AN ARCHAEOLOGICAL RECONNAİSSANCE IN THE BEYŞEHİR-SUĞLA AREA OF SOUTH WESTERN TURKEY

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INTRODUCTION

The Columbia University Archaeological Expedition sponsored by Columbia University of New York and financed under grants from the National Science Foundation and the Wenner-Gren Foundation for Anthropological Research, Inc., has conducted a survey for prehistoric remains in the basing of Lakes Beyşehir and Sûğla Gölü, Konya Vilayet (Fig. 1). This survey has been authorized under a permit from the Director General of Antiquities and Museums at Ankara.

The members of the Columbia University Expedition included Prof. *Ralph S. Solecki*, director of the expedition; Prof. *William Farrand*, Pleistocene Geologist; *Mrs. Farrand*, Asistant geologist; *Mr. H. Bruce Schroeder*, senior assistant archaeologist; Mrs. *H. Bruce Schroeder*, illustrator; and Mr. *David Lubell*, junior assistant archaeologist. Mr. Abdurrahman Erdal, of the Karaman Museum in Karaman, Konya Villâyet, was the official representative of the Antiquities Service of Turkey with the expedition. Visitors to the expedition in the field included Prof. I. Kılıç Kökten, of the University of Ankara, and Mr. David French, of the British School of Archaeology in Ankara. We are grateful for their cooperation.

We are obliged to Prof. Kökten for sparing his time to join us for several days in our survey. He gave to us the value of his 30 years experience in Anatolian prehistory. Mr. French lent us his assistance suring his three day stay with the expedition by identifying from his extensive records several of the mounds we have visited, and checking the Neolithic mounds located in the survey.

Thus far, no truly ancient prehistoric artifacts, which can be classed under the headings of Paleolithic to Mesolithic remains (up to ca. 12,000 years ago) have been found in the areas investigated. This is astonishing, in view of the fact that stone age artifacts have been reportedly found elsewhere on the interior plateau of Turkey. It is also surprising, since Prof. Kökten has told me that he has found an Aurignacien site (Upper Paleolithic) and Mesolithic sites near the northern part of Burdur Lake. These sites are about 85 kilometers straight line distance from Lake Beyşehir. Also, Mr. James Mellaart of Istanbul has found very early village sites yielding Neolithic material of estimated ages at least, 9,000 years old on both sides of the area investigated, viz. in the Burdur region to the west at Hacılar Hüyük, and in the Konya plain region to the east at Çatal Hüyük. Both sites are respectively 135 kilometers west and 105 kilometers east of our area in straight line distances. About 110 kilometers to the southwest near Antalya, Prof. Kökten has found a long occupation series of Paleolithic, Mesolithic, Neolithic and more modern dated materials in the famous caves of Karain. Other investigators have also found prehistoric

materials on the Mediterranean front. ıt appears that for some reason, the area immediately to the south, bordering the Mediterranean Sea appeared to be the more attractive to stone age man, and that this inner basin area was shunned. Artifactural remains of Paleolithic to Mesolithic origins were not found in any of the cave sites tested, nor in any of the open land form features visited. This seems to bear out Prof. Kökten's observation that Paleolithic sites are scarce in western Anatolia, and abundant in eastern Anatolia in general, and the presence of barren areas where Paleolithic man did not frequent. Until evidence is found to the contrary, we must assume, on the basis of our present researches, that the Beyşehir-Suğla area does not have any Paleolithic sites.

Purposes and Methods of Investigation

The Beyşehir-Suğla depression appeared to be an admirable area for prehistory. In the first place, it was an area unknown to students of Plleolithic archaeology. It seemed possible that there might be found Paleolothic evodences linking the cave finds of the Antalya district to the south, with the surface finds near Ankara to the north. It was also thought that Paleolithic remains might be found linking the archaeology of Europe with the known sites in the Near East.

Secondly, the Beyşehir-Suğla depression appeared to be an ideal area for investigation into the problem of finding some clue to the predecessors of the painted pottery cultures and the aceramic cultures of the related sites Hacılar Hüyük and Çatal Hüyük. These two sites, unique for Turkey, lie on either side of this depression, and there must have been traffic between them, traversing this fertile lake basinsarea. Therefore, sites related to both horizons shoull be found in the Beyşehir-Suğla depression.

These predecessors may or may not have been the direct antecendents of the aceramic and the painted pottery cultures. It is of significant note that Çatal Hüyük lies on the fertile plain fed by a powerful braided stream channeled from the Beyşehir-Suğla lakes. It was hoped to find somewhere in this basin evidence of both the aceramic and pained pottery cultures, preferably in a cave stratigraphic context, overlying antecedent prehistoric materials. It was thought that a cave site somewhere in or on the outer edges of the basin area would be most likely to contain materials evidencing contact with sedentary life on the plains, as well as a purely hunting economy of earlier ages.

This then, determined the scope of our investigations in the Beyşehir-Suğla depression. We searched for cave sites in the hills bordering the plains. Since nearly all caves are solution caverns found in limestone rocks, we concentrated our searches still more narrowly to the limestone belts bordering the basin. This meant the west side of the area, and thnough the Balikliavi Gorge.

Open sites were also sought, but it should be realized that generally such sites are much more difficult to locate, and less rewarding than cave sites. Open sites were sought on the edges of the plain, in wadis, and terraces. To find Paleolithic and Mesolithic open sites on the open plain seemed out of the question, since unlike Neolithic mounds which are everywhere obvious landforms, non-sedentary groups such as Paleolithic and Mesolithic cultures left no mounds or landforms for us to find. Moreover, they are very liable to destruction through natural means (allubiation, erosion, etc.).

The lakes Beyşehir Gölü and Suğla Gölü must have affected prehistoric occupations of this area. We have direct evidence of changes in lake level, as

evidenced by beach ridges along the shores of the lake, and evidence that at least four mounds (Burun Hüyük, Alan Hüyük, Küçük Hüyük, Büyük Hüyük) had been cut by wave erosion, and one mound (Kul Ada Hüyük) had been entirely surrounded by in fairly recent times.

Area Covered and Mode of Investigation

The area covered to date lies between the towns of Şarkîkaraağaç in the north at the head of Lake Beyşehir, to the town of Balikliavi, to the south of Suğla Gölü. The mode of transportaion for the survey was by Jeep four wheel drive vehicle, with the supplemental use of a power motor boat on two occasions to visit shore and island points on Lake Beyşehir. Once the destination was reached, or an objective was seen from the road, we proceeded the investigation on foot. Inquiry was made of local inhabitants concerning the identity of the topographical features seen, and checked against our charts. We also inquired of the local inhabitants for clues concerning the possibility of stone age artifacts. Themaps used were the 1/100.000 scale Turkiye Jeolojik Hartasi (T.C. Maden Tetkik ve Arama Enstitüsü Genel Direktörlüğü 1946) sectional charts, the 1/-125,000 scale Army Map Service Corps of Engineers Charts, and the United States Ait Force Operational Navigation Chart with scale of 1/1,000,000.

Physiography and Geology of the Area

For the background of the investigations, Prof. William Farrand has collected some notes on the physiography and geology of Beyşehir-Suğla depression and the surrounding environs. This data is given in full below.

The Archaeology of the Area

As noted above, we have not in our reasearches found any prehistoric remains which I would classify of Paleolithic or Mesolithic age. Sledge flints, called "Chakmaktashi", which can be distinguished from the stone age article only by virtue of their fresh looking and unretouched appearances, could be confused for the genuine prehistoric artifact. These flints, used to teeth the underside of the animal drawn wheat threshing sledges of wood, are frequently lost in the process of threshing the wheat, and may be picked up at random. It was found early that these flints could be identified readily once a study had been made of the flints in the market, and of the flints use-worn in the sledges. A certain amount of trimming prepares them for their field use. The use wear on these flints can be distinguished from that on the Paleolithic artifact.

The Sites Noted

The sites entered in our observations are divided into seven catregories. These include: 1) True habitation mounds with no evidence of underlying stone outcrops, which seem to be generally distinguished by the local inhabitants as hüyüks; 2) Tepes, which are natural summits or stone outcrops having a cover or veneer of human occupational soils and debris; 3) Tumuli, of which one was found; 4) Momuments and architectural works, of interest mainly to classical archaeologists; 5) Caves; 6) Rockshelters; and lastly 7) Open sites, which are not distinguished by any surfacial features included under the other categories. Most of the sites have local names. A few have not been identified by local names at present.

Among the sites and features recorded, are 29 habitation mounds, (Fig, 2, Table I) which are true occupational mounds or natural hillocks (with stone outcrops) with occupational matter on the surface, 1 tumulus, 7 sites of especial interest to classical archaeologists, 13 cave sites,

and 4 rockshelters, and 6 open sites. A whole series of caves and rockshelters in the Balıklıavı Gorge are not included here in the count. These sites are located on the indexed map.

It should be emphasized that none of these sites contained artifacts of Paleolithic interest, the search for which is the purpose of the expedition. However, in the hope that this compliation will be of some use to specialists in later periods, and in the interest of archaeology in general, the following data is offered. The sites under these various catagories are identified as follows.

Hüyük and Tepes

There seems to be no distinction other than size between hüyük and tepe in the Turkish language. A hüyük is a small tepe by definition. A tepe can be a small mountain or a hill. It generally appears that this distinction is recognized by the local inhabitants, although there are exceptions when may be a hüyük in one district is called a tepe in another. It has been observed that hüyüks are generally true habitation mounds, whereas tepes, which are usually associated with larger landforms, are based upon natural rock outcrops or summits. These prominent landforms were visited in the hopes that surfacial material giving clues to the range of occupation of these mounds could be found. We were specifically looking for diagnostic flints, such as sickle blade flints, which would indicate to us a probable early age for the mound. The ceramics, when found, were examined to determine whether early occupations were evident. Since a ceramist specialist in prehistoric Anatolian pottery was not included in the expedition, our identifications can only be tentative, pending study by a qualified specialist. Mr. David French proved to be of great help in the identification of the sample of ceramics we had collected on the mounds. Visits to the mounds were short, ranging from about twenty minutes to about two hours for an exceptionally interesting one. Not. all of the many obvious mounds seen from the road were visited. No measurements were taken of these earthen features, nor elevations, since this was not within the scope of our objectives in the survey. No test were made either.

On nine of the 29 mounds or hillocks were found obsidian (predominant) and other flint blades, which together with associated material, may be indicative of a Neolithic age occupation. The other associated material is mainly ceramic, principally burnished. Only a few painted sherds were collected. One of the sites (Görüklük Tepe) is of especial interest, since the local villages of Suberde had cut a hole in the top, exposing in profile some human remains of which a couple of fragments were collected. There did not seem to be any ceramics associated in the debris thrown out from this cut.

According to Mr. French, the survey had located nine mounds of which there was no record known (index numbers[2, 8, 12, 15, 16, 17, 23, 24, 29]) (Table I). Of these new mounds, four appeared to have as one of their components Neolithic age remains, as confirmed by Mr. French (index numbers [12, 17, 23, 29]). A total of nine sites, both known and unknown previously, contained materials identified to be of Neolithic age (index numbers [5, 9, 12, 14, 17, 21, 23, 26, 29]). This appeared to be nearly one third of all the mounds visited. On one mound, Küchük Hüyük (Ortakaraviran North), truncated by wave erosion at a higher level of Suğla Gölü, we collected some painted pottery and flints. The painted pottery, confirmed by Mr. French, appeared to look like the painted wares from Çatal Hüyük and Hacilar Hüyük.

Small sample collections were made from the following hüyük and tepe sites, as numbered from the index of sites (Table

1),–Nos.2, 3, 4, 5, 7, 9, 12, 13, 14, 16, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30. These small collections were deposited with the representative of the expedition at Karaman at the close of the expedition's work.

Görüklük Tepe

A collection of aceramic materials, principally obsidian, was made on Görüklük Tepe. This is a prominent hill situated half a kilometer to the east of the village of Suberde. This hill is a kilometer long (NW-SE direction) rock outcrop of limestone with a partial covering of soil. On the top of the hill in a hollow between two limestone outcrops was found a deep pit, which had been dug by the inhabitans of Suberde. They were ostensibly seeking treasure, and indeed produced some eartheenware jars of recent make, as well as some corroded copper ware reportedly found in the locale. They had dug through what appears to have been an old cemetery area, making a pit 3.15 meters deep, by 2.5 meters square. Around the sides of the pit, in dirt that was thrown out, was found a saddle quern of volcanic rock, some human bones, some potsherds of recent origin, and a number of obsidian artifacts. The east wall of the pit was dressed down in our investigation, and the stratigraphy was exposed for the record.

Six distinctive soil horizons were noted in this section (Fig. 3), as well as two zones of what appeared to be plaster made of limestone. These two features, found near the upper part of the section, seem to have been the plaster floors of former houses. They were found evidenced on the four sides of the pit. Below the first plaster floor from the bottom were noted two bands of green loam, which graded down to a dark brown loam. Below the green loam bandswas a layer of dark organic mixed soil, containing numerous fragments of limestone and charcoal. The basal layer, below the latter horizon, consisted of a brown loam containing charcoal and ash lenses, and numerous occupational debris. The latter included lumps of fire-hardened clay, many mammal bone fragments including those of large mammals, and numerous obsidian debitage and materials. It appeared evident that the occupational debris continued still further downward, below the present depth of this pit. However, from the conformation of the topography, it was felt that the deposit could not go much deeper.

We had found a number of obsidian artifacts in the course of preparing the face of the cut for the cross-section. They were especially abundant, however, near the base, in the heavy occupational layer of brown loam. The horn core of what may have been an animal of the deer family was found in the basal layer.

In our preliminary analysis of the stratigraphy, it appeared that the deposits represent an alternation of a refuse midden, followed by houses, and finally by a relatively modern cemetery ground. The deepest part of the cut seems to indicate a refuse midden stratigraphy. The two plaster floors, with rubble prepared bases, must have belonged to house constructions. The top fill consisted of a normal soil, in which some burials had been interred. Several bones were observed jutting out of the side of the pit toward the top, in this horizon. The inhabitants of Suberde use the western part of the hill today for a cemetery.

It appeared evident that the houses could not be built in the hollow between the two outrops until it had been filled in with the refuse midden materials.

Since no ceramics were found in the cut face and in the probes at the basal layer, we presuma that the occupational horizons including the plaster floors represent an aceramic sequence. This might also be tentatively called a "Proto-Neolithic" horizon. It is possible that the

plaster floors and the midden deposit underneath represent one occupation of relatively short duration, not necessarily longer than a hundred years.

Around the mouth of the pit were collected numerous obsidian flakes among which was a backed sub-rectangular blade. Also of interest was a baked clay ball with a hole perforated through it. Not collected, but noted, was the major part of a double faced saddle quern made of volcanic rock, a stone which must have been transported to the site from the eastern side of the valley. That is the nearest source for rocks of volcanic origin. The quern fragment, called in Turkish "Tuz Tası," measured about 50 centimeters long by 25 centimeters wide.

From a first impression of the obsidian artifacts, and the associated plaster floors at the higher level, it seems reasonable to assume that the Görüklük Tepe occupation is an aceramic one, or „Proto-Neolithic" horizon. It may be related to Mr. J. Mellaart's Çatal Hüyük aceramic horizons, which predate the painted ceramics found there. It is of interest to note that identical painted wares have been found at the base of Küchük Hüyük (Mellaart's North Hüyük) at Ortakaraviran. This mound is 11.5 kilometers to the east of Görüklük Tepe, across Suğla Gölü.

During the time of occupation at Görüklük Tepe, it appears evident that this hill was separated from the mainland body by a swale, which was probably marshy. The rock shelter, Lelek Taşa, at the southeast end of the hill, was on a knob which was probably cut off from the hill by water. Since Görüklük Tepe affords a commanding view of the surrounding terrain over both lake and plain, it was probably favored by prehistoric hunters. Their proficiency in the hunt is manifested by the numerous cracked mammal bones, among which is the deer antler base mentioned. But the quern and the house lfoors point to a more stable and sedentary economy. This presents a problem which can only be elucidated by a thorough investigation of this site. At least one month of excavation is estimated to be needed at Görüklük Tepe on this problem. The association with the now dwindling Suğla Gölü presents an aspect which may be nicely tied to the history of the human occupation. Küchük Hüyük , as Görüklük Tepe, now several kilometers from the lake, presents a parallel situation, although later in prehistoric time.

The Artifacts from Görüklük Tepe

A total of 243 specimens, almost exclusively obsidian, were found at this site. af this number, 221 were found in the spoils of the dirt throun out from the pit by the local people of Suberde, as well as from the immediate area. Sharp-eyed little boys gave me handfulls of obsidian pieces for which they had scoured The hillside. Twenty one pieces were found *in situ* at the base of the pit. Eighteen or about 12.2 % of the surface collected specimens were non - obsidian, that is, of chert or flint. Only one specimen of the 21 pieces found in the basal part of the pit was of chert.

Of the surface finds, from the little number of unretouched debitage of chipped stone (24 specimens), one gathers the impression that every scrap of material was ultimately used. All obsidian, and presumably the chert and flint as well, had to be brought in from outside, since no known obsidian or other materials are in this area. Predominant among the surface finds are use-retouched flakes and blades, with 83 specimens of obsidian, and 6 of chert. Some of these may be considered as raclettes, or little scrapers. Twenty five obsidian fragments are lumpy or blocky and multifacetted in shape, as though they had been failures of some

kind, or reject pieces. Next in order of frequency are 24 gravers, small flakes with carefully nipped one or more projecting points. These suggest use as scratching or engraving implements. Only one larger specimen of obsidian could be classified as a traditional burin. It is of a roughly polyhedral type. Next in order of frequency to the gravers are 18 notched mictoliths, of which 2 are of chert. These bear a distinct notch on one side. These are of obsidian. At least 15 specimens, all of obsidian, bear one or more surfaces which were smoothed very heavily. One specimen has a polish which had been brought to a near mirror finish. All in this group are small fragments.

In the distinct minority are nose scrapers, perforators and borers, and long blades. There were no projectile points, knives, and truly long pieces found at Görüklük Tepe, as at Çatal Hüyük, for instance. Indeed, the whole collection might be typified as microlithic in character. One specimen only had what could be called pressure flaking retouch. Of significance is one specimen in the backed blade, sub-rectangular category. There were no blades recognized with sickle-blade sheen. Not in the chipped stone category is the single lump of clay, fire-burned, with the hole perforated through the center.

From the basal part of the pit came only a few specimens which are recognized as implements. These include a well-fashioned circular scraper of obsidian.

On the basis of the artifacts found in and around this tepe, I think that this site belongs to a Proto-Neolithic horizon. It may be related to an early level at Çatal Hüyük. On the basis of the present evidence, however, we cannot be certain of this until a larger collection has been made from the tepe. All of the specimens collec- have been deposited with the museum authorities. The choice specimens are illustrated in Figures 4,5 and 6, drawn to scale.

Monuments

Seven monuments of classical archaeological interest were visited and noted. These include the famous monuments of 1) Fasıllar and 2) Eflâtun and lesser conspicuous sites of 3) Çal Dagh or Çatal Tepe, 4) Ortakaraviran Köy, 5) Bağra, 6) Taşagıl, 7) Fakhılar, extending from the north to the south end of the basin.

The first two sites are described in the literature elsewhere and it is probable that the remainder have also been described. However, a brief mention may be made of them here. On Çatal Tepe, a hill 1288 meters above sea level, situated 7.5 kilometers northwest of Seydişehir, was found evidences of cut stone construction and numerous pot sherds. There were several shallow pits in among these stones, evidently dug by treasure seekers. At Ortakaraviran Köy and Bağra were noted respectively three and approximately eight tombs cut into shallow hill slopes. A fluted marble column was seen in Ortakaraviren. About 2 kilometers southeast of Taşağıl on the west side of the road between Taşağıl and Suberde, was found some Greek writing on the ceiling of a rock shelter above the road. In the village of Fakhılar, at the north end of Beyşehir Gölü, were found abundant evidences of classical antiquities. Cylindrical columns were seen in the village, as well as other large architectural remnants. A tablet with Greek writing served as the fount in the village, and near an open well was seen a block of stone with an animal carved in relief on it.

Caves and Rock Shelters

Special attention was paid to caves and rock shelters in the survey. It was hoped to find a cave meeting the prerequisites

for ancient human occupation. We were disappointed in that none of the cavəs or rock shelters examined, did we find evidence of palaeolithic occupation. The caves and rock shelters examined, are described as follows.

CAVES AND ROCK SHELTERS IN THE TAŞAĞIL-SUBERDE DISTRICT

Kürtün İni (Cave)

This is a prominently situated cave clearly visisble for several kilometers, on the west side of the road between Suberde and Taşağıl, about 3.3 km. southeast of Taşağıl. It lies in a hill called Dolmuz Tokadı. There are well worn trails to the cave, and the slope in front is rich in organic material. This is evidenced by the luxuriant growth of grass, a distinctive feature of occupied caves. It has been used as a goat or sheep corral, for the floor is covered with animal dung.

The cave is about 107 m. above the Suğla Gölü plain. There are springs in front of it, with a paricularly fine spring about 200 m. down the slope from the cave. The cave faces to the east. Its mouth is 7 meters wide by 6 meters high. The length of the cave is about 17.5 meters, with a fairly uniform ceiling height of about 6 meters, and a width rangign from 4 to 6.5 meters.

Two small tests were made inside the cave to determine the composition of the soil. A hole, 1.5 by 0.60 meters near the front of the cave, was dug to a depth of 1.75 meters, and then probed to 2.75 meters at which point bedrock was reached. A second, and shollower trench was dug to a depth of 50 cm. at a point toward the rear of the cave. From the surface to about 25 cm. depth in the first test was found a loose, dark organic stained soil. Below it were found sterile banded layers of sand which continued to bedrock. A deep pit containing derk soil had intruded into the sterile sand layer from near the surface. Found in the part of the pit encountered were some large sherds of possible recent origin, and a number of mammal bones, No flints or any other diagnostic remains of stone age man were found in this test. The second test toward the rear of the cave was dug to the surface of what appeared to be a plaster floor. The test was not continued beyond this depth.

An interesting set of fire animal drawings in black pigment were found in the interior of the cave, about 1.75 meters above the cave floor. These included a group of what appeared to be four horned animals, possibly ibex or goats and one bird The horned animals seemed to be about 5 cm. high and 6 cm. long. Some of the figures evidently had been washed by solution water, and others had been covered with dust and natural accumulation of the cave wall. There were no other indications of antiquity. It is felt that these were made by hunters in the not too far distant past. They seem to have been made in a rather impressionistic style, captivating the most salient characteristics of the animals portrayed.

Although this cave is admirably situated, it sems to have had no paleolithic occupation. Were paleolithic populations present in this area, they would have certainly taken advantage of such an excellent shelter.

CAVES AND ROCK SHELTERS IN THE SUBERDE - SUSUZ DISTRICT

Persek Burnu Caves

The Persek Burnu Caves I and II are about 100 meters apart, situated on a point of hill jutting into the Suğla Gölü plain about 2.8 kilometers south from Suberde village on the road to

Susuz. Both caves cannot be seen from the road. They are limestone caverns and are desctibed as follows.

Persek Burnu I

This is a cave with a narrow aperture facing to the northwest, about 15 meters above the plain. It contained recent human evidence, such as a roof tile, a plastic bottle, as well as masonry work and the bones of animals. The entrance is about 60 cm. in diameter, leading down a 60 degree shaft extending down about 5 meters to a rubble filled chamber, with several passages leading from it. ceiling is about 50 cm. high. The floor of the cave is covered with fallen rubble. There is a passage-way which led to a hole cemented with small flat chunks of limestone into a semi-circular opening. This hole descends straight down for about 4 meters, with what appear to be passageways leading from the depths of this ahaft.

Persek Burnu II

This is a farily large cave, whose mouth has been blocked partially by quarrying operations close to the road. The opening, which faces east, is about 3 meters above the Suğla Gölü plain. The cave opens into the main gallery, with an average width of about 5.5 meters, a height about 2.3 meters, and a length of about 24 meters. The axis of the main chamber is NW-SE. At the extreme end of the main chamber is a pool of water about 0.75 meters below the main chamber level. There is a gallery leading off to the left rear of the main chamber for about 12 meters. The floor of the cave is of damp clay. A small test 80 cm. by 70 cm. by 50 cm. deep was made in the floor, revealing nothing. Numerous stalagmites were noted in the cave.

Inönü Magara (Cave)

This is a limestone solution cave situated in a former cove of Suğla Gölü, about 3.0 kilometers southeast from Suberde village on the road toward Susuz. The cave faces northwest, and is about 32 meters above the level of the plain. The cave aperture measures about 4.7 meters wide by 6 meters high. The interior ceiling averages about 3.0 meters in height. The cave is about 32 meters long. There is a verdant talus slope in front, marked by the characteristic vegetation found on the growing fertilized soil of occupational cave sites.

A small test hole measuring 70 by 70 centimeters and 30 centimeters deep was dug near the front of the cave, but no archaeological stratigraphy was found. Sterile soil was reached at about 15 centimeters, and the base of the cut reached bedrock in the test. However, there were indications that this cave had been occupied in the prehistoric past, since several obsidian flakes and one red chert flake, which seems to have a facetted butt, were fond in front of the cave.

There is goat dung covering the floor of the cave, and it is presently being used as an animal corral.

Gölgeli Taş Mağarası

On the west side of the road about 2 kilometers south of Suberde was examined a cavern in the hill slope, not visible from the road. This cavern was entered by a narrow aperture which opened up into a gallery measuring about 15 meters by 4 meters, and about 3 meters high. Some potsherds were found on the floor, which was of damp clay. A second chamber opened to the north on a lower level. This second chamber was somewhat larger than the first, and contained a pool of water in it. There are many fallen blocks strewn throughout. A second opening was seen vaguely to the rear of this chamber. No artifacts of stone ageman were found in this cave, and it does not look like a habitable place.

ROCK SHELTERS

Lelek Taşa

This is a prominent and conspicuous rockshelter near Suberde on a former island of Suğla Gölü. It is a rock outcrop to the east of the village. The shelter, facing to the south, is formed at the contact between limestone and shale of Paleozoic age, with the limestone leached out along the contact. The floor of the shelter measures about 7 meters by 5 meters, with an overhang of about 4 meters. The shelter is 8 meters above the plain. The floor of the shelter is of bedrock, and no archaeological deposits were seen. No artifacts were found associated with this shelter.

Susuz Rock Shelter

This os a very conspicuous rock shelter on the northwest outskirts of the village of Susuz. It is a limestone shelter measuring about 8 meters long by 4 meters wide. The floor is of rock. The shelter is about 14 meters above the Suğla Gölü plain. No prehistoric artifacts were found on the barren floor. However, a platform base measuring approximately 1 meter by 1.5 meters cut into the rock was seen near the front of the shelter.

CAVES AND ROCK SHELTERS IN THE ARVANA DISTRICT

Arvana Caves

Four caves and one rock shelter were examined in the environs of this village. The four caves were situated about 2 kilometers to the southwest of the village, along the walls of a major valley which enters Suğla Gölü at Arvana. These were paired caves in the limestone on opposite sides of the ravine and on different levels. They are described as follows:

Dikişin Ini (Mağara)

This is a pair of small caves situated about 8 meters above the volley floor. They face northwest. The largest is about 2.5 meters wide and 3 meters high and about 10 meters long. It tapered to a narrow hole at the rear. No surface material was found on the outside slope of either cave.

Cafer Ini (Mağara)

This is a paired set of caves about 100 meters above the valley floor, just opposite Dikişin Ini caves. From the valley floor the entrances to this pair of caves gives the impression of one large opening, but the caves are actually small, irregular slits-near vertical joints which have been widened by solution. Both caves are about 3 meters high; the smaller one is 2-3 meters wide and only 5 meteres deep. The larger cave is about 2 meters wide, perhaps 15 meters deep, and very irregular in plan and profile. Both have bedrock floors.

Kırklar Mağarası or Fasi Boğazı Üstü

A cave and rock shelter were examined near the village of Arvana which lay about 4.5 kilometers to the southeast. This feature is a solution cavern west of a hill called Katır Tepe, and overlooks a peninsula (Bölme Burun) jutting into Suğla Gölü. The cave and rock shelter are on the trail from Susuz to Arvana on the edge of the Suğla Gölü plain. The cave is about 100 meters above the plain. It faces roughly east. The cave opens up to a rock shelter, with a rock shelter adjoining it and on a slightly higher level. The cave is about 8 meters deep. The cave floor was of a loose reddish brown soil, with many evidences of old fires. The cave floor and the slope outside the cave and shelter were littered with numerous human bones, some of which still had cartilage adhering to them. Seven mandibles were counted. It appeared as though someone had been digging around among the bones and tossing them out of the cave. A large serpent crawling among the human bones

completed the gruesome picture. The inhabitants of Arvana did not know who was buried there.

CAVES AND ROCK SHELTERS IN THE BALIKLIAVI GORGE

The 32 kilometer channel of the outlet from Suğla Gölü from the head of the gorge at Balıklıavı to the mouth at Apa was examined for cave and shelter sites. This stream cuts through a Mesozoic limestone region, carving out cliffs reaching to precipitous heights. Presently, the outlet of Beyşehir Gölü and subsidary streams is canalized into the main feeder leading through the gorge. The relief in the gorge reaches to about 400 to 500 meters. About 12 kilometers down stream from Balıklıavı the gorge is joined by the Çarşambasuyu, a major stream draining the Bozkir region.

In a rapid survey by automobile, a count was made of 27 rock shelters and 23 caves, all of solution origin. We stopped to examine about 3 caves and 6 rock shelters. No large caves were seen which were good habitation places. The better rockshelters which were observed already contained either human habitations, or were utilized as goat corrals. The quick checks and visual observations from the road indicated that preactically all of the shelters and caves were either too low, that is, they were subject to washing by spring floods, or had rock floors with only a thin veneer of soil deposit, too thin to contain ancient occupational debris. In periods of high water, as in the spring, this gorge would have been impassable to human traffic. At such a time, passage over the higher land levels would have been favored. But in periods of low water, passage through the gorge would have been easy enough, with plenty of natural shelters ready for overnight stops or during times of bad weather.

CAVES AND SHELTERS OF FAKIHLAR

Three caves and two shelteres were examined in the limestone hill overlooking the east side of the village of Fakihlar. The hill is locally called Fakiflar Kayası. The caves and shelters, wich were considered to be too poor for further archaeological investigation, all faced to the west. They are described as follows:

Fakıhlar Mağarası (cave)

This is the large one of a pair of caves about 10 meters above the village (Fig.11) It had and earthen floor, with a grassy talus slope in fond of it. There are two entrances, the main portal is about 4 meters high, and a smaller entrance, a few meters to the south, is only 1.5 meters high. The cave is 16.6 meters long from the main portal to the rear wall, and the main chamber is about 10 meters wide. There are two large openings through the cave ceiling which admit sunlight (see figure). In general the main entry and the inner chamber are 4.5 tot meters high, although presumably only 3.5 to 4 meters high before the relatively recent removal of the cave earth. From the trim line on the cave wall, and a remmant shelf of travertine, it appeared that over one meter on the rich cave soil had been evacuated. Unforunately, the remaining cave earth had been thorroughly pitted and disturbed fairly recently, presumably by treasure seakers. At a depth of about 0.75 meters in a test was found a fragment of a rubber shoe. Several obsidian blades were found on the slope in front of the cave, and some sherds were found both on the surface and in the test, but none were recognized as Neolithic in origin, nor distinctive. There is a carved rock basin about 0.5 meters in diameter in front of the cave.

Another cave was found near the summit of the hill and entered from

the west through a fairly large aperture. The interior measured about 10 meters in diameter and is roughly circular. There was a second, narrower opening to the east side. The cave opening faces to the northwest. The floor was strewn with stones and recent goat dung. Evidences of afire was found in the center of the cave. Some large black potsherds were found on the cave floor . On the hillslope above the cave was found a basin, measuring about 1.75 meters in diameter, by 0.25 centimeters deep, cut into the bedrock.

Two closely adjacent shelters were found on about the same level as, and just south of the lower two caves. These two rock shelters measured about 5 meters long, with about 3 meters overhang. Sterile soil was found at about 0.75 meters depth in both shelters. No material other than some apparently recent sherds were found in and around these two features.

Surface Sites

The survey covered hill slopes, erosion cuts, ridges, terraces, and old beach ridges in the hope of finding an open palaeolithic site. None were found in the various places that the survey examined. Potsherds were found almost everywhere. We did pick up some flint pieces, but these were either very questionable as arttifacts, or were almost certainly threshing sledge flints. The areas from which the material was collected is not located on the map. Among the areas covered was Çaltı terrace, north of Beyşehir; a hill called Mazan near Ortakaravian; the limestone bluffs above the road west of Beyşehir; the bluffs overlooking the lake west of Beyşehir; the beach ridges north of Beyşehir; and from a quartzite outcrop hüyük northeast of Seydişehir near Karabulak hüyük. The materials picked up, all rather nondescript except for a large mammal bone, fossilized, from the limestone bluffs above the road west of Beyşehir , were deposited with the other finds.

Conclusion

Nearly a month and a half was spent in an archaeological reconnaissance by the Clumbia University expedition in the Beyşehir-Suğla depression area. It was surprising that no palaeolithic sites were found, in view of the many Neolithic sites located in this area. Indeed, this part of Turkey seems to have a near monopoly on the latter type sites. One site, Görüklük Tepe, appears to be a very promising site with Proto-Neolithic affinities. It would be instructive to explore this site further, in view of its proximity to Çatal Hüyük in the Konya Plain, and possible cultural connections with a level of the latter site. It is possible that palaeolithic material is present somewhere in the area covered, but if and when found, it certainly could not be prolific in amount.

The writer wishes to thank the Directorate General of Antiquities and Museums for its various kindnesses and cooperation, and also the representative of the expedition, Mr. Abdurrahman Erdal for his patience and efficiency.

TABLE I

INDEX OF SITES

	I) *Hüyüks and Tepes*	Latitude (N)	Longitudes (E)
	1. Yeniköy (tümülüs)	37 59.2′	31 23′
x	2. Karakaya Çiftliği	37 59.1′	31 24′
	3. Kıyakdede	37 57.7′	31 29.8′
x	4. Tulça	37 54′	31 30.4′
	5. Unnamed norh Beysehir	37 51.1′	31 36.8′
	6. Eflâtun hüyük	37 49.3′	31 40.5′
	7. Eflâtun Tepe	37 49.3′	31 40.5
x	8. Kistifan	37 46.5′	31 39′
N	9. Unnamed north Beyşehir	37 45.9′	31 41′
	10. Ören Tepe (Tasil Tepe)	37 45.1′	31 41.2′
	11. Hristian (Gâvurlar or Beyşehir)	37 40.8′	31 43.9′
Nx	12. Çem Çem	37 41.1′	31 44.9′
	13. Burun	37 39′	31 39.5′
N?	14. Alan	37 37.7′	31 37.5′
x	15. Saray	37 35.5′	31 36′
x	16. Hanvakfi Eski (1)	37 31.6′	31 52.7′
x	17. Hanvakfi Eski (2)	37 31.1′	31 52.5′
	18. Selveran (Akcalar)	37 30.5′	31 49.2′
	19. Karabulak (natural)	37 27.6′	31 52.1′
	20. Taşigli (Acalar Cif.)	37 23.2′	31 53.6′
N	21. Hüyük Bagları (üzümlü or Kanal)	37 24.4′	31 57′
	22. Gök	37 22.7′	31 56.2′
Nx	23. Görüklük Tepe	37 20.8′	31 56.3′
x	24. Eski Köy (Suberde)	37 20.7′	31 57′
	25. Bagra (Gemli or Büyük)	37 22.9	31 58.7′
	26. Küçük (Ortakaraviran North)	37 21.6′	32 05′
	27. Büyük (Ortakaraviran South)	37 21.2′	32 05.5′
	28. Yağlı	37 17.6′	32 05.7′
Nx	29. Balıklıavı	37 18.8′	32 09.7′
	30. Kayacık	37 14.8′	32 05.7′

key: x – not previously known
N – Neolithic

	II) *Caves and Rockshelters*		
	1. Fakhılar Mağarası caves (3) rockshelters (2)	38 02.7′	31 18.7′
	2. Kürtün Ini cave (1)	37 21.5′	31 53.3′
	3. Persek Burnu I	37 18.7′	31 56.3′
	4. Persek Burnu II	37 18.7′	31 56.3′
	5. İnönü Megara	37 18.5′	31 56.6′
	6. Dikişin Ini (caves 2)	37 14′	31 59.3′
	7. Cafer Ini (caves 2)	37 14′	31 59.3′
	8. Kırklar Mağarası (1)	37 14′	31 59.3′
	9. Arvana Rockshelter (1)	37 14′	31 59.3′
	10. Gölgeli Tas Mağarası		

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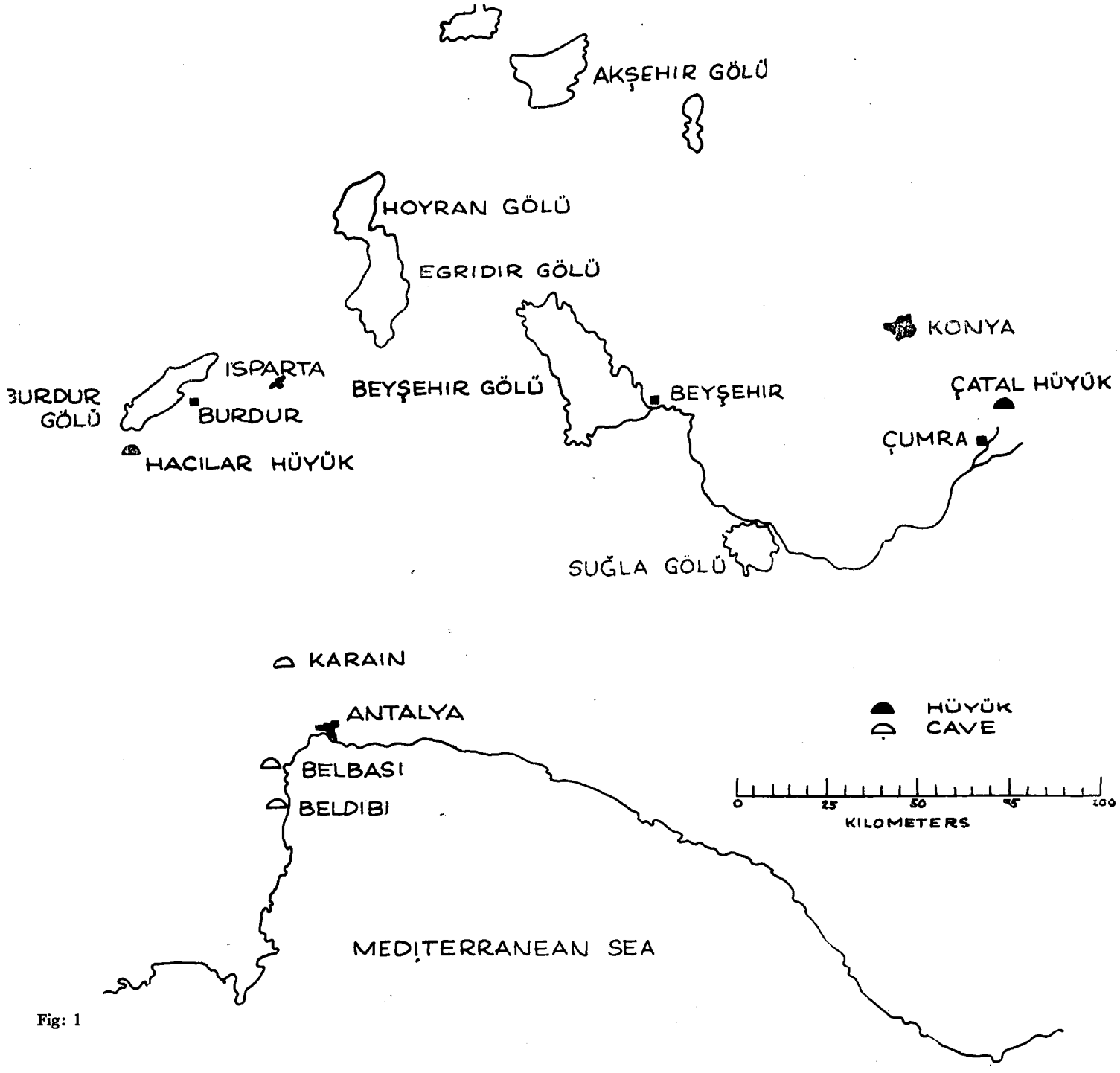
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HOYRAN GÖLÜ
EGRIDIR GÖLÜ
KONYA
ISPARTA
BURDUR GÖLÜ
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BEYŞEHIR
ÇATAL HÜYÜK
BURDUR
ÇUMRA
HACILAR HÜYÜK
SUĞLA GÖLÜ
KARAIN
ANTALYA
HÜYÜK
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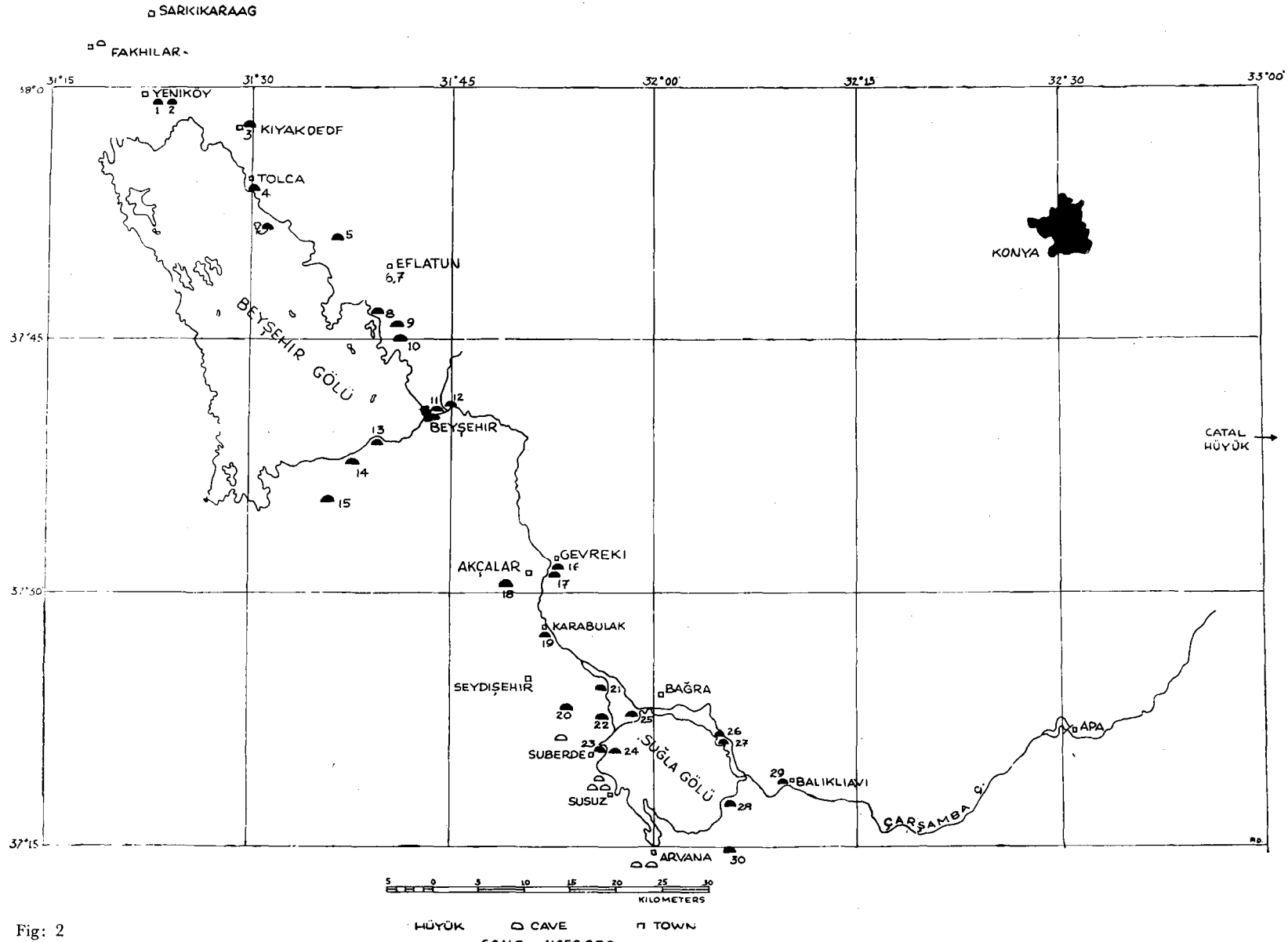
KILOMETERS
MEDITERRANEAN SEA

Fig: 1

P.D.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YENIKÖY
KIYAKDEDF
TOLCA
EFLATUN
6,7
BEYŞEHIR GÖLÜ
BEYŞEHIR
KONYA
CATAL HÜYÜK
AKÇALAR
GEVREKI
KARABULAK
SEYDIŞEHIR
BAĞRA
SUBERDE
SUĞLA GÖLÜ
SUSUZ
BALIKLIAVI
APA
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ARVANA
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HÜYÜK
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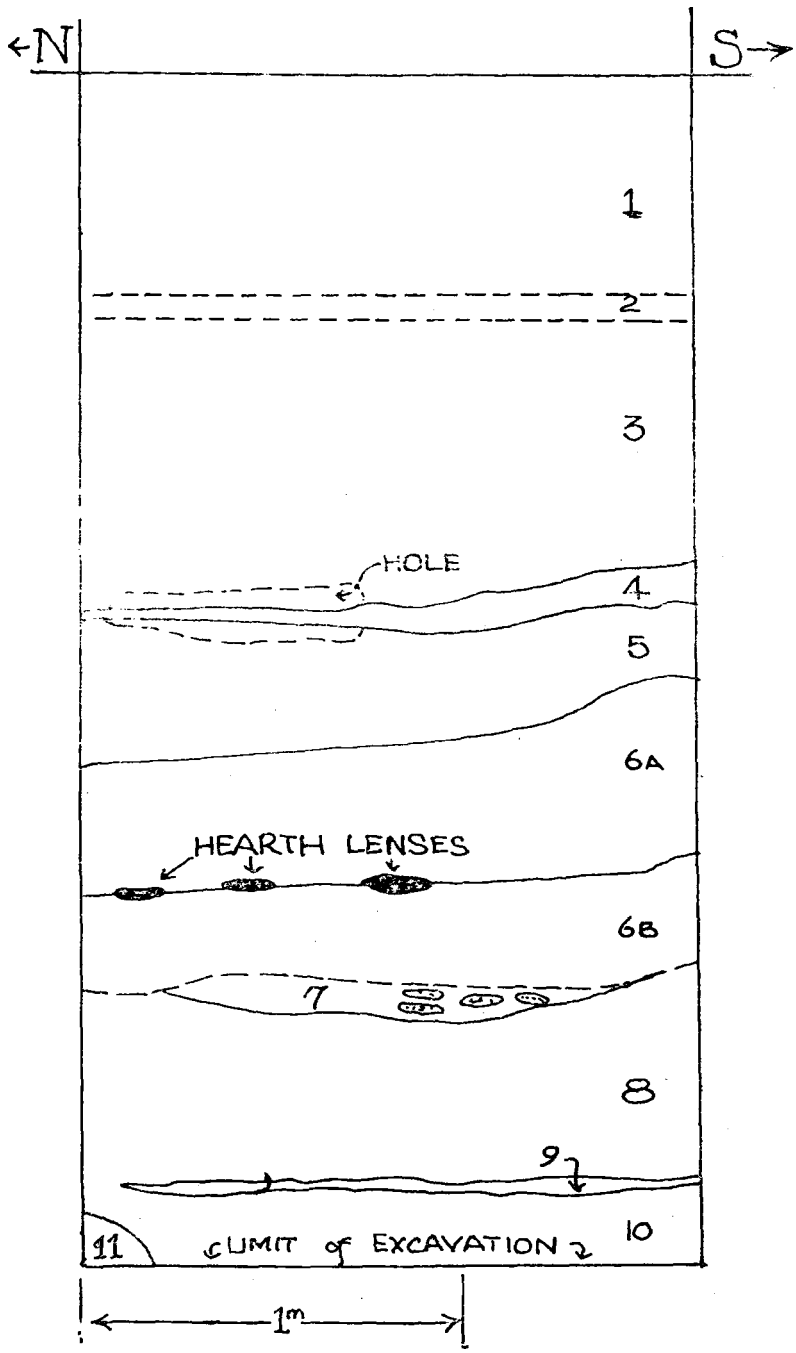
Fig: 2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2
3
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6B
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8
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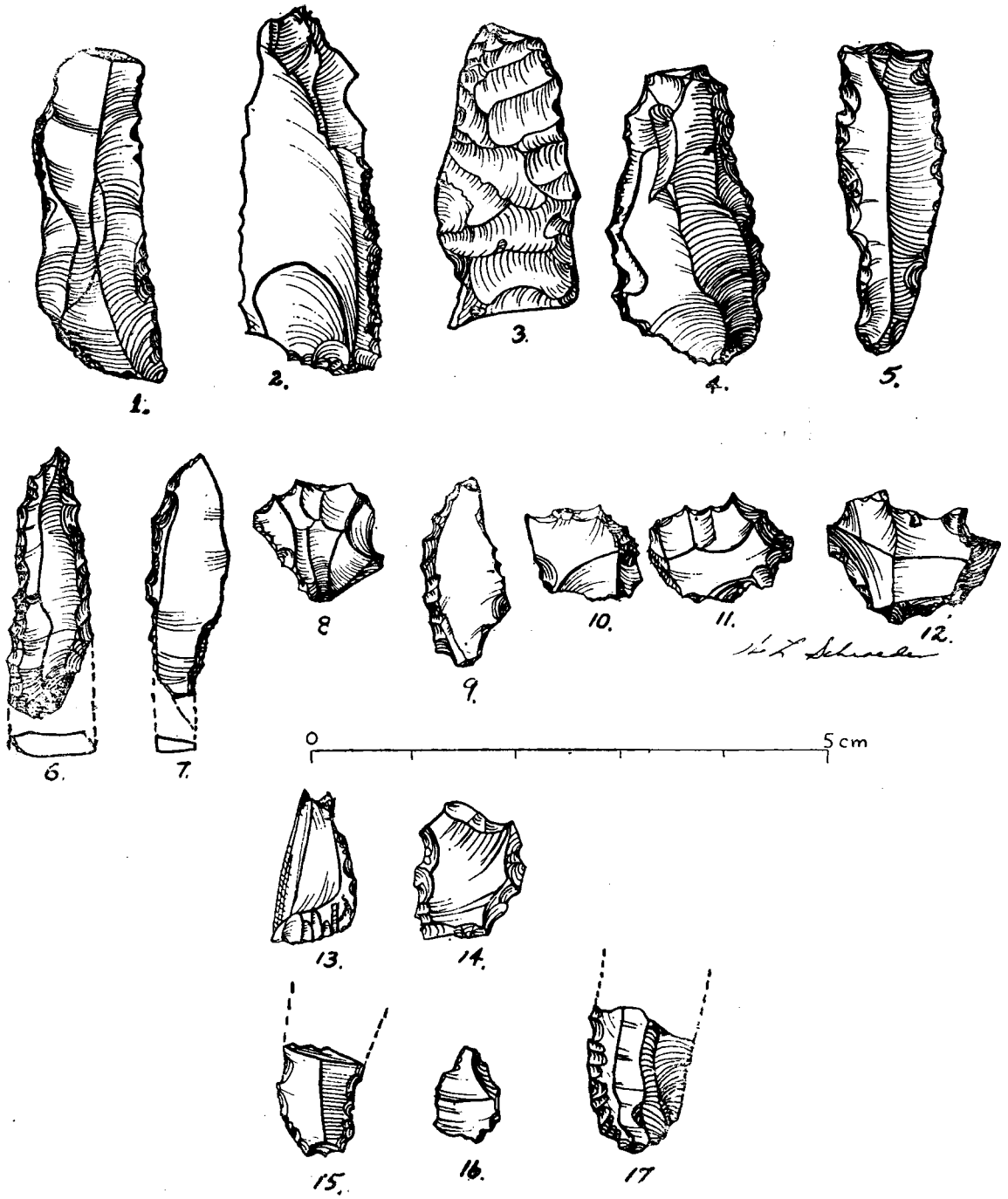
LIMIT of EXCAVATION 2
1m

Fig: 3



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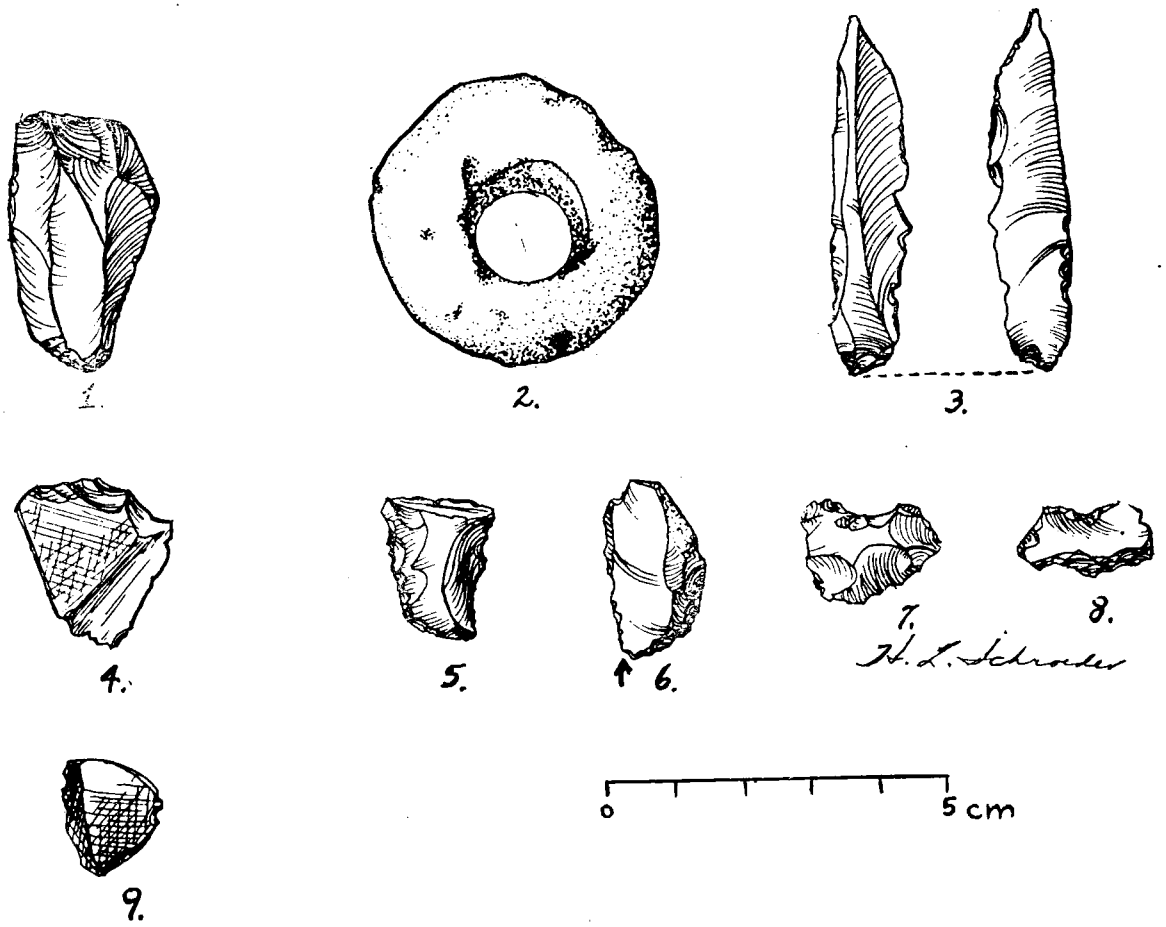

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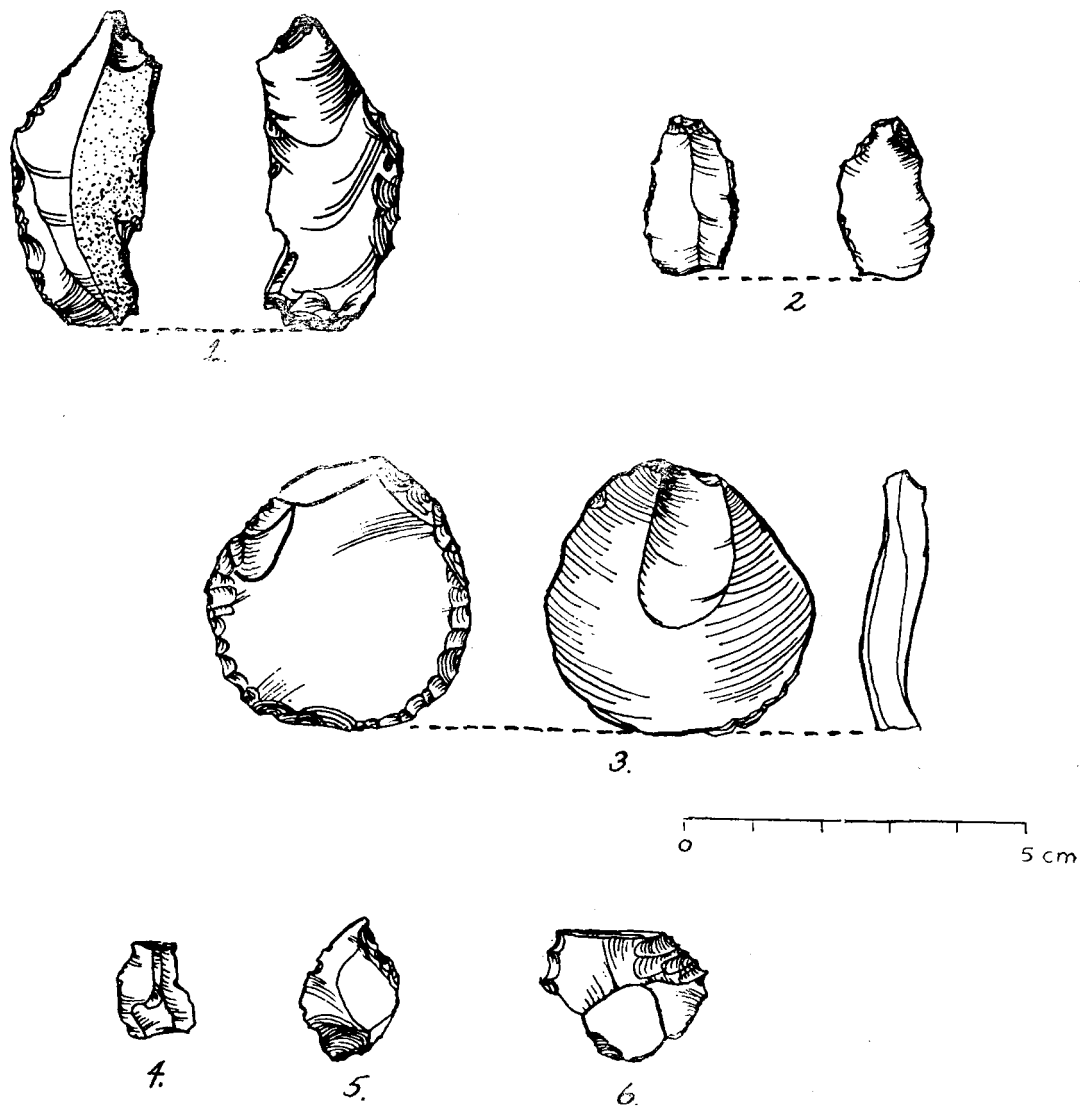

Fig: 6