

# Preliminary Report on the 4th Season of Excavation at Al-Tar Caves

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## Introduction

Hideo FUJII\*

We had confirmed the following points through the 1st to 3rd seasons of works at Hill-A caves:

1. The caves are carved out only in marlstone stratum and are not in sandstone stratum.
2. The ceiling level of the caves coincides with the upper level of the marlstone stratum, agreeing with the line (which runs horizontally almost at regular height) distinguishing the marlstone stratum from the overlying sandy marlstone stratum.
3. The floors of the caves are generally remarkable in rise and fall and more than 3m deep at places. There are some staircase-like places, and some of the floors are made in such a way as to suggest that they were intended for rooms.
4. The interiors of the caves, carved out with the best use of two cracks running crossing at right angles, form a zigzag structure, in which rooms and walls are not seeable from each other. Some of the walls are like barricades.
5. The caves as a whole form a kind of labyrinth with "half-moon" paths made at places immediately below the ceiling level.
6. All of the caves were carved out with chisels, possibly made of iron, thereby leaving the straight chisel traces on the walls as well as the chisel traces of fish-scale types on the floors.
7. Some caves had the accumulation of stone chips, produced when they were carved out. There are some caves with thick accumulation of sand, blown in by wind, but there are caves without any such accumulation inside.
8. The caves were secondarily used for graves, and so far there have been discovered some 4,000 fragments of textile, leather goods, pottery, glass wares, beads, etc., which were buried together in the graves.

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9. The C-14 datings for some of the woolen, cotten and hemp textiles uncovered so far indicate the 2nd century B.C. to 3rd century A.D. for the age of the secondary use of the caves.
10. Although there are many problems still unsolved concerning the age and purpose of the primary carving of the caves as well as the historical background to their secondary usage as graves such as cultural and tribal interrelationship between the East Mediterranean coast and the Al-Tar area, it is believed, on the basis of the thickness of the threads and structure, designs and dye-stuffs of the textiles unearthed, that the Al-Tar textiles are comparable with those from Palmyra, Dura-Europos and Cave of Letters in the Syro/Palestine region as well as Lou-Lan and Noin-Ula in the Central Asia.

Thus, the purpose of the 4th expedition was to research (1) the geographical and geological situation in which Hill-B, Hill-C and Hill-D caves near Hill-A are distributed, (2) the ways in which these caves are carved out, (3) types of the caves, (4) the archaeological objects derived from the surfaces inside the caves of Hills B, C and D, and finally (5) meanings of the primary carving and secondary usage of the Al-Tar caves.

After a careful examination of the results of the cave distribution survey, we decided to excavate in Caves C-12 and C-17 of Hill-C, considering their importance in terms of their types and secondary usage as graves.

Meanwhile, we surveyed 'Aramaic and Bedouin marks', left around the Al-Tar caves, recognizing their importance associated with how the caves and wadis are located; the distribution of such letters or marks is suggestive of the movements of the Aramaic people or the 'Bedouins' since ancient times.

We also researched on the rock fan of Tar Jamal, on which we had found many Mousterian lithic artifacts in the 3rd expedition, and again in this expedition confirmed many lithic artifacts manufactured in Levallois technology.

In this connection, we surveyed Abje and Hafna and found lithic artifacts there, too.

The lithic collections from Tar Jamal and Abje may add important new data to the Near Eastern Palaeolithic study, for they are completely different from the Zagros Mousterian industries and are very similar to the Levantine Mousterians with high dependency on Levallois technology.

These findings are very important in that they suggest certain human movements in the Pleistocene from the western region to the Al-Tar area or vice versa.

The Hafna samples, on the other hand, may present a unique data, for they are derived from the eastern border of the Syrian Desert and quite different techno-typologically from the lithic assemblages reported in the publications so far available.

Here, I would like especially to mention that we researched very hard in this season of work; we creaped up the cliffs when the caves were located at high levels; we moved very laboriously inside the caves when they were narrow, greatly curved and deep; we had to prepare for sudden fall of the ceiling inside the caves and for sudden dangerous attacks of snakes, wolves and hyenas which we believed were hiding inside the caves.

The excavational and survey results which follow in this report were accomplished by the hard works of all of our staff members who participated in this season of work, and I would like to express my sincere gratitude to them for their cheerful but scientific cooperation on the spot.

The 4th expedition was constituted by the following staff members:

Director:	Hideo FUJII	(General direction and excavation)	(Director and professor at the Institute for Cultural Studies of Ancient Iraq, Kokushikan University)
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Staff members:	Ken MATSUMOTO	(Excavation)	(Lecturer, Institute for Cultural Stu-
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Katsuhiko OHNUMA	(Excavation)	dies of Ancient Iraq) (Lecturer, Institute for Cultural Studies of Ancient Iraq)
Katsuaki WADA	(Excavation)	(Teacher, Koromodai Senior High School, Toyota)
Hiroe, INAOKA	(Excavation)	(Student, École de Louvre)
Toshio KAWANA	(Geomorphological research)	(Associate professor, College of Education, the University of the Ryūkyūs)
Junko MATSUO	(Research on textile)	(Assistant professor, School of Domestic Science, Bunka Women's University)
Nobuko NARUSE	(Research on textile)	(Professor, School of Domestic Science, Bunka Women's University)
Hidemi ISHIDA	(Research on physical anthropology)	(Associate professor, Faculty of Human Science, Osaka University)
Hisao YAMADA	(Geological research)	(Professor Emeritus, Tokyo Institute of Technology)
Shin SUGAWARA	(Photography)	(Photographer)
Nadir AL-RAWI	(Cooperative works)	(The State Organization of Antiquities and Heritage, the Ministry of Culture and Information, Baghdad)
Sabah AL-KADI	(Cooperative works)	(The State Organization of Antiquities and Heritage, the Ministry of Culture and Information, Baghdad)

On this occasion, I would like to mention that the research results of the 1st to 3rd seasons of excavations at Al-Tar caves as well as the preliminary reports on the textiles and leather goods derived from the 4th season of excavation were published in *AL-TAR I: Excavations in Iraq, 1971-1974*, *Al-Rāfidān Vol. I* and *Al-Rāfidān Vol. III-IV*.

I would like finally to add that the works of the 4th expedition was accomplished by the Grants-in-aid (Overseas Scientific Surveys), Japanese Ministry of Education, Science and Culture as well as the financial support from Kokushikan University.

# I. Physiographic Setting of Caves Along the Cliffs of the Kerbala Plateau

Toshio KAWANA\*

## 1. The cliffs of the Kerbala Plateau

Kerbala Town is located 100 km to the southwest of Baghdad. To the west of Kerbala, there is a cliff stretching in the north-south direction. At its southern margin, the cliff turns to the east. We provisionally name the region surrounded by the cliffs, the towns of Najaf, Kerbala and Razaza, "the Kerbala Plateau" (Fig. I-1).

Although the cliff line is disrupted at the southwest of the Kerbala Plateau in Fig. I-1, the cliff may be continuous because we observed the western cliff extending to the south of Barga and the map of C. VOÛTE (1957) also shows the undisrupted cliff from Barga to Najaf.

The greater part of the above cliffs have scarps, but the scarps are in certain areas interrupted by fan-like gentle slopes. We investigated the western cliff extending from Razaza to Barga, and the southern cliff from Najaf to Um al-Ghalaaf (Fig. I-1).

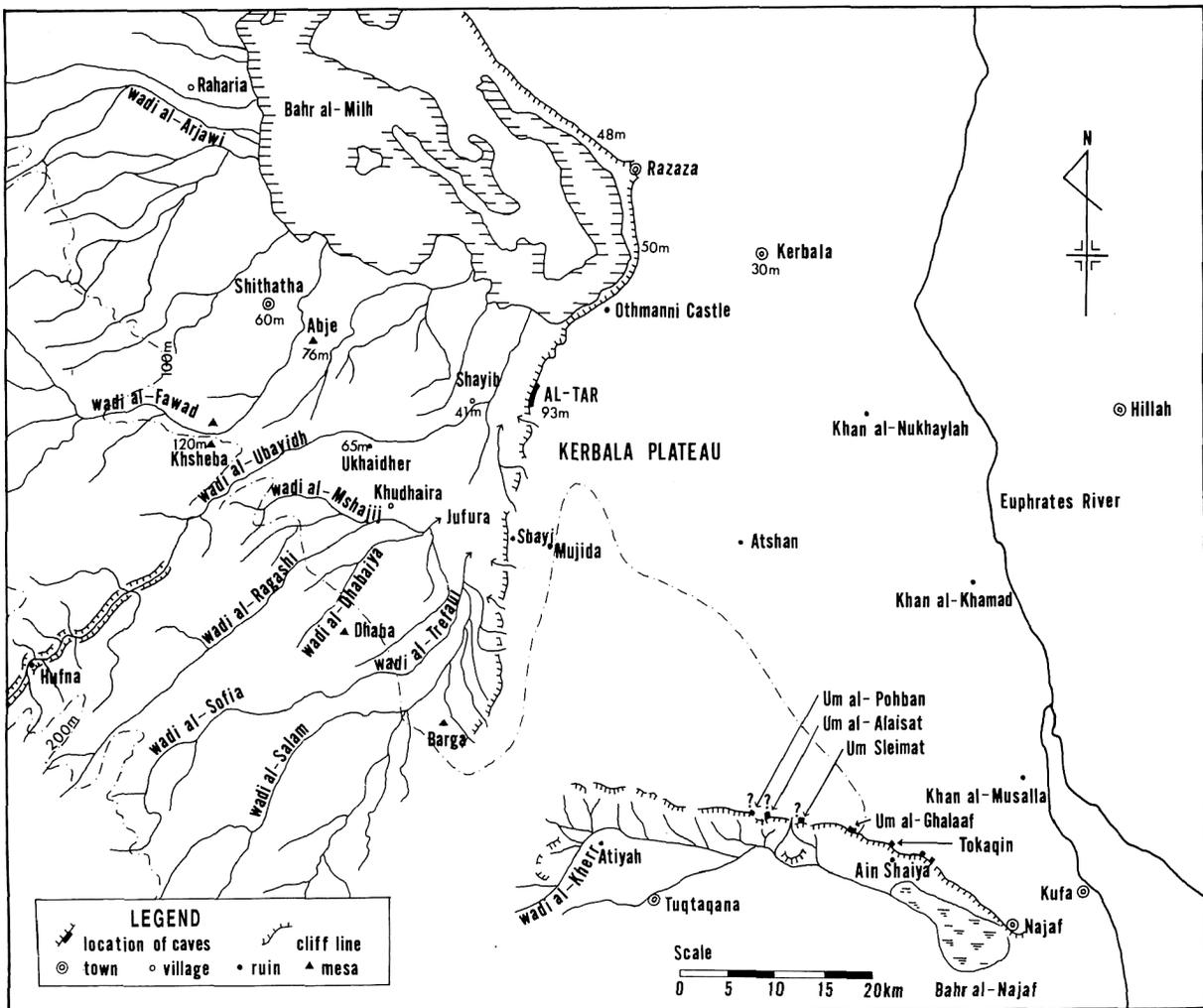


Fig. I-1 Distribution of caves along the margin of the Kerbala Plateau  
Based on H. USHIKI (1973) and C. VOÛTE (1957).

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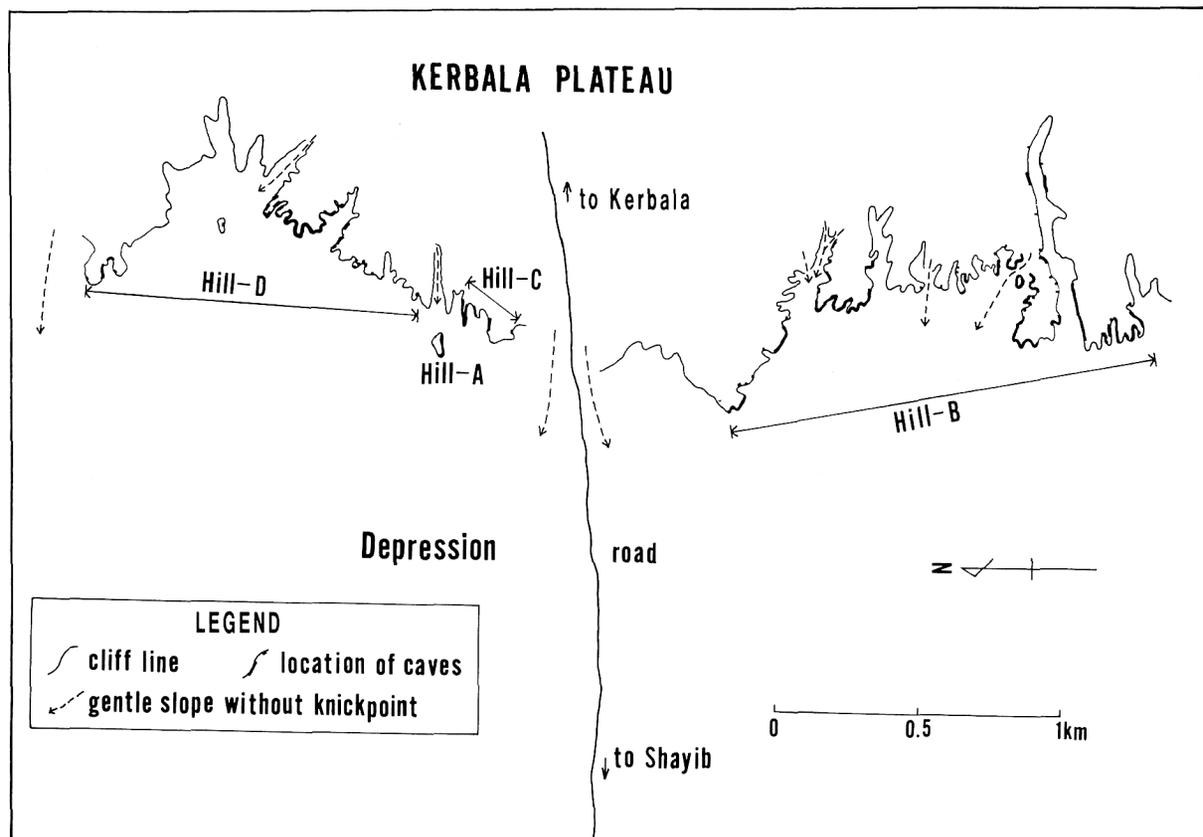


Fig. I-2 Distribution of caves in the Al-Tar area.

Along the cliffs of the Kerbala Plateau, caves are everywhere located on the scarps. Along the western cliff, caves are distributed within the stretch of about 4 km in the Al-Tar area. It is assumed that there are few caves to the south of Barga since the cliff in this section was observed to possess gentle slopes. Along the southern cliff of the Kerbala Plateau, four cave groups near Najaf were identified. Two groups of them are called Um al-Ghalaaf and Tokaqin, while others' names are unknown. The sounding of the southern cliff to the east of Um al-Ghalaaf revealed that cave groups are distributed within the distance of about 8 km from Um al-Ghalaaf (Fig. I-1). Moreover, three cave groups were known to be distributed to the west of Um al-Ghalaaf, i.e. Um Sleimat, Um Alaisat and Um al-Rohban according to a resident in Najaf, who could give only distances to Um Sleimat, Um Alaisat from Um al-Ghalaaf which are 5 km and 9 km, respectively. In Fig. I-1, therefore, the localities of Um Sleimat and Um Alaisat are inferred from the interview, and the locality of Um al-Rohban is uncertain.

The distribution of caves along the cliffs of the Kerbala Plateau is summarized as follows:

- (1) Caves are located on the scarps along the margin of the Kerbala Plateau.
- (2) Caves are distributed within the stretch of about 4 km in the Al-Tar area along the western cliff, and within the distance of about 8 km to the east of Um al-Ghalaaf and at least about 9 km to the west of Um al-Ghalaaf along the southern cliff. (Fig. I-1)

## 2. The Al-Tar area

The cliffs of the Kerbala Plateau in the Al-Tar area are dissected by many wadis with knickpoints, while some wadis have gentle longitudinal slopes without knickpoints (Fig. I-2). We grouped the caves except Hill-A caves along the western cliff in the Al-Tar area into three groups: Hill-B cave group (No. 1-313),

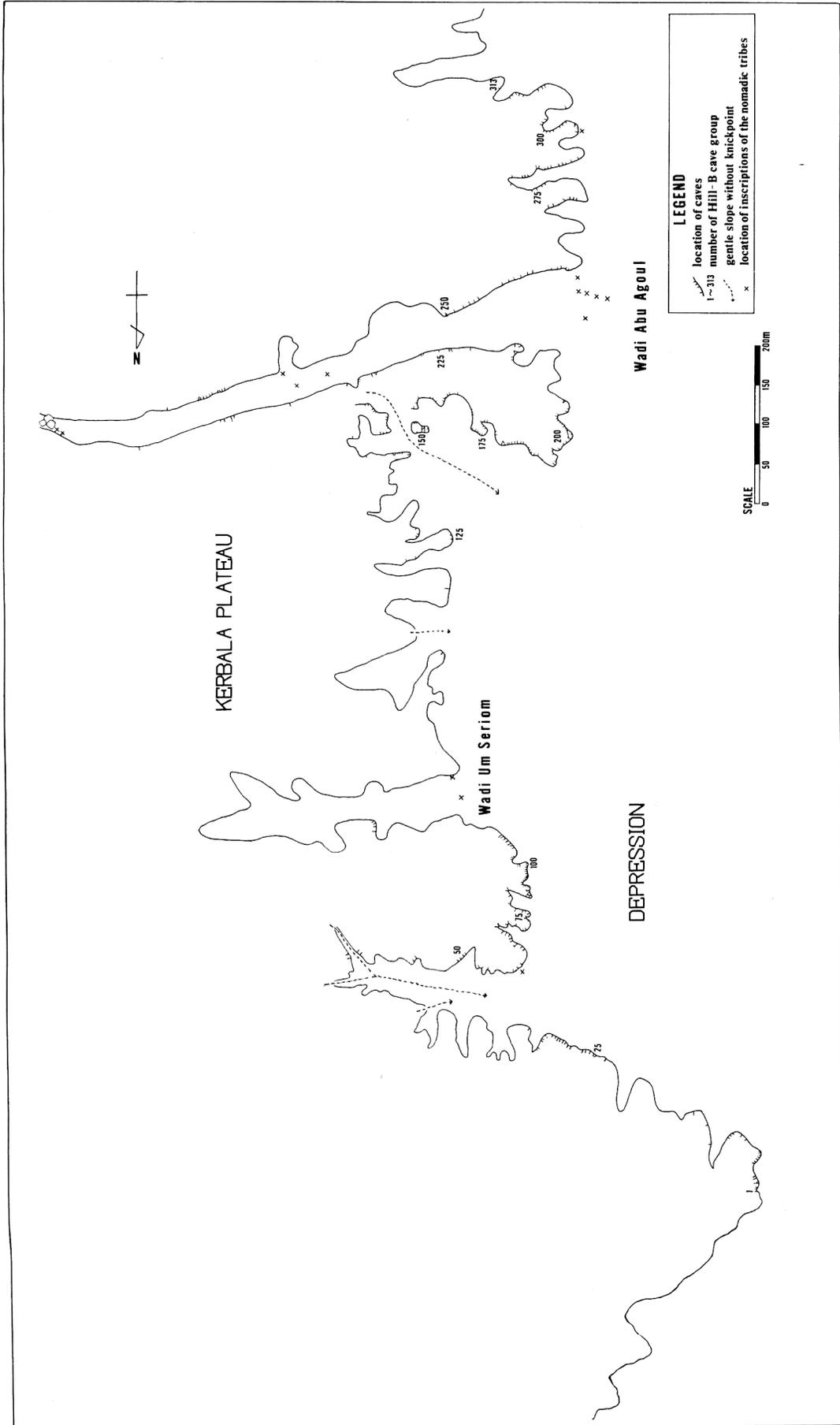


Fig. 1-3 Distribution of Hill-B caves.

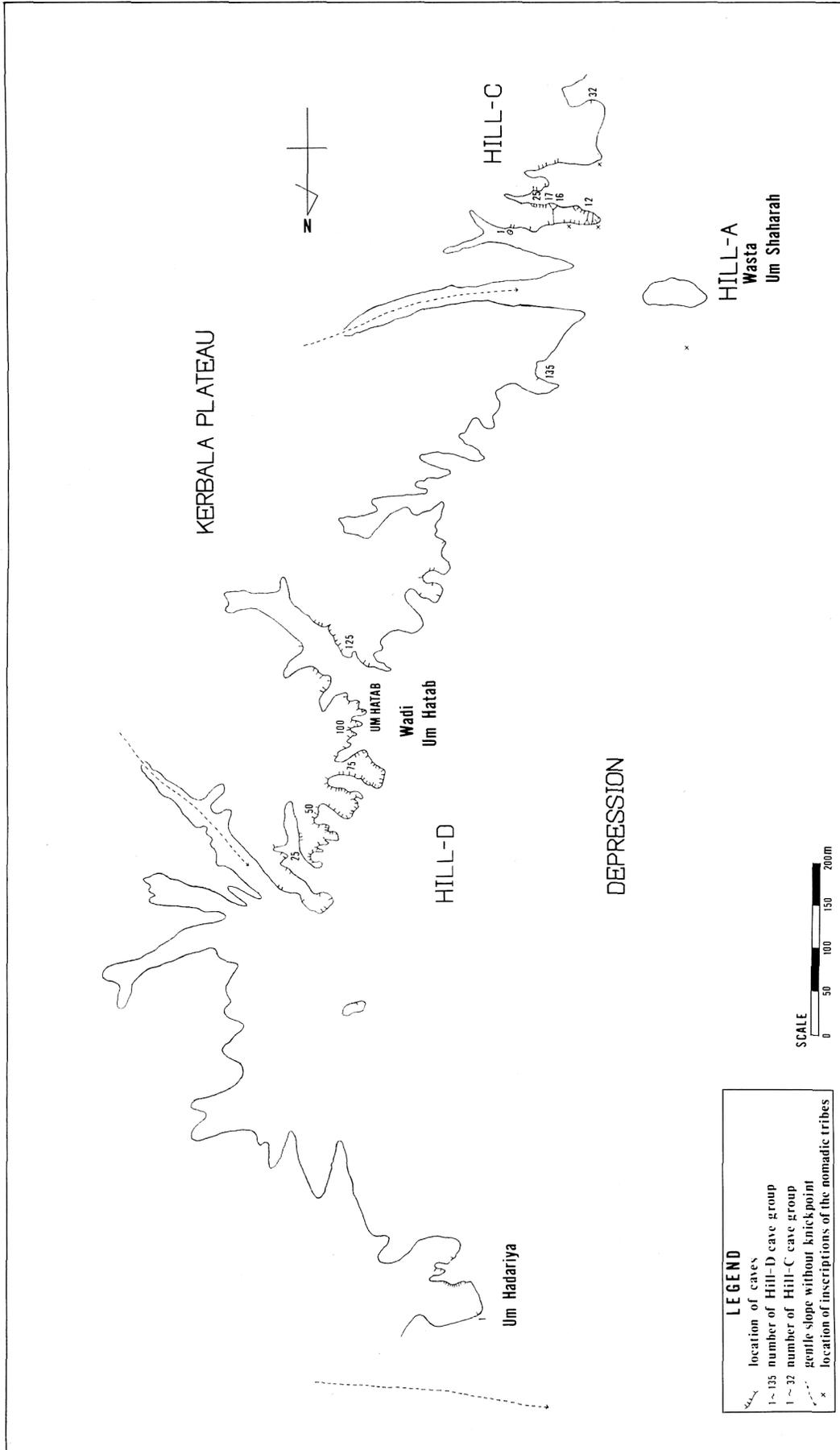


Fig. 1-4 Distribution of Hill-C and Hill-D caves.

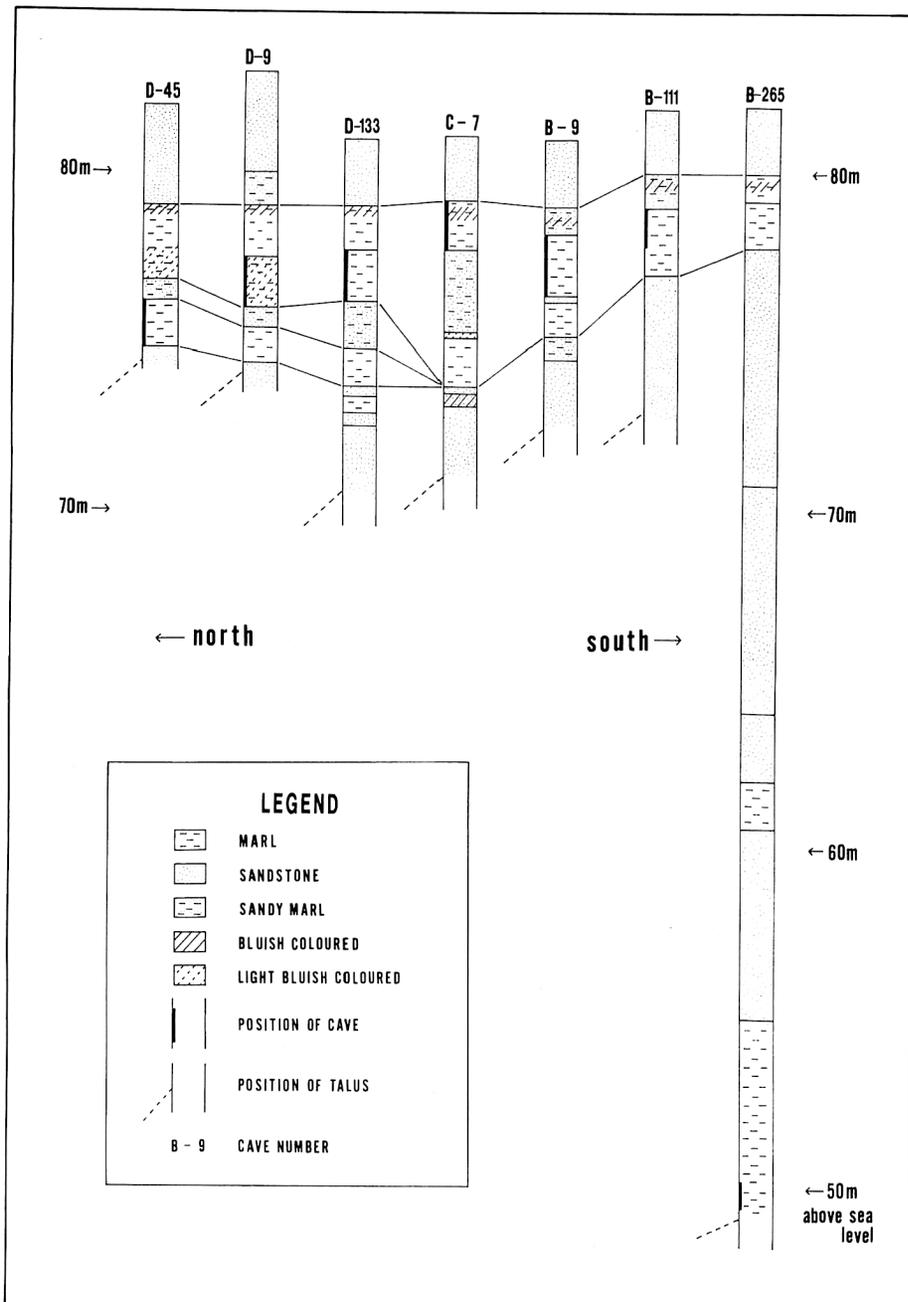


Fig. I-5 Columnar sections of the cliffs together with the vertical positions of the caves and the taluses in the Al-Tar area.

Hill-C cave group (No. 1-32) and Hill-D cave group (No. 1-135). We counted 480 caves in total in the three cave group areas. Fig. I-2 shows the distribution of the above caves in the Al-Tar area. Fig. I-3 shows the distribution of Hill-B caves, and Fig. I-4 shows the distribution of Hill-C and Hill-D caves. Fig. I-5 shows the columnar sections of the cliffs together with the vertical positions of the caves and the taluses. The four maps show that:

- (1) Caves are distributed within the limits of 1.2km to the north and 2.5 km to the south of Hill-A site.
- (2) Caves are located mainly on the scarps facing the depression and near wadi exits.
- (3) Directions which the caves face are irregular.
- (4) There seems no interrelation between locations of caves and existence of wadi knickpoints.
- (5) Caves are located on the scarps of marl strata.

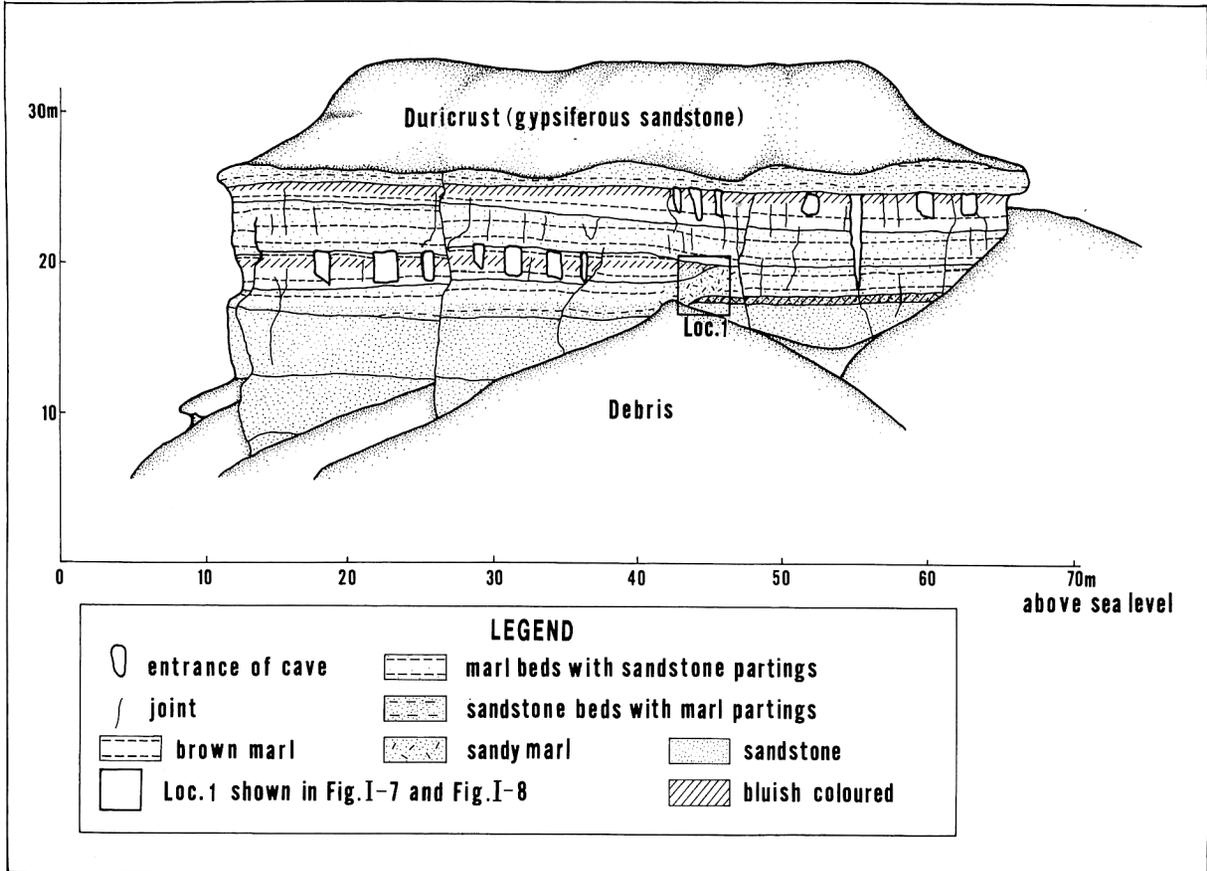


Fig. I-6 Strata at south side of Hill-A site. Based on T. TAKEMURA, 1976: Fig. II-2.

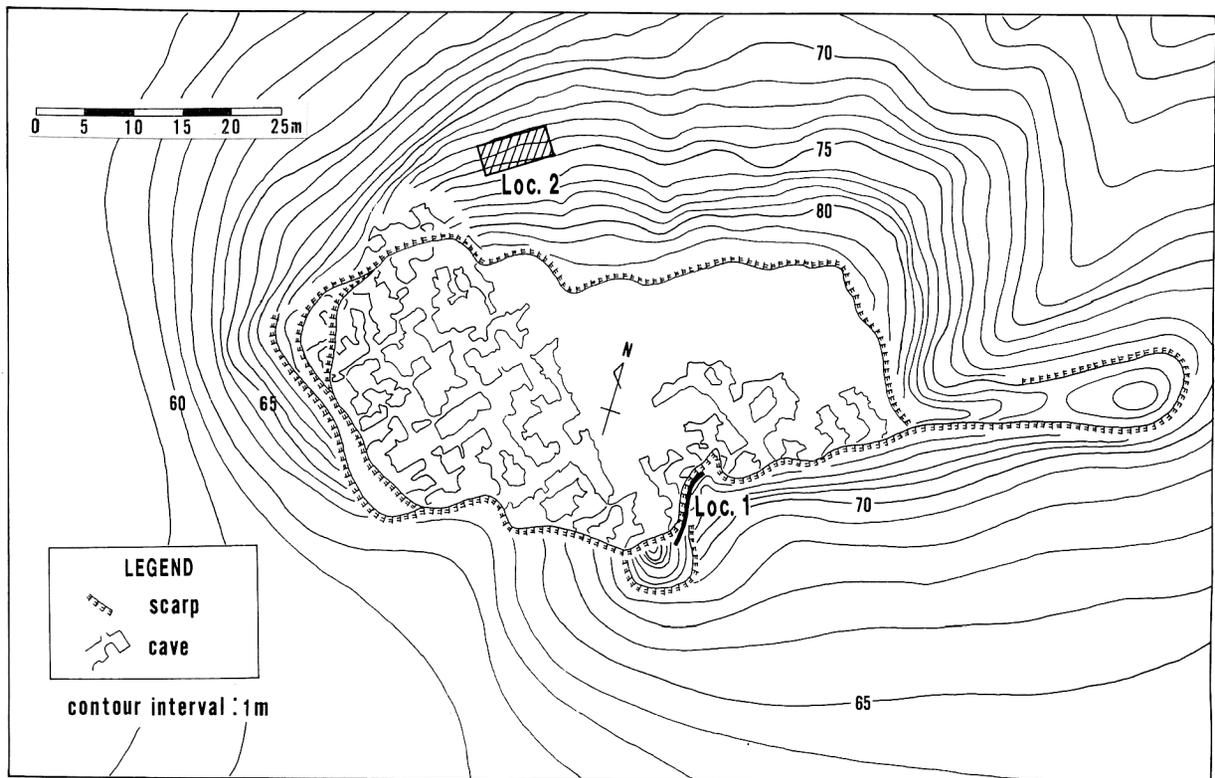


Fig. I-7 Overall plan of Hill-A caves. Based on T. TAKEMURA, 1976: Fig. II-1. Loc. 1 and Loc. 2 are shown in Fig. I-8 and Fig. I-9, respectively.

- (6) Caves are divided into two types, i.e. ones that can be entered from the taluses, and the others that cannot be entered from the taluses because they are high above the taluses.
- (7) Caves of the former type are distributed mainly in the Hill-D cave group area and wadi Abu Agoul of Hill-B cave group area (Fig. I-3 and Fig. I-4).
- (8) The former type caves are located at various elevations because the elevations of taluses vary, whereas the latter type caves are at almost the same elevation which is higher than the elevations of the former. (Fig. I-2, Fig. I-3, Fig. I-4 and Fig. I-5)

### 3. Hill-A site

The entrances to caves at Hill-A site are characterized by the two different elevations they are positioned on the cliff (Fig. I-6), and the caves are concentrated at the southwest and southeast parts of Hill-A site (Fig. I-7). Fig. I-6 shows the strata at the south side of Hill-A site together with the vertical positions of the entrances to caves. There are two marl strata of bluish-brown colour. The upper marl stratum thickens from west to east, and the lower marl stratum thickens from east to west. Fig. I-8 indicates unconformities of strata at Loc. 1 of the south side of Hill-A site shown in Fig. I-6 and Fig. I-7. The removal of debris at the north side of Hill-A site exposed another case of unconformities (Fig. I-9). The upper bluish sandstone shown in Fig. I-8 can be correlated with the upper bluish sandstone shown in Fig. I-9, and the lower bluish sandy marl shown in Fig. I-8 can be correlated with the lower bluish sandy marl shown in Fig. I-9. Fig. I-7 shows the locations of the above exposure of the unconformities. Fig. I-6, Fig. I-7, Fig. I-8 and Fig. I-9 indicate that the lower marl stratum thins out from west to a thin edge changing to sandy facies at Loc. 1 and Loc. 2 shown in Fig. I-7. Fig. I-6 indicates that the upper level entrances to caves are almost all situated in the thicker position of the upper marl stratum at the east, and the lower level entrances to caves are in the lower thicker marl stratum.

Consequently, it may be conjectured that one of the factors affecting the distribution of the entrances to the caves at the two levels at the Hill-A site is the existence of the thick marl strata at the two levels.

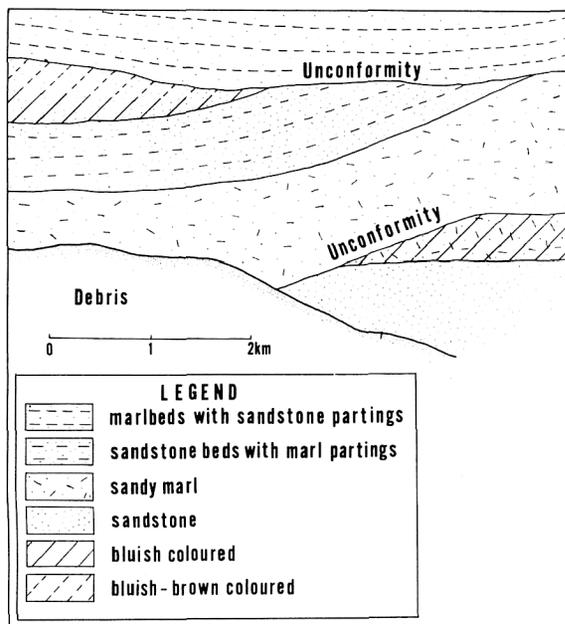


Fig. I-8 Sketch showing unconformities at Loc. 1 of the south side of Hill-A site shown in Fig. I-6 and Fig. I-7. Based on T. TAKEMURA, 1976: Figs. 1, 2.

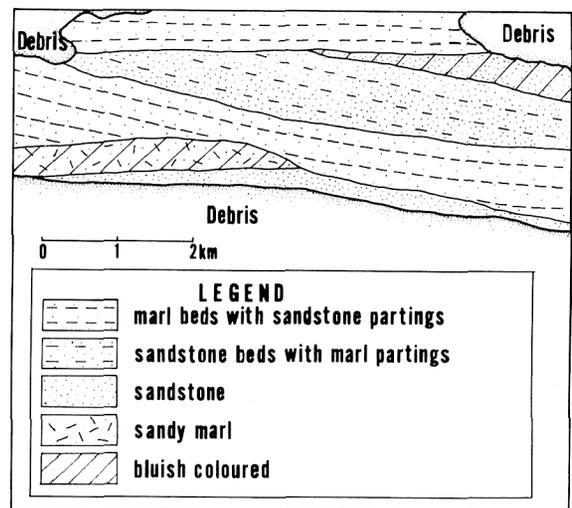


Fig. I-9 Sketch showing unconformities at Loc. 2 of the north side of Hill-A site shown in Fig. I-7. Based on T. TAKEMURA, 1976: Figs. 1, 4.

### Acknowledgement

The author is indebted to Professor Michihiro MIYAGI of the College of Education, the University of the Ryūkyūs for helpful suggestions and a critical reading of the manuscript.

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## II. Cave Distribution Survey in the Al-Tar Area

Ken MATSUMOTO\*

### Foreword

In the 4th season's works, we did the cave distribution survey at Al-Tar Caves (Hills B, C, D) and their neighbouring area from October 18th. to November 26th. 1975.

1. Purpose: Clarification of the digging purpose, the period and the secondary use process of the Al-Tar Caves.
2. Themes Pursued: For the survey toward the above purpose, we pursued the following:
  - (1) Confirmation of the caves along the cliff line
  - (2) Survey of the geomorphological situation of Al-Tar Caves
  - (3) Survey of the structure, accumulation, finds and digging method in each cave
3. Items of Survey:
  - (1) Height from talus to entrance of the cave
  - (2) Type of the cave's plan
  - (3) Type of the cave's section
  - (4) Crack existence inside the cave
  - (5) Accumulation
  - (6) Finds from the surface
  - (7) Traces of chisel (kind, position direction)



Fig. II-1 General View of Hill-D Caves

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(8) Brightness degree inside the cave

(9) Stratum on the cave is situated

In order to clarify the above items, we made about 170 plans and sections of the caves and picked up the surface samples from Hills C and D and put 480 cave locations on the map from Hills B, C and D.

#### 4. Contents of Survey:

We confirmed the distribution of about 480 caves at Hills B, C and D and 170 numbers of caves at Hill-C and Hill-D areas can be classified as follows through the studies on each cave (Fig. II-1):

##### (1) Type A Cave

Such Type A Caves are to be furthermore classified into three kinds as follows:

##### i Typical ones

- 1) D-93 Cave (Figs. II-2, II-3): Most typical of Type A Caves, and closely resembles Hill-A Caves. The rooms are square and wide, and the floor under the accumulation line is presumed to have up-and-down section.
- 2) C-7 Cave (Figs. II-4, II-5): There are few deposits except for the blocks. There blocks judged from the nature of the marlstone stratum appear to have come from the inner part and the wall near point C' when this cave was dug. Therefore, the digging process of C-7 Cave may be as follows:
  - ① The flat floor and square space were made. (The height from this flat floor up to the ceiling is about 1.7 m).
  - ② The innermost part was dug 3m deeper. Though we cannot decide whether or not the time difference of such different digging processes was short because there was no object found in this cave, there is a possibility that such two digging processes are separate in period, judging from the other caves in Al-Tar area.

##### ii Characteristics

- 1) The height from the talus to the entrance of Type A Caves is about 2-10m with ladders needed to get.
- 2) Their plan type is of square shape and big in scale.
- 3) Their section type is also of square and, in the case of the caves where we can see the floor, the height from the floor up to the ceiling is about 170cm.
- 4) Most of the walls in Type A Caves are on the surfaces of the the natural cracks.
- 5) Though different in direction and scale, the caves are generally deposited with sand blocks of natural formation probably detached from those caused at the time of primary digging.
- 6) Just as in Hill-A caves, these caves were filled with the thick deposited sand, and we found Textiles and human bones derived from burials from the surface of the deposite.
- 7) Above the accumulation line, the fish-scale type chisel tracs are numerous. Just like in Hill-A Caves, Hill-C-12 and Hill-C-17 caves, it is thinkable that these sort of chisel traces are also seen along the walls and on the floors under the accumulation line.
- 8) Type A Caves are so wide in space that they are bright even in their inner parts.
- 9) Most of Type A Caves were dug on the same marl stratum, independent of the talus.

##### iii Secondarily-used ones (for graves)

- 1) C-16 Cave (Fig. II-5, Fig. II-6)

Among Type A Caves, especially at Hill-C area, we can find such caves as were secondarily used as graves, just like this cave. We also found burials in C-12 and C-17 caves excavated by us in this season. In C-16 Cave burilas were also found two spots,

where human bones and textiles were recognized on the surface, These burials, judging from the excavation results in Hill-A Caves, seem to be of the secondary or the third use.

(2) Type B Caves

i Characteristics, Examples: D-6 Cave (Figs. II-7, II-8)  
D-58 Cave (Figs. II-9, II-10)

- 1) It is not so high from the talus up to the entrance of Type B Caves that we can easily enter the caves.
- 2) Their plan type is of straight-line or T-shape and the breadth is about 40 cm to 60 cm, and some caves are about 20 m in length.
- 3) Their section type is of half-moon shape when they are dug along one side with the use of the cracks, and is often of full-moon shape if they are dug along both sides. The breadth is about 40 cm to 60 cm and the height is about 60 cm to 100 cm. The new caves are often narrow, allowing only one person to get in. Different from the case of Type A Caves, we cannot see the up-and-down section of the floor.
- 4) The cracks are running along either side or the center of the ceiling in the caves.
- 5) There are a few objects, and many fragments of animal bones such as sheep, camel, donkey, etc. are scattered, probably carried into these caves by wolves and hyenas.
- 6) There is often seen the naturally deposited sand around the entrance and many detached blocks and excrements of bats are recognized there.
- 7) There are found many fresh chisel traces, pyramidal type, conical type and flat type. And these chisel traces are recognizable in many fresh chisel traces, pyramidal type, conical type and flat type. And these chisel traces are recognizable in many parts from the entrance to the interior.
- 8) We need a light at a spot about 1 m away from the entrance because these caves, are very narrow.
- 9) Type B Caves, like Type A Caves, exist on the marl stratum but their level is not so high probably because they were dug influenced by the talus.

(3) Mixture of Type A Caves and Type B Caves

i Typical ones

1) D-89 Cave (Figs. II-11, II-12)

Type A Caves are generally of big scale, but some are small like D-89 Cave. In the case of the smaller caves, we need to pursue whether they keep the original form without collapse at the entrance.

2) D-82 Cave (Fig. II-13, II-14)

This cave was dug again later. It seems that the outer half of this cave was older and the inner half newer.

### Summary

1. We clarified through the cave distribution survey that there are about 500 caves concentrated in Hill-A, Hill-B, Hill-C and Hill-D in Al-Tar area. (Figs. II-15, II-16)
2. These caves consist of Type A Caves and Type B Caves.

*Type A Caves*

- (1) Type A Caves are bigger than Type B Caves and are dug at the same level independent of the talus, and they are generally at higher levels, sometimes 10 m high from the talus.
- (2) most plan of Type A Caves indicate the assembled shape by several square caves and their

sections are of square type. The ceiling is flat and the floor under the accumulation line seems to have up-and-down section.

- (3) There are found many chisel traces, fish-scale type (Fig. II-17) used in the time of digging.
- (4) Probably it may belong to the same period as that in Hill-A caves.

#### *Type B Caves*

- (1) The entrance level is lower than that of Type A Caves, and we can easily enter them without a ladder.
  - (2) Type B Caves are extraordinarily narrow in breadth and they vary in length, from 1 m to 20 m.
  - (3) There are found many chisel traces, pyramidal type (Fig. II-18), conical type (Fig. II-19) and flat type, used in the time of digging.
  - (4) We have clarified through the cave distribution survey that these caves were dug quite recently by some people for the purpose of excrements of bats, as fertilizer, living in the caves and cracks. Therefore it seems that Type B Caves were dug by the collectors of bats' excrements.
3. Both Type A Caves and Type B Caves are dug on the marl stratum utilizing the cracks: while Type A Caves are concentrated in Hill-A, Hill-B and Hill-C areas, Type B Caves are in Hill-D area.
  4. At Hill-C area, like at Hill-A area, there are many caves reused for graves.
  5. The caves in Al-Tar area range about 15 km up to Tokakin Caves near Najaf (Fig. II-20).

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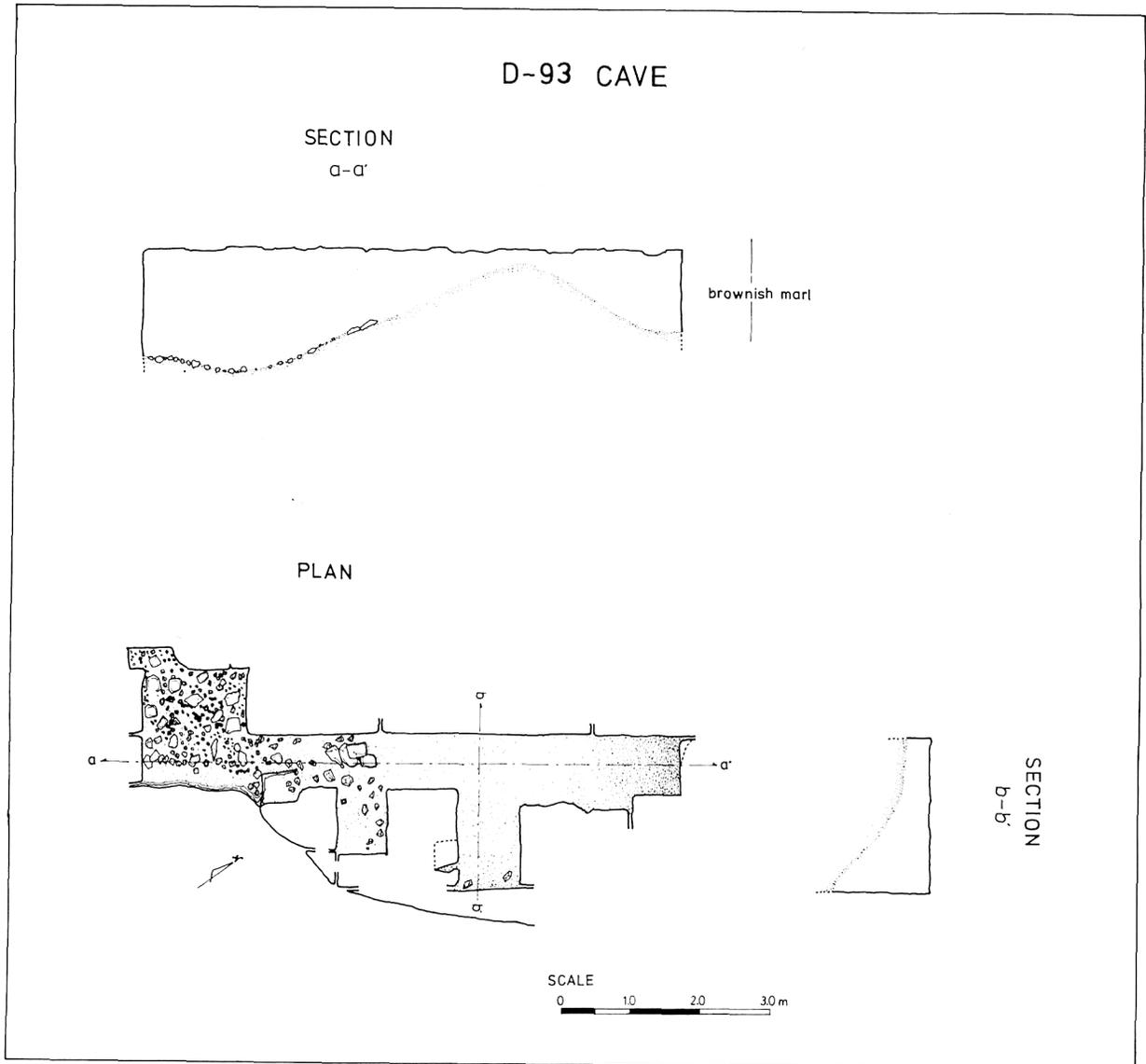


Fig. II-2 Plan and Section of D-93 Cave

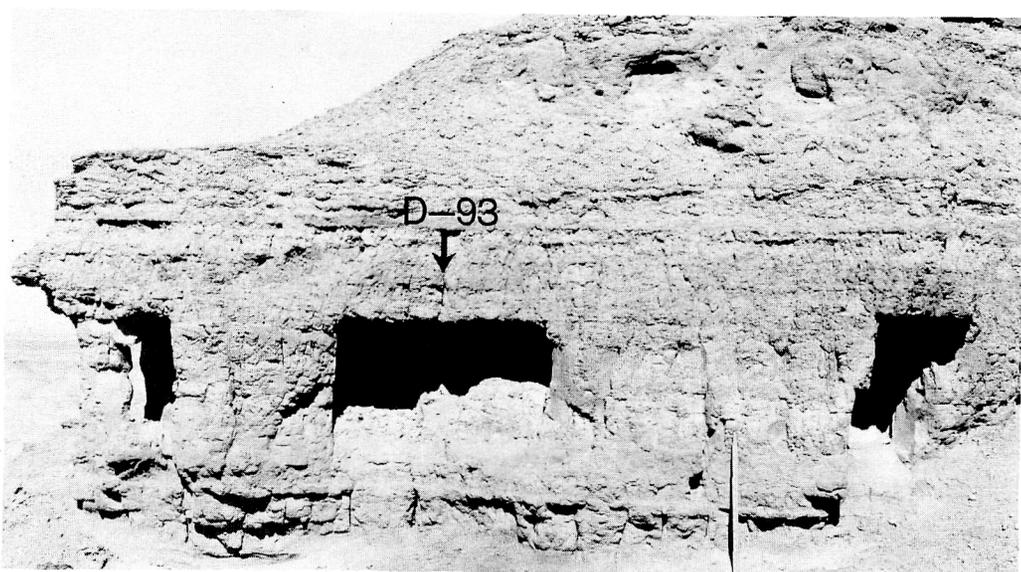


Fig. II-3 D-93 Cave

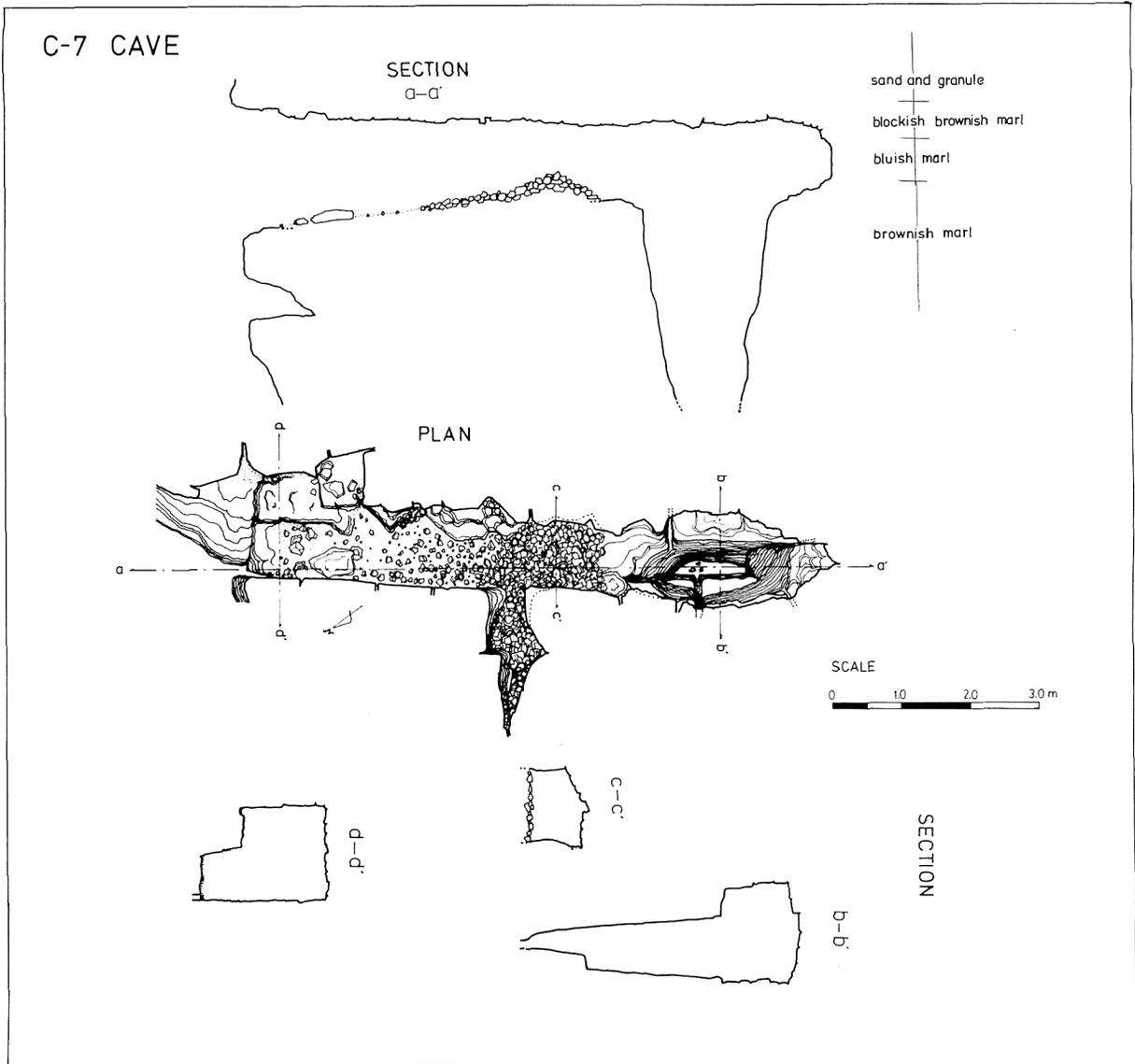


Fig. II-4 Plan and Section of C-7 Cave

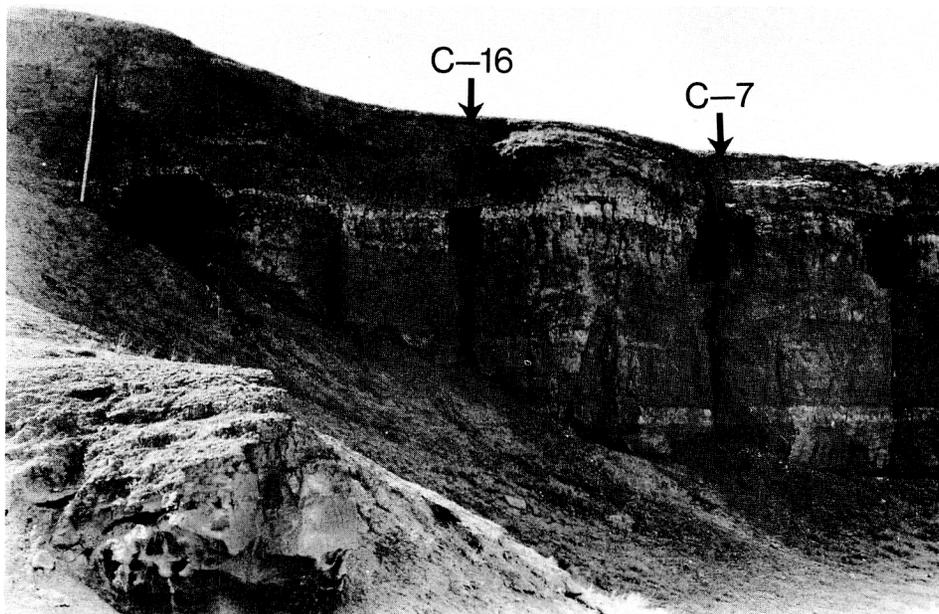
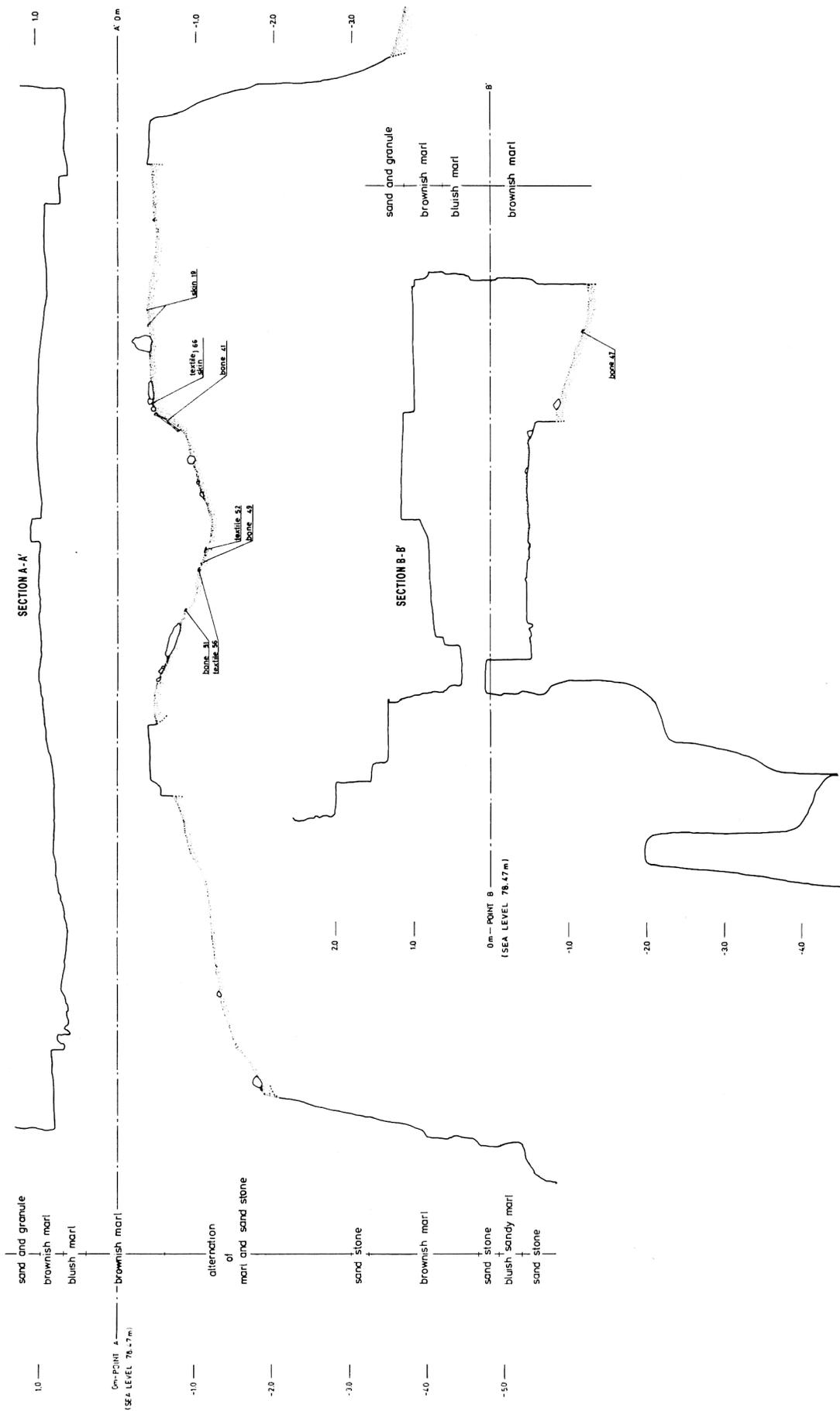


Fig. II-5 C-7 and C-16 Caves





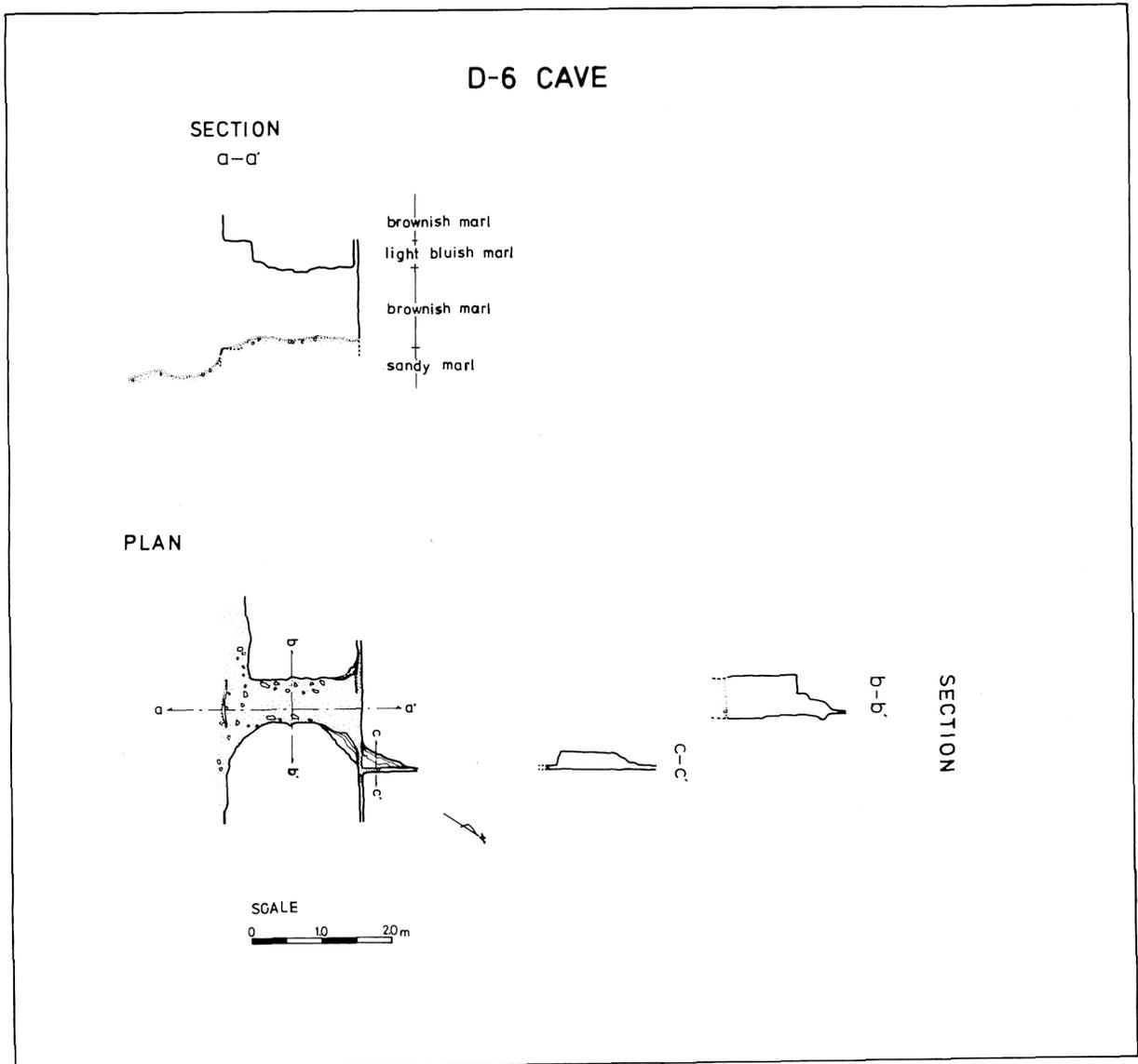


Fig. II-7 Plan and Section of D-6 Cave

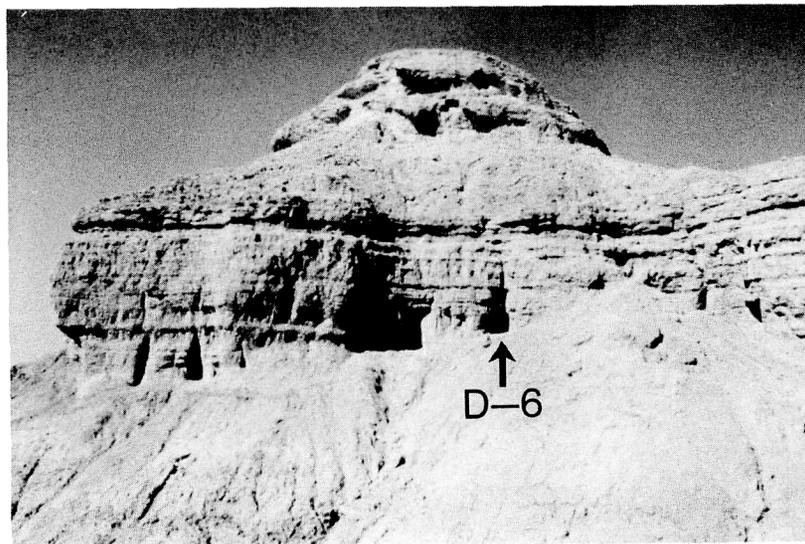


Fig. II-8 D-6 Cave

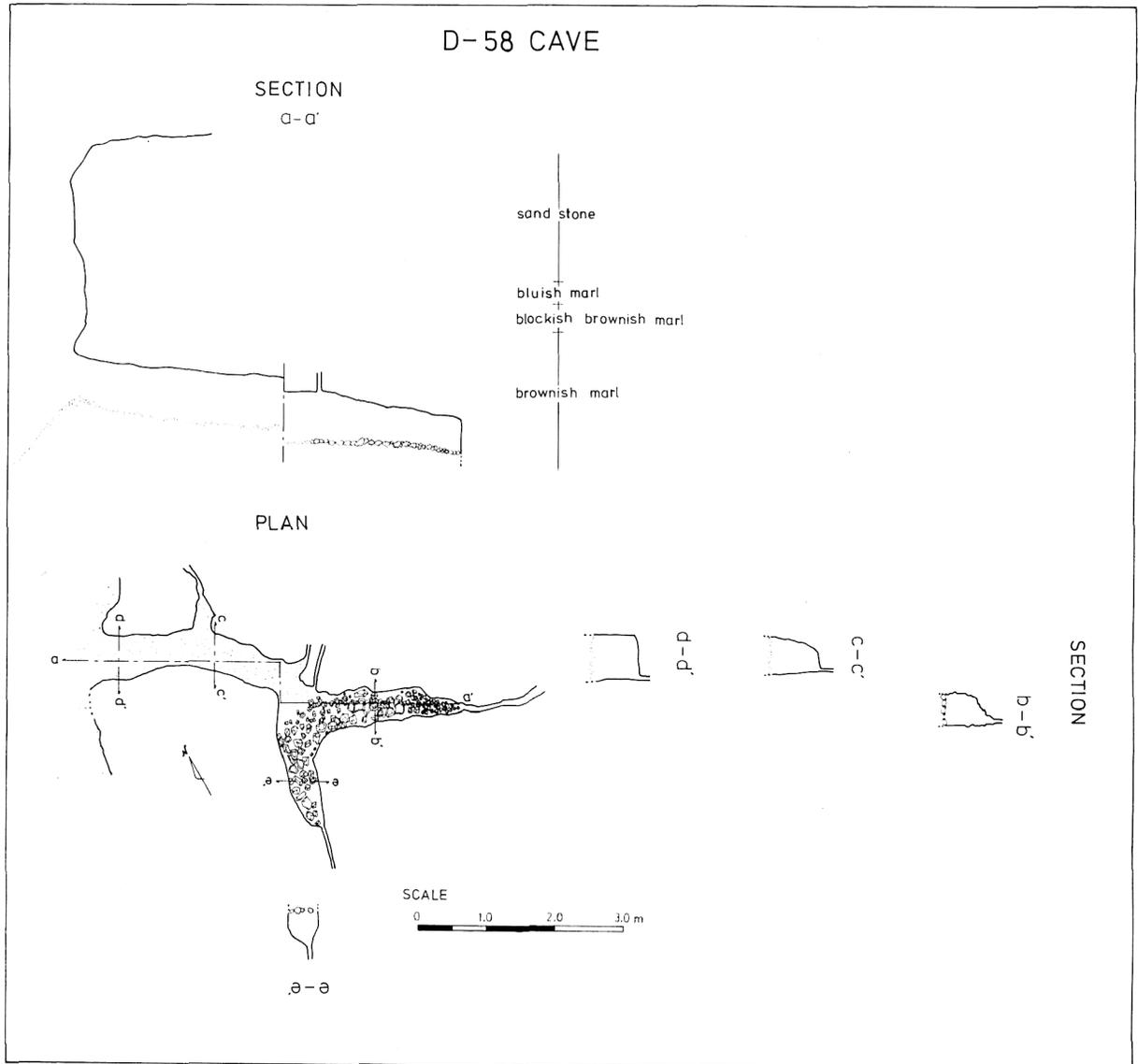


Fig. II-9 Plan and Section of D-58 Cave

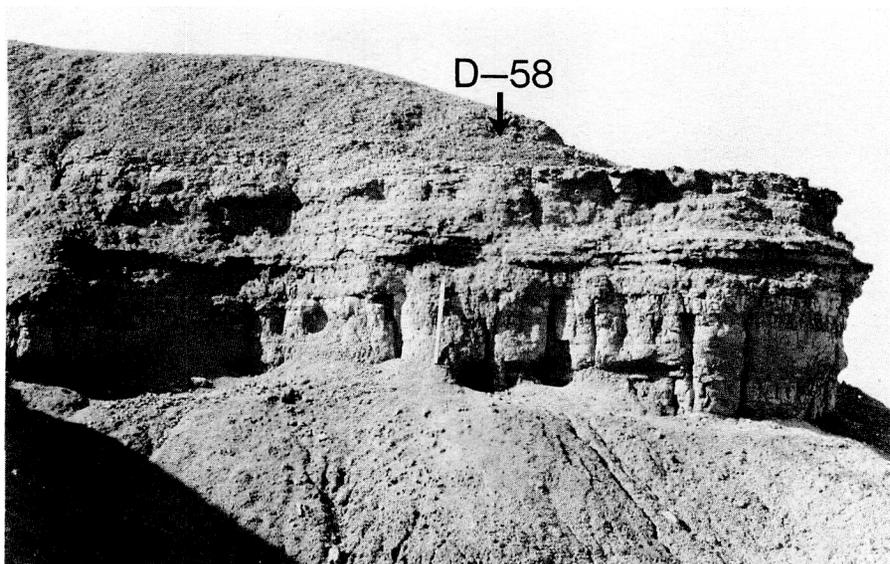


Fig. II-10 D-58 Cave

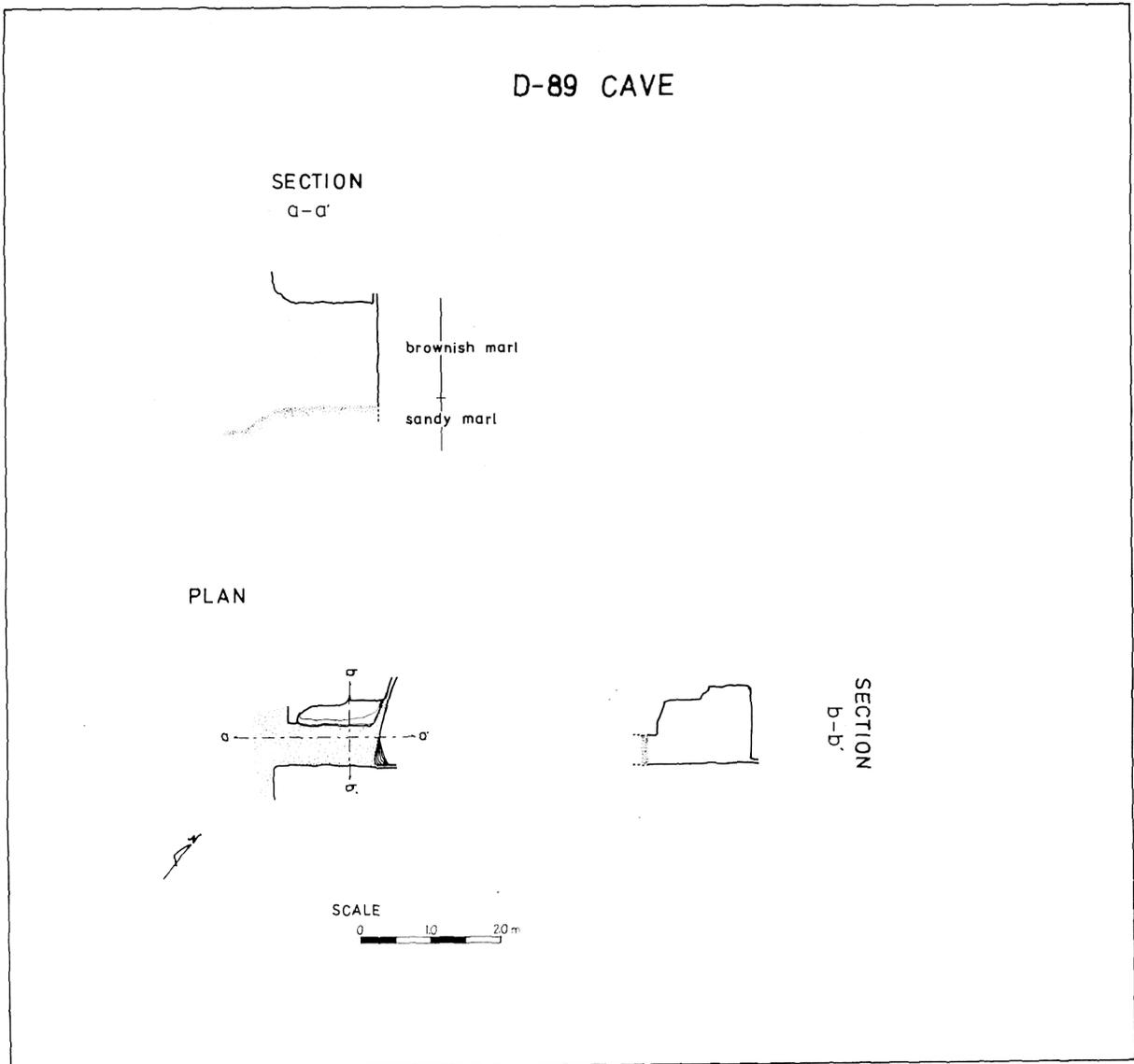


Fig. II-11 Plan and Section of D-89 Cave

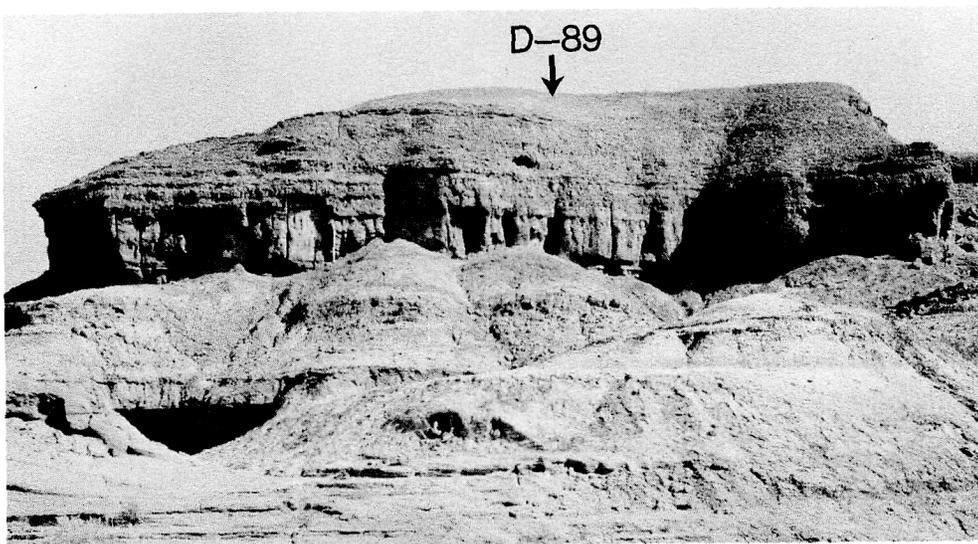


Fig. II-12 D-89 Cave

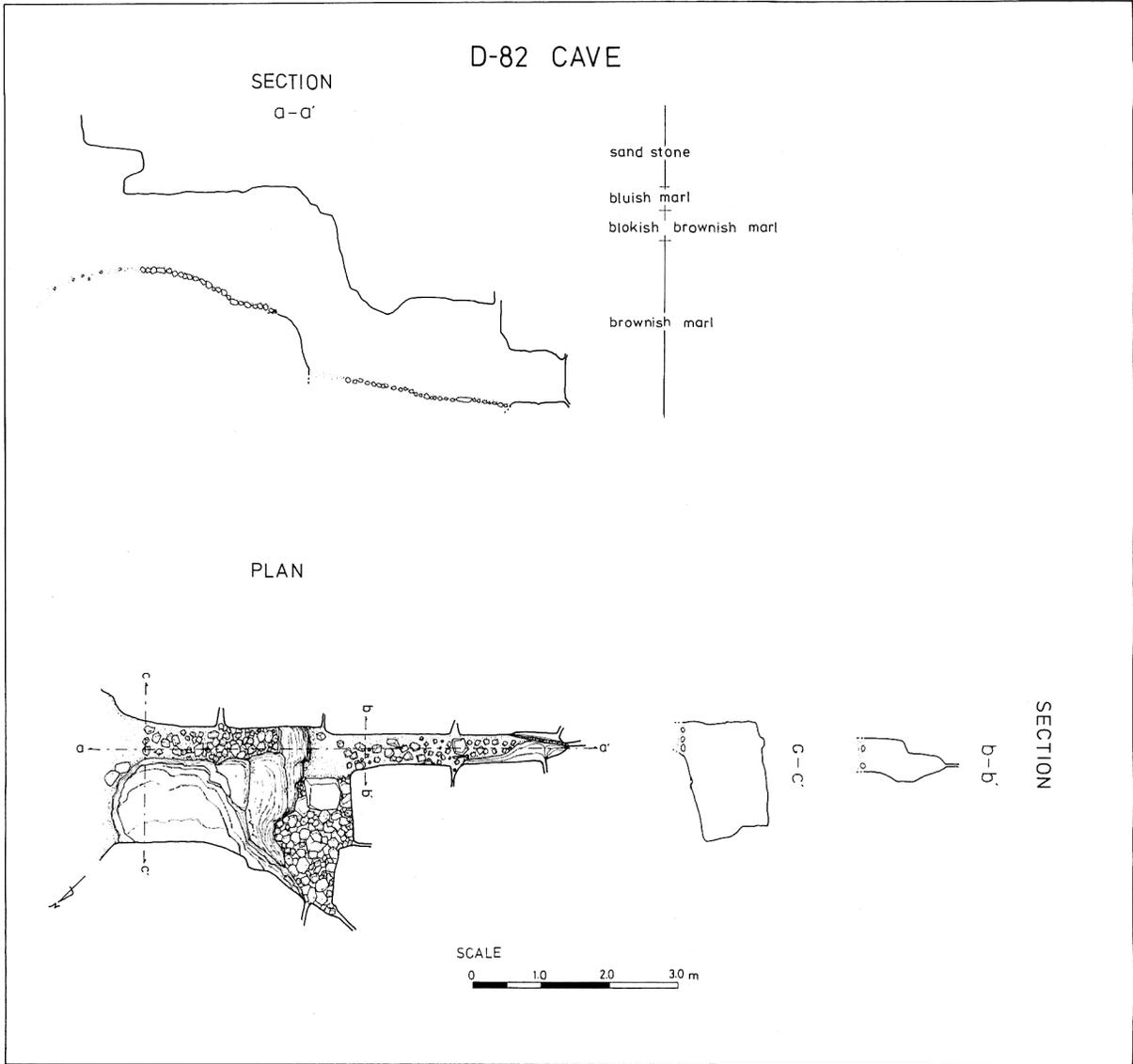


Fig. II-13 Plan and Section of D-82 Cave

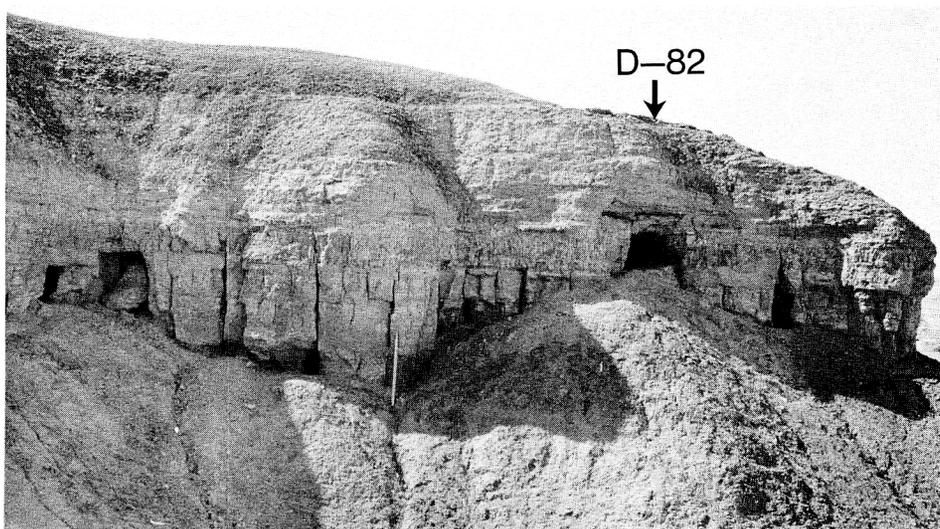


Fig. II-14 D-82 Cave

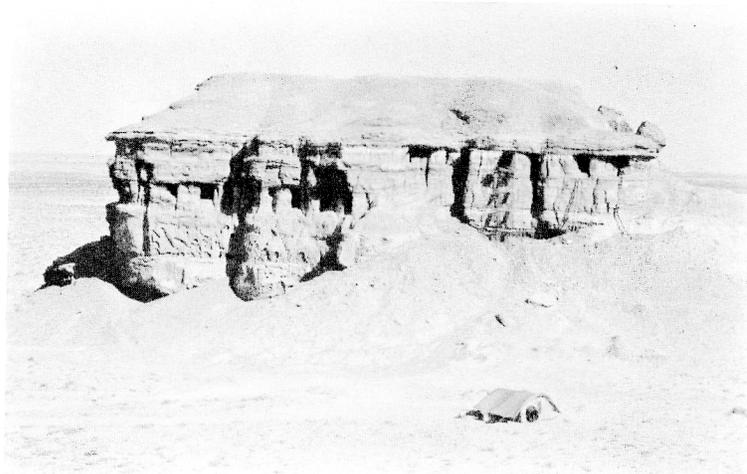


Fig. II-15 General View of Hill-A Caves

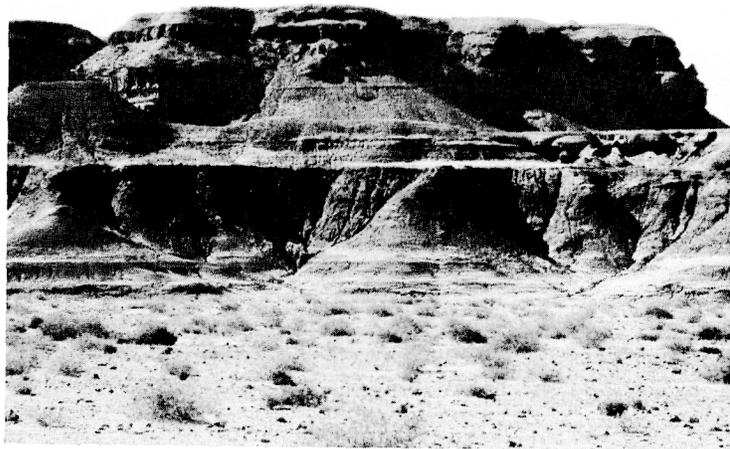


Fig. II-16 General View of Hill-B Caves

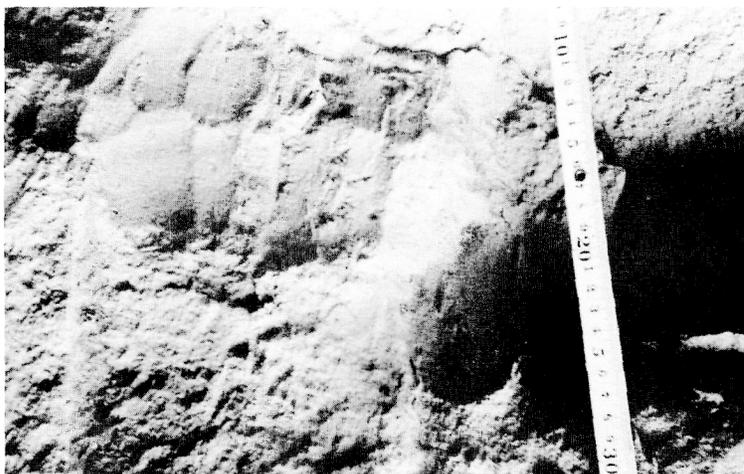


Fig. II-17 Fish-scale Type of Chiesel Traces



Fig. II-18 Pyramidal Type



Fig. II-19 Conical Type



Fig. II-20 General View of Tokakin Caves near Najaf

### III. Excavation in Hill-C-12 Cave (Cave C-12)

Katsuhiko OHNUMA\* and Hiroe INAOKA\*\*

From October 18 to November 26 in 1975, we performed a cave distribution survey in the Al-Tar area, during which textiles and bones were sampled in all the caves of Hill-C. In this connection, Cave C-12 seemed to be of a considerable importance, both in its burial and structure, and we commenced an excavation at the burial spot located in the corridor of the cave on November 26, 1975 and continued the work until January 6, 1976.

#### 1. Location of Cave C-12

Cave C-12 is located at a spot on the west-side cliff line of the Kerbala Plateau and is about 170m south-east from Hill-A caves (Fig. III-1). The cliff, into which Caves 1 to 24 of Hill-C are dug, is shaped like a peninsula of approximately 120m (L)×15m (W). Cave C-12 is located near the edge of this peninsula. With its width allowing 15m only, the cave itself takes a shape as a part of the peninsula hollowed out horizontally, just as shown in Hill-C-11 and Hill-C-16 caves. There are two entrances on its north side, presenting a precipice of about 8 m height, where a ladder or the like was needed to get in. On the south-side entrance, on the other hand, there is a talus, though a little too steep, through which we could enter the cave. This cave, carved in a marlstone stratum, had the same kinds of layers as those of Group-F caves of Hill-A.

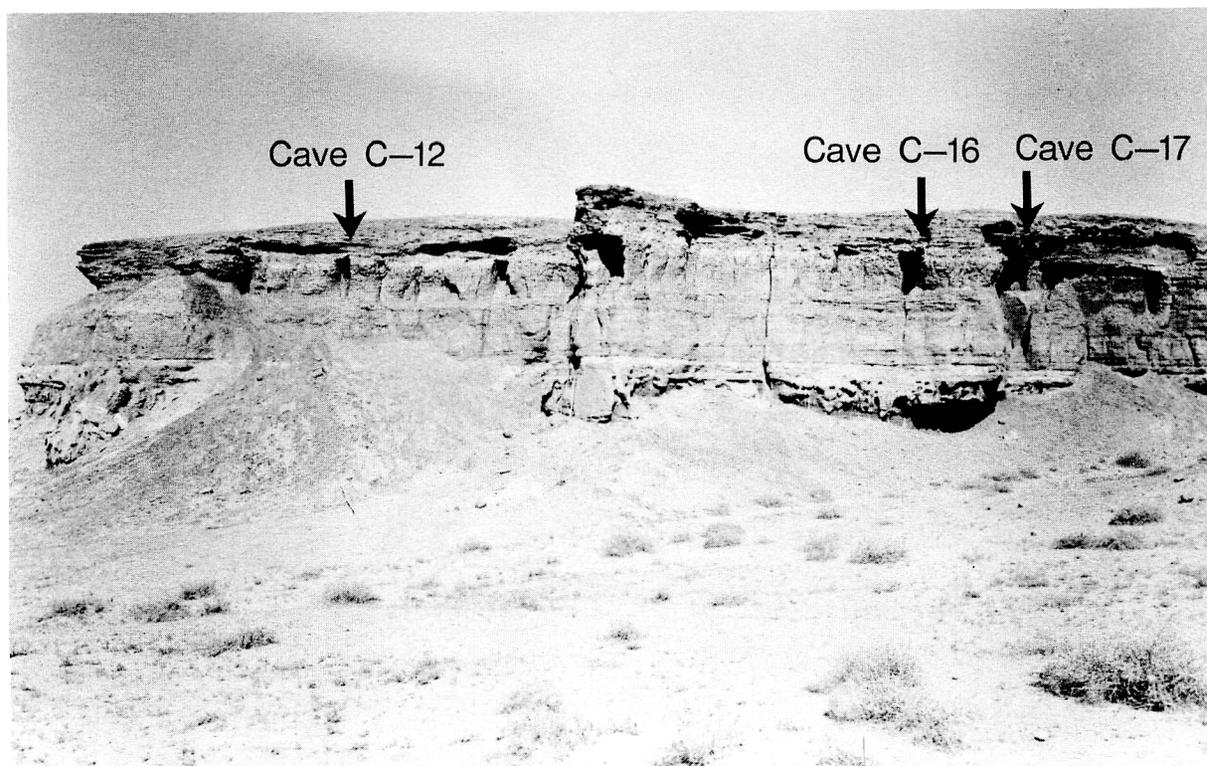


Fig. III-1 General view of Cave C-12

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\*\* Student, École de Louvre

## 2. Excavation

### (1) Structure

The cave goes from south-west through north-east in the range of 12m (L)×0.7m (W). In the vicinity of Point a'', one side is cut out about 4 m south-eastward, while the other runs through about 2.5 m north-westward direction, thereby resulting in the emergence of an 8 m high precipice, just alike the north-side of Point a'''. The plan and section of this cave before excavation are shown in Figs. III-2 and III-3.

### (2) Layers

At the burial spot, there were found rings, beads and many fragments of human bones (except for the skull, thighbones and wristbones) together with textiles and a pile textile. The burial covered the area of approximately 1.5 m (L)×0.7 m (W), with its post-burial confusion considerably developed. The burial lay on the stone chips mixed with sand, and many pile yarns were found around it (Figs. III-4, III-5, III-6, III-7 and III-8). Over the burial, stone chips mixed with sand were accumulated, and such stone chips were also found among the textiles.

## 3. Finds

(1) A black double-faced pile textile was placed with its both ends folded back. Its selvages are decorated with red and blue stripes and crest patterns (Fig. III-9). This pile textile was rather in good state of preservation when uncovered, but there were many parts which were missing. The discovery of some animal feces around this pile textile makes us consider the possibility that the animals were responsible for the confusion of the burial. The C-14 dating for this pile textile indicates  $2,000 \pm 100$  B.P. (GaK-6464).

(2) A ribbed textile coloured ocher: It was found considerably inclined toward one side with part of which being entangled in a red pile and a dark brown braid-like thing. This textile may have been intended for covering the whole burial at the topmost portion. It is a large textile with designs of H-type or the like, measuring 2.3 m (L)×1.8 m (W) when spread out (Fig. III-10, III-11, III-12, III-13 and III-14).

(3) A plain-weave textile coloured ocher: It was found partially wrapping the black pile textile and human bones. Woven in tapestry on this textile are purple coloured designs of "L", "↑" or the like.

(4) In association with the black pile textile, about 10 human bones were uncovered, but there were found no skulls. Near the human bones, rings and beads were located (Figs. III-15, III-16, III-17, III-18, III-19 and III-20).

The burial manner in Cave C-12, presumed on the basis of the folded condition of the textiles, may be restored by the plan and section of the textiles and human bones as well as by the study on the associated finds. Fortunately, the lower surface of the black pile textile was so tight that we could pick it up keeping its original form. Thus, we shall be able to clarify the following points through the future study on the textiles, human bones, rings, etc. which were uncovered in one combination: burial manner in Cave C-12, relation between the burial manner in Cave C-12 and those in Hill-A and Hill-C caves, and historical background to the secondary use of the Al-Tar caves.

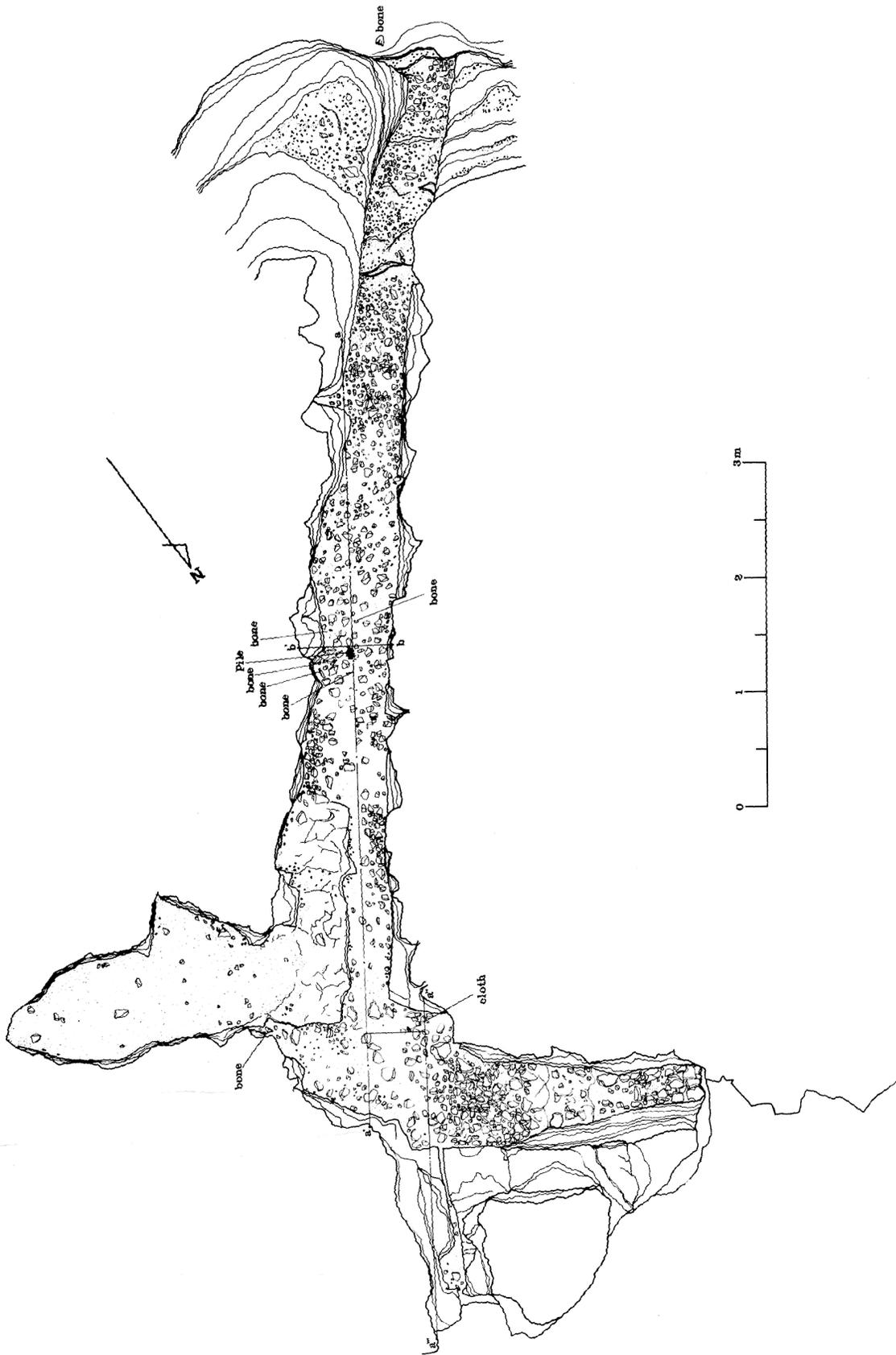


Fig. III-2 Plan of Cave C-12 before excavation

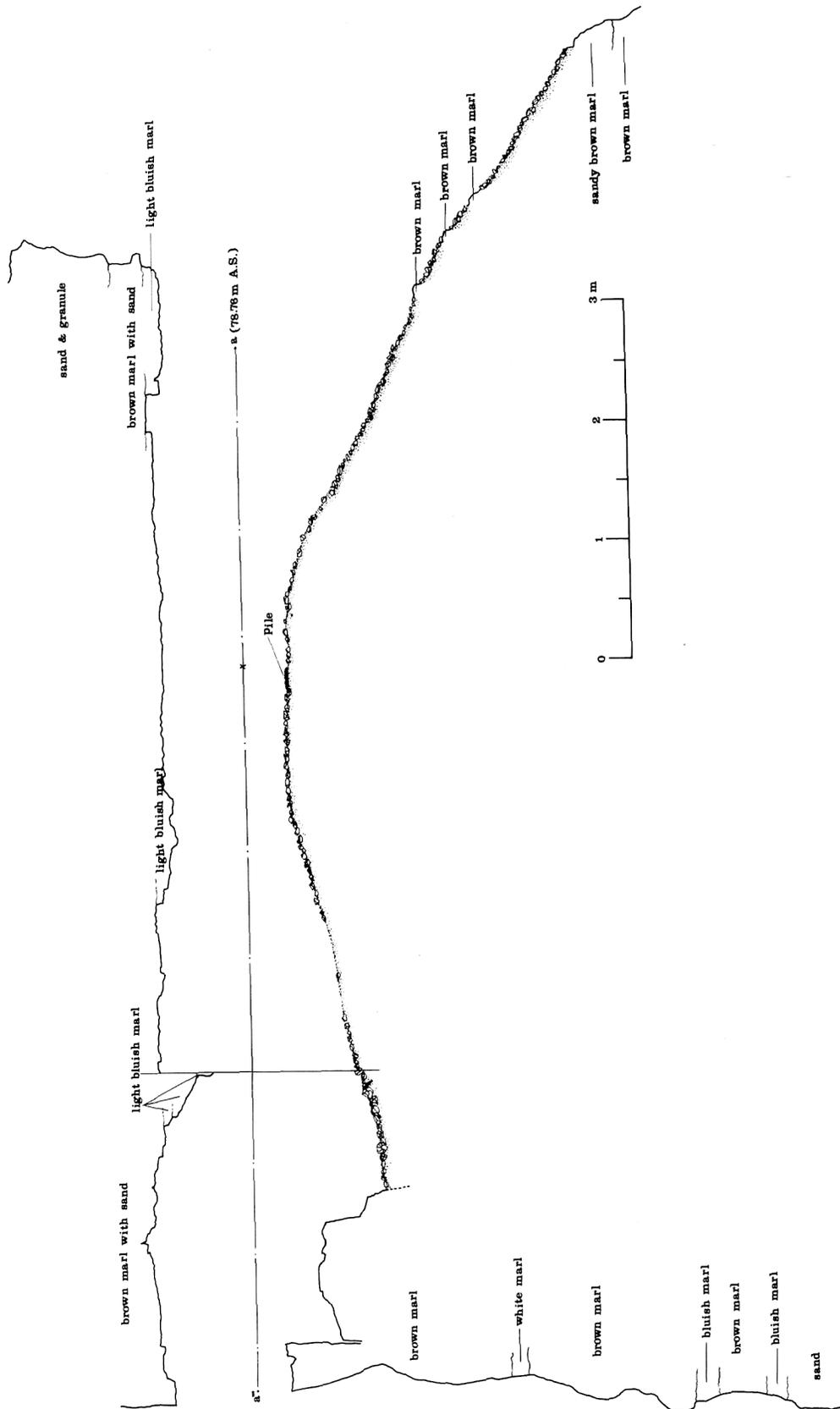


Fig. III-3 Section of Cave C-12 before excavation

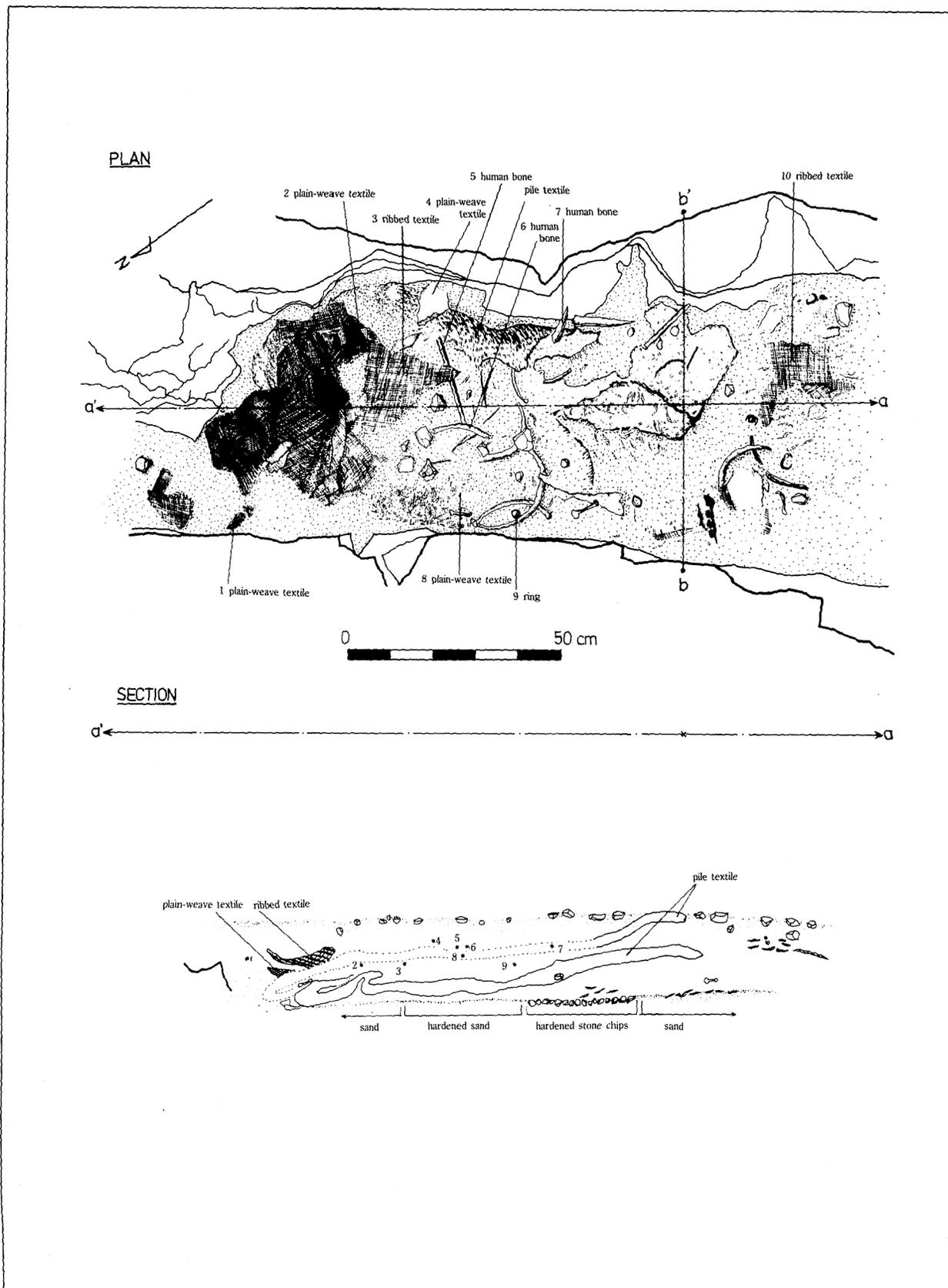


Fig. III-4 Burial in Cave C-12

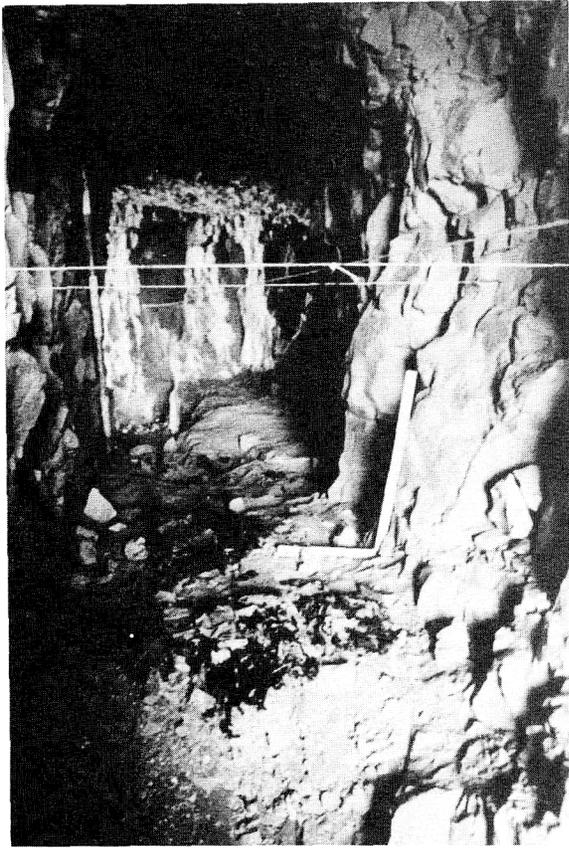


Fig. III-5 Pile yarns appearing during the excavation

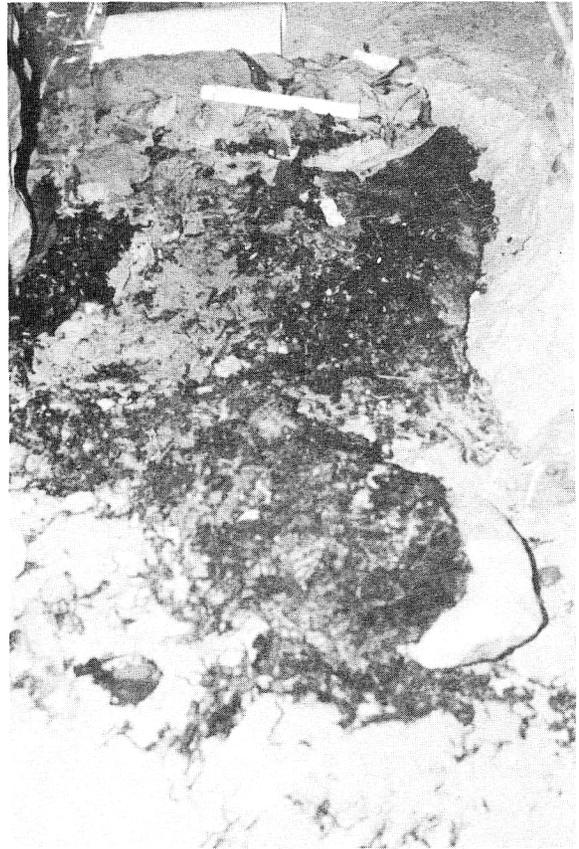


Fig. III-6 Detail of the pile textile and pile yarns

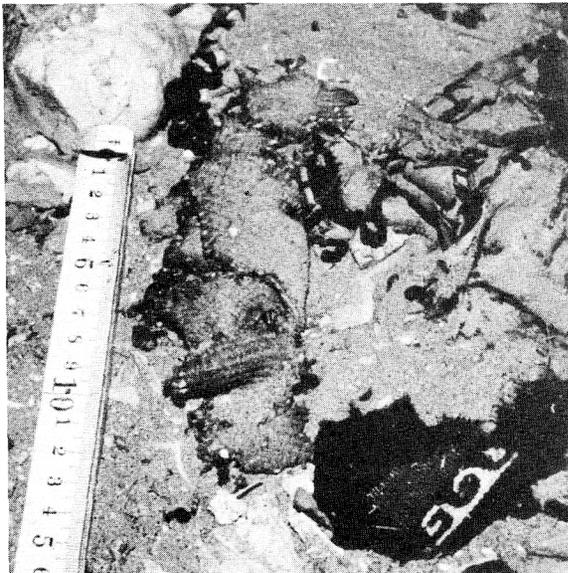


Fig. III-7 Detail of the pile textile and fragments of textile



Fig. III-8 Human bones found associated with the pile textile

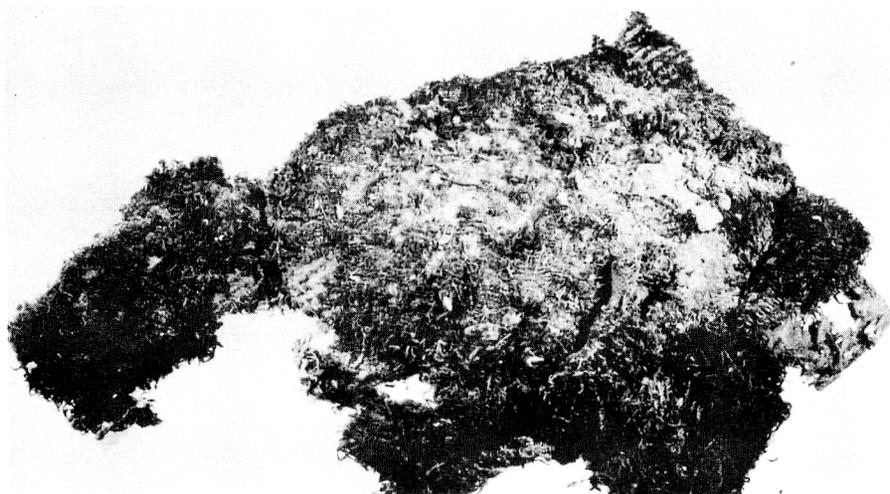


Fig. III-9 Double-faced pile textile uncovered



Fig. III-10 Detail-1 of the ribbed textile uncovered



Fig. III-11 Detail-2 of the ribbed textile



Fig. III-12 Detail-3 of the ribbed textile



Fig. III-13 Detail-4 of the ribbed textile



Fig. III-14 Detail-5 of the ribbed textile



Fig. III-15 Beads



Fig. III-16 Ring-1



Fig. III-17 Ring-2



Fig. III-18 Ring-3

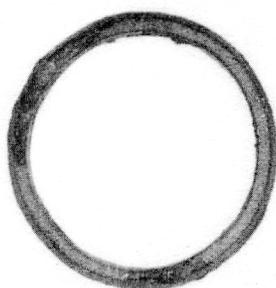


Fig. III-19 Ring-4

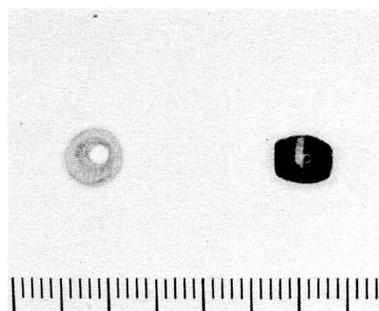


Fig. III-20 Beads

#### IV. Excavation in Hill-C-17 Cave (Cave C-17)

Ken MATSUMOTO\* and Katsuaki WADA\*\*

We performed on excavational work in Cave C-17 from December 16, 1975 to February 14, 1976, considering the results of the cave distribution survey in the Al-Tar area. Cave C-17 was proved to be one of the most important caves to clarify the cave digging purpose of the primary digging as well as the second or the third usage of the Al-Tar Caves.

##### 1. Location of Cave C-17 (Fig. IV-1)

Cave C-17 is situated at a spot of the west-side cliff line of Kerbala Plateau and about 200 m south-east of Hill-A. The upper entrance (2R) of this cave is about 6 m high from the talus, and the lower entrance (1R), from which we entered this cave by ladder, is about 3 m high from the talus. Cave C-17 exists at the same stratum and level as those of C-12 caves of Hill-C, and we dug at the marlstone stratum using the directions of cracks.

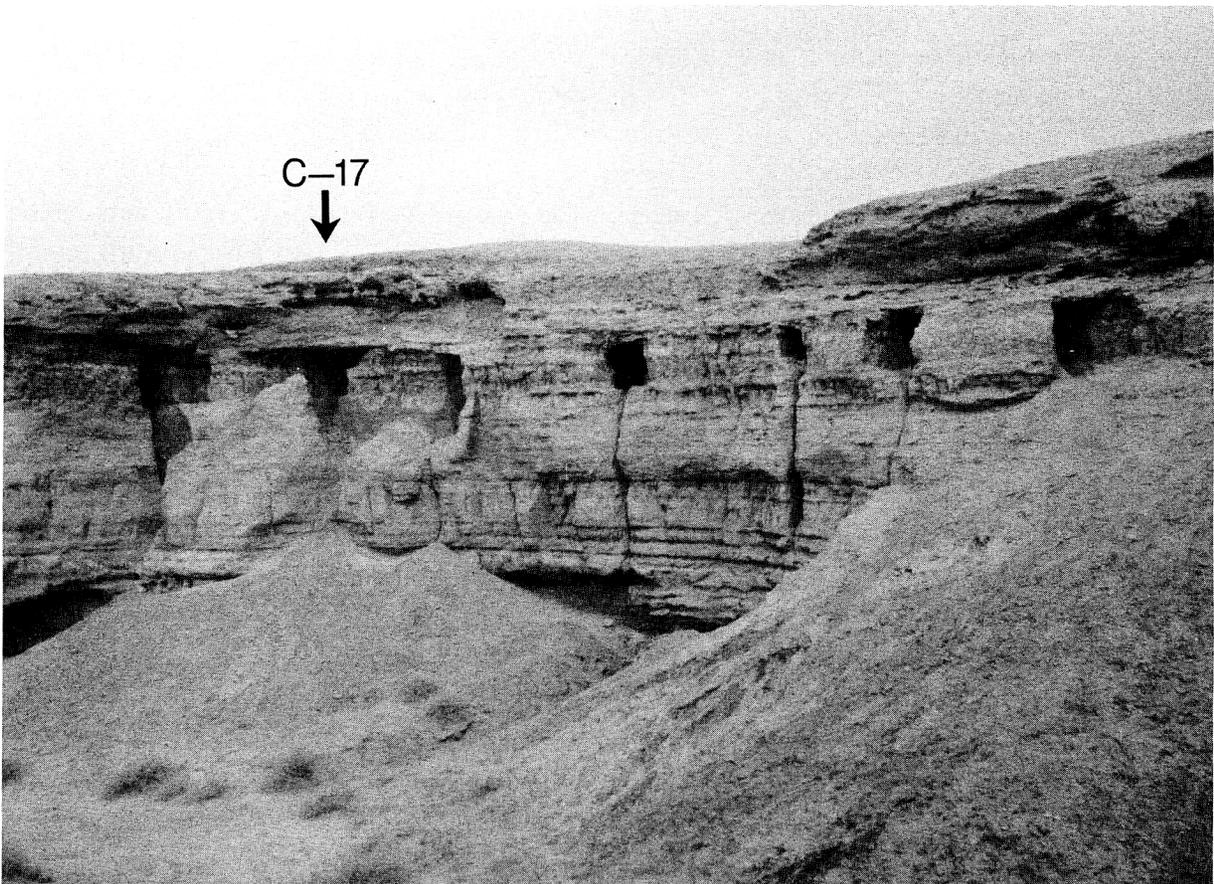


Fig. IV-1 Hill-C Caves

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\*\* Teacher, Koromodai Senior High School, Toyota

## 2. Excavation

## (1) Layers (to be explained from the floor upwards) (Figs. IV-2, IV-3)

## i C-17-1R (Fig. IV-4)

In this room, these were only the blocks (flaked off during the digging of the caves) accumulated, which are classified into the following two layers:

## Layer 1:

Fine marl blocks (2 cm to 5 cm in length) were accumulated up to 50 cm level from the floor, with the bat excrements.

## Layer 2:

Above the fine marl blocks (Layer 1), middle-sized marl blocks (about 20 cm long) and huge marl blocks were accumulated. There was some space among these blocks. There were found naturally-deposited sand and the ash depositing in the area of 50 cm in diameter and in the thickness of 20 cm, with the seeds of nut and twigs.

## ii C-17-2R (Figs. IV-2, IV-3, IV-5)

The layers of this room comprise a block layer with sand and a sand layer. A burial was found in the sand layer.

## Layer 1:

Up to 160 cm level from the floor, there were found blocks, mainly of middle sizes. Some amount of sand was also found among them. But there were no objects found in this layer except some fragments of birds' bones.

## Layer 2:

Found above the block layer was naturally-deposited sand.

## Layer 3:

A burial was found in the naturally-deposited sand, preserving almost original form on the hardened sand. In this burial spot, bones, textiles and leathers were found in nearly original situation.

## \*\*\*\*\* Burial Situation \*\*\*\*\* (Figs. IV-3, IV-6, IV-7)

This burial was found on the naturally-deposited sand. The followings are the order of the textiles observed from the bottom upwards:

- 1) Mat (sphere: 145×70 cm) (Figs. IV-8, IV-9)
- 2) Textile (pile, sphere: 145×70 cm, tri-folded) (Fig. IV-10) (GaK-6462 C-17 Textile IV-MK-1382 2030±110 B.P.)
- 3) Textile (thin, sphere: 90×60 cm: between 2) and 3) were recognized two laces) (Figs. IV-11, IV-12)
- 4) Textile (thin, sphere: 90×60 cm) (Figs. IV-13, IV-14)
- 5) Textile (thin, only at the lower part of the skeleton) (Figs. IV-15, IV-16)
- 6) Adult skeleton without head (placed in a contracted manner) (Figs. IV-17, IV-18)
- 7) Leather (sphere: 50×50 cm, only at the lower part of the skeleton: both the skeleton and textile were packed in this embroidered leather.) (Figs. IV-19, IV-20, IV-21) (GaK-6463 C-7 Leather IV-MK-1341 1750±140 B.P.)

Around this burial level up to the surface of the whole accumulation was the layer of the naturally-deposited sand, about 100 cm in thickness. (Fig. IV-25)

## (2) Structure (Figs. IV-2, IV-3)

We classified Cave C-17 into two rooms, 1R and 2R.

## i C-17-1R

This room seems to have functioned as the entrance to Cave C-17 with the floor extraordinarily low, about 4 m below C-17-2R.

Because of this extremely low floor, we had to use the ladder to get into 2R from 1R. The walls of 1R consisted of considerably curved natural cracks and had the stepped structure with many chisel traces of fish-scale type. The floor also had the same chisel traces and the center of the floor suggested that it had not been dug perfect. (Figs. IV-26, IV-27)

ii C-17-2R (Fig. IV-3)

This room consisted of a flat upper floor and a narrow lower floor which is 3 m below the upper one. On the flat floor at the entrance of 2R, sandstones, hard sandstones and marlstones were piled up, hardened with the mud and fine marlstones for the purpose of closing. Although today there is only a half of the enclosure left on the floor, there are found many traces of the enclosure on the ceiling and both walls, suggesting that this room was completely closed after the bodies were buried. There were found many chisel traces of the fish-scale type, on the walls except for on the natural crack surface in the lower room. In this room, the floors are extraordinarily narrow almost without flat floor surface. (Fig. IV-27)

### Summary

1. The primary digger of Cave C-17, as well as that of Hill-A Caves and other caves, dug this cave with fish-scale type chisels. Inside Cave C-17, the weathering seems to have been very rare, for there was not found a block, weathered and collapsed down from the walls and ceiling, in the sand layer which had been deposited for long time by the wind.
2. Judging from the situation and kind of blocks which were piled up in 1R of Cave C-17 as well as from the chisel traces left on these blocks, it is highly probable that Cave C-17 was dug in the digging processes as follows:
  - (1) 1R was dug down to the deep floor and the blocks removed then were taken out of this room by turns. Some blocks removed at the lowest level, however, were left behind, about 50 cm in thickness, on a part of the floor (layer 1).
  - (2) 2R seems to have been dug, at a time not so later than the time when 1R was dug and blocks in 2R were plugged into 1R, for there is little naturally-deposited sand on the floor and among the blocks in 1R. The chisel traces left, at the time of digging, were found to be very fresh while there were neither objects nor traces of living datable to the time of digging.
3. The blocks produced when 2R's floor was dug deep or when 2R was enlarged, were found at the level near the floor of the lower room of 2R.
4. Cave C-17 had been abandoned for a long time after the time of primary digging, and during this time the sand was deposited by the wind in the thickness of 3 m.
5. Some people buried the human corpses wrapped with the textiles, using Cave C-17 as a grave. A rather completely preserved burial in this cave shows its section from the bottom upwards as follow: 1). Mat, 2). Textile, 3). Textile, 4). Textile, 5). Textile, 6). Skeleton, and 7). Leather for covering. This burial is estimated to date before or after the Christian Era.
6. The people who buried the human corpses in 2R piled up some sandstones and marlstones at the entrance of this room and closed it with the mud mixed the fine marl blocks.
7. This enclosure was later destroyed by some visitors who entered this cave, gathered the bones, on the spot and seemingly took out the finds buried together with the bones; those were found only three small beads and woodenware join ter.
8. Sand was deposited above the burial level by the wind. Above the burial level, the wind blow the sand

into the save to deposit it in the thickness of 80 cm.

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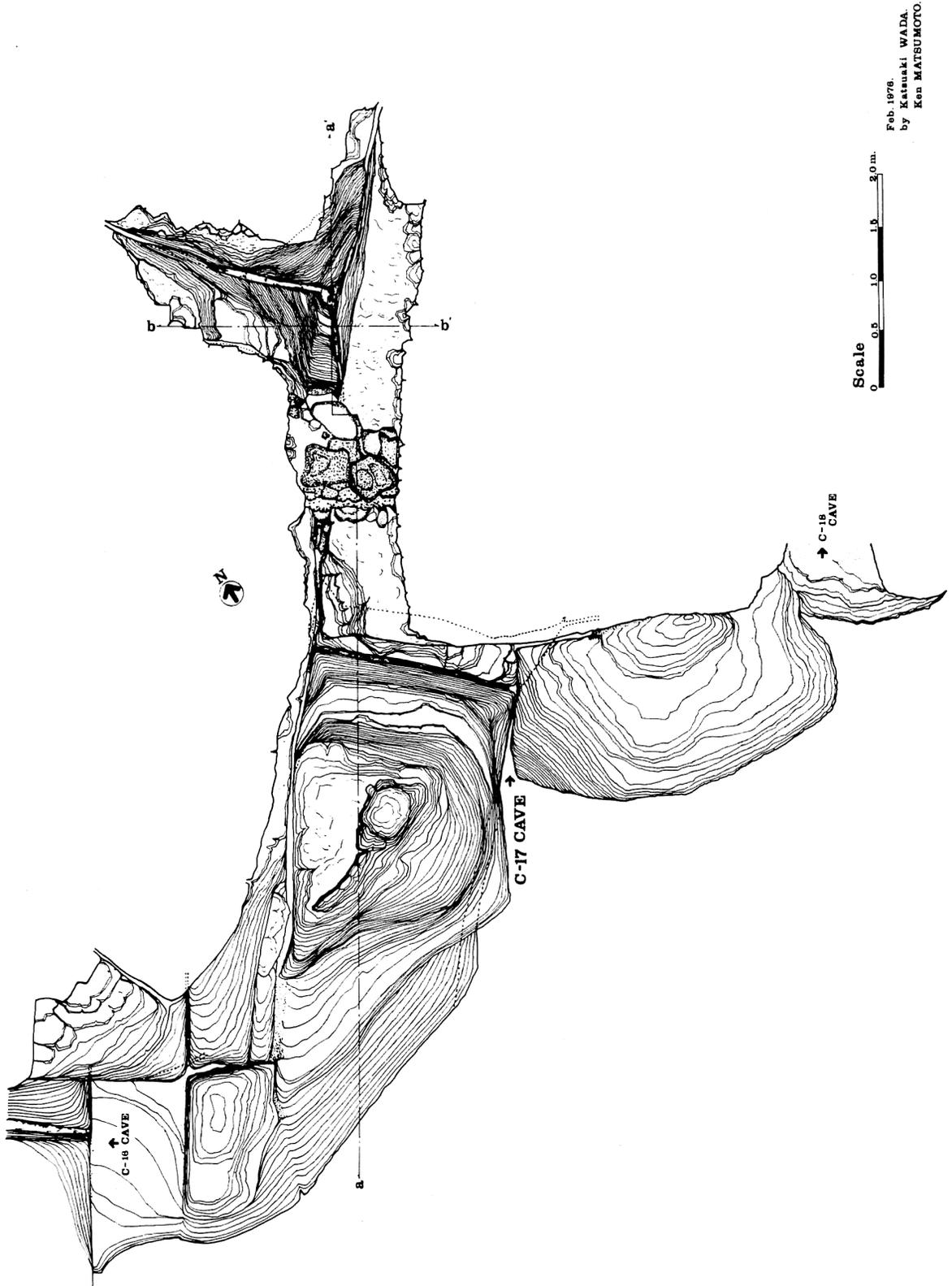


Fig. IV-2 Plan of Hill-C-17 Cave





Fig. IV-4 C-17-1R



Fig. IV-5 C-17-2R, before excavation



Fig. IV-6 Burial of Cave C-17

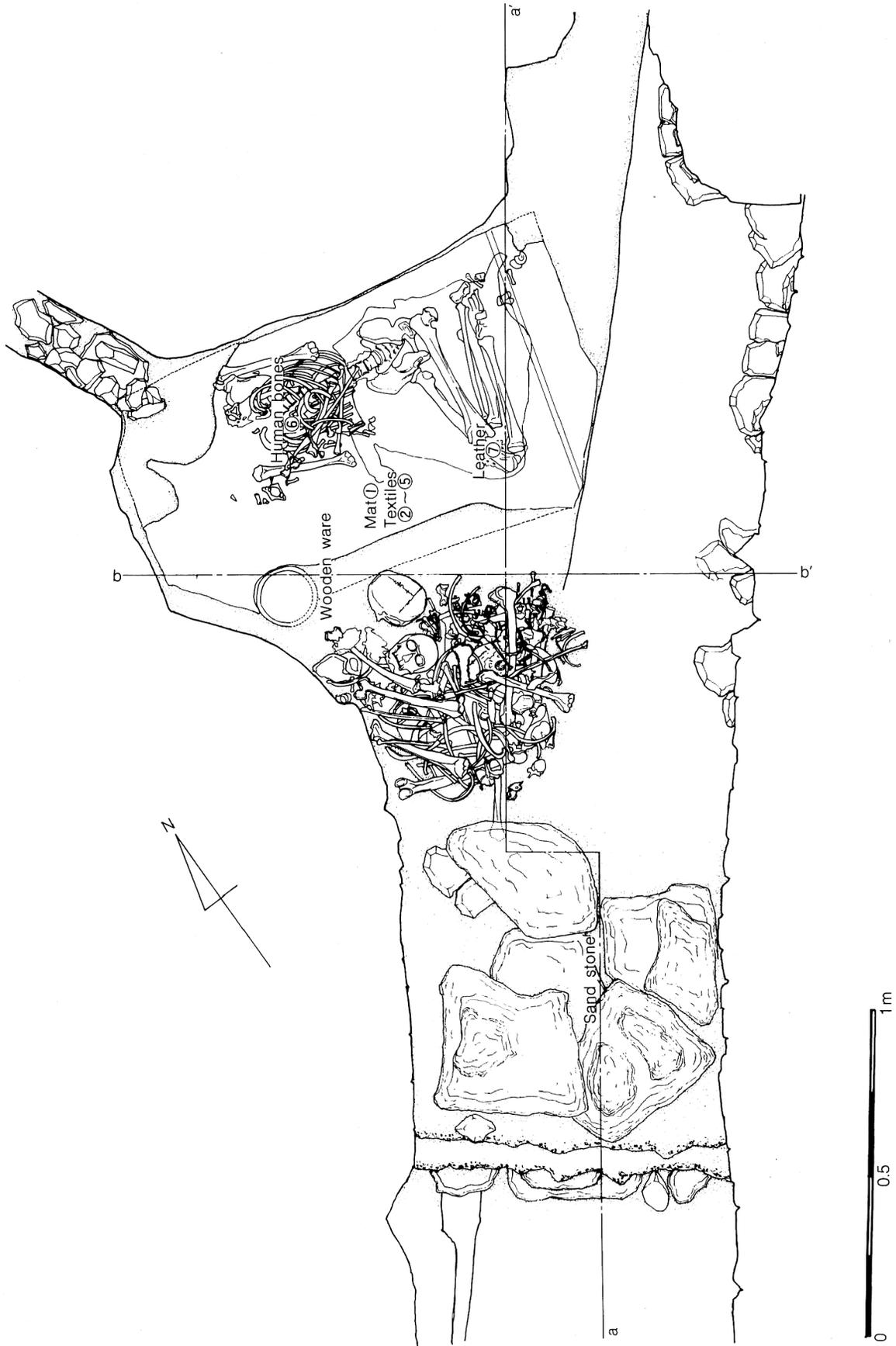


Fig. IV-7 Burial of Cave C-17



Fig. IV-8 Mat (1), (see Figs. IV-3 and IV-7)



Fig. IV-9 Mat (1)



Fig. IV-10 Textile (Pile) (2)



Fig. IV-11 Textile (3)



Fig. IV-12 Textile (3)



Fig. IV-13 Textile (4)



Fig. IV-14 Textile (4)

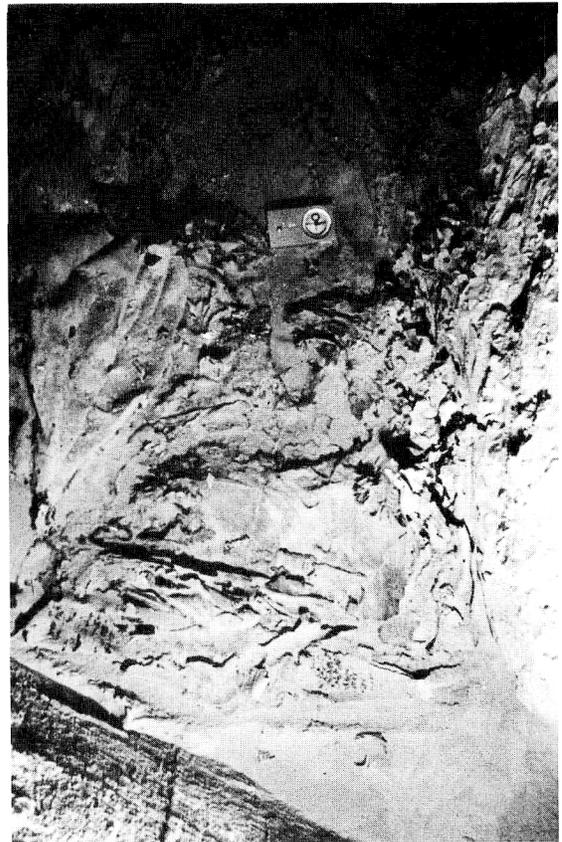


Fig. IV-15 Textile (5)



Fig. IV-16 Textiles

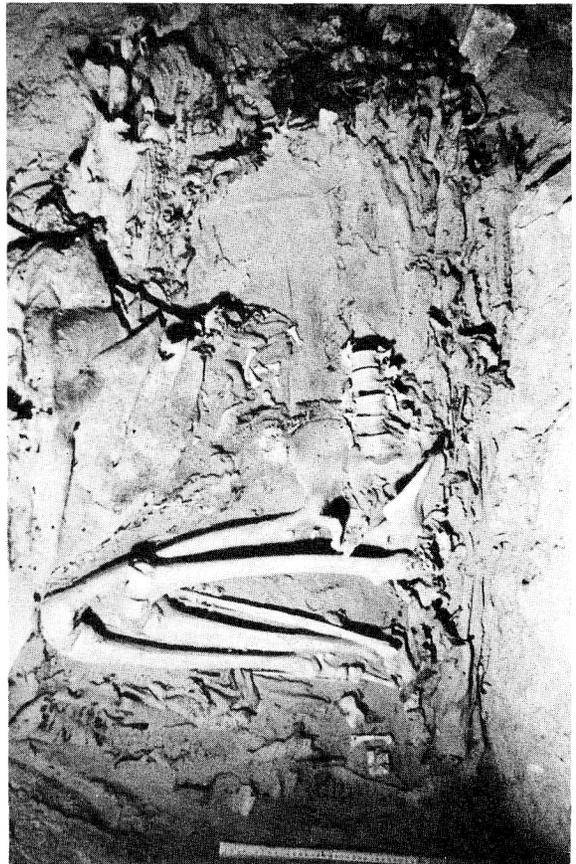


Fig. IV-17 Skeleton (6)



Fig. IV-18 Burial, Leather (7)



Fig. IV-19 Burial



Fig. IV-20 Burial



Fig. IV-21 Leather

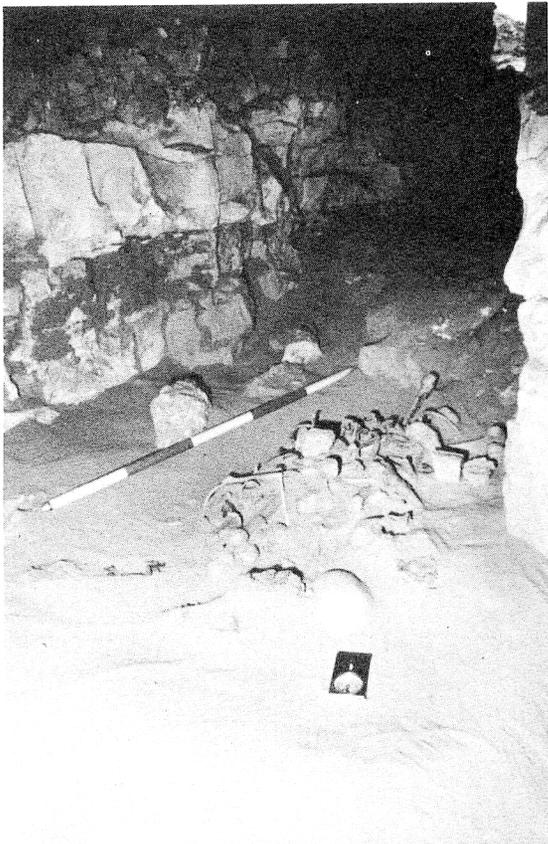


Fig. IV-22 Skeletons



Fig. IV-23 Skeletons

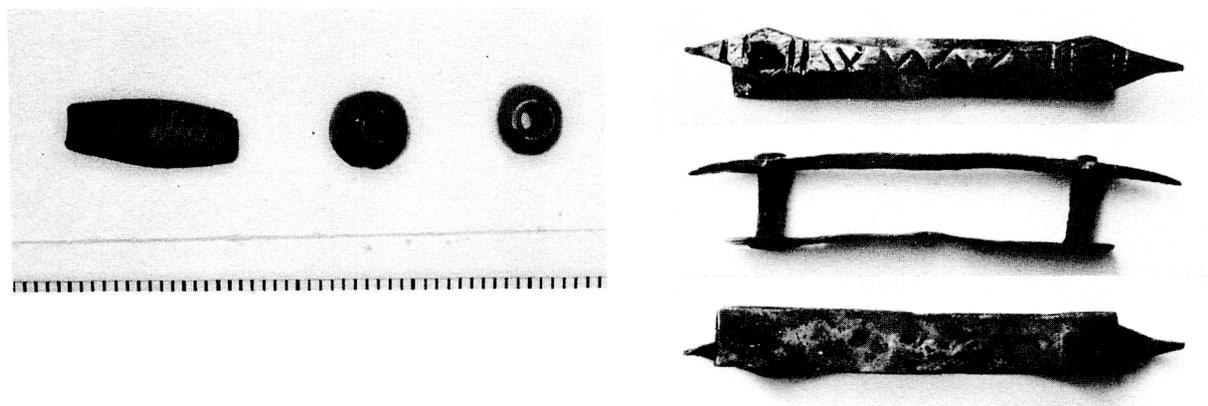


Fig. IV-24 Brass (?), Woodenware jointer and Beads

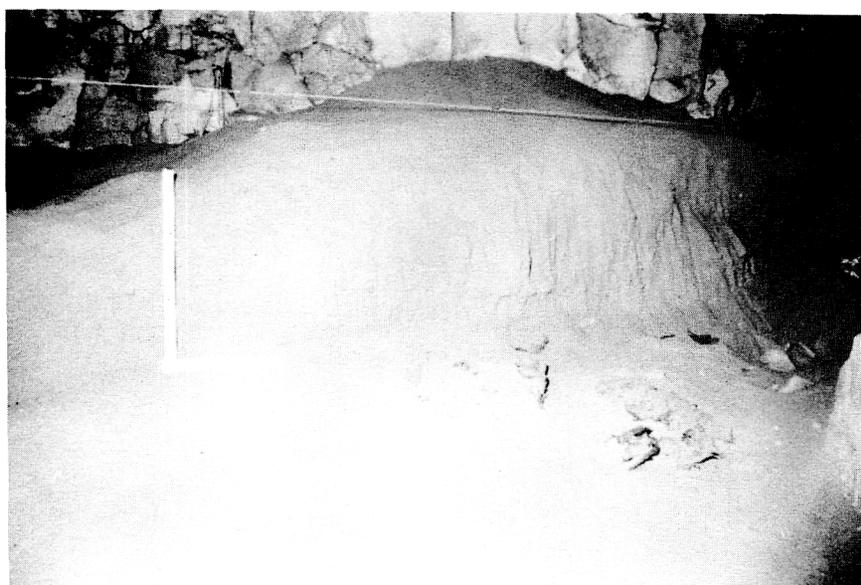


Fig. IV-25 Naturally-deposited sand

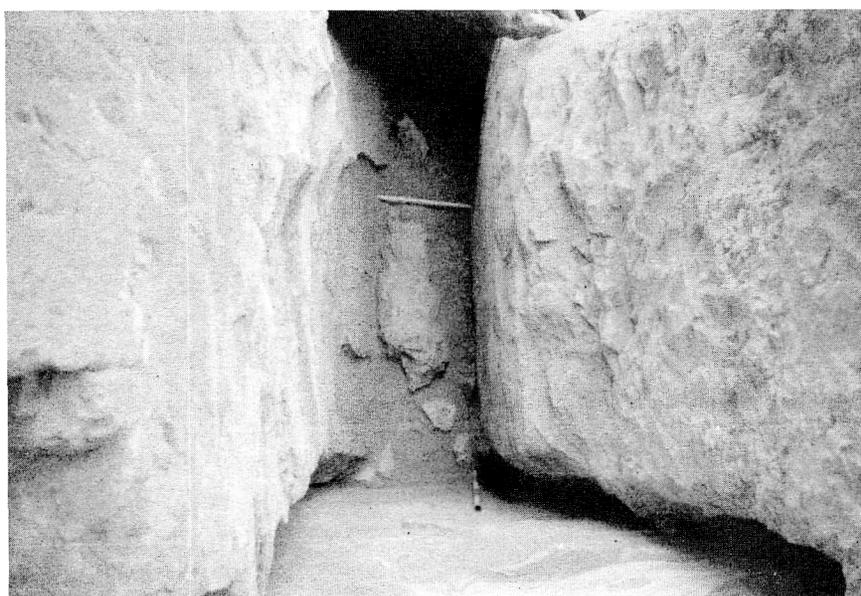


Fig. IV-26 Bottom of C-17-1R

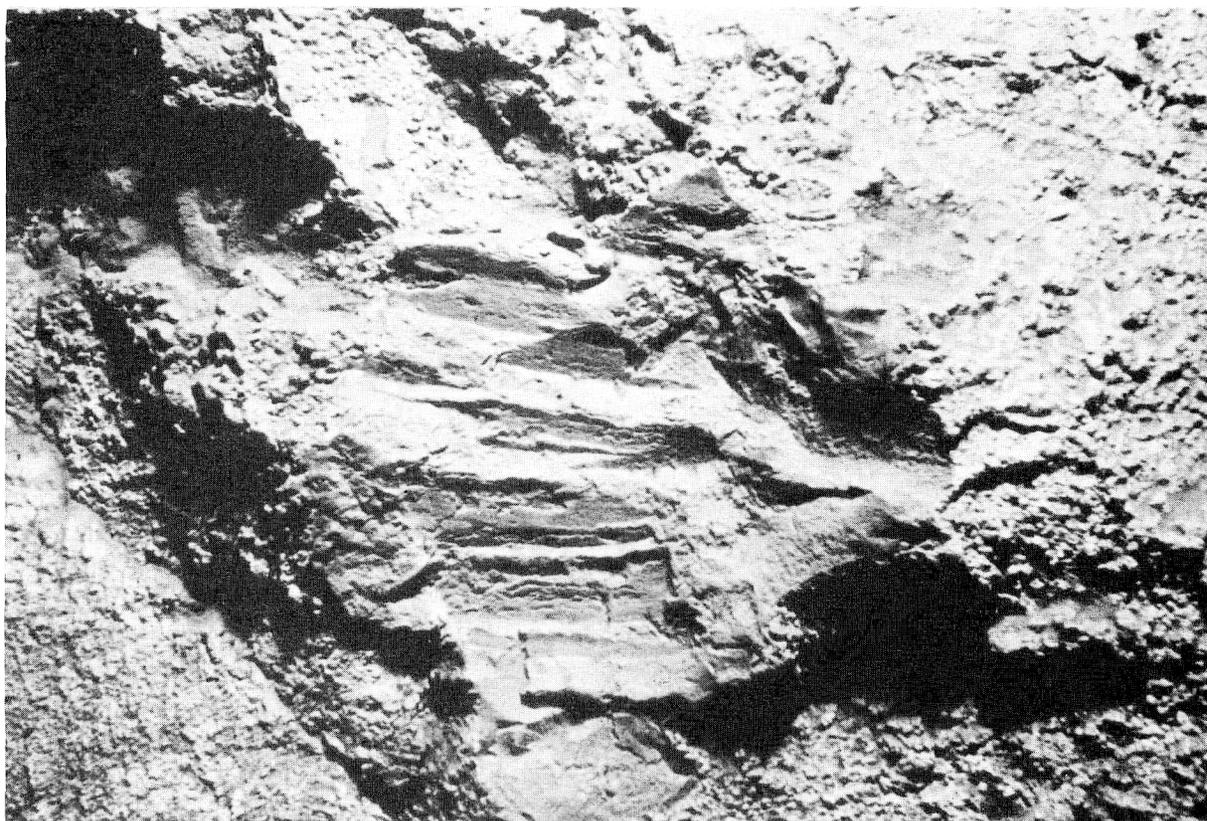


Fig. IV-27 Chisel traces

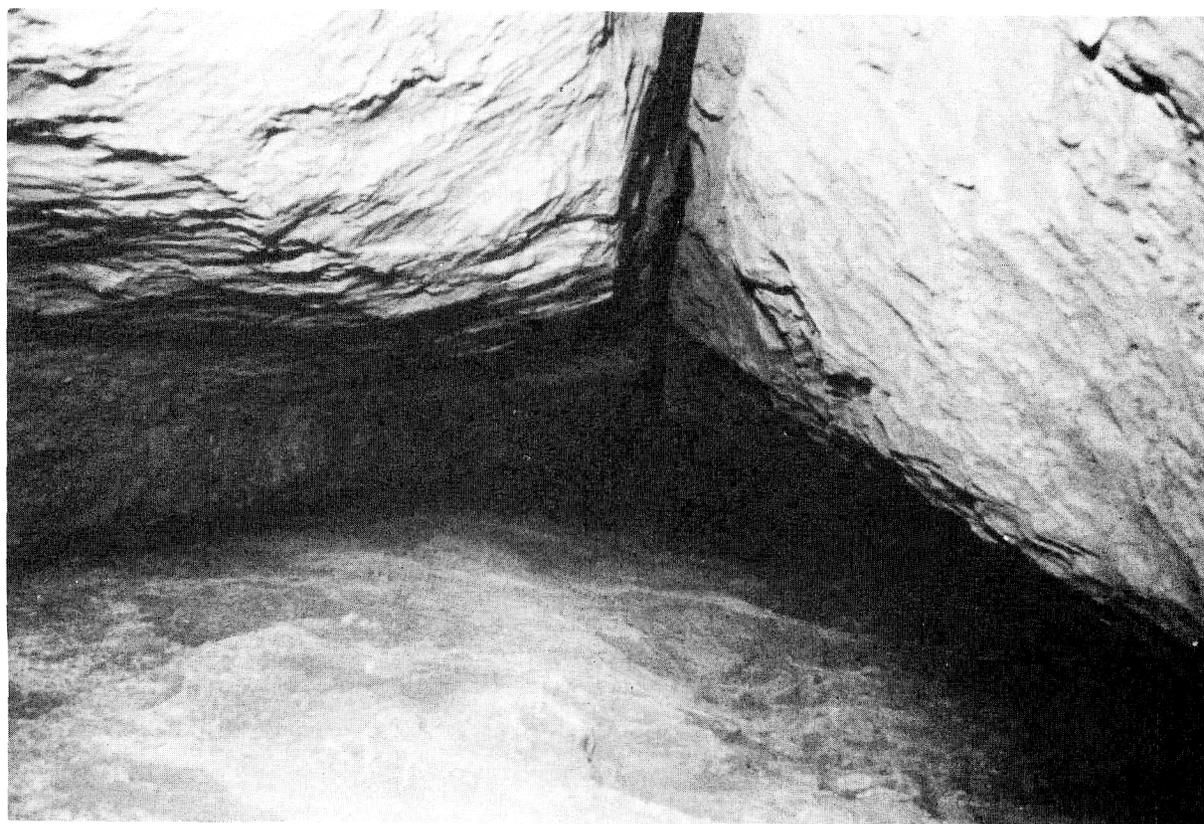


Fig. IV-28 Bottom of C-17-2R

## V. Lithic Artifacts from Tar Jamal

Katsuhiko OHNUMA\*

Lithic artifacts to be reported in this paper were collected on the fan-like topography of Tar Jamal (Fig. V-1) by the 3rd (1973) and 4th (1975) Japanese Archaeological Expeditions in Iraq, are manufactured on chert, agate and quartzite, and can be divided into two groups in terms of weathering exhibited on the surfaces of the artifacts. One of these two groups bears weathering including rounding of the artifacts, whitening of the surfaces of the artifacts and yellow to light-brown patination, but the other group scarcely exhibits any such weathering. Some artifacts among the weathered group, however, are rounded so heavily as to bring forward a possibility of their being excluded from the group.

Tar Jamal is an open-air site situated in a rather small area of a single set of identifiable geomorphological conditions, which leads us to suppose that there might have been at least two lithic assemblages there, for the two groups of lithic artifacts distinguishable in terms of weathering seem to show two separate characteristics, both in technology and typology.

The weathered group consists of some 1,200 samples and includes cores, tools and/or weapons, débitage (various classes of flakes and blades) and waste flakes (Fig. V-2). A small number of the cores are of unclassifiable types, a fair number are discoidal cores and prismatic cores from which flake-blades seem to have been detached, and a large number are Levallois cores, chiefly of flake type with faceted striking platforms rather than of blade and point types. A considerable amount of débitage are Levallois blades and points and non-Levallois triangular flakes most probably detached from discoidal cores. The majority of débitage, however, are flakes and blades with non-Levallois features and Levallois flakes with faceted butts. There are so many more tools/weapons made on flakes than those on cores, i.e., Levallois flakes, blades and points, considered to have been used without retouch modification, Mousterian points, burins, denticulated pieces, perforators, flakes with natural surface along one side probably intended for knife backs, and side-scrapers with abrupt or stepped retouch.

The scarcely-weathered group consists of some 300 samples: cores, tools and/or weapons, débitage and waste flakes (Fig. V-3). Many of the cores are prismatic, a few are discoidal, and a few are of unclassifiable types. Débitage consists of a large number of non-Levallois flakes and blades, but there are very few flakes, blades and points with Levallois features. There are comparatively many tools/weapons made on cores such as scrapers with abrupt retouch, few chopping-tools and some denticulated pieces. Tools/weapons on flakes consist of abrupt scrapers and a small number of side-scrapers and burins.

The future studies on the lithic artifacts from Tar Jamal may be listed as follows:

1. More detailed techno-typological study on the lithic assemblages classifiable in terms of weathering.
2. Study of the assemblages in close connection with the causes for the weathering exhibited on the artifacts and the geomorphological history of the area; it seems to be possible to establish a chronology for the weathered group of artifacts through examining the probability of a water increase of the palaeo-Bahr al-Milh (ancient lake of Razaza) on to Tar Jamal in the Pleistocene, which seems to have caused the heavy rounding of many samples among the weathered group of artifacts.

Regarding the latter study especially, the shoreline of the palaeo-Bahr al-Milh seems to have risen in a Pleistocene pluvial period (Kawana, 1976). It is a probability that this rise of the lake level arrived at

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52 m–60 m above sea level, where rounded lithic artifacts and whitened ones (which are not rounded but whose interior coloured minerals are so extracted as to exhibit white skin (Yamada et al., 1976)) are distributed overlapping (Fig. V-4). The rounded samples, distributed at lower altitude, seem to have been rolled on soil, probably in sandbank. The non-rounded whitened samples (whitened on their upwardfacing surfaces in most cases), on the other hand, are distributed at higher altitude, and it seems highly likely that they were being impressed in soil and stimulated by the movement of soil water (Stapert, 1976), most probably coming from and returning to the palaeo-Bahr al-Milh.

If these hypotheses on a water increase of the palaeo-Bahr al-Milh in the Pleistocene and causes for the two kinds of weathering on the lithic artifacts are proved, it becomes highly probable that the lithic artifacts of the weathered group (both rounded and whitened ones) were manufactured and left on Tar Jamal in an interpluvial period<sup>1)</sup> and were later involved in a water increase of the palaeo-Bahr al-Milh in a pluvial period in the Pleistocene.

#### Note

- 1) Kawana (1976) suggested that the fan-like topography (rocky fan) of Tar Jamal was formed in an interpluvial phase in the Pleistocene and that after the formation of the topography the lake level of the palaeo-Bahr al-Milh rose in a pluvial phase also in the Pleistocene.

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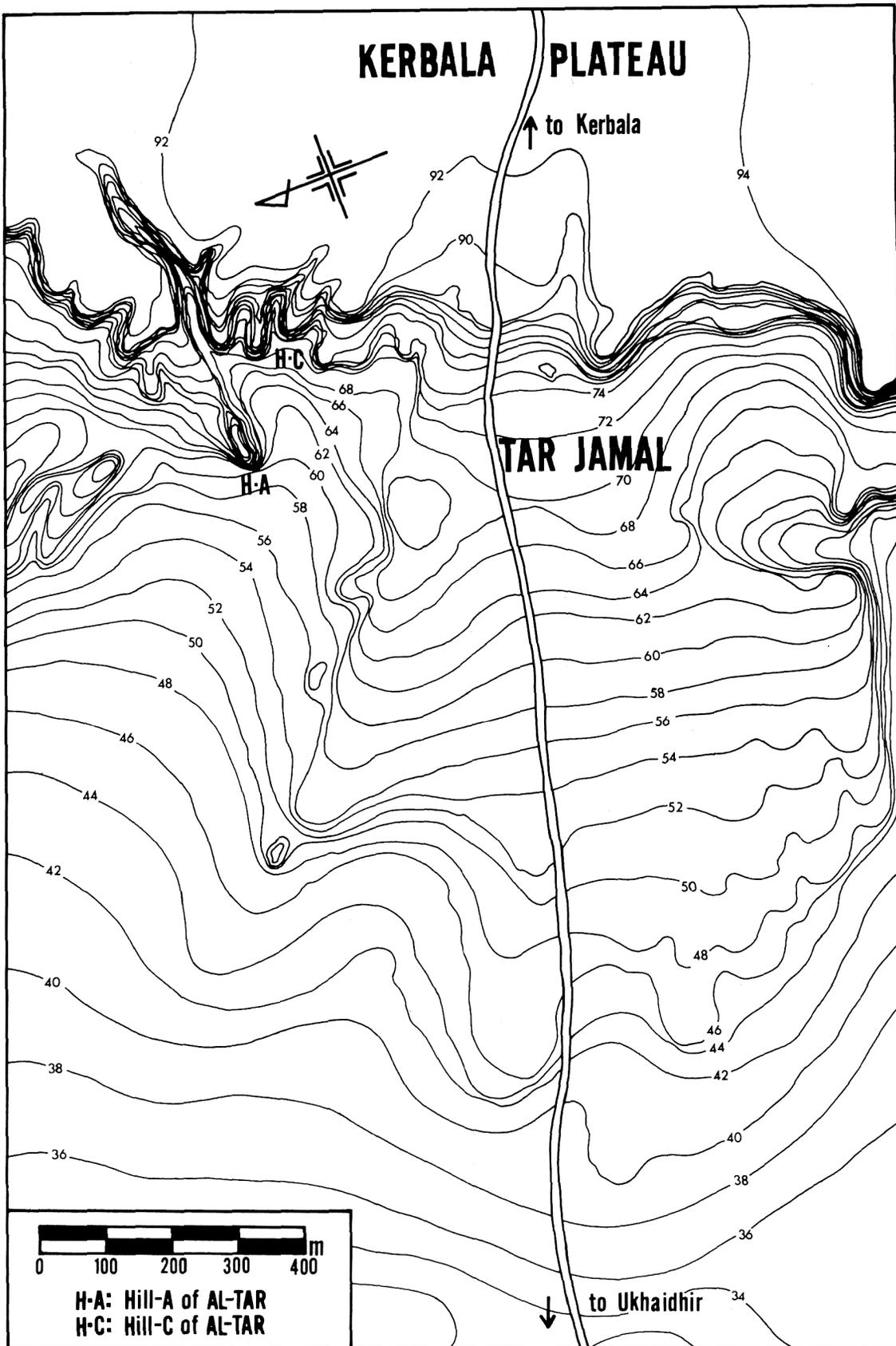


Figure V-1: Map showing the location of Tar Jamal

**Explanation of Figures V-2 and V-3**

Figure V-2: Weathered lithic artifacts from Tar Jamal

Rounded samples

1. Discoidal core
2. Levallois flake core
3. Levallois point core
4. Pseudo-Levallois point
5. Non-Levallois flake
6. Non-Levallois blade
7. Atypical Levallois blade

Whitened samples

8. Levallois flake core
9. Discoidal core
10. Levallois flake
11. Levallois flake
12. Levallois blade
13. Atypical Levallois point
14. Mousterian point on Levallois blade
15. Side-scraper on Levallois blade
16. Dihedral burin on non-Levallois blade

Figure V-3: Scarcely-weathered lithic artifacts from Tar Jamal

1. Non-Levallois blade
2. Levallois blade
3. Levallois point
4. Levallois flake
5. Segment of non-Levallois blade
6. Segment of non-Levallois blade
7. Side-scraper on older flake
8. Side-scraper on non-Levallois flake
9. Denticulated thick flake
10. Denticulated thick flake
11. Side-scraper/burin on tabular flint
12. Polyhedral burin on prismatic core
13. Polyhedral burin on tabular flint
14. Prismatic core

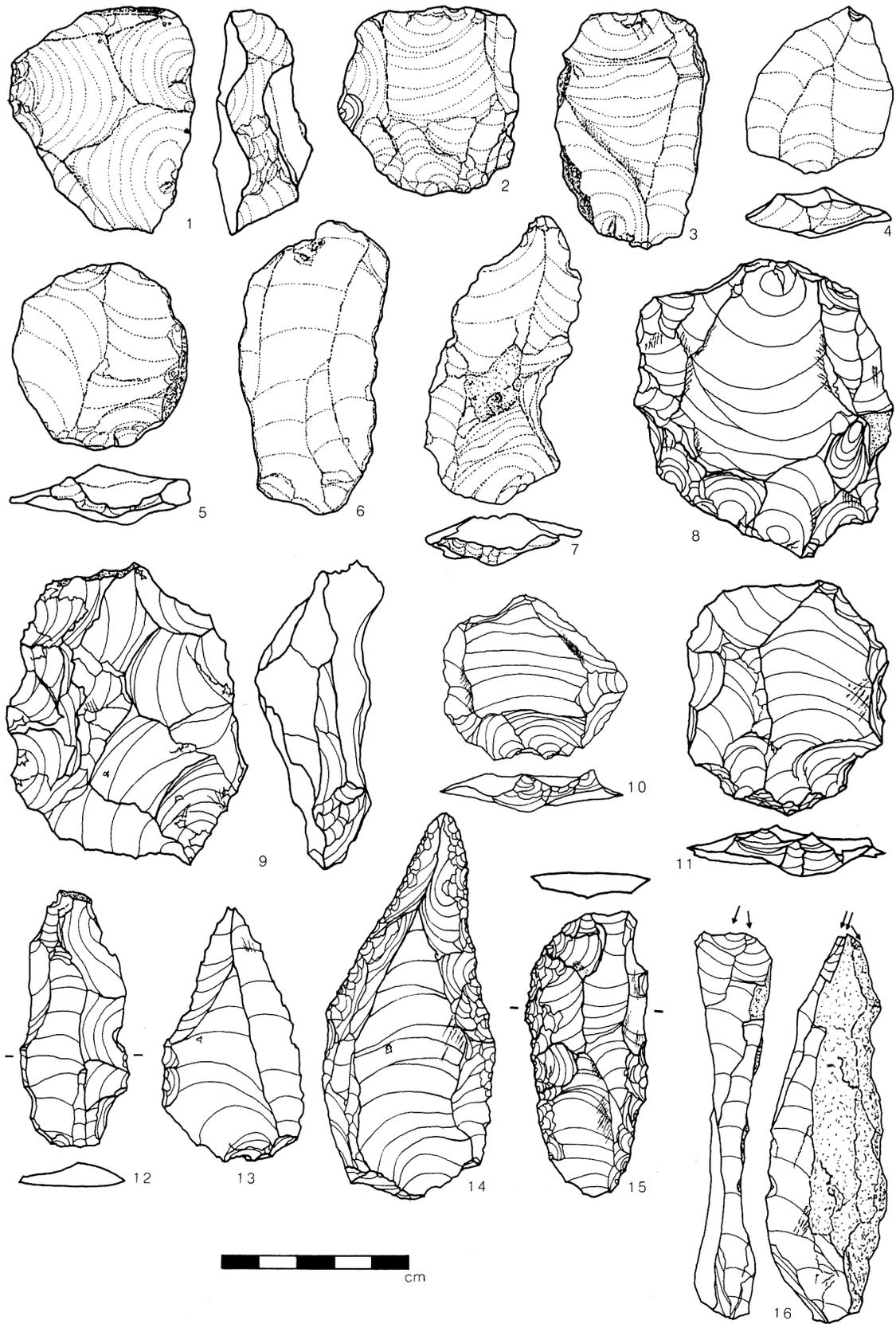


Figure V-2: Weathered lithic artifacts from Tar Jamal

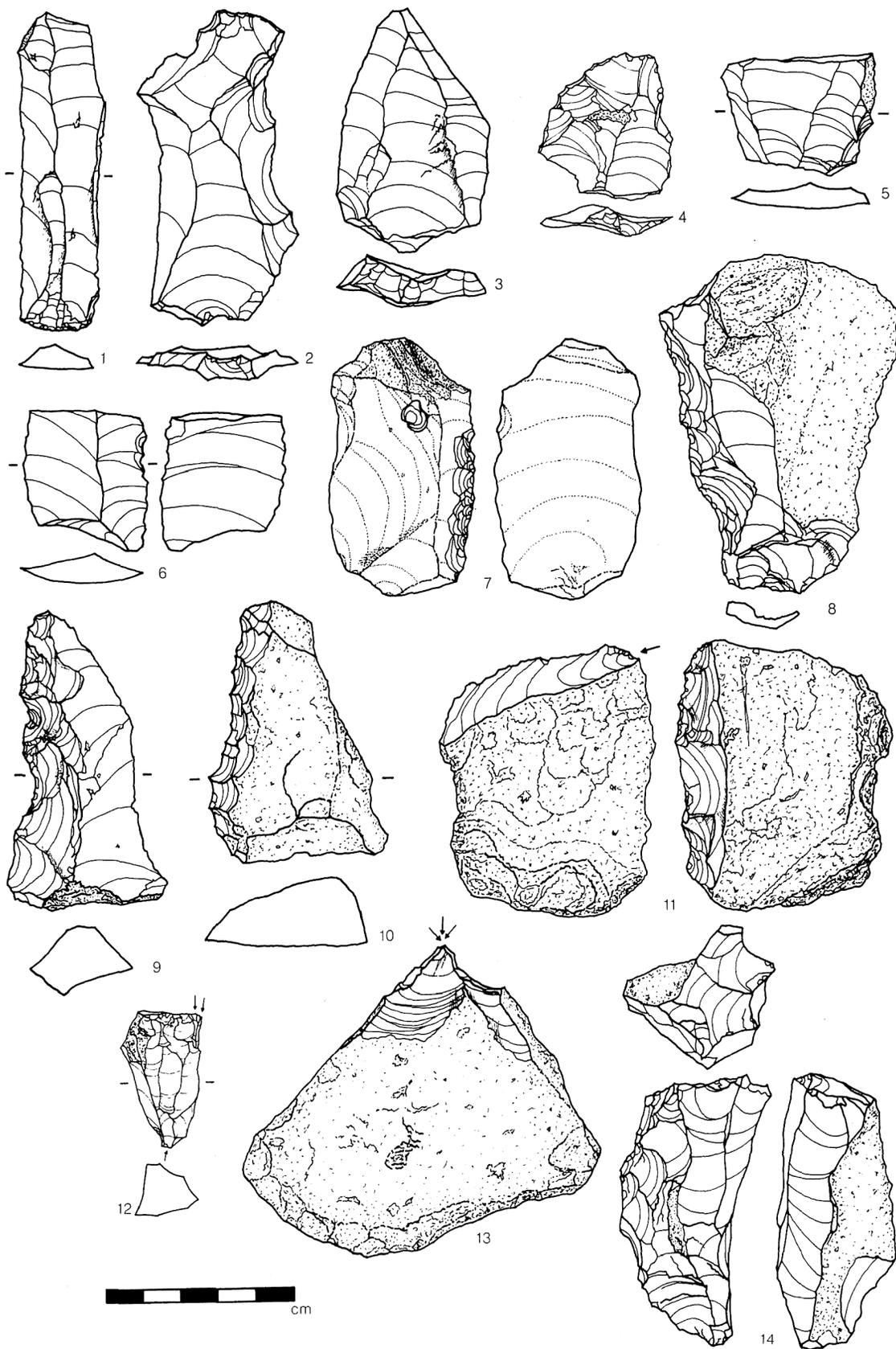


Figure V-3: Scarcely-weathered lithic artifacts from Tar Jamal

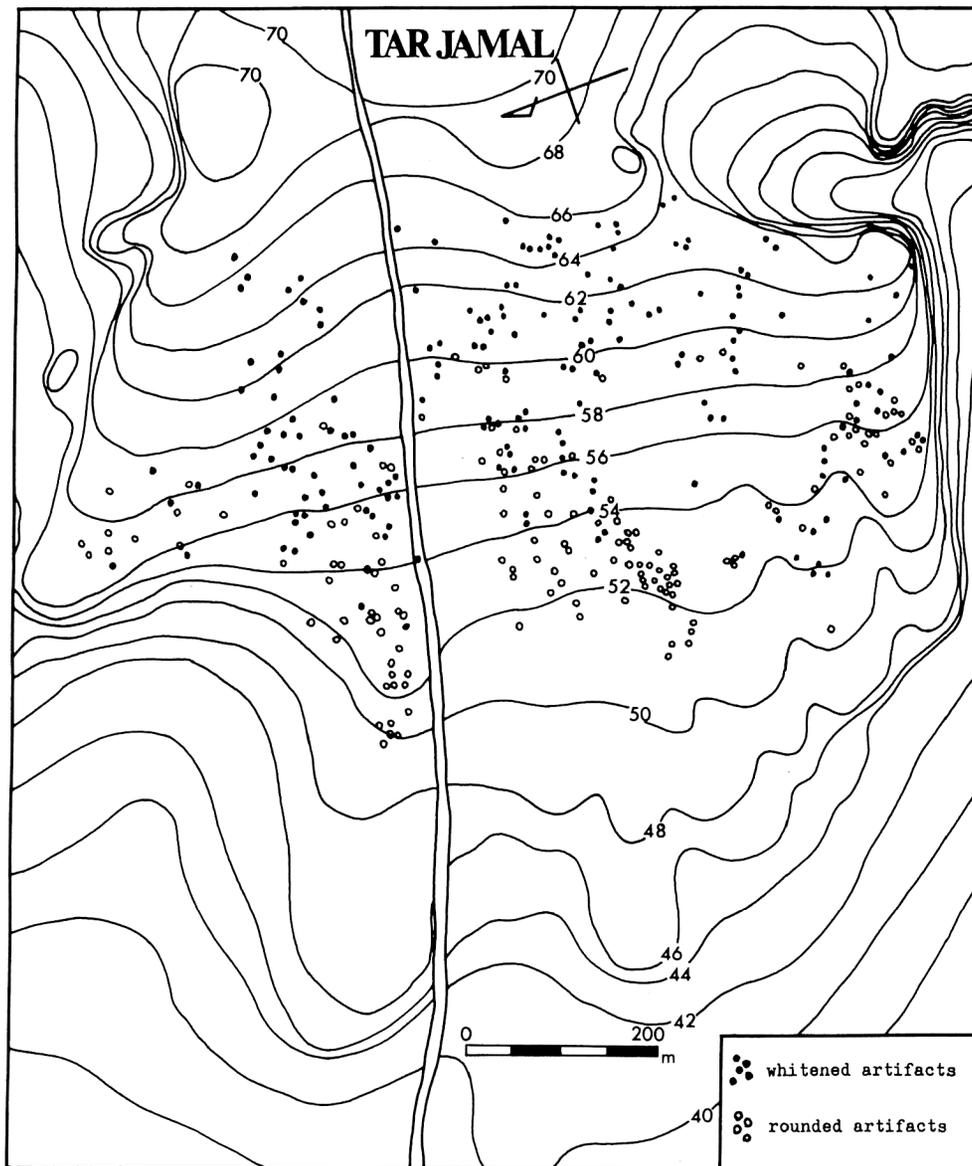


Figure V-4: Distribution of weathered lithic artifacts

## VI. Lithic Artifacts from Abje and Hafna

Katsuaki WADA\*

Abje is an open-air site located approximately 25 km WNW from Al-Tar Caves. This site is on a small hill, the flat top of which is about 10 m higher than the level of its surroundings. Collected at this site were 210 lithic artifacts (tools: 2, cores: 90, flakes: 118) (Fig. VI-1) which were made of either flint or chert and which can be divided into two groups—one with heavy abrasion and the other with no abrasion.

The 'abraded' group consists of the Levalloisian type cores, discoidal cores and flakes detached from these types of cores. The cores are of a flat type with roughly oval-or round-outlined surfaces. Core preparation is generally simple, and the original cortexes of the stone materials are recognizable on most of the reverse surfaces. The discoidal cores are characterized by a number of centripetal flaking scars on the main flaking surfaces, whereas the Levalloisian type ones show either the centripetal or parallel flaking scars resulting from core preparation, and have prepared striking platforms. Although the cores in this group are technologically similar to those from Tar Jamal, the former are smaller in general and differ from the latter in this respect.

The 'unabraded' group consists of prismatic cores and blade-like flakes, the former being characterized by both the parallel flaking scars on the main flaking surfaces on the perimeter and the striking platforms which are smooth and plain, i.e., non-faceted.

The analysis of the lithic artifacts from Abje seems to show that the two groups of artifacts differ remarkably from each other, both typologically and technologically. The present writer has the intention of reconstructing, in the future, the distinguished manufacturing techniques of the lithic artifacts from this site, thereby providing discussion regarding the relationship between these two groups of lithic artifacts.

Hafna is also an open-air site located on the west bank about 70 km up the Wadi Al-Ubayidh. 51 lithic artifacts (tools: 4, cores: 2, flakes: 45) (Figs. VI-2 and VI-3), manufactured on either flint or chert, were collected at this site, nearly all of which are usually patinated deep—light-cream in colour—and are heavily abraded. The present writer would like to refrain from propounding any conclusion now when further study is in progress. According to the preliminary analysis of the main lithic artifacts, however, the true blade technique seems to play a major role in the Hafna collection.

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### Explanation of Figures

Figure VI-1: Lithic artifacts from Abje

'Abraded' samples

1. Levallois flake core
2. Levallois point core
3. Levallois blade core with uni-directional parallel flake scars
4. Flake with a faceted butt
5. Flake with a faceted butt
6. Flake-blade with a faceted butt
7. Blade with a smooth butt

'Unabraded' samples

8. Obliquely-ended scraper
9. Prismatic core with the trace of continuous removal of blades and resembling a true blade core
10. Flake-blade with a natural butt

Figure VI-2: Lithic artifacts from Hafna

1. Blade with a smooth butt
2. Blade with a smooth butt
3. Flake-blade point with the bulbar end thinned by chipping on its reverse surface
4. Prismatic core with the trace of serial removal of flake-blades or blades
5. Side-scraper with nibbled retouch along the left side

Figure VI-3: Lithic artifacts from Hafna

1. Obliquely-ended scraper manufactured on a large flake
2. Broken blade, probably aimed for a burin, with nibbled retouch along the left side
3. Truncated blade
4. Core-like keeled scraper

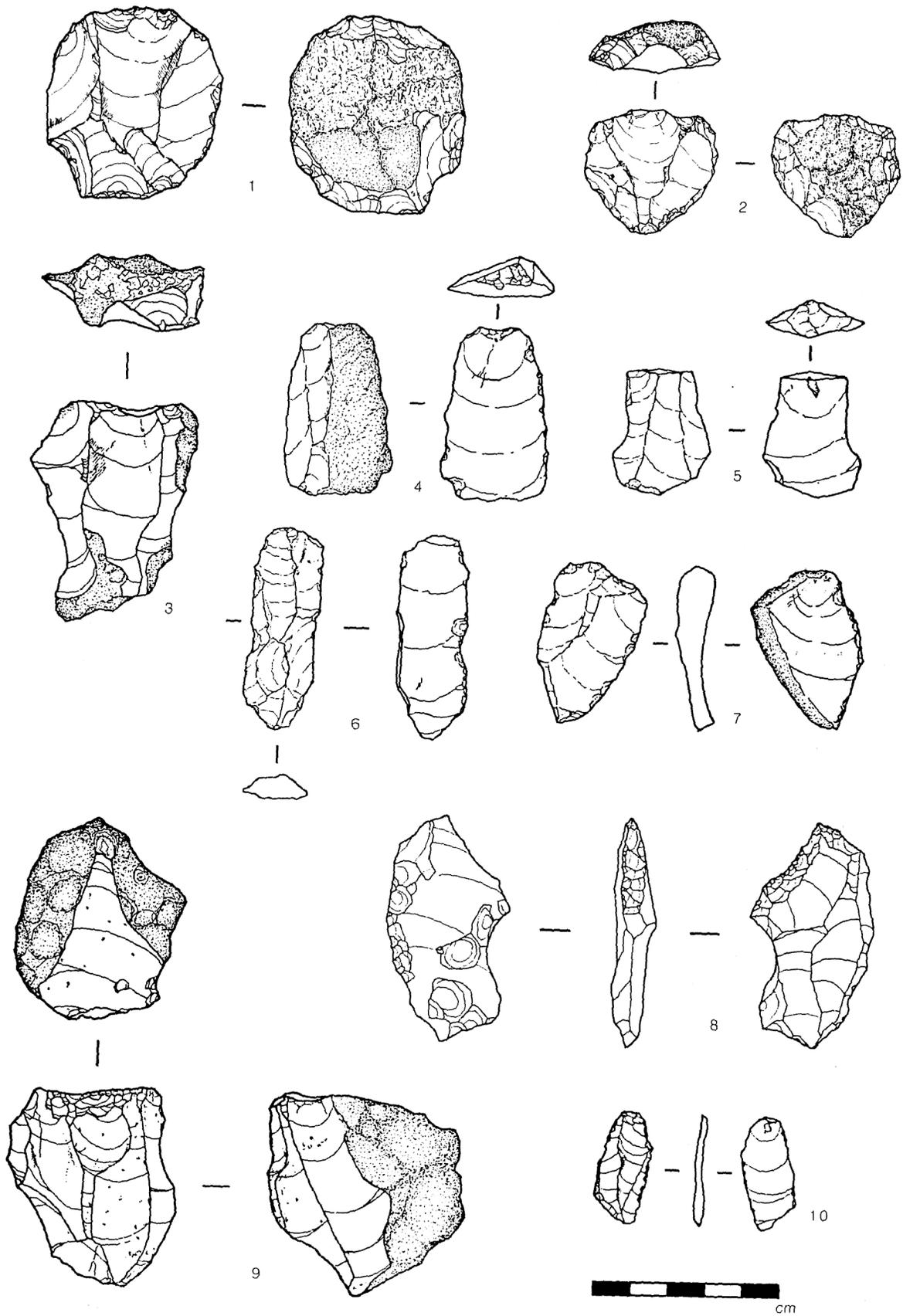


Figure VI-1: Lithic artifacts from Abje

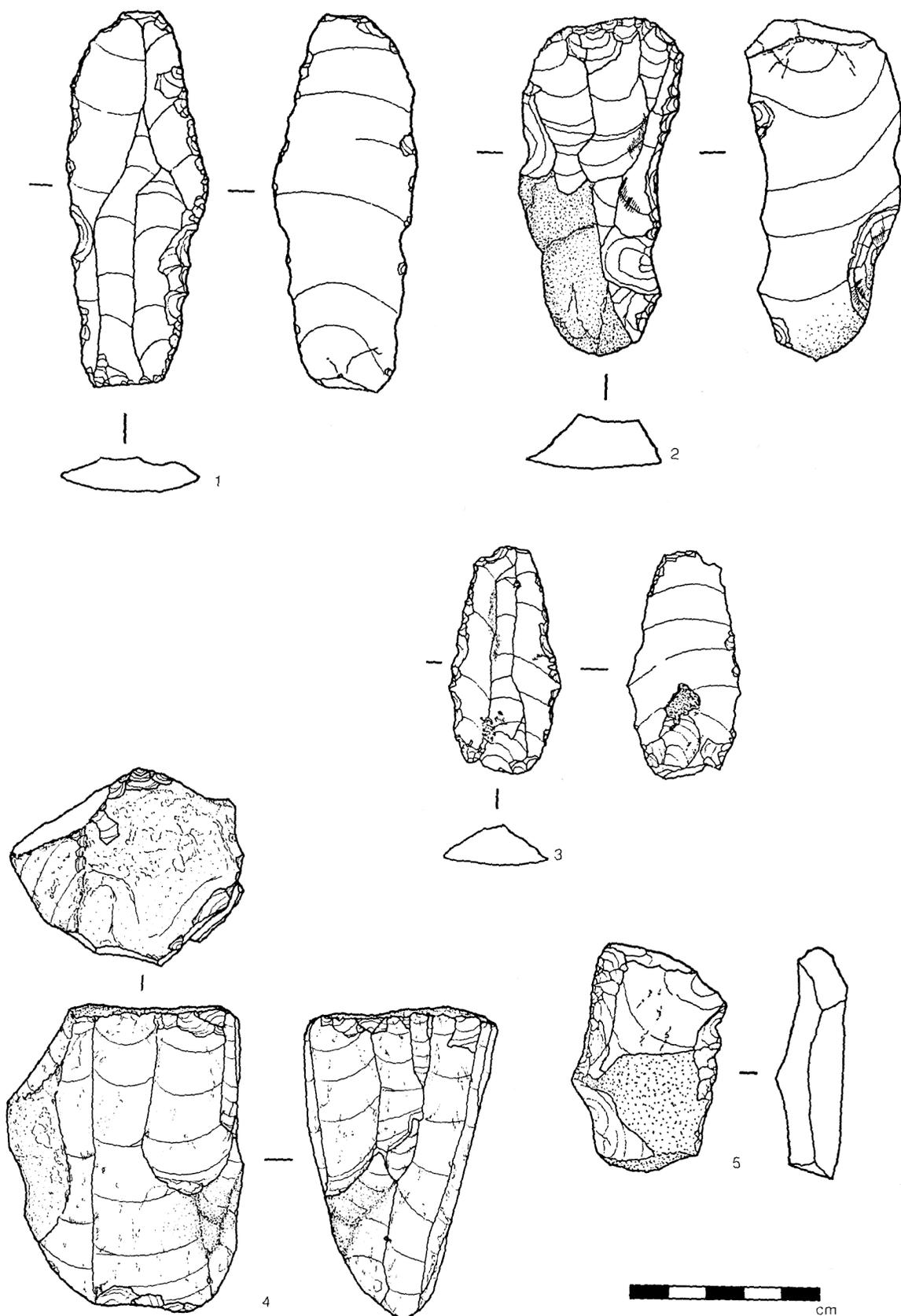


Figure VI-2: Lithic artifacts from Hafna

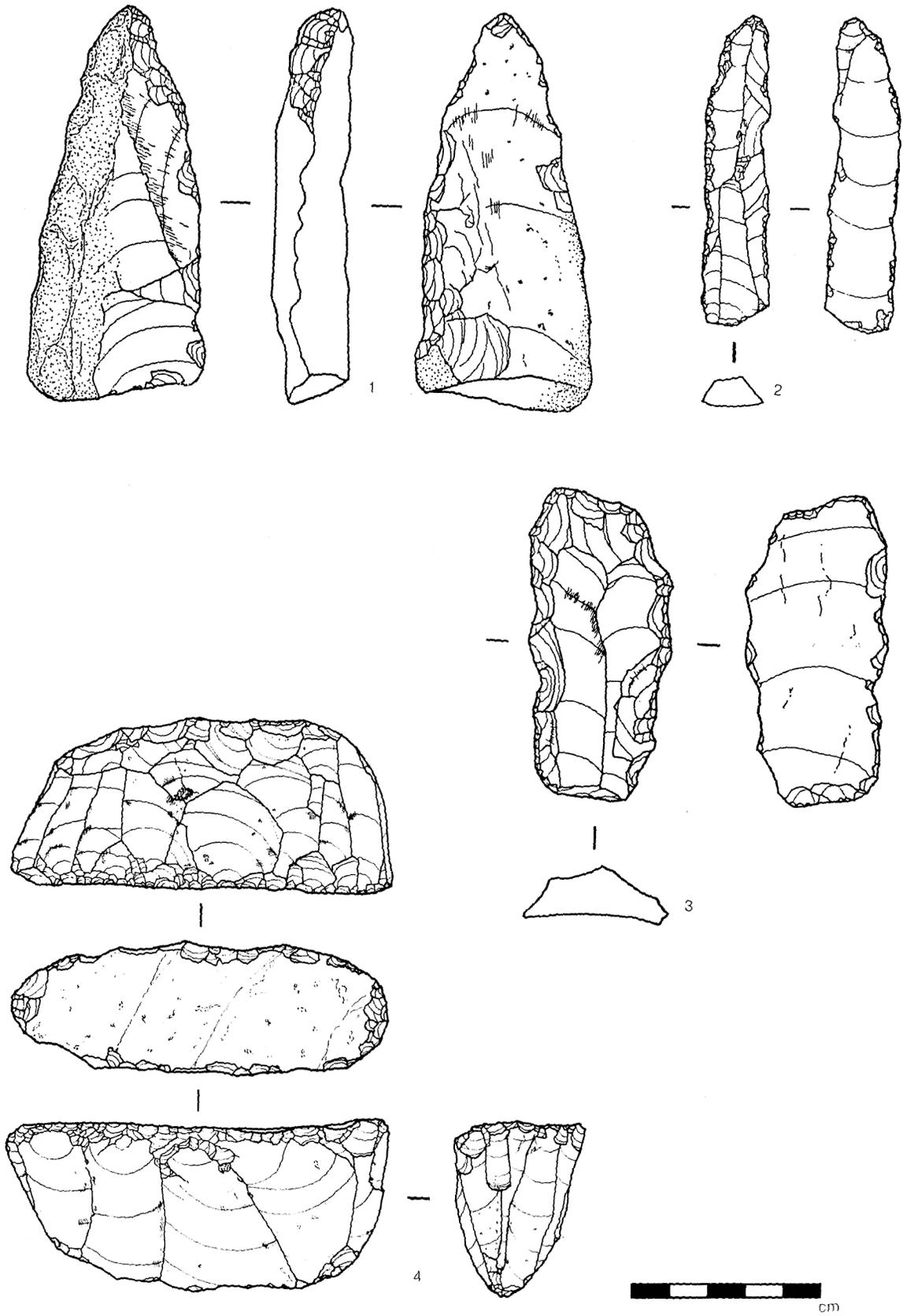


Figure VI-3: Lithic artifacts from Hafna

## VII. Inscriptions of Nomadic Tribes in the Al-Tar Area of the Kerbala Plateau

Toshio KAWANA\*

A map showing the present distribution of nomadic tribes in the Al-Tar area and the surroundings, and the area along wadi al-Ubayidh was made (Fig. VII-1). *Shammar* and *Anaza* are major tribes of the Arab (W. M. WATT, 1970), and it is said that the former is widely distributed in Iraq and the latter in Saudi Arabia. *Shammar zagroutai* tribe belongs to *Shammar* tribes, and is distributed principally in the Al-Tar area and along wadi al-Ubayidh. It is also said that some *Baeji* families migrate to the Al-Tar area only in winter, and a single *Anaza* family lives in Bendar, near Ukhaidher in the Al-Tar area (Fig. VII-1). Fig. VII-1, therefore, indicates that many *Shammar zagroutai* families, some *Baeji* families and one *Anaza* family are distributed in the Al-Tar area.

Many signs assumed to be inscribed by nomadic tribes were found out in the Al-Tar area along the margin of the Kerbala Plateau because it is said that the majority of the signs are the same as those put on the camels' cheeks or thighs by the tribes to indicate the owner of animals. These signs are inscribed on sandstone boulders in the wadis, sandstone cliffs and walls of a cave on the cliff around the Plateau. Fig. VII-2 shows locations of these inscriptions in the al-Tar area (cf. Fig. I-3 and Fig. I-4 in this volume for detail). Fig. VII-3 shows inscription types for the individual tribes. The inscriptions of *Shammar zagroutai* tribe were usually easily recognized, but inscriptions of other tribes were, in many cases, difficult to identify because there were few people belonging to these tribes in the Al-Tar area. Despite the difficulty, the number of inscriptions of each inscription type was preliminarily counted in the field in 1975 and the result is shown in Tab. VII-1. Inscriptions of tribes other than the tribes at present occupying the Al-Tar area are found, and they are also included in Tab. VII-1. On the other hand, it is said that before World War II nomadic tribes were against each other in this area, but after World War II these inter-tribal strifes were almost settled and each tribe lived in peace, and the present composition of tribes was stabilized approximately fifteen years ago.

Inscriptions of Aramaic letters were reported by the Director of our expedition at Hafna, wadi al-Ubayidh shown in Fig. VII-1 (H. Fujii, 1976). Relation between these Aramaic letters and the tribal symbols remains to be found (Fig. VII-1, Fig. VII-2, Fig. VII-3 and Tab. VII-1)

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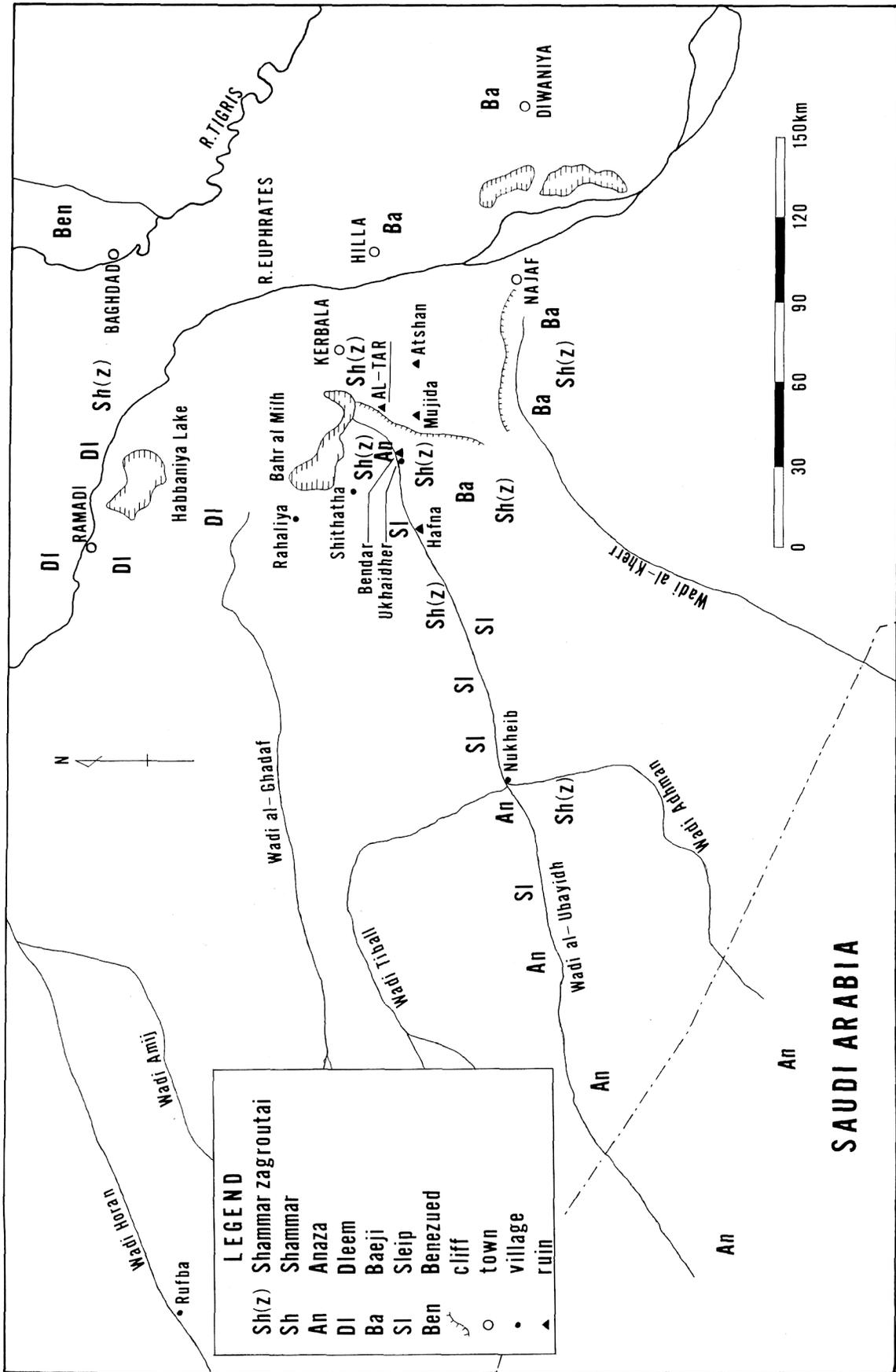


Fig. VII-1 Present distribution of nomadic tribes in the Al-Tar area and the surroundings, and the area along wadi al-Ubayidh. By the interviews with residents in the Al-Tar area.

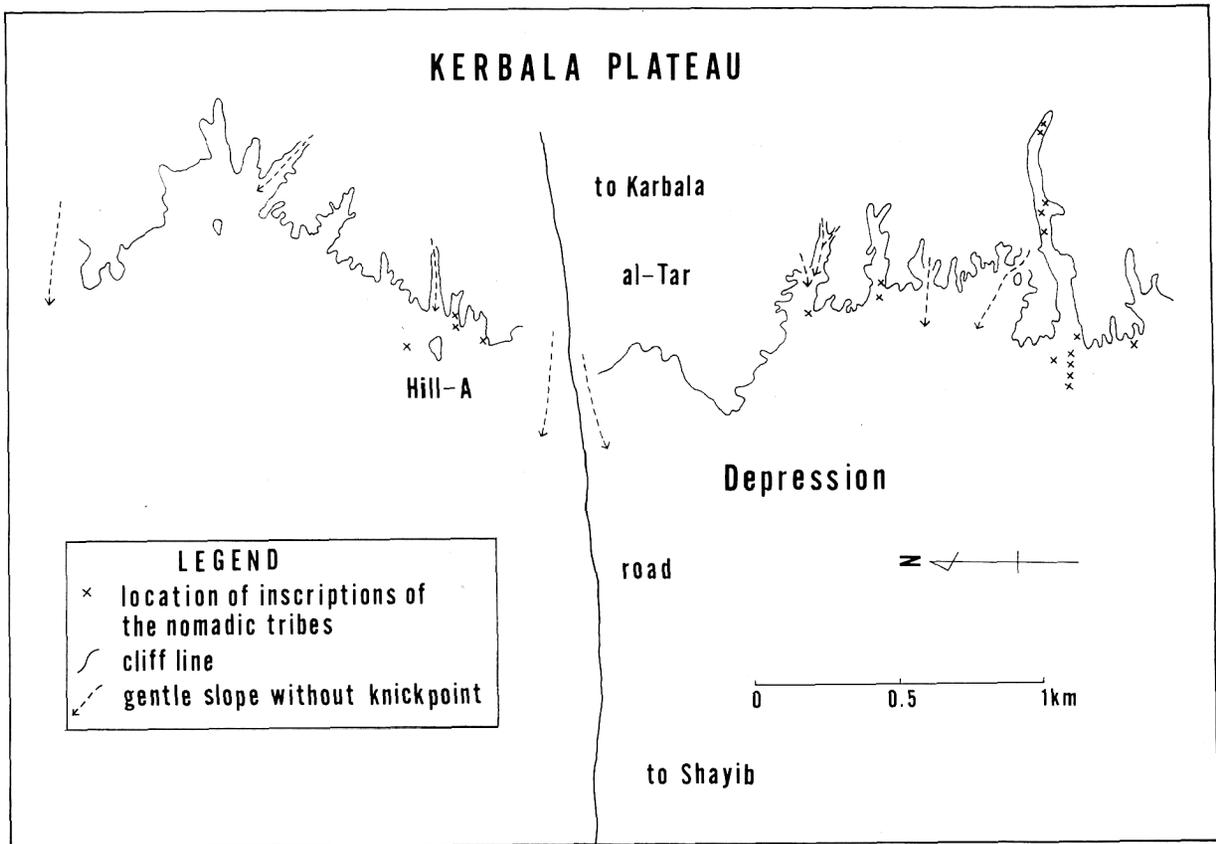


Fig. VII-2 Locations of the inscriptions in the Al-Tar area

Name of nomadic tribes	Inscriptions
Shammar zagroutai	ī ī ī ī ī ī ī ī
Shammar	∨ Ψ Ψ III ≡≡ +
Anaza	∩ ∩ ∩ ∩ ∩
Dleem	+
Baeji	∩ ∩ ∩
Sleip	β
Benezued	10

Fig. VII-3 Inscription types for the nomadic tribes inscribed in the Al-Tar area. By the interviews with residents in the Al-Tar area.

SHAMMAR Zagroutai	43
SHAMMAR	12
ANIZY	22
DLEEM	19
BAEJI	6
BENEZUED	5
SULEIP	3

Tab. VII-1 Number of the nomadic tribes' signs inscribed in the Al-Tar area shown in Fig. VII-2. Preliminarily counted by the interviews with residents in the Al-Tar area.