 1989: 301; Simán 1990: 189–190). Some were even of the opinion that the archaeological materials of early excavations cannot be properly used, and only new excavations can resolve the problems (Simán 1995: 42).

The use of materials recovered by early excavations is generally problematic in modern archaeological investigations. The reason stems from the record system of previous excavations, which are not accurate enough to provide answers to those questions that have arisen recently in Palaeolithic archaeology. Nevertheless, the assemblages originating from earlier excavated sites should be used in modern studies, even if only to a limited extent. The results of a revision can modify the propositions of an earlier research considerably, as it can be seen in the case of Suba-lyuk Cave (Mester 1989, 1990).

Ringer (1983) defined a new Middle Palaeolithic culture in the region of the Bükk Mountains at the beginning of the 1980's, the Bábonyian. This industry, containing bifacial tools, brought a new perspective into the debate on the origin of Szeletian culture. Ringer (1989, 1990, 2000) pointed out that the Bábonyian and the Szeletian compose a techno-typocomplex. Accordingly, it was needed to reinterpret the sequences of Szeleta Cave in order to clear the chronological position of this cultural unit (Ringer 1993; Ringer, Kordos & Krolopp 1995).

The Department of Prehistory and Ancient History of the University of Miskolc, under the supervision of Árpád Ringer, undertook a revision of the Szeletian and Aurignacian cultures of the Bükk Mountains in 1999. The research wished to carry out new excavations, as well as to revise the lithic assemblages of former excavations of Szeleta and Istállós-kő

caves (Ringer & Mester 2000: 266). The basis of the revision was a reconstruction of the previously excavated areas and locations of the artefacts. In the case of the Szeleta, previous excavation documents have made it possible to identify both stratigraphically and topographically most of the original places of the artefacts. A method used already successfully in the revision of the Bükk Mousterian was applied in this project (Mester 1994; 2001).

### Sources

It is worth demonstrating briefly Kadić's cave excavation method developed for Szeleta Cave before presenting the sources used in the revision. Fortunately, the method has been published in detail (Kadić 1914a, 1915, 1916: 165–167, 1938: 23–26), thus the old excavation documents and the procedure can be interpreted relatively easily.

#### Kadić's cave excavation method

The first findings in Miskolc, called the "hand axes of Bársony's house" generated an intense debate concerning their age. Since further investigations in the town could not settle the issue, Kadić was commissioned to conduct a research in the caves of the Bükk Mountains, to search for further traces of Prehistoric "man". Therefore, Kadić focused mainly on the determination of the age of the finds (Kadić 1934: 15–24), that is, on documenting where exactly and in what stratigraphic position did the objects come from.

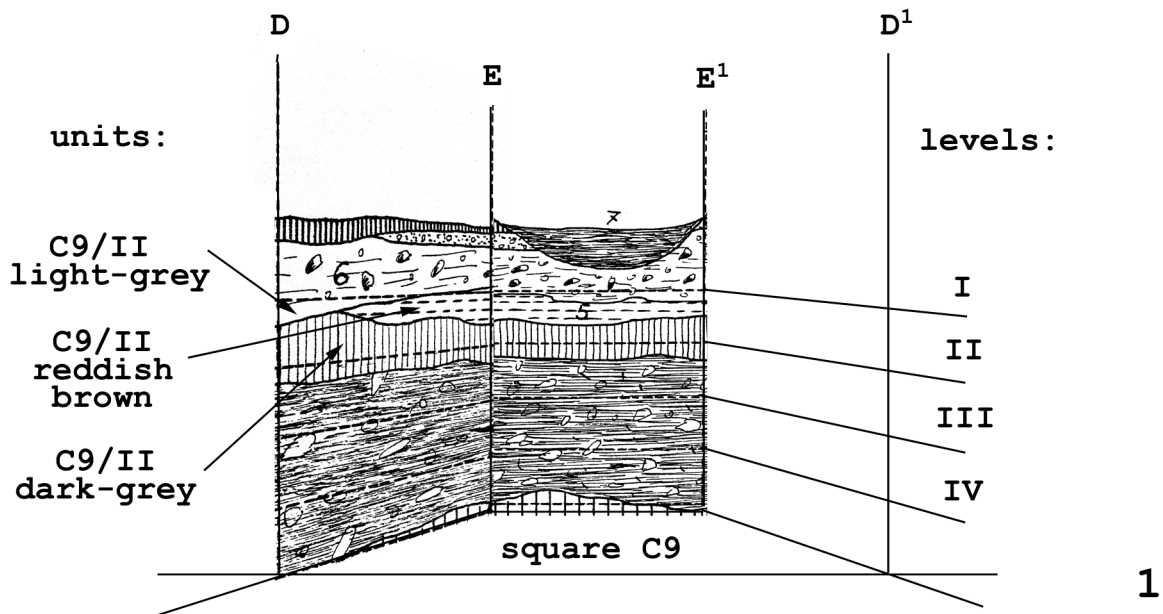
Before starting the excavation, the cave area was surveyed and mapped. The area of Szeleta Cave was divided into parts marked by the following letters: Entrance (A), Main Hall (B), Main Corridor front (C) and rear (D), Side Corridor front (E) and rear (F), and Stalactites' Cavity (G) (Kadić 1916: Taf. XIII). The cave parts were partitioned by a 2 x 2 m grid system, which served as a topographical basis. The square corners were marked by capital letters along the cave axis (e.g. A, B, C etc.), and superscripted numbers marked their position left and right from the axis: e.g. ... <sup>2</sup>A – <sup>1</sup>A – A – A<sup>1</sup> – A<sup>2</sup> ... The squares were marked by Arabic numerals. Each part of the cave had its own series of square numbering.

The numbering, theoretically, was started at the front from left to right and proceeded toward the inner part of the cave (Kadić 1916: Taf. XIII), but the system that was put in practice at Szeleta was different, as it can be seen below.

Cave sediment was removed from square to square. Within the squares, layers were distinguished according to the characteristics of the sediments. The sediment, independently of the layers, was divided vertically into 0.5 m thick artificial levels, numbered by roman numerals. According to this system, the basic excavation unit equalled one sediment layer within a square level (Fig. 1.1). Accordingly,

the marking of an excavation unit was composed of the cave part-square-level-layer. A vertical section was drawn after every removed sediment of a level; this served to compose the longitudinal and cross-sections of the cave sediment.

The archaeological and palaeontological remains collected from the excavation units were placed separately at the site. The documentation of finds was not started at the excavation; this was another stage of the research work, started after the cleaning of the finds. Each find was numbered and registered under its number in a find inventory, by recording the data of the excavation unit<sup>1</sup> (Fig. 1.2).



828	"	"	B 44/IV	"	"	ulcqm. apio mlamul Kakastak. Kale. - asuel	
829	"	"	B 9/II	szinte agyag		ulcqm. kőes. töred Vöröslana muféty	✓
830	"	"	B 80/IV	Vöröslana agyag		apio mlamul Farkas aknilla.	
831	"	"	"	"	"	apio mlamul Sötétvörös Kale.	
832	"	"	B 28/V	"	"	Fliesny, oluwa na Kősztalán borból kny	Leiva. 292 old. 2. n. ✓

Fig. 1. Cave excavation method of O. Kadić. 1: excavation units at level II of square C9; 2: detail of the find inventory showing note 829.

<sup>1</sup> The Suba-lyuk Cave excavation in 1932 was the first field research where the registration and marking of finds was accomplished at the site, immediately after their discovery (Kadić 1940: 24).

## Documents

Documents that were used for reconstructing the excavations at Szeleta Cave are divided into three groups:

1. area plan and section drawings;
2. find inventory and museum find register notes;
3. reports and publications.

Some of the area plans and sections have been published (Hillebrand 1910: Abb. 54; Kadić 1912a: Fig. 33, 1916: Taf. XIII–XVI; Mottl 1945: 1552; Saád & Nemeskéri 1955: Fig. 1.; Vértes 1968: Bild 1–2.; Ringer 1993: Fig. 19.). The area plan made by Andor Saád during the excavation in 1928 is stored at the Archaeological Archives of the Herman Ottó Museum of Miskolc, while the Hungarian Geological Institute is in possession of the area plans and sections drawn by Mária Mottl in 1937. Most of these plans and documents have not been published yet.

The find-inventories of the excavations from 1906–1913 (2.Sz.I.) and 1936 (3.Sz.I.), and Vértes' excavation notebook from 1966 (XII.237/1968) can be located in the Archives of the Hungarian National Museum. Saád's field notebook from 1947 (567–68) and Ringer's report of the 1989 excavation year (2129–90) are found in the Archaeological Archives of the Herman Ottó Museum. Information on the excavation units from 1928 and 1966 has been recorded into the find register of the Palaeolithic collection at the Hungarian National Museum (47/1928.1–8 and Pb 66/29–59 inventory numbers).

The publications on Szeleta Cave excavations (see bibliography) do not always give satisfactory information in order to localize the excavated area precisely. However, it is worth emphasizing that Kadić reported the excavations of 1906–1913 in relative detail in the monograph (Kadić 1916: 171–192).

## Method

### Principles of the revision

The most fundamental question of every revision is judging the genuineness of the sources, whether the data are correct. The error factor, the possibility of making a mistake, is present in a certain percentage at every stage of recording or copying. Therefore the fundamental sources of a revision should be those documents which have the most direct connection with the excavation. Mistakes or incorrect data recorded in the excavation documentation can be avoided and recognized if most available sources are collected. If there is a contradiction, then the document with the most direct connection to the excavation should be accepted. The notes and registrations in the find inventories are deleted or modified sometimes. If the modification seems to be contemporary with the modified data, the latter should be taken into consideration, but it is worth weighing the possible validity of previous data as well.

The identification number on the finds, which links the finds to the find inventory notes, were written with ink. Sometimes the numbers are deleted or covered during the revision of the inventory, or fade with time. A considerable amount of these artefacts can be re-identified on the basis of the find inventory and the published figures and descriptions.

### Database management

A database has been created, so that all the data can be compared within one uniform framework. For reconstructing the excavation process, the data of the excavation units had to be placed in space. Therefore a 3D grid system has been established (Fig. 2), where the basic units can be supplied with coordinates. The  $x$  and  $y$  axes fit those of the cave. The  $y$  is composed of the squares situated along the eastern side of the longitudinal cave axis; the  $x$  is formed by the squares on the southern side of the Side Corridor's longitudinal axis. The points on axis  $z$  correspond to the horizontal levels.

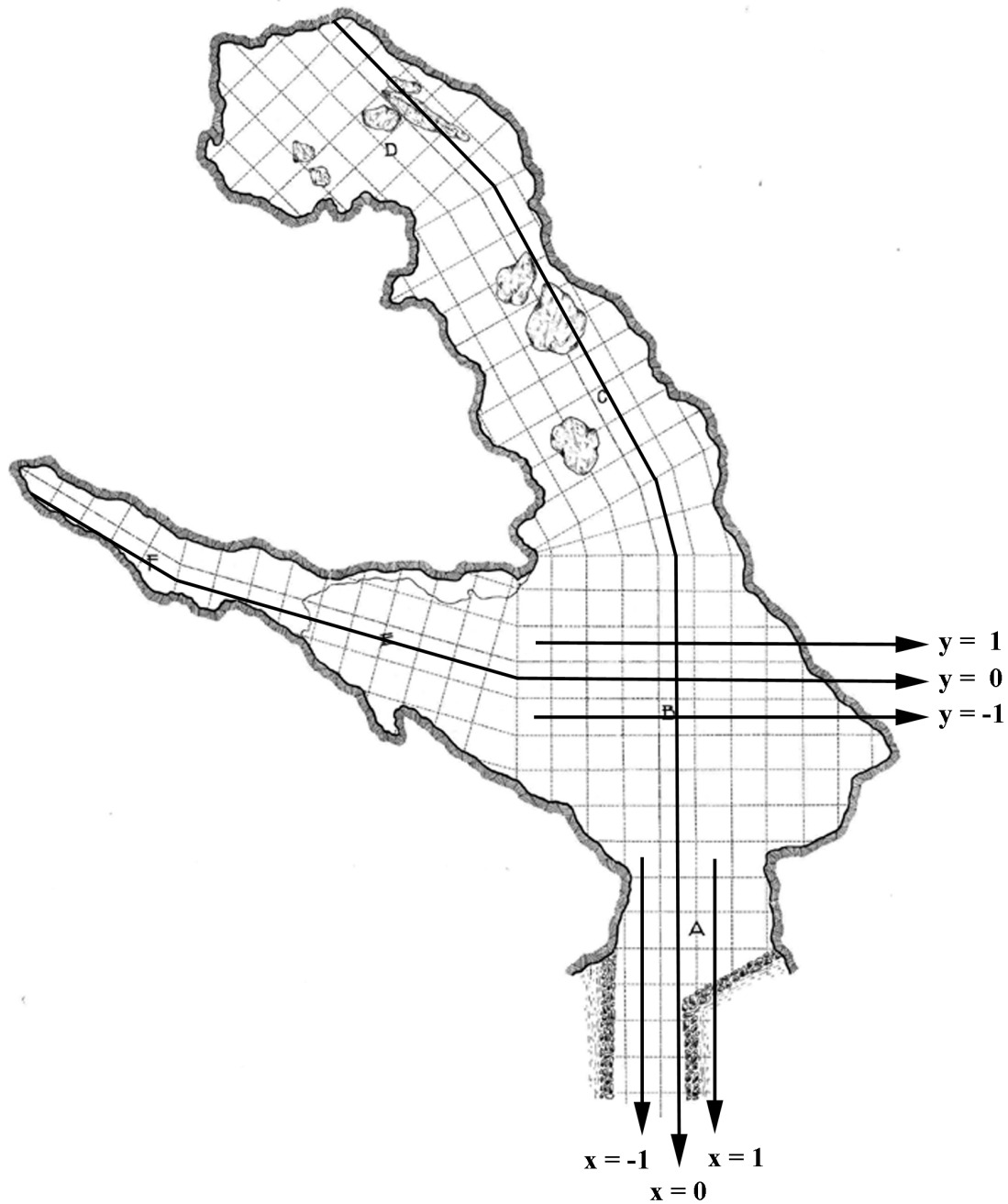


Fig. 2. The grid system used in the revision.

### General remarks

The find inventory of the 1906–1913 excavations consists of 2000 items. Of the 2000 items, 1934 have been marked correctly by the excavation unit (square-level-layer), including 203 squares. Each of the remaining 66 items has at least one missing component of the excavation unit marking. However, the area plan published in the monograph (Kadić 1916: Taf. XIII) has 49 missing squares (e.g. A92, B79, C49, D104, and E28). These 49 squares,

according to the find inventory, yielded 422 items, but it is unlikely that a quarter of the items were recorded incorrectly. The area plans of levels I, II, IV, VI, VII, IX and X made by Mottl in 1937 presents 192 squares of the 203. The 11 missing squares are related to 52 items in the find inventory. Therefore the location of the squares in the cave area grid system have been identified on the basis of Mottl's plans, just as the corresponding coordinates (Fig. 3).

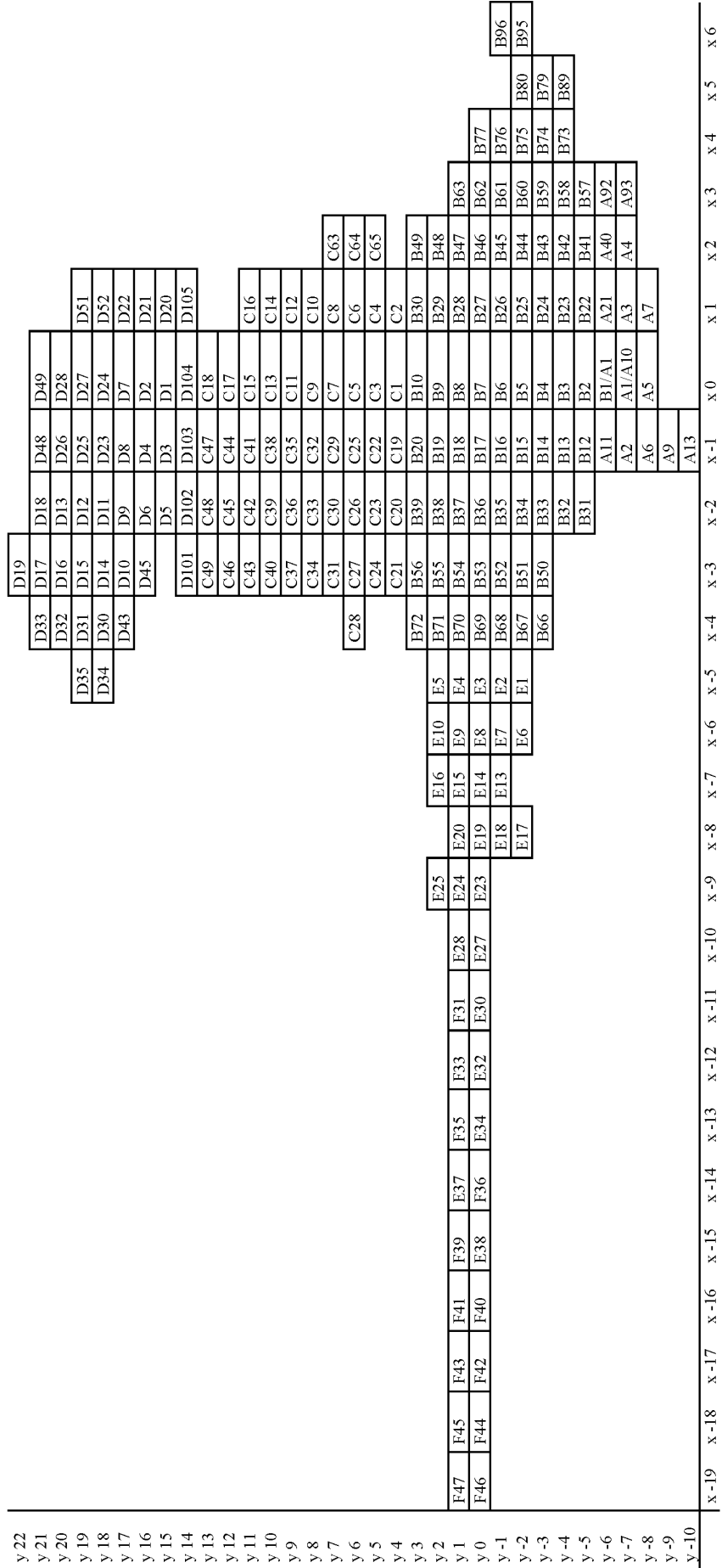


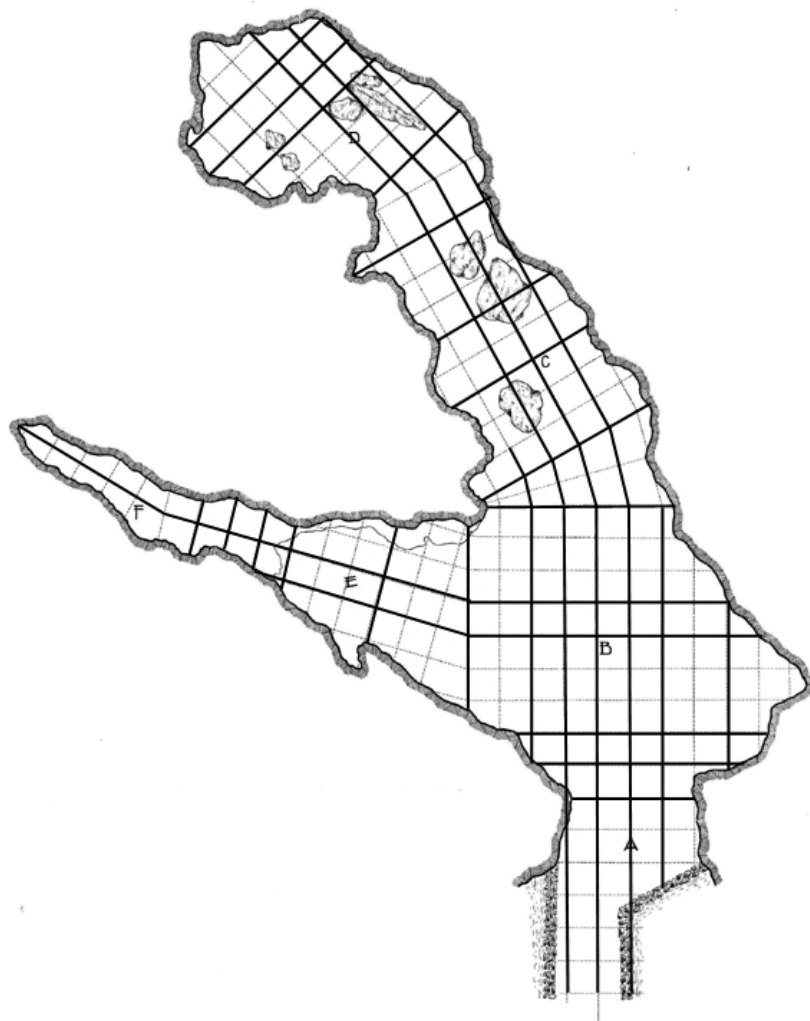
Fig. 3. The topographical distribution of the squares in the grid system.

Based on the ordering of the number of squares, the full grid system was not established before the excavation. The squares of the grid were fixed one after the other, during the excavation process. This is obvious especially in the cave parts C and D. This possibility is also supported by Dancza's note. Dancza, who conducted the excavation at Suba-lyuk, had learnt about Kadić's cave excavation method while on fieldwork under Kadić's direction. Dancza mentions in one of his papers that a fully established grid system was used only at smaller cavities; in the larger caves the grid system was completed as the excavation went along (Dancza 1931: 6).

Kadić's and Mottl's cave area plans have different letters for marking the axes in the cave. In Mottl's plans, the axes in the cave parts B, D and F are a continuation of the axes in parts A, C and E.

responds to Kadić's remark (1914a: 158): the marking continues with A only if the letter Z is reached or the cave branches. This difference, however, is not significant for this revision, since it affects section identification only. Kadić's (1916: Taf. XV–XVI) and Mottl's sections together (Fig. 4) present a pretty good picture of the cave's stratigraphic conditions.

During the collection of the data, it has been noticed that the borderline between cave parts A and B had been shifted during the excavation. Therefore a section of the cave entrance, the area between squares 11–1–21–40 was placed in cave part B at first, later it was put – incorrectly – into part A. A possible reason for the misplacement is that this section was excavated simultaneously with the squares at the entrance. Likewise, squares 101–105 of the main corridor had been included in cave part C and – at other times – in D.



*Fig. 4. Available sections of Szeleta deposit, after Kadić and Mottl.*

Problems also arise from the way the horizontal levels had been established. Logically, level 0 was at the surface of the original unexcavated cave deposit. The levels should have been designated exactly horizontally all over the cave. The unevenness of the cave floor made it difficult to measure the levels in a given square from the top of the deposit. Accordingly, the depth of level I was established at the point where the longitudinal cave axis and the entrance line intersected one another. This served as the datum-line. All the other levels were recorded according to level I (Kadić 1938: 25). Since neither the place of level 0 nor level I was marked on the cave wall, level identification is problematic. The other consequence is that level I has a varying thickness in the cave, in the inner parts it can even reach 2 m (Kadić 1916: Taf. XVI).

A tar line goes around the cave wall. It is certain that it marks the original height of the cave floor. According to a report from 1928, the line was painted at the beginning of the research work (Kóródy 1928). Saád and Nemeskéri (1955: 18) also mention that the line was drawn by Kadić at the beginning of the excavations. However, in my opinion the line seems to have been drawn after the removal of the upper levels, following the traces of the cave deposit on the wall. In the other sources used in this work, only Ringer's dissertation (1993) makes reference to the line. If this line is used for the identification of the horizontal levels, then the varying thickness of level I must be taken into consideration. This was the case in the elevation levels from the 1947 excavation.

One of the main problems in the reconstruction is that the Szeleta Cave excavations were not continuous, but were riddled with long pauses. Were the conductors of later excavations aware of the state of the excavation process? This also concerns the identification of squares and layers. Archaeological research between 1906 and 1913 was continuous. However, there were long breaks between later excavations. According to various sources, it seems that only Mária Mottl was familiar with the documentation of the 1906–1913 excavations. Other excavators used the data published by Kadić in the site monograph.

Mottl did not have direct experience with the first excavations at Szeleta, because she joined Kadić's Bükk cave research only in the early 1930s (Kadić & Mottl 1938: 71). They also worked together on the Board of the Hungarian Speleological Society, and in 1934 she became a fellow-researcher of Kadić at the Institute of Geology where she was in charge of cave research (Mottl 1934: 22). Andor Saád, who took a significant part in the excavations after 1915, did not have direct experience with earlier excavations at Szeleta Cave either, because he and his family moved to Miskolc in 1920, when he was sixteen (Dobrossy 1999: 143). Saád conducted the Szeleta excavation in 1928 together with Jenő Hillebrand. Hillebrand had already worked in Szeleta Cave between 1909 and 1911. Thus it is very surprising that the area map of the 1928 excavation, made by Saád, used the incorrect square numbers of the monograph.

Under these circumstances it is an important issue how intact did the surfaces and sections remain during the long intervals between excavations. Szeleta Cave has been open for visitors for a long time now, and many people have come to see the site. Thus it is no wonder that the surfaces and sections of previous excavations have disappeared. It is known, however, that the forestry closed the cave entrance in the autumn of 1907, after the excavation. This was requested by the Museum of Miskolc, for the purpose of protecting the site (Szentesi 1999: 44–45). A wooden fence blocked the entrance, of which some pictures have remained (Kadić 1937: Pic.1; Dobrossy 1999: 116). The fence was mentioned by guidebooks as well (Illyés 1925: 36; Erdey *et al.* 1932: 105). It was destroyed possibly during the Second World War, because by the early 1950s it was not there (Erdey 1954: 106). In spite of the protection, the levels and sections were hardly made out in 1936, thus thorough calculations had to be made to identify the previous squares (Mottl 1945: 1553).

### **Excavations at Szeleta Cave before 1999**

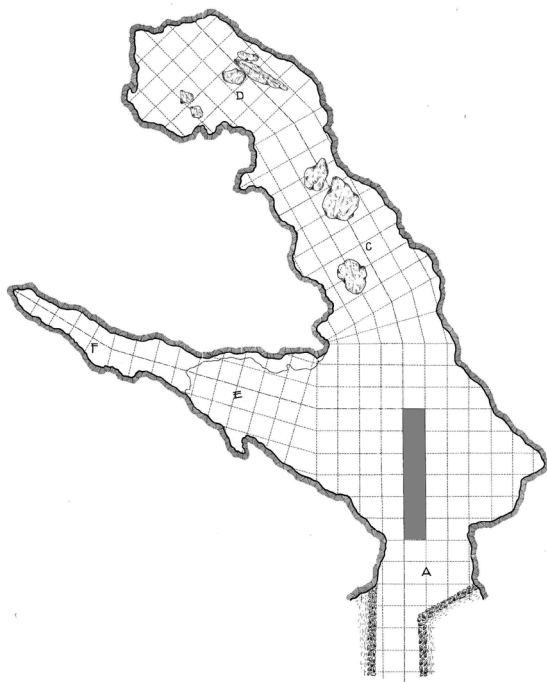
In the following, those excavations will be described which were conducted before the project of revision started in 1999. Due to limita-



tions, the paper will give a brief description of the date, conductor, aim and results of the excavation, as well as the location and depth of penetration. Those excavations will also be touched upon which have been mentioned in certain publications, but have not been confirmed by other sources. According to all available sources, 18 excavations had been conducted in Szeleta Cave between 1906 and 1999.

(1) 14–28 November 1906

Conducted by Ottokár Kadić. Published by Kadić (1907: 388–389, 1916: 171), Fig. 5.



*Fig. 5. Excavated areas, 14–28 November 1906.*

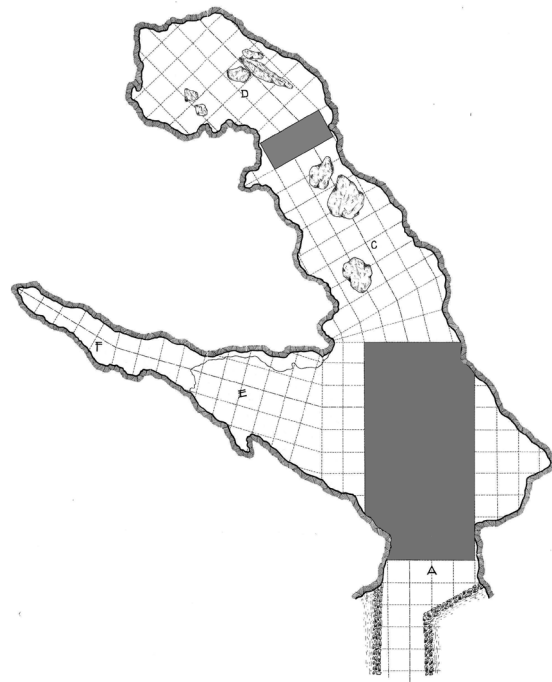
When Kadić was put in charge of researching the trails left by diluvial man in the caves of the Bükk Mountains, he first made a trial excavation at Kecske-lyuk and Búdös-pest caves (Kadić 1907: 387–388). Since the trial was unsuccessful, he went further on to Szeleta Cave. The aim of the trial excavation was to ascertain the presence of diluvial layers and diluvial man in the cave deposit.

The trial trench was located at the beginning of the Main Hall; it was 12 m long and 2 m wide. The trench was dug at different depths; its deepest part was at the northern end, at 6.5 m. The bedrock was not reached, and the weather

did not allow further excavations. In the deposit, under the 1 m thick Holocene sediment, Pleistocene layers were found. The age of these layers were proven by the bones of *Ursus spelaeus* and the lack of Holocene fauna. While stone tools were not found in the sediments, charcoal, ash and burnt bones did come to light. Kadić interpreted the latter as the imprints of Prehistoric man.

(2) 15 May–30 June 1907

Conducted by Ottokár Kadić. Published by Kadić (1907: 391–394, 1916: 172–174), Fig. 6.



*Fig. 6. Excavated areas, 15 May–30 June 1907.*

Systematic excavation started. The squares and the first level of depth I were established (see above). The aim of the excavation was to enlarge the trial trench in every direction. They dug also in the trial trench and at the depth of 7 m they reached what they supposed was the bedrock. (Later it turned out that a few metres to the east the bottom of the cave was at a much deeper level.) In the squares by the trial trench level VI was reached, at the other part of the Main Hall level I was recovered.

Stone tools came to light during this excavation season. The first one was a leaf-point (Kadić 1907: Abb. 3 right implement) found in the

yellow layer of B1/I. According to Kadić, 40 stone tools were found in total.<sup>2</sup>

At the back part of the Main Corridor (the borderline between cave parts C and D) a 6 m long and 2 m wide trial trench was dug in order to answer the question regarding the presence of Prehistoric man in this part of the cave. Rock was hit at the depth of 3.5 m in a certain part of the trench. At level I, two large, carefully worked tools were found (Kadić 1907: Abb. 4).

(3) 18 October–3 December 1907

Conducted by Ottokár Kadić. Published by Kadić (1907: 394–395, 1916: 174), Fig. 7.

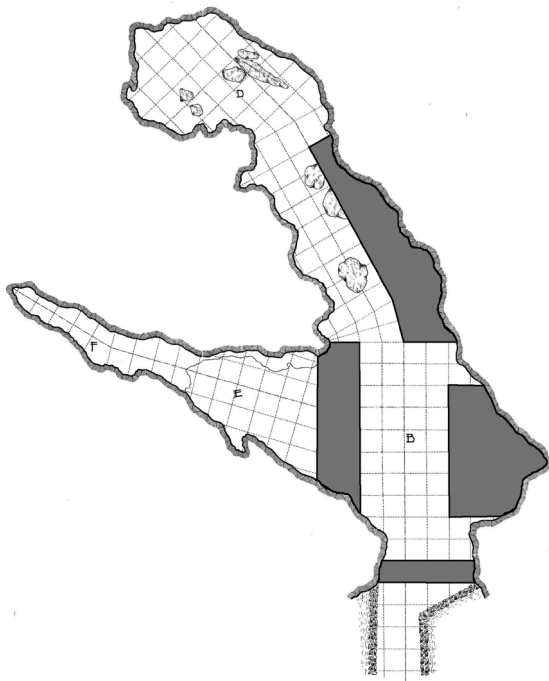


Fig. 7. Excavated areas,  
18 October–3 December 1907.

Excavation of the Main Hall continued. The following levels were excavated in a larger area. Level I was recovered in the western part of the Main Hall, while level II in the eastern part. Because of the tools found in the trial trench at the end of the cave, excavation of the Main Corridor began at level I. According to Kadić, 50 stone tools were collected.

(4) 4 May–21 June 1908

Conducted by Ottokár Kadić. Published by Kadić (1909a: 582–583, 1916: 178), Fig. 8.

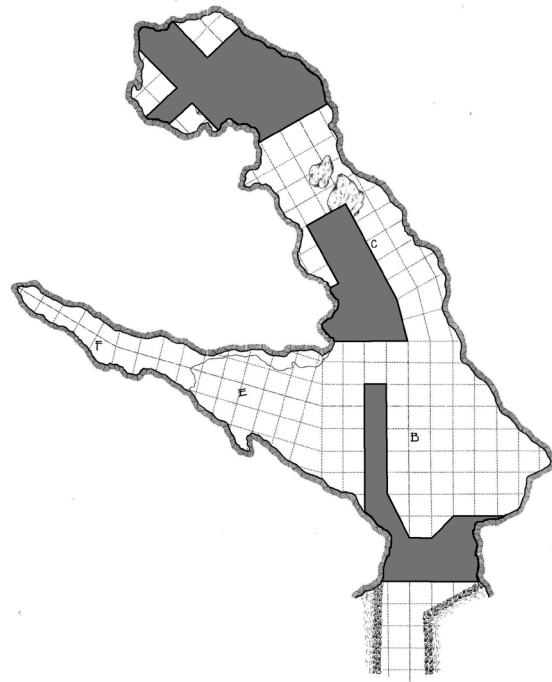


Fig. 8. Excavated areas,  
4 May–21 June 1908.

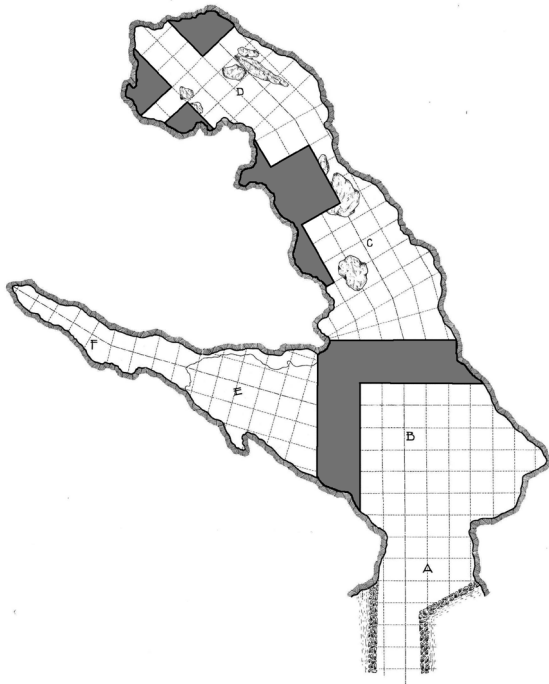
The aim of the excavation was to uncover the horizontal limit of the distribution of tools. Therefore, the excavation area was extended in the Main Corridor by the recovering of level I, then digging continued in the Main Hall at level II.

One of the results of the excavation was the collection of more than 300 pieces of stone tools, and the other was the discovery of bones originating from mammals other than the cave bear.

(5) 10–31 May 1909

Conducted by Ottokár Kadić and Jenő Hillebrand. Published by Hillebrand (1910: 681–682) and Kadić (1916: 179), Fig. 9.

<sup>2</sup> This number does not equal exactly the data from the find inventory. Accordingly, the number of collected stone tools here and at other excavations can be estimated only approximately.



*Fig. 9. Excavated areas,  
10–31 May 1909.*

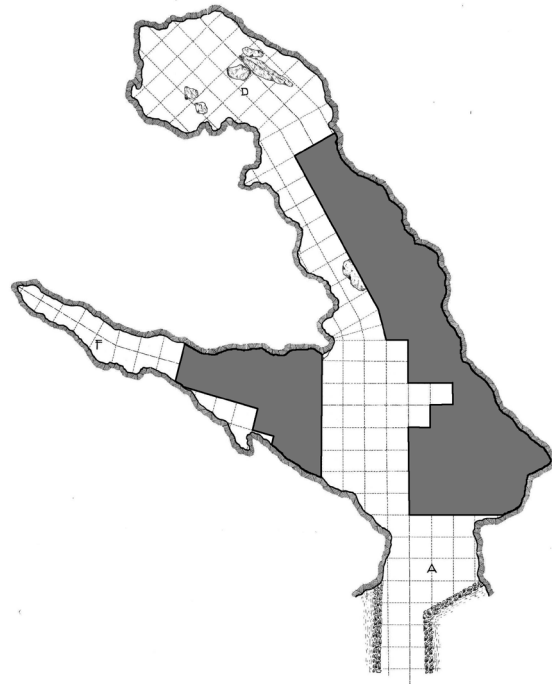
Jenő Hillebrand joined the excavation of Szeleta Cave so as to keep the research work going while Kadić had other assignments to do for the Geological Institute. He learned about Kadić's excavation method during this excavation.

The work followed a horizontal strategy: the remaining deposits at level I in the Main Corridor and at level II in the Main Hall were excavated. Thus the cave was fully excavated in part B down to level II, and in parts C and D down to level I. The Geological Institute wanted to finish the research of the cave with this excavation.

(6) 1 June–4 September 1909

Conducted by Jenő Hillebrand. Published by Hillebrand (1910: 682–692) and Kadić (1916: 179–181), Fig. 10.

Further research in the cave was financed by the Museum of Miskolc. The money given for the continuation was equal to the amount spent on the first five excavations. Accordingly, this was the most extensive excavation in Szeleta Cave.

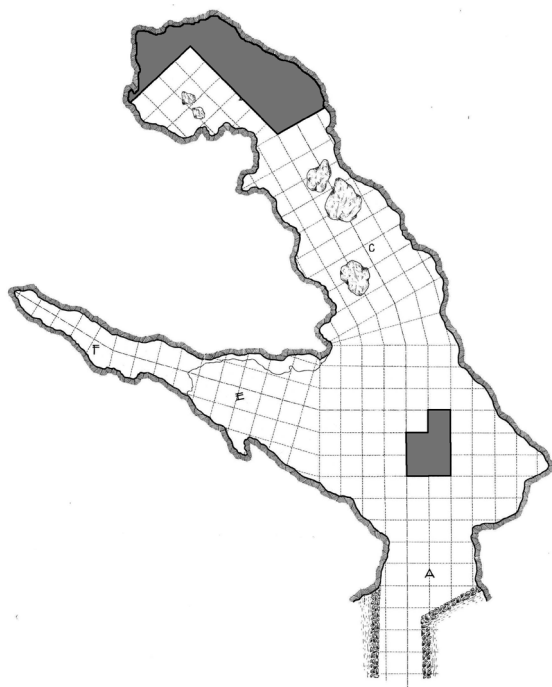


*Fig. 10. Excavated areas,  
1 June–4 September 1909.*

Since it turned out at the previous excavations that plenty of stone tools could be found at the deeper levels of the cave, the aim of the research was to recover the cave's eastern side down to the bedrock. They also planned to excavate the northern half of the Side Corridor. At the latter location the deposit turned out to be very shallow (1.5 m). Since this part of the cave was very narrow, they decided to recover the entire surface. After the removal of level I, they managed to reach level II in some places. Levels III–VI were excavated in the eastern part of the Main Hall, while in the centre, on a small surface, levels VII–X were extracted. In the eastern part of the Main Corridor levels III–IV were excavated. However, the bottom of the cave was not reached in any of the areas. The find assemblage of this excavation was the largest of all; it counted 800 pieces of stone tools and six big boxes full of animal bones.

(7) 21 November–14 December 1909

Conducted by Ottokár Kadić. Published by Kadić (1916: 181–182), Fig. 11.



*Fig. 11. Excavated areas,  
21 November–14 December 1909.*

The work left behind in the summer was continued. Levels III and IV were excavated in the back part of the Main Corridor and the trench cut in the centre of the Main Hall was dug deeper, but the bedrock was not still not reached. The artefacts gathered in the Main Corridor counted about 40 pieces.

(8) 28 August–27 September 1910

Conducted by Jenő Hillebrand. Published by Hillebrand (1911: 841–842) and Kadić (1916: 182–183), Fig. 12.

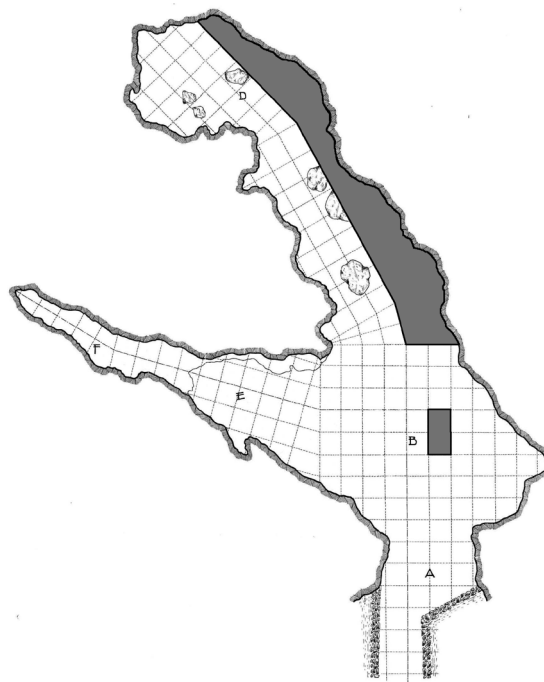
The aim was to reach the bottom of the cave in the eastern part. Levels V and VI were reached in the Main Corridor, and 1.5 m more were dug in the deep trench of the Main Hall, but the bedrock was still not reached. Apart from the rich faunal remains, only 40 stone tools were found.

(9) 15 June–25 July 1911

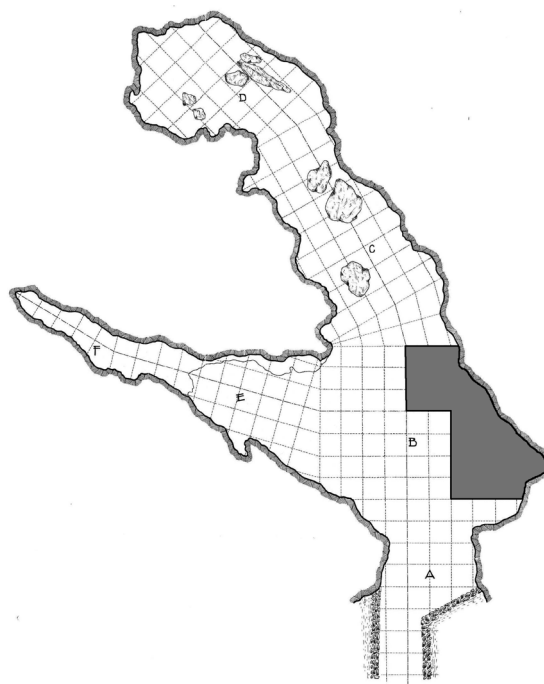
Conducted by Jenő Hillebrand. Published by Kadić (1912a: 178, 1916: 183), Fig. 13.

The aim was to reach the bottom of the cave. In the trench in the eastern part of the Main Hall 2 m more were dug (VIII–XI), but the

bedrock was not reached. A dark brown clay layer was being excavated during this season, from which no artefacts were found.



*Fig. 12. Excavated areas,  
28 August–27 September 1910.*



*Fig. 13. Excavated areas,  
15 June – 25 July 1911.*

(10) 26 July–5 September 1911

Conducted by Ottokár Kadić. Published by Kadić (1912a: 179–182, 1916: 183–185), Fig. 14.

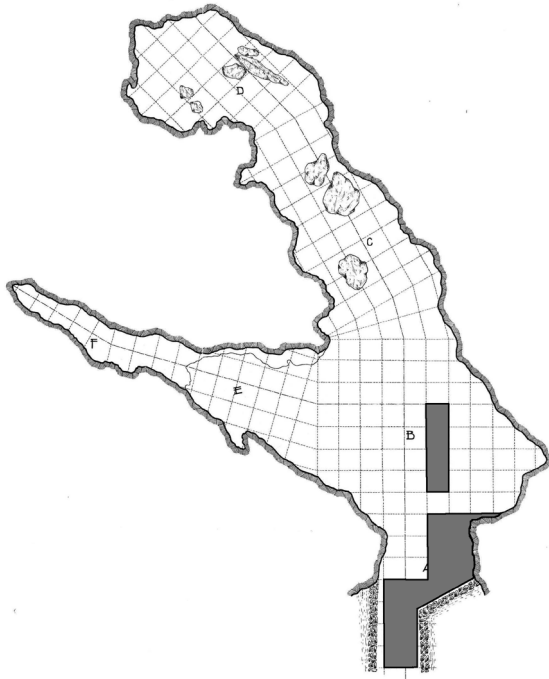


Fig. 14. Excavated areas, 26 July–5 September 1911.

This was the direct continuation of the former excavation, but financed by the Hungarian National Museum. The aim was to ascertain the size of the cave entrance. A depth of 2 m was dug (levels III–VI) in the eastern part of the Entrance till the 6th of August, but the bedrock was not reached. However, this part of the cave was rich in stone tools.

Kadić participated in an international palaethnological conference between 7–15 August, organized in Tübingen, where he gave a lecture on the results of the Szeleta excavation. During his stay, László Hulyák medical student was in charge of the excavation. The trench in the centre of the Main Hall was dug further; levels XII–XXIII were excavated. At the depth of 12.5 m the bedrock was reached. Here, a mammoth molar (*Elephas primigenius*) was found, but unfortunately we do not know exactly which level it came from. Two horizons containing stone debris were found in levels XIV–XV and XVII, including a few knapped stone tools.

Under Kadić's direction, between 16–26 August the front of the cave was excavated down to level I. A few stone tools were found. After 26 August only geological examinations were made around the cave.

(11) 14 September–20 October 1912

Conducted by Ottokár Kadić. Published by Kadić (1913, 1916: 189–191), Fig. 15.

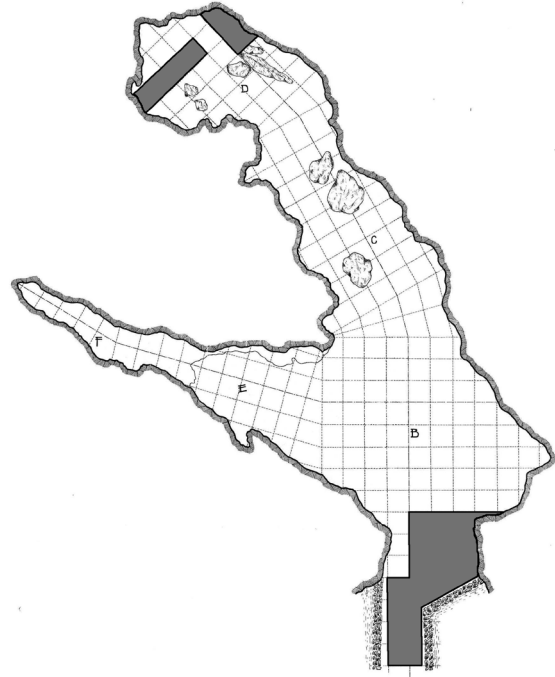


Fig. 15. Excavated areas, 14 September–20 October 1912.

The Hungarian National Museum supported the continuation of the excavations. In the previous year most of the finds were found at the Entrance, therefore the excavation of this part continued. Level VII was reached in most of this area, but at a smaller surface they managed to dig down to level XI. A considerable amount of artefacts came to light from level VII. At the front of the cave levels II and III were recovered.

Works were carried out at the back part of the Main Corridor as well. Levels III–IV were extracted in one half, levels VII–IX in the other. The Stalactites' Cavity (part G) was found during the extraction of level VIII (Kadić 1916: Taf. XIII). Plenty of cave bear bones were found on the surface of this cavity,

covered with travertine, but they did not have time to start excavations.

(12) 12 September–14 October 1913

Conducted by Ottokár Kadić. Published by Kadić (1914b: 218–219, 1916: 191–192), Fig. 16.

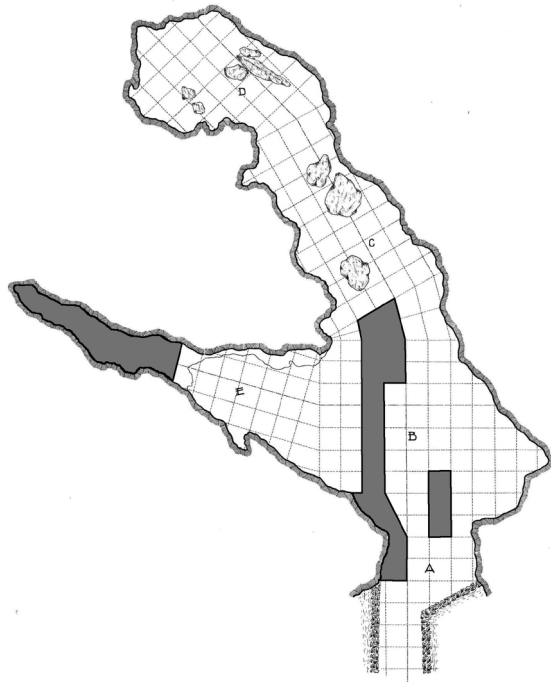


Fig. 16. Excavated areas, 12 September–14 October 1913.

This was the last fieldwork in the series of classical excavations at the cave. It was initiated by the Museum of Miskolc but was financed by the Geological Institute. At the Entrance levels III and IV were excavated without results. In the western part of the Main Hall levels III and IV were excavated, and plenty of stone tools were found. The trench that was dug down to the bedrock at the centre of the Main Hall was enlarged towards the south also to the bedrock (levels XII–XXII). The debris horizons in levels XV and XVII yielded a couple of knapped stones, similarly to the year 1911.

The thin deposit (0.5–2 m) of the Side Corridor made the full excavation of this part possible. Carefully shaped stone tools were collected from one of the layers at the rear of the cave.

(13) April 1928

Conducted by Jenő Hillebrand, Andor Saád and Louis G. Clarke.

Among the 18 excavations of Szeleta Cave, this is the one about which we know the least. During some stages of the research it was even assumed that this excavation had never taken place.

In his summary on Hungarian cave research between 1927–1928, Kadić (1932: 15) writes that Louis G. Clarke, the director of the ethnographical museum of Cambridge was excavating in Hungary in the company of Jenő Hillebrand in 1927 and had the fancy to do some research at Szeleta. In the autumn, after having run out of money, he sent Francis Rex Parrington to excavate at the cave. Parrington excavated the cave with Hillebrand and Saád for ten days. It is known for sure that this excavation was accomplished in the autumn of 1928 (see below). Mottl's data (1945: 1553) might originate from the same source that Hillebrand and Saád worked for 10 days in the cave in 1927. Mottl, in the same place, refers to the following excavation as having taken place in 1928, but without mentioning Parrington. In his monograph on the Hungarian Palaeolithic written by Kadić (1934: 32), it is stated that Hillebrand, Saád and Clarke excavated the Szeleta in the spring and autumn of 1928, but there is no mention of Parrington.

It is regrettable that the participants of this excavation did not publish more precise data on the fieldwork. Hillebrand (1928: 100, 1935: 11) mentions only those that were done together with F. R. Parrington, on which the first split-base bone points came to light. Saád (1929: 242) reports only the fact that excavations were carried out in the cave in the spring and autumn of 1928. The English participants have never published the excavation or the find assemblage (Allsworth-Jones 1978: 5).

The spring excavation can be supported by an interview made with F. R. Parrington (Kórády 1928) in the autumn. According to this source, Clarke was at the cave in April and gave Parrington exact instructions regarding the excavation. It should be emphasized that the

interview was published in a newspaper, and the journalist only said that Clarke had visited the cave, and did not specify that he also did work there. The assemblage in the collection of Cambridge has been catalogued under two heads (Allsworth-Jones 1978: 14). According to the label, one of them comes from the excavation of Hillebrand and Clarke, and the other was extracted by Hillebrand and Parrington. Allsworth-Jones concludes that both groups belong together and the whole collection derives from Parrington's excavation in September 1928. He argues that the stone tools classified as Aurignacian in Saád's publication belong in fact to Clarke's group, and according to Saád these were found together with the split-base bone points.

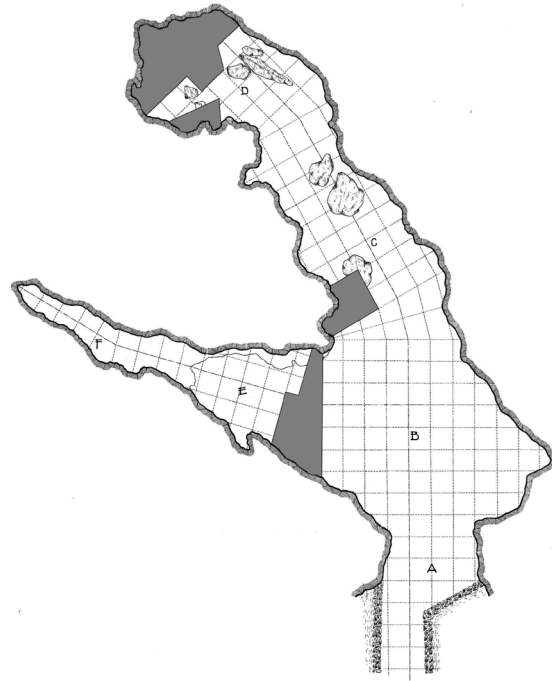
According to the information in the sources, it cannot be wholly rejected that Clarke did actually excavate at Szeleta Cave in April 1928 in the company of Hillebrand and Saád. Saád (1929: 242) definitely mentions two excavations. On the cave plan made in 1928 by Saád, the excavated areas are marked without any reference to the number of excavation seasons. In reference to the argumentation of Allsworth-Jones, one should turn to Saád (1929: 247), who writes that the Aurignacian stone tools and the bone point were not found together, but at the same place of the cave, that is, at the beginning of the side corridor. Since Clarke instructed Parrington (Kóródy 1928) where to excavate, it is highly possible that Parrington dug at the same places as Clarke did before him. Maybe this is the reason why Saád did not discuss the spring and autumn excavations separately. But if there was a spring excavation, we do not know its exact place or time.

#### (14) 16-30 September 1928

Conducted by Jenő Hillebrand, Andor Saád and Francis Rex Parrington. Published by Hillebrand (1928: 100), Saád (1929: 242–245) and Allsworth-Jones (1978), Fig. 17.

The Museum of Ethnography of Cambridge and the Museum of Miskolc financed the excavation. It is not known from the sources

what the aim of the excavation was. In the find description it is mentioned that the leaf-points were found in the central and rear parts of the cave, while the Aurignacian tools were recovered at the front of the Side Corridor (Saád 1929: 247).



*Fig. 17. Excavated areas, 16–30 September 1928.*

Andor Saád prepared the plan of the cave, showing the excavated areas and the depth of penetration: at the end of the Main Corridor between 2–3 m and 1–1.5 m, at the front of the Main Corridor between 1–2.1 m and at the beginning of the Side Corridor between 2–3 m. It is not clear what the points of reference are for these figures. It is clearly visible that Saád based his plan on Kadić's publication (1916: Taf. XIII). Comparing the two plans, it is also obvious that Saád established the elevation data on the results of the 1913 excavation. Therefore his data concerning the front of the Side Corridor are incorrect. On Kadić's plan the marking of squares 1–13 of part E is incorrect because the deposit was excavated only to the depth of 1 m (level II), and not to the depth of 2 m (level IV)<sup>3</sup>. Thus in 1928 levels III–IV, situated between 1–2 m were recovered here. This coincides with the fact that the split-

<sup>3</sup> Incorrect data, namely "2–3 m" can be also read in the inventory of the Hungarian National Museum, where the finds coming from Parrington's excavation have been catalogued (47/1928.4–8).

base bone point was found at level IV, between 1.5–2 m (Hillebrand 1928: 100; Saád 1929: 245).

(15) 10 June–3 July 1936

Conducted by Mária Mottl. Published by Mottl (1945: 1553–1564), Fig. 18.

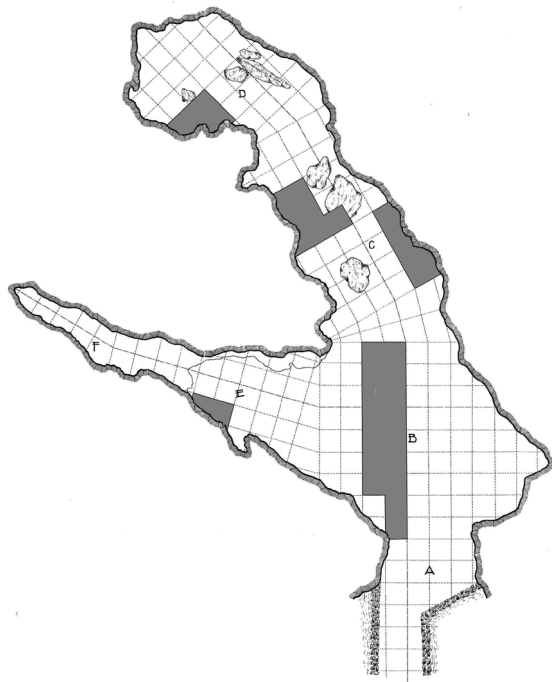


Fig. 18. Excavated areas, 10 June–3 July 1936.

It has already been mentioned that Mottl became the employee of the Geological Institute in 1934 and her area of interest was cave research. It is obvious that from 1934 onwards the documents of former cave research projects were in her possession. Possibly this was why she re-drew several plans and sections of Szeleta Cave in 1937. The main aim of the excavation in 1936 was to make precise plans and sections of the cave according to the levels, complementing and updating the old drawings. Her drawings constitute the most valuable group of sources for the present research (see above).

Two conditions made the work difficult. Firstly, the levels and sections left behind by former excavations were not clearly visible; therefore thorough measuring had to be done in order to identify the location of the squares. Secondly, the already extracted deposits were heaped up at

the front of the cave. There was such a large amount of deposit that a new place had to be found somewhere around the cave. Since the eastern part of the Main Hall was already excavated to the bedrock, Mottl placed the debris and the excavated cave deposit here. Except for the Entrance, new excavations were conducted in every part of the cave during this season.

The squares of the Main Hall were dug further, and depending on the conditions left behind by former excavations, the main work was carried out between levels II and X. The following areas of the Main Corridor were recovered: levels VII–VIII at the front, levels II–VI in the middle and levels II–V at the rear. In the Side Corridor two unexcavated squares still remained, here Mottl could recover the uppermost layers at level I. According to the find inventory 25 stone tools came to light during the excavation.

(16) 9–23 October 1947

Conducted by Andor Saád and János Nemeskéri. Published by Saád and Nemeskéri (1955: 18–21), Fig. 19.

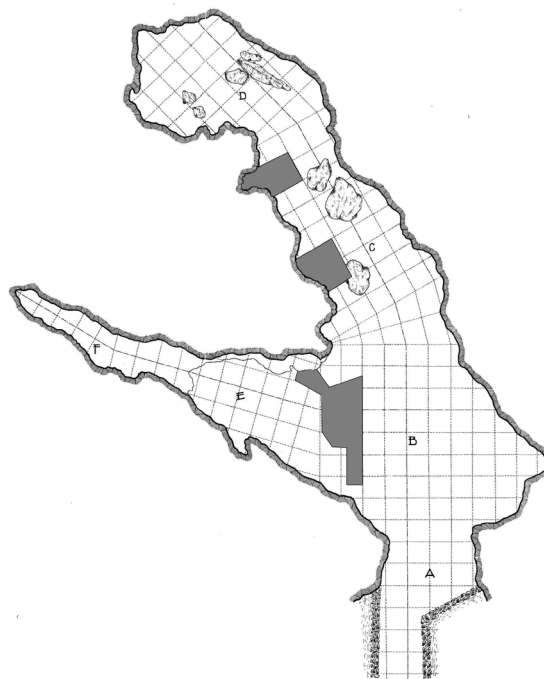


Fig. 19. Excavated areas, 9–23 October 1947.

Although the excavators did not mention the aim of the excavation, it is very possible to



regard this excavation as the continuation of the 1928 project. Saád is the main link between the two excavations, but the excavated areas are also close to each other. It is worth noting that the excavation was based upon Kadić's (1916: Taf. XIII) plan, as it was in 1928, and not on the plan of the former excavation published by Mottl (1945: 1552).

The lines of levels and sections could be identified only with great difficulty in 1936, 11

years later they must have faded beyond recognition. For re-establishing the elevation of the levels, they used the tar line on the wall (see above). Saád and Nemeskéri summarized the results of the excavation in a table as well (1955: 21). The authors depict the figures measured from the tar line and compare them with the levels of Kadić's system. If the varying thickness of level I (see above) is also taken into consideration, the comparison needs to be slightly corrected.

Squares after Saád & Nemeskéri	Squares after Mottl	Reached depth in 1947	Levels after Saád & Nemeskéri	Thickness of level I	Levels after correction
C23, C24, C19	C37, C36, C33	1.0–1.8 m	III., IV.	0.8 m	(II.) III.
C38, C39	C49, C48	1.0–1.5 m	III.	0.7 m	(II.) (III.)
B41, B42, B32, B31	B69, B53, B52, B68	2.2–3.5 m	(IV.) V., VI.	1.0 m	(IV.) V., VI.
B50, B51	B70, B54	2.3–2.7 m	(IV.) V.	1.0 m	(IV.) (V.)
B22, B13	B51, B50	2.2–2.6 m	(IV.) V.	0.9 m	(IV.) (V.)
E9	E5+E10	2.1–3.1 m	(IV.) V.	1.0 m	IV., V.

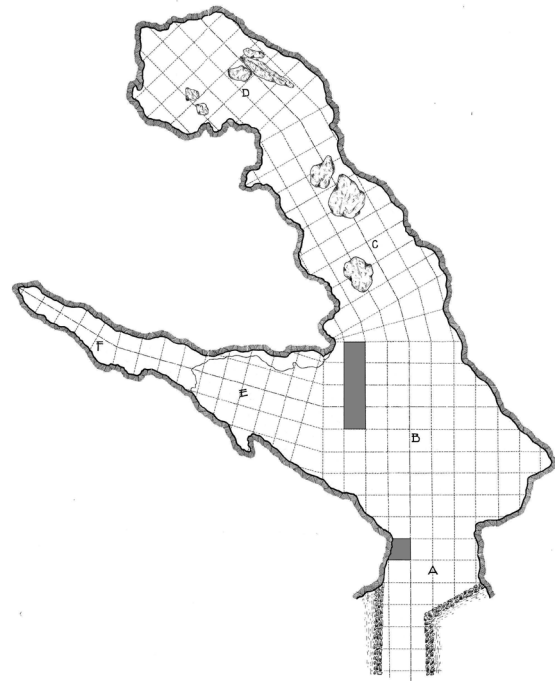
It is worth noting that according to Saád and Nemeskéri, level IV in square E9 had already been partially recovered in 1928. Therefore it is possible that the deposit of the excavated level IV was in reality accumulated deposit. No stone tools were found in the Main Corridor (C) during this season. However, knapped stones, as well as a split-base bone point were found in the Main Hall (B).

(17) 22–28 August 1966

Conducted by László Vértes. Published by Vértes (1968: 381–384), Fig. 20.

Vértes conducted an excavation at the site during the organization of the international Szeleta-Symposium in 1966. The aim was to show the stratigraphy of the cave for the participants of the symposium. Two sections were created:

- trench A at the Entrance, where Vértes hoped to find the upper layers;
- trench B in the western part of the Main Hall, where he expected to recover the layers of deeper levels.



*Fig. 20. Excavated areas, 22–28 August 1966.*

The southern wall of square A6 (based on Kadić and Mottl) was chosen for the location of trench A. The W–E oriented trench became

2 m wide and 2.4 m deep by the end of the excavation. The profile of trench B was L-shaped, and started at the northern wall of square B64 (based on Kadić) at the width of 1 m, then continued on the western walls of squares B64, B59, B51 and B42<sup>4</sup> for 8 m. (These squares in Mottl's distinction – used in the present research as well – are B56, B55, B54 and B53 respectively.) According to the field notebook, a perpendicular section was required because they had already reached the bedrock at the W-E oriented section at the depth of 1.1 m.

By studying the excavation progress, plans and sections it seems that trench A was not at the location Vértes defined, but 4 m to the north in square A13 (Mottl's A11). Since the Entrance had not been excavated since 1913, squares A6, A9 and A13 of Kadić (namely A6, A2 and A11) were excavated down to level IV (cf. Kadić 1916: Taf. XIII). Therefore Vértes should have recovered all the three squares at the length of 6 m in order to reach the place that he had defined. Yet only square A6 is mentioned in both the publication and the field notebook. In addition, he writes that only 2–3 m<sup>3</sup> deposit was exploited (Vértes 1968: 383) which equals less than 1 m of trench in the case of a 2 m wide and 2.4 m deep section. It can be concluded that Vértes identified the place on the plan incorrectly or the designated place was identified wrongly at the site itself. The mistake could have stemmed from the fact that the northern wall of square A11 offered a 3 m section, since the adjacent B12 was dug to level X in 1936. However, such a section on Kadić's longitudinal cave section can be found only at line F of the Entrance (1916: Taf. XIV), which belongs to square A6 on Kadić's plan. It is worth noting this longitudinal section – according to its coordinates – should follow the cave axis, but based on Mottl's drawings this is actually 2 m away towards the east.

Vértes measured the elevation figures from the surface of the cave floor. Taking the depth dug at trench A into account, Vértes was excavating levels V–IX. According to the

drawing published of trench B (Vértes 1968: Bild 2), the given area for the section seems to be correct. It touches levels V–VI at its W-E section, but on the southern end it falls into the excavated areas of level VI, reached in 1947. Thus Vértes reached level XI at the latter area. Knapped stones were found only in trench A, but the bone samples from trench B were used for <sup>14</sup>C dating.

(18) 8-12 August 1989

Conducted by Árpád Ringer. Published by Ringer (1993: 119–121), Fig. 21.

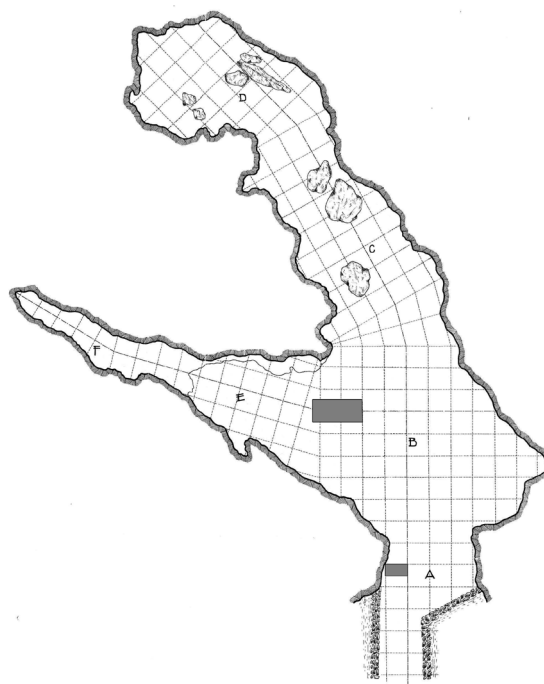


Fig. 21. Excavated areas, 8–12 August 1989.

Ringer prepared two trenches in Szeleta Cave to represent the stratigraphy on the occasion of the 10th International Speleological Congress. Both trenches were fitted to the trenches dug by Vértes in 1966:

- trench I was the southerly continuation of Vértes' trench A. According to the published plan, its size was approximately 2 m wide and 1 m long (Ringer 1993: Fig. 19);
- trench II intersected the southern end of Vértes' trench B in a perpendicular line.

<sup>4</sup> Vértes ranked squares 64, 59, and 51 incorrectly into part E, and instead of square 42 he mentions squares 43–44. The mistake is obvious because Vértes talks about the north-south section which is rectilinear and perpendicular to the W-E oriented section.

According to the plan (*ibid*) it was approximately 2 m wide and 5 m long.

According to Ringer's plan, trench A is depicted as 2 m wide and 4 m long. Based on its position, it includes squares A6 and A9 of Kadić. Unfortunately, Ringer does not mention the sources he used for locating the trenches,<sup>5</sup> which slightly deviate from the data published by Vértes (see above). Thus it is not possible at the moment to account for this discrepancy.

If the deductions concerning the position of trench A are correct, then Ringer's trench I should be moved 4 m towards the north. (For consistency, this position is shown on my plan.) The depths of both trenches are not noted in Ringer's dissertation, but on the basis of the trenches' position it can be assumed that the excavation reached the levels of Vértes.

A few knapped stones and plenty of faunal remains were found. The most important result was the stratigraphical revision and reinterpretation of Vértes' sections and the original location of the <sup>14</sup>C date samples (Ringer 1990, 1993: 117–125; Kordos, Krolopp & Ringer 1995).

### **Perspectives**

In addition to providing an outline of the Szeleta Cave excavations, the most important purpose of this paper was to emphasize the usefulness of the documents of previous excavations. These give more possibility for present and future research work on the Szeleta assemblages. With the help of previous sources the study has tried to provide a methodological basis for researchers dealing with this topic in the future.

The research published in the present paper should not be regarded complete. There are several ways in which it can be continued. There are great possibilities in the computerised 3D modelling of the excavated parts. The spatial display of the finds open up a new per-

spective and will probably give rise to several further issues. I hope that these results will help to identify the locations of *in situ* sediments of the cave more clearly. Recovering these locations by modern, scientific methods can provide a better understanding of cave stratigraphy.

Szeleta Cave has always played an important role in the Palaeolithic research of the Bükk region and I certainly believe that it will do so in the future as well.

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<sup>5</sup> It is possible that he used personal communication. We know from the field notes of Vértes that László Pap and his son was working at trench A. Pap, who worked with Vértes at the excavation of Istállós-kő Cave (Vértes 1957: 53), is in good health even today and visits every Palaeolithic excavation site of the Bükk region regularly.

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