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EXPLORATIONS IN CENTRAL ANATOLIA
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EXPLORATIONS IN CENTRAL ANATOLIA
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BY
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PREFACE

Research among the remains of ancient Hittite civilization in Asia Minor was begun by the Oriental Institute in the summer of 1926 with a preliminary campaign of exploration under H. H. von der Osten. His efforts were devoted especially to the region within the great bend of the Halys River, called by the Turks the Küzül Irmak, a region which forms the heart of the ancient Hittite territory. The preliminary report on this first campaign was issued in 1927 under the title Explorations in Hittite Asia Minor (Oriental Institute Communications, No. 2).

The present volume is a fuller account of the preliminary survey in the basin of the Küzül Irmak. In the development of its researches in Asia Minor, the program of the Oriental Institute contemplates three successive stages: first, rapid preliminary explorations such as are reported in the present volume; second, a fuller and more detailed survey of the sites and monuments disclosed by the preliminary explorations; third, the excavation of such sites as the more detailed survey may disclose to be of special promise and importance. All three of these stages are now in full operation. A preliminary report carrying the work of all three stages to the end of the summer campaign of 1928 will appear as Oriental Institute Communications, No. 6, in the spring of 1929.

JAMES HENRY BREASTED

The Oriental Institute
University of Chicago
December 27, 1928
AUTHOR'S NOTE

This publication seeks primarily to present a scientific record of source materials. The ancient monuments are fast disappearing. Whatever information is obtained in field work, whether in such preliminary explorations as those here recounted or in later, more intensive surveys, should be made available to all scholars.

Though the manuscript of this detailed report was prepared in 1926, the author's repeated absences in Anatolia have until now interfered with its actual appearance in print. The Index, thanks to this interval, includes various cross-references both to ancient place-names and to new names or spellings since substituted for designations current at the time these explorations took place. Upon later visits to many sites, the author has been amazed at the variations in usage.

The Turkish government has now in preparation an official list of geographic names transliterated into Latin characters. From this list such spellings as Ankara and Istanbul have been noted in the Index. But, since the list as a whole is not yet available, the author here, as in his preliminary report (Oriental Institute Communications, No. 2), follows the principles of the American Library Association. That is, spellings of Turkish place-names and of other words transliterated from Arabic script represent as simply as possible an approximation to the spoken sounds. Consonants are rendered by their simplest English equivalent, while vowels are used with their Italian or German values.

Since usage of the individuals concerned governs transliteration of personal names, less consistency is attainable in this latter group. Its problems affect also geographic names which contain personal names as elements. It should be mentioned especially that dj is favored by many writers to represent the English j-sound, and that this combination has been utilized even in geographic names in certain cases where jj (avoided throughout) would perhaps be more appropriate.
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I

INTRODUCTION

The purpose of the expedition sent to Asia Minor by the Oriental Institute of the University of Chicago in 1926 was to survey the central part of Anatolia, especially the territory within the great bend of the Kızıl İrmak, the ancient Halys River, for archaeological remains dating from the great Hittite Empire. Apart from the ruins of Boghaz Kōi and of Hūyūk near Aladağ, no site with “Hittite” remains was yet known in this region. But since for at least five hundred years the center of Hittite power was hereabouts, it seemed very improbable that only two cities should have existed. Various scholars had traveled in this region, but most of them were especially interested in classical or post-classical remains. Furthermore, their routes had been almost identical, so that vast territories were left archaeologically almost or wholly unknown. The few excavations on “Hittite” sites in Asia Minor, North Syria, and northern Mesopotamia had not shed satisfactory light on the Hittite question from the point of view of archaeology.

In contrast, important discoveries had resulted from historical and philological investigations. These showed that in the second millennium B.C. a great Hittite Empire in Asia Minor had controlled during its widest expansion a large part of North Syria and northern Mesopotamia and had been in close relations with the Egyptian pharaohs as well as with the kings of “Abbijava” on the Greek mainland. This empire had been destroyed about 1200 B.C. After the wreck of the Hittite Empire, there had appeared in the southeastern part of Asia Minor and in North Syria a number of “Hittite” city states which were

1 Cf. Boghaskoi, die Bauwerke, von O. Puchstein unter Mitwirkung von H. Kohl und D. Krencker (Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft, No. 19. Leipzig, 1912). A second volume, dealing with the pottery and small objects collected during the excavations there, is in preparation. On Hūyūk, see Th. Macridy Bey, “La porte des sphinx à Euyuk,” in Mitteilungen der Vorderasiatisch-ägyptischen Gesellschaft, XIII (1908), 177–205. The final publication of his excavations, which will furnish valuable material for further studies, will soon appear, as Macridy Bey told me in the summer of 1926 at Stambul. Cf. also E. Chantre, Mission en Cappadoce (Paris, 1898). In 1925 Dr. Götte discovered “Hittite” terra cotta on a hūyūk near Yozgad, the exact position of which I do not know.

2 Exceptions include the publications of Perrot and Guillaume, Exploration archéologique de la Galatie et de la Bithynie (Paris, 1872); of J. G. C. Anderson and F. and E. Cumont in Studia Pontica. 2 vols. (Bruxelles, 1903–6); and of E. Huntington in Zeitschrift für Ethnologie, XXXIII (1901), 204–9.

3 Forrer, in Mitteilungen der Deutschen Orient-Gesellschaft, No. 68 (1924).
gradually absorbed by the Phrygians and Cimmerians in Asia Minor and by the Assyrians in North Syria.

Archaeological material was lacking for the Hittites of the Empire in Anatolia especially; and to survey Asia Minor for places where such material could be secured by excavation was the task of this expedition. A tentative route was chosen by taking into consideration the regions where natural conditions would suggest the existence of ancient settlements. I was fortunate enough to be able to consult on this matter Dr. E. Forrer, of the University of Berlin, whose studies on the historical geography of Asia Minor during the Hittite Empire are fundamental. This route had, of course, to be changed several times in its details, according to the presence or non-presence of roads or the information of natives concerning ancient sites.

Of cartographic material, the Kiepert map\(^1\) is still the most convenient, even though it is not absolutely reliable in detail. The British General Staff map 1:250,000 for Anatolia is not very useful; the topographical map of Philippson\(^2\) might also be improved in some respects. A good general survey is given by the German map 1:800,000\(^3\) and the Turkish map 1:1,000,000 based on it. A British map 1:1,000,000 is based on the British General Staff map. The Turkish General Staff is now preparing a new Turkish map on a scale of 1:200,000. I have had the privilege of examining a few sections, and find it very reliable.

The ruins of pre-Greek settlements in Anatolia are of two main types. First should be mentioned walled cities such as Boghaz Koi and the city on the Kerkenes Dagh. Being normally situated on mountains and of relatively large dimensions, they do not form tells, or, as they are called in Asia Minor, hiiyiiks. Their surrounding walls are partly preserved, and remains of buildings may be recognized by small depressions or elevations or even by stone foundations. More frequent are hiiyiiks or mounds, which constitute the second type. As in Mesopotamia the word tell proclaims an ancient ruin, so does hiiyiik in Asia Minor. Anatolian towns and villages are numerous in whose names this designation appears or which have only the word itself as a name.\(^4\) Place names containing kara ("black"), boz ("gray"), kul ("ashes"), yazili tash or yazili kaya ("inscribed stone"), hissar or kaleh ("castle"), tepe ("artificial hillock"), or oren ("ruin") point usually to ancient remains near by.

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\(^2\) Philippson, Topographische Karte von Kleinasien, 1:300,000 (Gotha, 1910).

\(^3\) Übersichtskarte von Vorderasien, herausgegeben von der Kgl. Preuss. Landesaufnahme.

\(^4\) Cf. compounds such as Kara Hiiyiik and Boz Hiiyiik. Hiiyiik alone is the name of one village near Aladja and of another near Chakal.
INTRODUCTION

Very seldom does the archaeologist find in Asia Minor other means of identifying the approximate period of an ancient settlement on a hiiyik than the fragments of pottery covering its surface. Classical or post-classical settlements are of course exceptions, as such ruins are more likely to provide architectural fragments—architraves or columns, and even inscriptions—either on the spot itself or in nearby villages where the stones have been reused as foundations for houses or in the cemeteries. A hiiyik itself is usually easily recognized by its regular form and by the gray color of its soil due to the ashes of the ancient settlement. On the summit of such a mound small elevations with depressions in their tops often result from decomposition of the kerpich or sun-dried bricks which were, as today, the commonest building material.1 Stone was generally used only in foundations or for very important buildings. The kernel of such a hiiyik may have been a small natural elevation or an artificially raised one. Around this center may have been grouped the dwellings of the inhabitants. On the elevation itself may have been a small stronghold or place of worship. By destruction and decomposition of the building material, a hiiyik grew gradually in proportion to its population. On the surface of such a mound our expedition would find not seldom pottery fragments from Neolithic down to Byzantine or even Seljuk times, proving settlement during all these periods, sometimes of course with interruptions. This same genesis applies also for the larger settlements, where the “kernel” is usually marked by the acropolis. Situation of dwellings on natural terraces prevented, of course, the forming of a hiiyik.2 As already stated, remains of foundations or even fragments of wrought stones or sculptures are very seldom found on such pre-Greek mounds.

So up to now mounds found and investigated during this expedition have been attributed to the “Hittite” period on the evidence of pottery fragments collected on their surfaces, if a reasonable percentage of “Hittite” specimens could be collected on them in comparison with fragments of other periods. Probably many sites on which only a little or no “Hittite” pottery at all has been found had also “Hittite” strata which are, on account of their age, very deeply imbedded.3

The weak point of this method of classification is the attribution of pottery to the “Hittite” civilization. In that respect systematic stratigraphic studies for Asia Minor are completely lacking. For “Hittite” settlements in North Syria

1 Cf. the small hiiyik near Kandilija (pp. 93–95), where we found evidences that already in very remote periods the dwellings were built of kerpich.

2 Cf. Fig. 138.

3 Cf. the hiiyik near Kandilija (pp. 93–95). There, even though it was only a very small settlement, the earliest “Hittite” stratum, as found by our expedition, was seven meters under the present surface of the hiiyik.
EXPLORATIONS IN CENTRAL ANATOLIA

only one such study has been made, the results of which cannot be applied to Asia Minor.¹ For Asia Minor three types of pottery are generally accepted as “Hittite,” since pieces and fragments of such have been found at Boghaz Köi, Hûyüük near Aladja, and the well-known Kûl Tepe northeast of Kâsîariyeh.²

The first type shows a red, highly polished slip, in some cases decorated with black linear ornaments. This pottery has been found at Hûyüük near Aladja, Boghaz Köi, and Kûl Tepe, and has until now been considered typically “Hittite.”

The second type of pottery, found in abundance at Kûl Tepe and also at Boghaz Köi, shows spouts in the form of animals’ heads, or decorated with little plastic figures of human beings and animals. Sometimes the vessels themselves are in the form of animals.

Painted ware constitutes the third type. Specimens of this kind have been found especially at Kûl Tepe and Boghaz Köi. It appears in many guises, sometimes in very carefully worked clay, sometimes very crude, and formed either with or without the wheel. The ground retains usually the natural color of the clay (various shades of buff). The designs, mostly geometrical, are applied in black, dark and light brown, and red, rarely also in black and white on a red background. As already stated, more precise classification of this type is impossible on account of lack of data. As it was seemingly in use over a long period, much of this kind of pottery may have been made a long time after the rule of the Hittites in Asia Minor was broken. Some of it may even be dated nearly as late as the classical period. Collection of such material from different sites by scientifically conducted and executed excavations is of the utmost importance for further study of “Hittite” archaeology.

During the short stratigraphic investigation made by this expedition at the small hûyüük near Kandlija it became evident that the pottery with the red polished slip is earlier than the painted ware, but that it was still in use for a certain time together with the latter.³ Furthermore, it could be recognized that in the region of the Karajerli Su and the eastern part of the Delidje-Konak Su there was used, at the same time as the red-slipped pottery, a similar kind with a highly polished black slip. As far as I know, this has until now been the extent of our knowledge of “Hittite” pottery in Asia Minor.⁴

² Cf. E. Chantre, Mission en Cappadoce. There is another, practically unknown site, likewise called Kûl Tepe, west of Kâsîariyeh.
³ Cf. p. 95.
⁴ Cf. E. Chantre, op. cit.; Ed. Meyer, Reich und Kultur der Chettier (Berlin, 1914); Records of the Past, VII (1908), 175 and 310, and VIII (1909), 93–96.
INTRODUCTION

The tendency of the new Turkish government and its officials to promote scientific research work and studies in Asia Minor helped very much toward the results of our investigations. The completion in the near future of railroad projects in Anatolia will facilitate further studies.¹ I am greatly indebted to His Excellency the Minister of the Interior, Djemil Bey, and to His Excellency the Minister of Public Instruction, Nedjati Bey, for their kind assistance in forwarding the work of the expedition; also to Halil Bey, the director-general of the museum in Stambul. I wish also to express here my sincerest thanks to Professor L. Moore and Professor M. Schede at Stambul, and to Mr. Margolis and Mr. Hirschbold at Samsun, for their kind assistance and advice in matters concerning technical phases of the journey.

The staff of the expedition was composed of Mrs. von der Osten, who was in charge of the technical work, and myself. For the first two months also an interpreter was taken with us (Shefket Hilmi Bey until we reached Samsun; then, from Samsun to Angora, Nedjmeddin Kadry Bey). During the last month we enjoyed for two weeks the company of Dr. E. Forrer and Professor Weigand. During the whole trip we had as our faithful chauffeur a young Turk, Hussein.

¹ The Angora-Kaisariyeh line is nearly completed, as is also the Samsun-Sivas line as far as Amasia. A connection with the southern line, the Baghdad railroad, between Kaisariyeh and Uluköşebler is to be started in the near future.
MAP OF ASIA MINOR, SHOWING ROUTE OF THE EXPEDITION
II
THE COURSE OF THE EXPEDITION

From Stambul, where we bought a Ford car and engaged the interpreter and the chauffeur, we sailed to Mudania, where the expedition really started. Our next stop was at Brussa, where we had to stay two days to obtain the necessary permit to travel to An­gora. In the museum at Brussa I saw a small basalt torso of a woman, said to come from Afiun Karahissar. The piece resembles in its style Egyptian statuettes of the Middle Kingdom. Unfortunately I was not allowed to take a picture of it. From Brussa we followed the road leading toward the Anatolian railroad, which we reached at Boz Hüyük. At Bazarjik on the way were many architectural fragments of late classical and Byzantine times. I was told that not far from this town, at places called Kızıl Sarai and Sorgun Boyu, were large ruins from which these pieces had been brought.
Boz Hüyük itself is situated at the base of a *kaleh* (Fig. 1). On its top are two basins, about 6 by 6 by 6 meters, cut in the living rock; here and there on the slope are a number of rock-cut steps. Fragments of Byzantine pottery and of *terra sigillata* were collected, in addition to very archaic specimens of the black-on-yellowish-buff type. In the sawmill 500 meters west of the village I was shown a remarkable bit of sculpture: the bust of a man on whose mouth lies a snake (Fig. 2). It is in a very dark cave under the factory, built into its foundation wall, so that it was impossible to make a close examination or accurate drawing. The sculpture is very similar to a piece published by Perrot. Within Boz Hüyük itself are numerous architectural fragments, including capitals and a few altars, of late Roman and Byzantine times. The principal mosque of the town is a remarkable Osmanli building (Fig. 3).

From Boz Hüyük we followed the railroad line to Eskishehir. Along the road we saw a few sites, small or larger ones, with ruins of late periods, especial-

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2. G. Perrot and Ch. Chipiez, *Histoire de l’art*, Vol. V (1890), Fig. 42.
ly near the small village of Porya, 32 kilometers northwest of Eskishehir. At Chukur Hissar is a large hūyūk which I could not investigate (Fig. 4). Besides this I counted five tumuli along the road which follows the valley of the Pursak Su. Around Eskishehir are a few more hūyūks which I did not investigate, as this was not the actual territory in which we had planned to work. The next stop on our way to Angora was Sivri Hissar, the ancient Justinianopolis. Again we passed a number of Byzantine and Roman remains. In the cemetery of the village of Hamidiyeh was an inscription on a basalt slab about 1.20 meters long and .55 wide (Fig. 5). I do not know to what period it should be attributed. At Sivri Hissar we stopped for one day, as I had heard of a hūyūk near it. The pottery we found there was similar to that found at Boghaz Kōi.  

Continuing from Sivri Hissar, we followed northeastward the valley of the Pirlek Su, a tributary of the Pursak Su, as far as Mülk, whence we ascended the west slope of a dry, gently undulating plateau which extends to the broad valley of the Sakaria. We descended then into the Sakaria valley, crossing the river at Beli Köprü. Northward we could see in the plain a number of tumuli, probably belonging to those around Gordium, the ruins of which are situated 6 kilometers north of the bridge. The road then followed more or less closely the Anatolian railroad line through Polatli to a point 4 kilometers south of Mali Kōi. There the road enters an arid plain (Fig. 6) which narrows gradually to a small valley leading northeastward toward the plain of Angora. In this valley are three springs. Near the middle one, called Faharet Chesme, is a small ancient site with a few fragments of columns, one of which bears a badly worn Byzantine inscription (Fig. 7). Included among fragments of later periods re-used in the

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1 Cf. pp. 4 and 55.
Fig. 5.—The inscription at Hamidiye

Fig. 6.—The plain near Mali Köi
THE COURSE OF THE EXPEDITION

Fig. 7.—Ruined Columns near Faharet Cisime

Fig. 8.—Angora and Its Setting

Fig. 9.—Angora
wall surrounding the spring is a remarkable Phrygian relief. Shortly after passing the third spring, the valley opens toward the dry and hilly plain through which flows the Engürü Özi and on the northeast end of which is situated Angora (Figs. 8–11).

At Angora a few days were spent while getting our necessary permits for traveling and investigating in the eastern vilayets. These were granted to us very courteously, without any difficulties, as the new Turkish government encourages all kinds of scientific research. From Angora we followed eastward the valley of the Tabakshaneh Su, along which runs the new railroad from Angora to Kaisariyeh. We passed a number of small tumuli and two small ruin sites before reaching Lala Han, situated in a small but fertile plain where are the remains of a large ancient settlement in a place dominating the whole valley (Fig. 12). There we left the valley and ascended a steep slope leading to a bare and very dry mountain chain, in a cleft of which is situated Azi Yozgad (Fig. 13). Not far from it lies an extensive classical site (Fig. 14), not identical, however,

1 Cf. p. 59.
THE COURSE OF THE EXPEDITION

FIG. 11.—ANGORA. SCULPTURES BROUGHT FROM HÜYÜK NEAR ALADJA (cf. p. 98).

FIG. 12.—THE PLAIN IN WHICH LALA HAN IS SITUATED

FIG. 13.—AZI YOZGAD, A TYPICAL ANATOLIAN VILLAGE
with the one indicated near Sungur on Kiepert's map. From these ruins the road descends to the deep valley of the Chukurjuk Su, whose dry bed it reaches at Külüşlar (Fig. 15). In dangerous curves the road then climbs the mountain chain between the Chukurjuk Su and the Küzül Irmak, to which river it next

R. Kiepert, Karte von Kleinasien, Blatt Angora.
descends in still more thrilling curves. It reaches the Kütül Irmak near Yakhshi Han, where a bridge spans the river.

From Yakhshi Han we went to Kirik Kaleh, the ancient Eccobriga, in the neighborhood of which we found a subterranean place of worship at the Keskin Sivrissi and a small cave near Ahali.¹ At Kirik Kaleh itself are the remains of

¹ Cf. pp. 68-76.
FIG. 18.—TERZILI HAMMAM. FAÇADE OF THE ROMAN THERMAE

FIG. 19.—TERZILI HAMMAM. INTERIOR
a large ancient settlement. On the day of our arrival an Egyptian statuette had been found there.¹ From Kirik Kaleh we followed the road leading southward to Keskin. Then we turned almost straight eastward across a rather arid plateau cut from northwest to southeast by a few fertile valleys, in two of which I observed hüyük, until we reached the post road from Angora to Köprü Kōi and Yozgad. After passing the Kalğüz Özü, a short detour brought us to Aivalû, near which is a hüyük already discovered by Chantre.² From there we followed the main road, which leads through dry steppes, partly real salt steppes, until we reached the broad valley of the Delidje Su. We crossed the river at Sekili Köprü. Near the bridge are the remains of a large han, probably Seljuk. This valley gradually widens until it becomes, near Yerkōi, a large plain. The valley is bordered on both sides by gently sloping mountains,

¹ Cf. pp. 64–67.
² E. Chantre, Mission en Cappadoce.
those on the north being divided by a number of valleys running from north to south. The largest of these, in which flows the Sarai Su, we followed upstream to Yozgad.

Along this river, and especially around Yerköi, are situated a number of ancient settlements. We investigated some of them at this time from Yozgad, others from Yerköi during the third part of the expedition. One excursion from Yozgad brought us to Terzili Hammam, a little south of the valley of the Konak Su, as the upper reaches of the Delidje Su are called. The road leads first northeastward to Chalatli, where it turns to the east and follows the valley of the Egri Özi. Slightly upstream from a southward bend of the river lies Köhne, near which is situated a hammam with classical remains (Fig. 16). We then followed the east bank of the river, passing Churuk Köi, Imrahor, and Bahatlin, near which three villages are remains of late classical settlements of varying size. Near Bahatlin also are some large tumuli. By a road leading southward along the west slope of the gently undulating Chomak Dagh (Fig. 17) we reached Terzili in the Konak Su valley. From there a mountain path leads to the hammam, the remarkable remains of Roman thermae (Plate I and Figs. 18–20).

We returned to Yozgad the next day by another road, a little south of the one on which we had come. It brought us past the imposing mountain of the sıvari near Alishar. Near that village, too, we found a large höyük, and close by it a number of tumuli. We crossed the Egri Özi near Yazili Tash, a village in which a number of architectural fragments and sculptures occur, among them

1 Cf. pp. 77–84.
1 E. Chantre, Mission en Cappadoce, p. 118.
1 Cf. p. 89.
FIG. 23.—RUINED CITY WALL AND TALUS ON THE KERKENES DAGH
architraves of late Roman times and a bit of relief which may be "Hittite" (Fig. 21). At Shakh Muratli we reached the southern slope of the Kerkenes Dagh, on the summit of which are the remains of a large ancient city (Fig. 22). This site was so vast and the interval before sunset so brief that we abandoned any thought of even a sketchy survey, promising ourselves that we would return the following year. The magnitude of the city wall and its talus can be imagined by comparing its size with that of the stooping man almost invisible in the center of Figure 23. Having passed this mountain range, our road led northward toward the Egri Özü valley, which we reached north of Balali, and on through Chalatli back to Yozgad. Not far from Balali, south of the Egri Özt, we observed a large hüyük similar in form to the one near Alishar.

Our next aim was to reach Boghaz Köl. From Yozgad we retraced our route to Chalatli, from which a path rather than a road leads over the mountains to the valley of the Arabsefer Su. Around Aladja this forms a broad, fertile plain

\[^{1}\text{Cf. Studia Pontica, I, 25-29.}\]
belonging already to the Yeshil Irmak basin. Near the watershed of this mountain range we passed the remains of an ancient settlement with pottery fragments of various periods (Fig. 24). In the valley of the Arabsefer Su are remains of various classical or post-classical settle-

![Fig. 26.—Altü Yapan. Lion Built into a House Wall.](image)

![Fig. 27.—Altü Yapan. Stone Weight from a "Pontic" Oil Press.](image)

![Fig. 28.—Bogged on the Road to Boghaz Kōi](image)
EXPLORATIONS IN CENTRAL ANATOLIA

FIG. 29.—THE ROAD NEAR SUNGURLU

FIG. 30.—LANDSCAPE NEAR SUNGURLU

FIG. 31.—VIEW WESTWARD FROM KALEH BOINU
ments. Aladja itself contains a great number of sculptured architectural fragments. From Aladja we followed a road leading westward to Altü Yapan, a little village built on a hūyük (Fig. 25). In the foundation wall of one of the houses a stone lion (probably "Hittite") has been re-used (Fig. 26).¹ As

Fig. 32.—Ancient Foundations at Kaleh Boinu

Fig. 33.—Ancient Foundations at Kaleh Boinu

in all other villages in this neighborhood, there is here also a weight from a "Pontic" oil press (Fig. 27).² Following a dry river bed leading northward, we reached Hūyük, famous for its two gateway sphinxes and its "Hittite" reliefs.³ From there we made a short excursion to the Kara Hissar, also called Kaleh

² Cf. Studia Pontica, I, 15.
³ Cf. p. 98.
Hissar, a mountain of volcanic origin in a narrow valley about 9 kilometers north of Hūyük. As this mountain and various tumuli around Hūyük seemed very interesting, I decided to come back later to investigate more at leisure. We did so on our way back from Samsun.1

From Hüyük we then continued to Boghaz Kōi. It was one of the most difficult parts of our whole journey, as the valley which we had to follow was very marshy and it was very hard to keep our car from getting mired (Fig. 28). Finally, late in the afternoon, we reached Boghaz Kōi, where we were received in the home of Zia Bey with his well-known courtesy and hospitality. We stayed four days in Boghaz Kōi, as I wanted to study the famous ruins and photograph parts of the rock sanctuary of Yazılı Kaya. The last day before continuing northward I made an excursion on horseback along an ancient road to Büyüük Nefez Kōi.

For the first part of our journey northward we had to follow again the marshy “road” along the Budak Özü Chai as far as Sungurlu. Near this town the whole valley is nothing but an immense garden with clumps of beautiful old trees. From Sungurlu our road bent slowly northward toward a dry and undulating high plateau with occasional very high mountains with rocky summits (Figs. 29 and 30). At Kaushut we crossed the broad dry bed of a tributary of the Delidje Su and then went ahead northward without any road, through a dry mountainous region where we had often to push our car uphill, until we reached Kaleh Boinu.

Kaleh Boinu is situated on the high plateau not far from the point where the Delidje Su joins the Kızılı Irmak. Two rocky mountains rise like forts out of the general slope of the chain, and one has a magnificent view of the union.

\[1\] Cf. pp. 102-9.
of the two rivers and far to the west beyond the Küzül Irmak (Fig. 31). The whole region is dry, and the steppes around the two rivers in the broad valleys are rich in salt exudations. On one of the two isolated mountains, and especially on the terrace connecting them with the plateau, are many remains of ancient foundations (Figs. 32-35). Unfortunately, the natives are digging them out for building material. Besides many pottery fragments of Roman and Byzantine times and a few Seljuk coins, we collected also a reasonable percentage of older pottery fragments, especially of the kind with the highly polished red slip, together with some of the painted type. There is no doubt, considering the dominating strategical position, that a settlement has existed here continuously. A short excursion brought us to the junction point of the two rivers themselves near the small village of Kula. The Küzül Irmak valley is fairly wide here, but covered only with the dry, grayish steppe grass. It opens gradually toward the northeast. Proceeding on our way, we reached the valley again, descending the next day from the high plateau. Other than two small tumuli on the west slope of the plateau we saw here no remains of ancient times. The few modern villages are rather poor and small, mostly inhabited by Cherkess (Fig. 36). Near Ambarjik we reached the main road from Iskelib to Chorum and followed it eastward. The valleys became more fertile and the mountains appeared now partly covered with shrubs. Occasionally small groups of real
trees appeared also (Figs. 37 and 38). Chorum is situated at the northeast corner of a broad, fertile valley around the Chorum Chai, a tributary of the Yeshil Irmak.

In the valley of this river, southeast of Chorum, we found a large hüyük (Fig. 39) near Sarai, which village is filled with remains of Roman and Byzantine times. On the hüyük we found red-slipped and painted pottery fragments. A little farther, where the valley narrows and two detached rocks form a natural
gateway, we encountered the first of those fortresses with tunnels of which we later saw several more.\textsuperscript{1}

From Chorum we proceeded northward toward Osmanjik, where stand the imposing remains of an ancient fortress and where we saw also a cliff tomb.\textsuperscript{2} At the northeast corner of the fertile plain around Osmanjik the road enters a narrow but fertile valley which gradually tapers to a real gorge with rock walls dropping nearly vertically; it opens again gradually into the broad plain of Merzivan. In this plain rise, seemingly dispersed irregularly, large but flat tumuli (Fig. 40). Beginning at its west end and forming a chain eastward, they seem to be a system of military posts. Proceeding northeast, we reached the famous Amasia road which leads northward to Samsun and along which the new railroad from Samsun to Sivas is now being built (Fig. 41). At Khawsa, the Anatolian Vichy, are many remains of the late classical period, such as sculptured architraves and small altars. At Kavak a large huyuk, the kernel of

\textsuperscript{1} Cf. p. 123.  
\textsuperscript{2} Cf. pp. 120-22.
which had been a natural rocky elevation, proved that an ancient settlement had been located there. The whole route is beautifully scenic (Figs. 42 and 43), especially the view of the Black Sea, which one sees first between the two large tumuli near Karamut, and then the descent toward the fertile plain on the border of which lies Samsun on the slope of the Kara Samsun.

Famous for its situation near the site of the ancient Amisus, Samsun is likewise famous for the tumuli in its vicinity. During the ten days we were there, I visited not less than twenty-one of them (Fig. 44). These tumuli appear usually in groups. The first is situated east of the city, on the Dervent (Figs. 45–47). One of these tumuli, although the smallest, is especially interesting, as it has been opened and the excavator has cleared the entrance to a number of rock-cut rooms beneath it (Fig. 48). North-west of Kara Samsun are three other imposing groups of tumuli, one near the site of the classical cemetery, one on a promontory called “the Dromedary” (Fig. 49), and one on the Palach, a broad mountain range sloping gently down toward the Black Sea. The landmarks of Samsun are two very large tumuli situated on a flat mountain a little north of the small village of Karamut, not far from Samsun. These two tumuli, surely royal tombs, are to be seen from the south by one approaching along the Amasia road (Figs. 50 and 51). There seems no doubt that all these tumuli
Fig. 44.—Sketch Map of the Tumuli around Samsun
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were primarily burial mounds; but at least a part of them might have been used secondarily as beacons for ships trying to enter the Bay of Samsun.¹

Not far from Samsun, about 16 kilometers southward, an ancient citadel is situated near the village of Akalan. This place has been partially excavated by Th. Macridy Bey.² It is a very interesting stronghold (Figs. 52 and 53), resembling closely the one at Tiryns. The whole surface of the citadel is covered with painted pottery of archaic type; pottery with a red slip prevails. It would be of great importance to have this place excavated systematically, as I feel sure that much could be found here which would shed light on relations of the

¹ Cf. Studia Pontica, II, 112.
Hittite Empire with the Mycenaean and Aegean cultures. Six kilometers from Akalan on our way back to Samsun I observed another ancient site (Fig. 54).

During our stay at Samsun a rather late burial had been found in the course of the work on the railroad. It consisted of a small niche cut in the rocky mountain slope, then closed by a few large stones and covered with earth. Inside were three pottery coffins. Unfortunately the workmen, imagining treasures to be hidden in them, had broken them to bits and scattered the bones of the skeletons and the other objects inside of the coffins all about, so that on my visit I found only two small vases of terra cotta and the remains of two or three bronze objects. The coffins had been of an elongated oval shape with a rectangular opening at the top near one end. Over this opening lay a rectangular pottery lid, and near the edge of the opening were protuberances on both coffin and lid. Around these protuberances had been put cords or bands to lace the opening shut. These bands were joined by means of buckles, of which I was able to find two or three (Fig. 55).

Northwest of Samsun is the large mountain complex of the Hodja Dagh (Fig. 56). I had been told in Samsun that around the whole Hodja Dagh, about halfway up the slope, were dispersed fortifications showing walls very similar to these at Akalan. A careful investigation of the summit and the whole northeastern and eastern slopes showed that these “walls” were nothing but strata of a harder limestone, 1.50 to 2 meters thick, cropping vertically out from the soil and running as far as 500 meters in a straight line. Wind and weather and especially frost had cracked this limestone, giving the impression of a cyclopean wall. Only on the northwestern end of the summit did this natural cyclopean wall seem to have been used as part of a huge tower (Fig. 57).
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From Samsun we followed back as far as Khawsa the Amasia road on which we had come. From Khawsa we turned eastward, searching our way as well as possible through the very tall mountains until we reached the broad and fertile plain on the southern end of which Ladik is situated. On one of the mountains, near the only place from which a road could enter this plain from the west, I noticed a tumulus. Not far from the modern town of Ladik is situated an ancient mound (Fig. 58). Ladik itself is full of remains of late Roman and Byzant-
tine times, and in addition there is a very fine old mosque (Figs. 59 and 60). From Ladik we proceeded on the ancient road toward Amasia. Scenically, this was one of the most beautiful parts of our journey; but the road, very little used, is in a deplorable condition. Finally, descending to the valley of the Yeshil Irmak, we reached Amasia. As Amasia has been fairly well investigated archaeologically,¹ I did not stay there long; but it would still be worth while to make a systematic survey of the many cliff tombs which cover, besides its hissar, the mountains surrounding this remarkable city (Plates II and III and Fig. 61).

From Amasia we followed the post road to Tokat. As far as Turkhal no features of archaeological interest appeared. Turkhal itself I investigated on our way back from Tokat.\textsuperscript{1} Tokat, on the Yeshil Irmak, is in its topographical situation very similar to Amasia. There, too, the town lies at the foot of a huge rock on whose top is an invincible castle. From Tokat we made an excursion to Bairam Tepe, a rock \textit{kaleh} with tunnels like the one near Chorum.\textsuperscript{2} Another excursion brought us to the famous site of Comana Pontica (Figs. 62 and 63),\textsuperscript{3} near which we found a second settlement on the other side of the river. Not far from the mound is a huge monolith with two tombs cut in it (Plate IV and Figs. 64 and 65).

On a third excursion from Tokat we visited Niksar (Fig. 66). The citadel here also had a tunnel, which seems now to have vanished completely. In the outer wall of the citadel four different methods of wall-building can be seen, one above another. After the destruction of the first wall, of polygonal stones carefully put together, it had been repaired with roundish stones arranged in rows. On this stratum is superimposed a third, showing more or less rectangular ones; and this again is surmounted finally by a wall constructed in the late classical style, its stones bound with mortar (Fig. 67). At the north end of

\[\text{Cf. Studia Pontica, II, 259-70.}\]
the bridge crossing the Germili Su is a bit of modern wall on which are used as decoration two small ancient reliefs showing winged animals with tails ending in animal heads (Plate VA). A similar piece, but with human figures, F. Cumont found at Niksar in the citadel itself.\footnote{\textit{Studia Pontica, II}, 269.} In the portal of a beautiful Seljuk \textit{türbeh} at the entrance to the city a stone slab with a crouching antelope in bas-relief is inserted as centerpiece under the stalactite ornament. This relief shows the same technique as the two animal reliefs in Plate VA and the one found by Cumont.
From Tokat we followed the valley of the Yeshil Irmak, this time on its south bank, back westward to Turkhal. Not far from Pazard Köi we saw the remains of a Seljuk *ulu han*. A little farther we passed a very large *tumulus* (Fig. 68) which belongs to a group of five distributed in a straight line across the whole width of the valley. From there we proceeded 10 kilometers farther on the south bank. Then, crossing the river, we reached the main road from Turkhal to Tokat.
Turkhal is situated in a pocket surrounded by high mountains; toward it lead five tributary valleys (Fig. 69). In the center of this pocket towers a high rock on which is situated the castle. This shows especially Byzantine remains, but also a large tunnel.\(^1\) About 3 kilometers north of Turkhal, not far from the road to Amasia, we found the remains of a rather large classical settlement with many very well preserved foundations. This spot is called by the natives Han Öni (Fig. 70).

At the foot of the valley through which the road leads southwest toward Zileh we found on an isolated rock on the mountain slope the site of a small early Christian chapel. In a narrow crevice with vertical walls were the badly

\(^1\) Cf. pp. 128 and 130.
weathered remains of a Greek inscription and of four incised crosses. Over this inscription, at a height of about 2.50 meters above the ground, were a number of rectangular holes corresponding in position on both sides of the crevice. They were probably made to hold timbers in order to support a wooden roof. Scattered all over the ground around this rock are fragments of pottery, but I could not find a single one of a definite type.

Proceeding on our route, we reached Zileh (Fig. 71), in its situation very similar to Turkhal. There, too, was a large citadel mound bearing the remains of an ancient castle with a tunnel. A rather badly preserved road led then northwestward to the mountain plateau which we had to cross on our way back to Amasia. Leaving the highland, we descended the mountain on a road sloping rapidly down into the valley of Amasia. From Amasia we made an excursion to Gönenjik, where I found a fortress with three tunnels of the same type as
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at Amasia and Tokat. On our way back from Gönnenjik to Amasia we investigated a large hiiyiik near Olas and also a rock tomb not far away from it.

From Amasia our road led to the northwest until we reached the wide plain on the northern border of which Merzivan is situated. Again I had occasion to observe the military situation of the tumuli which I had already noticed as we came from Osmanjik (cf. Fig. 40). At Merzivan we turned southwest, following a valley which pierces the mountains bounding the plain of Merzivan to the south. Through a steep gorge the road ascends to Chorum. Proceeding from Chorum, we went straight southward to Aladja, then westward to Hüyük,

following approximately the same road we had followed a month before. During the two days' stay at Hüyük I investigated the Kara Hissar and the nearby tumuli. From Hüyük we proceeded northwesward along a creek until we reached the watershed. We then turned southwest, following another small stream which joined the Budak Özü Chai 10 kilometers east of Sungurlu. Twelve kilometers southwest of Hüyük we saw the remains of an ancient settlement not far from the small village of Tuvush. Near Sungurlu we struck the road leading from there to Boghaz Köi, and followed it into Sungurlu. Thence we made our way northwesward, following first about the same course we had taken a month before in traveling to Kaleh Boinu. As before, we crossed at Kaushut a large tributary of the Delidje Su and proceeded until we reached the Kütüül Irmak. The region between the Delidje Su and the Kütüül Irmak is a very dry plateau, partly gently undulating and partly showing medium-sized rocky mountain ridges. We tried near Imatli to cross the Kütüül Irmak with our car in order to reach Changri; but neither that evening nor the whole next

FIG. 63.—Comana Pontica

FIG. 64.—Comana Pontica. Monolith in Foreground
day could we manage to do so, although we followed the Küzül Irmak valley up and down for about 40 kilometers (Figs. 73 and 74).

In contrast to the high mountains which form the west bank of the river in this region, the east bank consists of a relatively broad and fertile plain. The whole day we did not see any ancient remains except a few column shafts in Turkish cemeteries. Finally I decided to push southward toward Yakhshi Han, where I knew of a bridge over the Küzül Irmak. No road existed; so we found our way with the aid of the compass in a general southerly direction until we saw the Keskin Sivrissi. We then used it as a landmark, since I knew its position relative to Kirik Kaleh near Yakhshi Han. We finally struck the track of the new Angora-Kaisariyeh railroad and simply followed it to Kirik Kaleh, where we were received very hospitably by the engineers still working there. Further excavation had brought nothing interesting to light since our last visit except a few small glazes of late Roman and Byzantine times. After a well-earned night’s rest, I decided not to cross the Küzül Irmak here, but to proceed farther southward via Keskin to Köprü Kōi. The road showed nothing interesting. It runs from Keskin southward along a small river until it joins the

Fig. 65.—Comana Pontica. Plans and Sections of the Tombs Cut in the Monolith
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FIG. 66.—NIKSAR

FIG. 67.—NIKSAR. THE CITADEL WALL
FIG. 68.—A LARGE TUMULUS NEAR PAZARD KÖY

FIG. 69.—TURKHAL
main Angora-Yozgad road. Not far from this point we noticed a large hiiyiik. The road ascends westward toward the Keskin Dagh, through an extension of which the Küzül Irmak forces its way near Köprü Köi. Finally, at two o’clock in the morning of the next day, we reached Angora.

At Angora we had the great pleasure of meeting Dr. E. Forrer and Professor Weigand, with whom we made various excursions in the environs of Angora; then later we traveled together as far as Yerköi. The first of our excursions was to the tumuli a short distance south of Angora, a few of which had been opened.
The largest was especially interesting, as it showed how they had been built (Figs. 75–77). First a small ring of earth was thrown up; then the space in the center was filled by throwing in earth from all sides. After this was leveled, earth was thrown up against the outside of the wall all around and then the top was leveled by throwing in earth from all sides toward the center. This
must have been repeated five or six times. This technique made it possible for a great number of workmen to work at the same time, and furthermore they had always an equal slope on all sides. On the upper part of the second tumulus, which is far more destroyed than the first one, one could notice thin walls
consisting of field stones set one above another. These can have had no structural importance, but were perhaps set up only as partitions for the parts which the different workmen or groups of workmen had to finish (Fig. 78).

Another excursion was to the so-called “Phrygian necropolis,” where a few large pottery vessels had recently been unearthed. Another day, under Professor Schede's amiable guidance, we visited a small höyük at Amakzis, 18 kilometers west of Angora; and one day before we finally left Angora we made a long reconnaissance southwestward along the Angora-Beli Köprü road, where we found that the large fortress marked near Takhta Kaleh on the Kiepert
map was a natural formation. But very near it we found at Boz Tepe a large post-classical settlement.

After having our car completely overhauled, we left Angora, following the main road to Köprü Kōi as far as Chakal. There we turned westward, examining a húyūk and then proceeding to the famous Giaur Kalessi. A long, difficult ride then brought us to Bahla (Kartal), which lies just off the main road to Köprü Kōi. From Bahla we made another excursion southward toward the Pasha Dagh, during which we investigated three very interesting húyúks. That evening we reached Köprü Kōi. From Köprü Kōi we turned southeastward, following the Kirshehir road, near which we noted a number of húyúks. Kirshehir itself is a large and prosperous town among the mountains. Surrounding it are several tumuli. Besides the citadel mound, itself a large húyūk, we investigated two smaller ones in the neighborhood of this town, near each of which appeared two or three tumuli. From Kirshehir we went back along the same road by which we had come, until we reached Chugun. There the road forks, one way leading to Köprü Kōi and the other through the Malya Chōlū to Yerkōi. At Üchayak we passed the remains of a huge Byzantine church.

\footnote{For details on what follows, cf. pp. 139-48.}
and, proceeding northward, a large hiiyk near Khas and a large cave complex called by the natives Yarıüm Kaleh. From this point the road follows a broad dry river bed, which it leaves near a little village to climb in a very difficult ascent the mountain range (spurs of the Chichek Dagh) dividing the Malya Chölü from the Delidje Su. The descent was easier, and near Mejidiyeh we came out of the mountain complex. That same afternoon we reached Yerköi, where for six days we were the guests of the railroad engineers.

Excursions made from this point brought us to Büyük Nefez Köi, Kavass Maghara, and Asha Elma Hajilar.

At Yerköi we separated from Dr. Forrer and Professor Weigand, as we had to continue our way southward. From Yerköi we followed the Delidje Su east-

\[1\] Cf. p. 151.
ward, exploring the various hüyük sitiaté in this valley as far as the niuri near Alishar. We then turned southwestward, finding our way through a dry, high plateau to Jiblakh on the Karajerli Su. There also we were the guests of railroad engineers, through whose courtesy I was enabled to excavate on a small hüyük beside the railroad. From Jiblakh we proceeded southward toward Kaisariyeh, investigating a number of hüyük on the road. From Kaisariyeh itself we made an excursion to the Kül Tepe, which now has a rather sad aspect (Fig. 80). The surface is torn by excavators' trenches, and everywhere appear destroyed foundations. From Kaisariyeh we followed the main road to Nigdeh (Fig. 81). Along this road, on conspicuous mountains, were tumuli (Fig. 82). On the way from Nigdeh to Ulukışlar I visited Öküzli Hissar, the site of ancient Tyana. I saw there the remains of three huge stone eagles very similar to the one which I had found at Bulumashlı. From Ulukışlar, after having discharged our faithful Hüssein, we returned by rail to Stambul.
The town of Sivri Hissar is situated 94 kilometers southeast of Eskishehir on the south slope of a pointed rock formation (Turkish, sıvri) on the top of which are the remains of an Ottoman fortification (Figs. 83 and 84). South of the town extends a valley, widening gradually toward the broad plain through which the Sakaria River flows. Five kilometers south of it, in the middle of the valley, not far from the small village of Kepen, is situated a large höyük (Figs. 85 and 86). It is approximately 350 meters long, 190 to 220 meters wide, and about 14 meters high. I collected pottery of various periods; archaic types were especially frequent, many pieces having a red slip like those found at Boğaz Kör and Kül Tepe. On the top were marble fragments from a probably Byzantine church (Figs. 87 and 88). In the village itself, as also in Sivri Hissar,
many Byzantine building fragments were seen. About 1 kilometer south of the hüyük extend the remains of a Roman site (Fig. 89). Traces of foundations are still to be recognized, and the whole surface is covered with fragments of tiles and terra sigillata pottery fragments.

At Sivri Hisar are, in addition to the before-mentioned fragments, a number of sarcophagi, altars, and capitals, also two Seljuk lions.
THE KEPEN HÜYÜK NEAR SIVRI HISSAR

FIG. 86.—THE KEPEN HÜYÜK. PLAN AND SECTIONS
FIG. 87.—THE KEPEN HÜYÜK. 
BYZANTINE BUILDING FRAGMENT.

FIG. 88.—THE KEPEN HÜYÜK. BYZANTINE BUILDING FRAGMENT.

FIG. 89.—A ROMAN SITE SOUTH OF THE KEPEN HÜYÜK
THE PHRYGIAN RELIEF AT FAHARET CHESME

Faharet Chesme ("Faharet spring") is situated 29 kilometers southwest of Angora on the Beli Köprü road (Fig. 90). The wall from which the water of the spring emerges contains, besides a number of Byzantine architectural fragments and two Turkish inscriptions, a small relief (Plate VB). It is a grayish basalt slab, 60 centimeters high and 49 centimeters wide, the lower part of which is destroyed on one side. The stone shows in low relief two disks, each attached by a short neck to a double-lined rectangle below. This rectangle itself divided into two compartments, one containing a swastika, the other a number of vertical, slightly wavy lines, each of these patterns being centered under one of the disks.

This representation is most unusual. I know of only one similar. Such disks, found on a Phrygian altar, have been interpreted as highly conventionalized pictures of Kybele and Attys; but, as far as I know, no representations have previously been found showing the two disks in combination with the swastika and the vertical parallel lines.

1 E. Brandenburg in Abhandlungen der historischen Klasse der K. Bayerischen Akademie der Wissenschaften, XXIII (1906), 695-96 and Fig. 61.
THE ANCIENT SETTLEMENT AT KIRIK KALEH

Just 12 kilometers south of where the new railroad from Angora to Kaisari-yeh crosses the Küzül Irmak, the ancient Halys River, lies a small town called Yakhshi Han (Figs. 91 and 92). Directly east of it, about 8 or 9 kilometers farther, in the valley of a small river, the Keskin Chai, which empties a little south of Yakhshi Han into the Küzül Irmak, is a hill, probably of volcanic origin, called Kirik Kaleh (Fig. 93). The top of the hill is truncated. It slopes gradually on the southern and eastern sides, but drops nearly vertically at the northern and western sides (Fig. 94). Its greatest dimensions are, from northwest to southeast, 400 meters, and from northeast to southwest, 320 meters; its highest elevation above the general level of the valley is 64 meters. The small river of this valley flows around the north and west sides of the Kaleh. On the south end it is connected with a small elevation which gradually rises until it reaches the mountains closing this valley toward the south. The top of the Kaleh is surrounded by a wall with the exception of a small piece at the north end where the abrupt slope of the hill makes all fortification unnecessary (Fig. 95). The wall is to be recognized mostly by long ditches which the natives have dug in order to get foundation stones for new building. In very few places is the foundation itself preserved. In Figure 96 it appears, in a width of about 1–1.50 meters, as a mass of irregular stones carefully put together. At the south side is still to be recognized a gate construction, to which leads a road coming up the hill from the east and continuing toward the highest elevation of the Kaleh (Fig. 97). There again some mural remains are to be recognized, but without excavating it is impossible to see their meaning. The surface is covered with pottery fragments of Byzantine and classical times; but, especially at the north-east side of the highest point, pottery with a red, highly polished slip has been collected by myself, identical with the kind found at Boghaz Köl and other

1 This and the following monograph were first printed in preliminary form in the American Journal of Semitic Languages and Literatures, XLIII (1927), 288–96.
probably "Hittite" sites in the central part of Asia Minor. There I found also a few painted pieces, similar to those coming from Kül Tepe.

The small elevation to the south of the Kaleh bears the remains of a rather large classical and post-classical city. This site has long been known, and is

\footnote{Cf. J. G. C. Anderson in the \textit{Annual of the British School at Athens}, IV (1897–98), 72; J. W. Crowfoot in \textit{Journal of Hellenic Studies}, XIX (1899), 38.}
marked on Kiepert's map as probably the ancient Eccobriga. Unfortunately, there has just been built on this very spot a large factory, and a great amount of very valuable archaeological material has already been and will be destroyed by the digging out of foundations in order to get new building material—a custom frequently found in Anatolia—and in terracing a part of the west slope of

1 R. Kiepert, Karte von Kleinasiens, Blatt Angora.
the elevation. The work of destruction was already very far advanced when we arrived there on our way to Yozgad, so that investigation of the architectural remains would have been in vain. Furthermore, exceptional circumstances would have made a careful survey a very delicate task. So I will state the few things which I myself could see through the courtesy of the government officials and of the engineers working there, who were our kind hosts for two days.
At the south end of the Kaleh, perhaps 100 meters before it separates itself from the smaller elevation, there seems to have been a large temple, judging from the remains of two big foundation walls and a number of fragments of Ionic capitals and even of columns themselves which were found there while excavating a terrace for the new buildings (Figs. 98 and 99). Numberless fragments of all kinds of pottery and tiles of a rather late classical, perhaps even Byzantine, period were discovered there. Under these foundations again some fragments of the pottery with red slip were brought to light. A limestone mold, now in the new museum at Angora, for an unrecognizable bronze object is likewise said to have been found in this place (Fig. 100). A little farther to the south a number of burials had been unearthed or, better said, destroyed. It was impossible to give them, therefore, any but an approximate date. It seems sure only that they were pre-Mohammedan.

Two hundred meters farther south, where a second terrace was built, the workmen struck a real necropolis. Aside from a few Christian tombstones (cf. Fig. 100) of the Byzantine era, terra sigillata, and glass fragments, nothing of particular interest had been found there. But on the day we arrived they dug out an Egyptian statuette about 35 centimeters in height, broken in two but nevertheless very well preserved (Plate VI). Since this piece is of the time of the Middle Kingdom, as Dr. Allen shows in the next monograph, it was quite surprising to find it in so late a necropolis. But the fact that the workmen, at nearly all the places where they dug, struck, at a depth of 2 meters in the ground,
pottery of much earlier periods, mingled with the red-slipped “Boghaş Köi” pottery and painted pottery, suggests the theory that this piece had come here during these earlier periods and later on by some chance had been dug up and kept as a curiosity until it ended in this late necropolis. This statuette, like the other pieces, is now in the new museum at Angora. The director-general of the Minister for Public Instruction, Reouff Bey, had been there to save what could be saved, as I heard later when I passed there for the second time, coming back from the expedition.

The geographical position of Kirik Kaleh, a natural fortress, itself makes probable its early settlement, especially since we may assume that here passed the ancient road which connected ancient Ankuvaş (Angora) with Hattuşaş (the capital of the Hittite Empire from about 1800 to about 1200 B.C.).

Besides the pottery, another feature which speaks for early occupation of this site is the presence of a large subterranean temple about 16 kilometers to the northeast in the Keskin Sivrissi.1 This temple, which we happened to discover in the course of our expedition, is very old. In addition to this, about 800 meters east of the Kalah there is a small tumulus. But it has not yet been opened and therefore cannot be dated at this time.

1 Cf. pp. 68–75.
That the statuette (Plate VI) seen by Mr. von der Osten at Kirik Kaleh is purely Egyptian is evident from its style, its material, and its inscription. Among figures in similar pose one might mention pieces in Berlin (8432) and in the Art Institute of Chicago (10.239). The latter is of hematite; the former, like this Asia Minor find, is of black granite. The Art Institute piece is Eleventh Dynasty work, if one may judge by its owner's name, Nebhepetre. Costumes more exactly like that of our find are pictured on a Cairo stela which came from a Twelfth Dynasty cemetery at Abydos.

The inscription (Fig. 101) consists of a single column of hieroglyphs down the back of the plinth, followed apparently by a single horizontal line reading from right to left along the back of the base. As both ends of this line are illegible, the visible text reads as follows:

\[ htp \ dy (ny)-swt \ Wsyr \ nb \ cnh \ Wp-wat \ n \ b3 \ n(y) \ Kry \ yr(yw) \cdot n \]

... y ...

An offering which the king gives [to] Osiris the lord of life [and to] Upwawet for the spirit of Kry, begotten of [name of parent lost except for the final letter y] ...

The offering formula here, though unusually brief, corroborates by its phraseology the stylistic evidence for a Middle Kingdom date. The name Kry, too, is found in several Middle Kingdom inscriptions, though

1 Ausführliches Verzeichnis, pp. 82 (illus.) and 83.
2 Handbook of the Egyptian Collection, p. 51.
3 Lange and Schäfer, Grab- und Denksteine des Mittleren Reichs, No. 20360.
4 Mariette, Catalogue général des monuments d'Abydos, No. 719.
5 On this formula see Gardiner's detailed discussion in Davies, The Tomb of Amenemhet (No. 83), pp. 79-93, since summarized in his own Egyptian Grammar (Oxford, 1927), pp. 170-73.
the examples cited by Lieblein\textsuperscript{1} happen all to be feminine, rather than masculine as here. However, other Egyptian names common to both sexes are known, and there is nothing feminine in the form of this one. The writing, though crude, is so Egyptian in feeling that it and the material together should prove the origin of this statuette in Egypt itself.

That an Egyptian statuette of the Middle Kingdom (around 2000 B.C.) should have been discovered amid Graeco-Roman remains is explicable to both Mr. von der Osten and myself only on the supposition that it was found at that period during building operations which penetrated into "Hittite" strata lower down and was preserved as a curiosity by its finders. The circumstances under which it originally reached Asia Minor must remain obscure. In age and material it supplies an interesting parallel, though from a much more inaccessible part of Asia Minor, to the statuette of Sitsnefru found by an American missionary about 1882 at Adana and now in the Metropolitan Museum of Art at New York. Strange to say, the Sitsnefru figure also seems to have been associated with classical material.\textsuperscript{2} Supplementing the Tale of Sinuhe for Palestine and the burial of Hepzefi at Kerma in the Sudan, such finds in Anatolia are beginning to forge another link in our knowledge of Egyptian relations with distant peoples and races four thousand years ago.

\textsuperscript{1} Dictionnaire des noms hiéroglyphiques. Dr. Hermann Ranke has since kindly informed me that the Berlin \textit{Agyptisches Wörterbuch} files contain only one \textsuperscript{1}, a Middle Kingdom woman (Lieblein’s No. 1620), but that they show also a male \textsuperscript{1} of the early Eighteenth Dynasty (on Berlin 14994, a stela dated to Thutmose I). Cf. also a male \textsuperscript{1} on a Middle Kingdom stela (Cairo 20054 \textit{i}).

\textsuperscript{2} See Winlock in the Metropolitan Museum \textit{Bulletin}, XVI (1921), 208–10.
THE SUBTERRANEAN TEMPLE IN THE KESKIN SIVRISSI

About 20 kilometers by air line northeast of Yakhshi Han, the small town near the railroad bridge over the Kızıl Irmak, 48 kilometers east of Angora, is situated the Keskin Sivrissi, in itself a remarkable mountain formation. Having heard from an Austrian engineer at Kirik Kaleh that there was a great cave in this mountain, I decided to investigate it personally. In our automobile we followed the valley of the Keskin Chai, the little river in whose valley Kirik Kaleh is situated, about 6 kilometers to the east, then upgrade on a bad, nearly nonexistent road, with the mountain chain closing the valley to the north. The top of this mountain range is a rather broad, smoothly undulating terrain about 2 to 3 kilometers wide, with steep descents at its southern and northwestern ends. The slope consists of a grayish-yellow limestone practically devoid of vegetation. A small group of very old cypresses nearly at the top of the slope appears as a deep black spot (Fig. 102). Among the trees are a few

**Fig. 102.** Sacred Trees on the Way to Keskin Sivrissi
Mohammedan tombs. The many little pieces of wool threads and of garments nailed to the trees show that the natives consider the place holy. They believe that, if they are afflicted by an illness, a piece of their clothing nailed to such a sacred tree will cause the sickness to leave them.¹

At the very top of this range the road leading to the north strikes a second road, which runs from southwest to northeast. Even before this junction the peak of the Keskin Sivrissi had become visible, looking like an artificially built pyramid (Fig. 103). As we advanced, the imposing mountain gradually appeared more clearly (Fig. 104). It is connected with the mountain range itself by a saddle, and forms, so to speak, the end of it. The road we were following to the northeast became gradually better. The last two-thirds, leading along the northwest slope of the mountain, looked even as though it had been built recently. In some places it had been cut directly in the living rock (Fig. 105). The mountain slopes precipitously several hundred meters to a narrow valley. Across the valley a second range rises, higher than this one, a picturesque and wild formation. The whole panorama is beautiful. One mountain range appears behind another, all without vegetation and with marvelous coloring: blue, gray, yellow, red. The different strata appear to be mostly limestone, but there is also some greenish clay. All this is dominated by the imposing sivri itself. The road follows the slope at the height of the saddle, and after reaching the mountain it continues at about the same level (Fig. 106).

¹During our expedition we passed many such places. One near Köhne, for instance, east of Yozgad, was the burial place of an imam near an ancient classical temple. There the bits of cloth had been fastened to little sticks and put into the tomb. At another, at Bulumashlii, a hot spring southwest of Yozgad, the pieces of cloth had been tied around stones and thrown in a great heap beside the remains of a huge stone eagle of probably "Hittite" origin.
We left our car at this point, fearing that we could not turn around on such a relatively narrow road (2.50–3 meters in width), where the slope went up on one side at about 35 degrees and down on the other at the same angle. So we continued on foot. After perhaps 800 meters the road widened, forming a

**Fig. 104.—Keskin Sivrihis. The Procession Road**

**Fig. 105.—Keskin Sivrihis. Roadway Cut into the Rock**
narrow terrace where wagons could easily turn around. And there the road
ended also. About 50 meters before the end of the road we observed a quantity
of stones, looking like a petrified river coming down from near the top of the
sivri. Following it up the slope in a hard and dangerous climb, we arrived, after
some 200 meters, which took us about an hour, at a single huge rock under
which was the entrance to a cave (Fig. 107). A little farther down there was a
small rectangular niche cut in the rock (Fig. 108).

At the cave entrance is a sort of hall (3 meters in width, 12.5 meters long)
from which a small doorway leads to a little room with two holes for windows.
The room is of very rough workmanship. Within it are two or three little niches
at a man's height on the wall, for lamps, and the wall is still blackened by soot
in these places.

From the hall a narrow entrance (90×80 centimeters) leads to a great,
roughly domed, oval cave room, its floor covered with stones and earth (19×13
meters, 6 meters high in the middle; see Fig. 109). It left the impression of
being unfinished. At the far end, in the same axis as the entrance, appeared an­
other small hole, the entrance to a tunnel 16 meters long (75×60 centimeters)
which widens toward the middle, where it turns slightly to one side, narrowing
immediately afterward to the same size as at the beginning. At the end of this tunnel a shaft about 3 meters high leads upward to a second room. Though the tunnel and the shaft showed much more careful workmanship than did the first room, this second one surpassed even them (Fig. 110). It is nearly oval, 11.80 meters wide, 15.50 meters long, and 2.50 meters high. Its vault is supported by three pillars (1.80 meters square on the average) cut in the living rock; a fourth is still connected with the side wall, but the beginning of the work of separating it can be seen. Diagonally opposite at each end are cisterns, both covered inside with a reddish slip. Facing the cistern at the inner end of the chamber appear two niches containing altars, and in various places again are small blackened niches for little lamps. To this same cistern leads a narrow trough which fills it with running water, coming out of the wall at the end of the room. Near by, between the altars and the cistern, again in the same axis
with the entrance to the first room, appears the entrance to a second tunnel, unfortunately closed by stones and earth. The floor of this second chamber also is covered with stones and earth, but not to such an extent as that of the first room.

There is no doubt that this great place of worship—since such we shall have to consider the cave, as will be shown later—was never completed. The absurdly narrow entrance and the small dimensions of the tunnel leading to the second floor suggest that the tunnel, the first room, and the entrance hall are simply still partly filled with some of the material removed from the second chamber; and the uneven floor of this second chamber is explained if we suppose that it contains material from a third room, or at least from the excavation of another tunnel leading to a third room. Furthermore, the unfinished pillar in the second room and the startling contrast of the cleanly worked and vaulted second room, especially the altars and the cisterns, with the rough and seemingly unfinished work of the first room and the entrance hall support the same conclusion.

As for the interpretation as a place of worship, a real subterranean temple,
the two altars alone would be proof enough. The road leading to this cave (cf. Fig. 104) suggests a procession road. There is otherwise no need at all for such a road on this mountain range, as there are no villages on it, and especially since the road leads only to the platform below the entrance.

Our studies and researches have as yet not advanced far enough to give such a monument a date or even to attribute it to a certain people. Nor do we know to what kind of deity it was built. We know only that in this part of Anatolia, the ancient Paphlagonia, it was a custom to worship a mountain itself, or,

1 Cf. R. Leonhard, Paphlagonia (Berlin, 1915), pp. 239-40, where he gives a reference to Strabo (XII, 562), who certifies this custom for this region.
better, "the deity localized therein." Since it is known that mountain deities were venerated in caves,¹ I am inclined to see in this subterranean temple such a worshiping-place.

The surroundings of the Keskin Sivrissi and its dominating appearance suggest that this monument was one of the most important worshiping-places of this whole region at a time perhaps as remote as the second millennium B.C., if not still earlier. But before trying to give any more definite date, much more investigating and exploring must be done. To point out once more the significance of this particular mountain, I wish to add that after leaving Kirik Kaleh for Keskin, we could still see this sivri for nearly three hours as we rode in the automobile; and later, as we came from the north, it was our "lighthouse" for nearly half a day when we were trying to find a road from the Küzül Irmak to Yakhshi Han.

South of Kirik Kaleh there is another, but much smaller, cave, also of a rather interesting type, in the neighborhood of the little village of Ahali. Following the valley which leads from the Keskin Chai valley southward, after passing three small water-mills on the east slope of the valley we noticed on the

¹ Cf. ibid., p. 239, n. 3.
other side a few big rocks, one of which showed a hole. This last, an immense monolith, is situated in a vineyard; in fact the whole valley is covered with vineyards and gardens (Fig. 111).

Over some smaller rocks lying irregularly at one side, some having rough gashes which facilitated climbing, we entered the small cave through a slightly vaulted passage (2.50 meters long, 1 meter wide). The room itself is 6×3.75 meters and 2 meters high, narrowing toward one side, where there is a large depression in the floor. At the opposite side is a very deep window. The window is flanked on the right by a little hearth and on the left at the same height by a protuberance with a hole in the middle leading to the outside of the rock, where a trough leads down to the ground (Fig. 112). On the walls are two small blackened niches for little lamps, besides some small circular holes penetrating about 10–15 centimeters into the rock (Fig. 113).

The depression in the floor was surely once filled with straw or some other soft material to form the bed of the cave-dweller. Four of the small circular holes facing each other at the window and the door we may interpret as having originally held wooden sticks supporting thick wool fabrics or animal skins in order to close those openings. The protuberance with the hole and the connected outlet is possibly an early latrine.

As for the date of this monument, there is not much to be said. It may be the cell of a Byzantine hermit; but it may also be of a much older period, perhaps for a guard. From the window nearly the whole southeastern part of the valley is to be seen.†

† We found a similar cave on the mountain range north of Yerkö (a town south of Yozgad). But there also no sign was visible which might give any information as to a possible date.
THE HÜYÜKS IN THE DELIDJE-KONAK SU, SARAI SU, AND KARAJERLI SU VALLEYS

The Kızıl İrmak rises in the western part of the Armenian mountains, a little more than 38° east of Greenwich, about 70 kilometers south of Karassund, a port on the south coast of the Black Sea. It first flows directly west; then, shortly after passing Sivas, it follows the southeastern slope of the Ak Dagh in a southwesterly direction toward Ürgib, where it turns gradually due north toward Kalejik. Here it changes its direction again to the northeast to Osmanjik, after which it turns sharply to the west again, finally flowing, after another "detour," into the Black Sea along about the same line which it had followed from Kalejik to Osmanjik. This river and its valley have been described so often from different points of view that I will not go into unnecessary detail here, although much more could be said from the geographical point of view concerning this extremely interesting and important river.

Its main tributary is the Delidje Su, whose sources lie somewhere southwest of Ak Dagh Maden, a large town west of the northwestern slope of the Ak Dagh. This river flows nearly parallel to the Kızıl İrmak, turning also sharply northward and emptying near the small village of Kula into the Kızıl İrmak in the middle of the stretch between Kalejik and Osmanjik.

For this investigation only two of the small tributaries of the Delidje Su are important. Nearly all of them except the Karajerli Su are dry during the summer. The Karajerli Su rises only a few kilometers west of the bed of the Kızıl İrmak at the southwestern end of the Ak Dagh, flows toward the west to Karafakeli, then turns northward. A little west of Hadji Shefatli it joins the Delidje Su, which from its beginning to this point is usually called Konak Su. The second tributary with which we have to deal here is the Sarai Su, which rises a little north of Yozgad and empties into the Delidje Su west of Yerköi.

The Delidje Su basin includes most of the region bounded on the south and west by the mountains which outline the right bank of the Kızıl İrmak, on the north by mountain chains which separate it from the Yeshil İrmak basin, and finally on the east by the Ak Dagh complex near Ak Dagh Maden. This region, with the southern part of the Yeshil İrmak basin, was the very heart of the great Hittite Empire of the second millennium B.C. It is a mountain land, irregularly divided, but nevertheless rich in fertile valleys and elevated plains, although practically devoid of trees. Only in the north are there "woods"—small, weakly shrubs rather than trees (cf. Fig. 30). In the fertile
valleys near springs or streams there are of course trees, and on the mountain slope facing Yozgad on the east there is also a real pine wood of considerable extent (Fig. 114). But apart from these the mountains spring up bare and rocky out of the gently undulating plains, often forming picturesque, deep-cut valleys. Another type of landscape here is the steppe, wrongly called desert. One steppe, lying south of the Delidje Su, is called Malya Chöülü; the other lies west of the Küztılı Irmak. But both are regions with which we have not to deal here.

During the expedition we investigated this territory twice. First, we came by ourselves from Keskin and followed the Delidje Su as far as the Yerköi
railway station, there turning to the north and following the Sarai Su to Yozgad. From there we made an excursion to Terzili, near the Delidje, or Konak, Su, as it is called in this part, following it to the sivri near Alishar.

The second time, traveling with Dr. E. Forrer, of the University of Berlin, and Professor Weigand, of the University of Würzburg, we reached the Delidje Su from the south on our way from Kirshehir. After renewed investigations in the neighborhood of Yerköi we started again alone, following the Delidje Su to the sivri of Alishar and then, later on, following the Karajerli Su from Hadji Shefatli to Karafakeli.

From Keskin we followed eastward a road which reached the Aghach Dere not far from Aivalü. Through the Aghach Dere flows a tributary of the Delidje Su called Kilinj Özü. Ten kilometers east of Keskin, about 1 kilometer south of the road, is the Aga Dede, a Mohammedan holy place, where I collected a number of pottery fragments of an uncertain period (Figs. 115 and 116). In a fertile valley not far from it, near the village of Kurgali, a large huyuk could be seen (Fig. 117). Eighteen kilometers farther there were two more near the village of Kochakli (Fig. 118).

Near Ughur Kaleh we reached the post road from Angora to Köprü Köi and Yozgad, after passing Aivalü (Fig. 119), a huyuk discovered and described by E. Chantre. The landscape has a sad and sinister aspect. Bare mountains and dry grass steppes alternate with salt steppes. The coloring is marvelous (Fig. 120). Like the mountains on the west bank of the Kuzul Irmak on the road from Angora to Yakhshi Han, these too show violet, blue, red, and greenish-yellow strata of clay and limestone, the typical sedimentary formation. The steppes were covered with dry yellowish or grayish grass. In some places the salt excrescence appeared like snow. There were no human beings or traces which might prove their having been here; only a few big eagles, not disturbed by our passing through in our automobile, sometimes remained so close that we could easily have thrown a stone at them. This landscape changes little even

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1 E. Chantre, Mission en Cappadoce.
after reaching the Delidje Su valley itself; the same aridity continues (Fig. 121).

At Sekili Köprü, near which are remains of a Seljuk han, we crossed the river, which here flows slowly through a girdle of marshes varying in width. To the north the mountains slope gradually upward toward the high mountain range behind which lies Boghaz Köi, near which village are the remains of the probable capital of the Hittite Empire. This undulating slope is divided by many valleys leading to the north, in each a dry river bed. After crossing the last side valley before reaching the Sarai Su, the valley widens and gradually the dryness gives way. First near the river bed, then enlarging more and more until they occupy the whole valley, appear grain fields; but at only one place, near the Hadji Bey çiftlik ("farm"), appear also a few trees, long to be seen as black spots. Near this place we saw also the first hûyûk in this region (Fig. 122).

Two kilometers farther, on the north side of the river, is a second hûyûk (Fig. 123), directly north of the railroad station of Yerköi south of the river. In this place R. Kiepert in his map locates an Armenian village, Tozde Köi,
which no longer exists.¹ The surface is covered with mostly classical and later pottery fragments, but this does not by any means imply that there is not a "Hittite" settlement beneath the classical stratum. About 3 kilo-

meters southwest of this point, on the other side of the river, is a big hūyūk near Mejidiyeh (Boyalik). Boyalik is situated on the slope leading upward to the high mountain range which divides the steppe of the Malya Chōlū from the Delidje Su valley. Not far from the hūyūk near Yerköi, and a little

¹ R. Kiepert, Karte von Kleinasien, Blatt Jozgad.
north of the present river bed, are the remains of a Roman bridge (Fig. 124) over which probably passed the road to Tavium, the modern Büyük Nefez Köi. Of the ancient road itself we found no trace here.

The modern post road to Yozgad bends here sharply to the east and enters the Sarai Su valley about 500 meters west of Asha Elma Hajilar. Near the end of this valley is situated Yozgad (Bozuk), the seat of a vali, with a fine Osmanli mosque (Fig. 125). North of Yozgad, among the remains of an ancient settlement on the Kızıl Tepe, I collected only pottery of a rather late type (Roman and Byzantine). Following downstream about 18 kilometers toward the Delidje Su, shortly before the village of Sarai, but on the west side of the river, appears a rock formation containing caves (Fig. 126). The caves are very roughly cut in the rock. Around them are a great quantity of pottery fragments. Besides classical specimens, I collected also pieces with the polished red slip.

Fourteen kilometers farther to the south, near the point where the road turns sharply westward, is situated the village of Asha Elma Hajilar. There the Sarai Su forces its way through a mountain range, entering it through a remarkable gorge. On both sides of the river the cliffs rise abruptly some twenty meters or more. On the mountains west of the river are the remains of a large ancient settlement. Foundations are still to be recognized, and quantities of pottery of many types cover the top. The nearby Mohammedan cemetery shows all kinds of architectural fragments, most of them of Roman and Byzantine provenience. In the village itself are still more. Two of them were especially interesting to me, both of grayish basalt: the first, a cylindrical stone 80 centimeters high, slightly expanded at the bottom, the bottom border itself being rounded, and with a bowl-shaped depression at the top; the second piece, a large stone slab 30 centimeters thick, forming a half-circle about 2 meters in diameter, with some engraved lines.

From Asha Elma Hajilar on, the narrow Sarai Su valley is simply a great garden with all kinds of fruit trees and vineyards, until it reaches the Delidje
FIG. 122.—LOCATION OF HÜYÜKS IN CENTRAL PART OF DELIDJE SU VALLEY. SCALE, 1:580,000.
Su near Yerköï. Perhaps 4 kilometers west of Yerköï, at the foot of the mountain range through which the Sarai Su breaks at Asha Elma Hajilar, is a hot spring, Üyüz Hammam. In the middle of the pool is a lion head of the Seljuk period, from whose mouth flows the hot water.

The mountain here forms a terrace before descending to the actual valley. This whole terrace is covered by an enormous quantity of pottery fragments of classical or post-classical periods (Fig. 127), but I feel sure that under this stratum is also an ancient settlement. It is interesting to note that this site does not have the typical huyuk formation; that is, it is not a mound which by its form and color one is able to identify immediately as artificial. To me it is clear why this settlement did not form such a huyuk. I think the different strata have, little by little, simply filled up the terrace (Fig. 128).

Not far from this hammam, but on the south side of the river, is a second
one, called Bulumashlı (Fig. 129). The road which leads to it crosses the Delidje Su near the railroad bridge. There a valley leads through the mountains separating the Delidje Su valley from the chôl ("desert"). In fact, Bulumashlı is in that territory. It is a hillock approximately 250 meters long, with two elevations. At the northeast end is the Turkish hammam (Fig. 130). At the southwest end traces of wall foundations are to be seen, as also on the second elevation. Classical and Byzantine pottery fragments cover the hûyûk. Between the two elevations I found several fragments of pottery with red slip.

Most remarkable is an embankment leading at nearly a right angle from the second elevation to the south. It is paved and at its top about 4.50–5 meters wide. It leads some 800 meters in a straight line southwest, then turns westward and stops (Fig. 131). I do not think that it is a Roman road, as it is too wide, and moreover there was no continuation at either side. Up to now, I am not able even to suggest any explanation for it.

About 200 meters from the hill, directly beside this embankment, is a stone heap. It is a Mohammedan holy place, as is to be seen by the little pieces of
clothing tied around the stones. At the same spot lies also the lower part of a huge stone eagle, showing the base, its feet, and a part of the wings and body (Figs. 132–34). There is also a smaller fragment, showing part of the breast and wings. The larger fragment is 1.50 meters high, and it very much resembles three pieces of about the same dimensions which I saw at Öküzli Hissar, the ancient Tyana.

A little west of Yerköiu the valley of the Delidje Su narrows again, gradually forming a gorge. Four kilometers southeast of Yerköiu is a small hüyük at Hüyük Köl (Fig. 135). It consists of a rocky hill, overlain by several strata of culture deposits which prove that it was occupied by ancient settlements. The road to Hadji Shefatli leaves the valley at Stambulolu, 8 kilometers farther on, and ascends the steep south slope to the plateau, which slopes gently toward the south, then slowly ascends again. Shortly after climbing the steep slope from Stambulolu, we saw about 500 meters southeast of Akche Koyun a hüyük about 10 meters high and 180×185 meters in area. The hüyük itself and the surrounding fields are covered with all kinds of pottery fragments, among them that with red slip and specimens of painted ware.

Near the point where the Karajerli Su joins the Konak Su, perhaps 1 kilometer west of Hadji Shefatli, is a very large hüyük in the middle of the valley of the Konak Su (Fig. 136). It was originally a natural rocky hill about 30–35

1 Cf. p. 69.
2 Small statuettes from Kül Tepe, in the possession of Miss Isabel F. Dodd, in Constantinople, show the same design and treatment of the wings and tail.
meters high, but on its plateau are remains of walls of probably Roman period, and pottery is scattered over the whole hüyük. Red-slipped pottery proved that there had been also a “Hittite” settlement here. This hüyük is situated at a point very important strategically, as from its top one can see far to the south into the Karajerli Su valley, and eastward even farther, up the Konak Su valley.

Following the Konak Su eastward we found a small hüyük near a mill about 10 kilometers east of Hadji Shefatli. Natives of whom I inquired told me that it was called Chakmak Hüyük. Not far away from the town of Pasha Köi is another hüyük, on the south side of the river. At this point the road leaves the actual valley. After crossing the Yozgad-Kaisariyeh road it ascends to a mountain plateau which slopes southward into the here wide and fertile valley of the Konak Su. On this plateau, 1.50–2 kilometers east of Sari Ören, is
another hūyk, which is about 8 meters high and 95–100 meters in width and length (Fig. 137). The red-slipped and painted pottery appears very frequently, and also a black kind with surface polished in the same manner as the red-slipped pottery. This kind of pottery I found on nearly all the hūyukas of the eastern part of the Konak Su and also on those in the valley of the Karajerli Su.

From the hūyk near Sari Ören the road turns to the north and descends toward Dedik in the Konak Su valley. Dedik itself is situated around a hūyk (Fig. 138) where also are to be found the previously described types of pottery.¹ Perhaps 2 kilometers northeast of it, near Jamarli, is a very large hūyk 18 meters high and 210–220 meters in width and length (Figs. 139 and 140). There I collected the three kinds of “Hittite” pottery, besides a few plain pieces which seemed to be of an early period. By the Konak Su eastward, about 2.5 kilometers from Dedik, is situated Orta Hūyk, which E. Chantre had excavated (cf. Fig. 138).² Its dimensions are: height, 10–11 meters; diameter, 120–130 meters. There also “Hittite” pottery was collected. Two kilometers farther east was a smaller hūyk where “Hittite” pottery appeared on the surface (Fig. 141; cf. Fig. 138).

From the moment when the valley opened eastward after the defile of the Konak Su between Pasha Kōi and Dedik, the imposing form of the sıvıri near

¹ E. Chantre, who investigated this region, mentions the presence of seven tumuli around Dedik (Mission en Cappadoce).
² E. Chantre, op. cit., p. 65.
Alishar was to be seen (Fig. 142). North of Alishar we found a most exceptional hıyyık (Fig. 143). It consisted of an oval terrace with five small elevations around it and a depression on one side leading to its center, from which emerges an elevation about 20 meters high (Figs. 144 and 145). The whole is surrounded by a broad marshy strip which was once probably water. Over this extraordinary hıyyık great quantities of painted pottery are scattered. I did not observe any more hıyyıks in this valley, although I am convinced that there, as well as in the fertile plain sloping gently upward to the north, many more exist.

The hıyyıks which we saw in the Karajerli Su valley from north to south remain to be enumerated and described. South of the point where the Karajerli Su joins the Konak Su, and not far from Temlik, in a small lateral valley entering from the west, is a large hıyyık about 16 meters high and 200–250 meters in diameter, covered with red- and black-slipped and painted pottery (Fig. 146). On the mountain bounding this valley to the northeast, nearly opposite the hıyyık itself, is a nearly circular “arena” formed by an earth wall measuring at
FIG. 136.—The Hûyük Just West of Hadji Shefatli

FIG. 137.—The Hûyük near Sari Ören

FIG. 138.—Three Hûyüks near Dediêk
the base about 8 meters and in height 2.5–3 meters (Fig. 147). The ground so inclosed is 1.50–2 meters deeper than the actual surface of the plateau. The diameter of this arena is about 160–200 meters. In its center is a small elevation about 6 meters in diameter and about 1–1.50 meters in height. At the south side of the surrounding earth wall is a small tumulus (Fig. 148). Not far from the small elevation in the center is a shaft now filled with earth and all kinds of pottery. The natives of Temlik say that this is the entrance to a subterranean passage communicating with the Temlik huyuk.

It is very possible that this arena was a great camp for troops, which could of course not stay in the city whose remains we must suppose to be in the huyuk. It may be that the huyuk was a royal residence. The small tumulus on the south side speaks also for the military character of the arena. I am inclined to see in it a signal station belonging to a great system covering the main part and communication roads of Cappadocia.
FIG. 141.—The Easternmost Hūyük near Dedik

FIG. 142.—The Sivri near Alıshar, seen from the terrace of the Alıshar Hūyük.

FIG. 143.—The Alıshar Hūyük. Its terrace extends as far as the lines marked.
Not far away from Temlik, but on the east side of the river, at Tachirolu, is another hūyûk. Seven kilometers farther to the south, in a lateral valley east of the river near Kuzaji is a small hūyûk, and 10 kilometers farther east in the same lateral valley is a larger one. Farther to the south, in the valley of the Karajerli Su, about halfway between Bash Kōi and Karasenir, is a large hūyûk.

Four kilometers southwest of Kandlija, on the west side of the Karajerli Su, is a small hūyûk about 8 meters high, 100 meters long, and 80 meters wide, which has been partly destroyed in order to furnish material for the construction of the railroad embankment which passes very near this spot. Through the kindness of the Turkish section engineers and the Austrian engineers who are in charge of building this part of the roadbed I had opportunity to investigate the hūyûk and even to dig there for one day with six workmen whom they courteously placed at my disposal. The hūyûk is of course nearly destroyed, and the only thing that I could do in so short a time was to have a few cross-sections made in order to discover how many and how thick the different strata were (Fig. 149).

In the middle of the hūyûk, going nearly through all the strata, are stone foundations. The different strata themselves looked very similar. They each consisted in general, beginning at the bottom, of hard, yellowish earth; then different layers of ashes containing pottery and bones, both human and animal;
then mostly a greasy, gray claylike deposit. Then another layer of yellowish earth would mark the beginning of another stratum. Often, of course, we struck

remains of burnt wood. I could distinguish five strata, as follows, beginning with the uppermost:

I. The first stratum, 70–72 centimeters thick (20 centimeters humus), contained unglazed, sometimes very rough, pottery and a few pieces of *terra sigillata*.

II. The second stratum, 100–110 centimeters thick (37–50 centimeters total of different layers of ashes), contained slag of copper, along with unglazed pottery as in the first stratum, but no *terra sigillata*.

III. The third stratum, 90–125 centimeters thick (50–125 centimeters ashes), contained the same sorts of objects as the second stratum.

IV. The fourth stratum, 105–162 centimeters thick (70–80 centimeters
ashes), contained painted as well as plain pottery. In one place we struck the remains of a wall of sun-dried brick (called here kerpich). The faces of the bricks were 6×13 centimeters; between them were layers of 2–5 centimeters of yellowish earth.

V. The fifth stratum seemed to rest on the original surface of the valley. It contained thick layers of ashes, painted pottery, and pottery with red and with black slip. In this stratum a burial had been found in a stone cist with very primitive pottery and a bronze bracelet (Fig. 150). We could not discover what had been the posture of the body.

Further investigation of the upper strata would have been fruitless on account of their advanced stage of destruction; and excavation in the fifth, nearly untouched, stratum could not be made, as it forms the foundation of the roadbed.

About 6 kilometers east of this hūyūk, in a side valley near Saush, stands a small hūyūk. A few kilometers southeast, in the valley of the Karajerli Su
itself, is another one. At Karafakeli we saw two huyïks, one large and one small. A small hill, uninvestigated by us, at the north entrance of the town may be a small huyïk or a very large tumulus (Fig. 151). About 1 or 2 kilometers southwest of Karafakeli is another huyïk. Two or three kilometers farther, near the railroad track and near Eski Ören, is a medium-sized one. Halfway between Almalı and Düvel Köi, in the very middle of the high plateau between the Karajeri Su and the Kütül Irmak valleys, is a huyïk about 15 meters high and 150–180 meters wide (Fig. 152). Fragments of painted pottery and of pottery with red and with black slip are scattered all over the ground.

At this moment it is not possible to say anything more precise or detailed concerning these huyïks. Perhaps the historians working on the cuneiform
texts from Boghaz Köi will bring out some suggestion as to the identity of one or another of them with a city or town named in these inscriptions; but nothing definite can be said about them until at least a few have been opened.

It is by no means to be hoped that remains of cities will be found in all of these huyüks. It is more than probable that many of them were merely small towns or villages. But it is very important that one or more should be excavated systematically in order to get at least a reliable relative chronology for the different kinds of pottery and to furnish us, in the meantime, with archaeological material illustrating the "Hittite" culture in this region, which material has until now been utterly lacking.¹

¹ The excavations conducted by E. Chantre at Orta Hüyük near Dedik seem not to have been recorded systematically; and the results of Professor F. Hrozny's excavations at the Kül Tepe northeast of Kaisriyeh have not yet been completely published.
HÜÜÜK, BOGHAZ KÖI, AND YAZILI KAYA

In the course of our expedition we visited Huyiik twice, the first time coming from Yozgad via Aladja on our way to Boghaz Kōi, where we stayed several days to study the monuments of Yazili Kaya and to trace an ancient road southward. The second time, coming from Chorum on our way to Angora, we stayed at Huyiik two days to investigate the Kara Hissar, a mountain not far away from it, and the tumuli in the neighborhood (Figs. 153 and 154).

Huyiik, like Boghaz Kōi and Yazili Kaya, is among the “Hittite” sites in Asia Minor which have been longest known, and the sculptures from there have often been published; but unfortunately no complete publication is yet available. It has also been partly excavated by Th. Macridy Bey, and it is to be hoped that the results will soon be in print, as they will surely throw light on many interesting problems.¹

One of the famous sphinxes there has been thrown over and now lies broken on the ground (Figs. 155–57). The reliefs have been carried to a place outside the village and are exposed to rain and wind or the fancy of the native children (Figs. 158–62). Three smaller pieces have been taken to Boghaz Kōi, where they are lying in the courtyard of the old expedition house; others have gone to Angora (cf. Fig. 11). It is probable, and is earnestly to be hoped, that all these sculptures will soon be placed in the new museum at Angora.

Among the many interesting finds at Huyiik are Phrygian inscriptions, two on single stone slabs, one on the body of a huge, seemingly unfinished stone lion (Plate VII), and one on the back of a sculptured dado slab. During our second stay at Huyiik we investigated the top of the Kara Hissar, where we saw a two-line Phrygian inscription on an altar cut in the living rock.²

The bare, isolated, double-peaked rock of the Kara Hissar, called also Kaleh Hissar, is situated northwest of Aladja, 5 kilometers north of Huyiik (Fig. 163). It consists of grayish porphyry, and the material used for the sculpt-


² On the site see Humann and Puchstein, op. cit., p. 82, and Anderson in Studia Pontica, I, 21. The inscription is referred to by E. Huntington in Zeitschrift für Ethnologie, XXXIII (1901), 205, and by W. Belck, ibid., Verhandlungen, p. 476.
tures at Hüyük comes from there. A huge rectangular block still lies not far from the place where it was quarried. The rock rises about 150 meters out of a little plain surrounded by high hills. It is nearly conical, the slopes being here and there as smooth as though polished (Fig. 164). At its base are the ruins of three buildings of probably Seljuk origin (Fig. 165), and on the saddle between the two peaks are remains of walls of the late classical period. In the references will be found a few notes concerning them, but I will not deal here with these remains.

One peak, which is broader and lower than the other, is in part artificially flattened (Fig. 166). On it I found the remains of the Phrygian altar (Figs. 167-70). It consists of a large stone bench with a high back surmounted by the remains of two crouching lions, all cut out of the native rock (Plate VIII). At one side a path cut in the rock leads from the flattened summit of the peak, and down the slope are to be seen a few groups of three or four steps much worn and badly preserved. On the other side of the bench is the real altar, likewise cut out of the native rock. It consists of three narrow steps with risers slanting backward like saw teeth. The two-line Phrygian inscription is cut on the riser of the top step. Its tread forms a leveled space, from which in turn rises a small platform from the center front of which a large rectangular section has been removed. At each side of the recess an armlike projection extends downward and across the leveled space below. At the back of the platform is cut a “stela.” The whole is of course very much weathered and covered with lichens. Lack of time made it impossible for me to clean and copy the inscription. To make a squeeze would have necessitated special preparations, as the water has to be carried to the top—a difficult task. Similar altars are known in Phrygia proper and have been described frequently.1

On the mountains surrounding the southern edge of the plain in which Kara

1 E. Brandenburg in Abhandlungen der historischen Klasse der K. Bayerischen Akademie der Wissenschaften, XXIII (1906), 694-98.
Hissar stands are four large tumuli and one smaller, unfinished one (Fig. 171; cf. Fig. 153). They are probably burial mounds (Fig. 172). At each end of this chain of tumuli were two more smaller but broader ones. From the fifth tumulus, the one at the east end, I could see another at the entrance of the gorge leading from Chorum to Aladja; another farther north, situated on the summit of the mountains of the same valley where the road turns in coming from Chorum southward; and finally a third one, on an outstanding mountain south of Hüyük. From the broad tumulus at the west end one could see about four other tumuli toward the northwest and west, besides the one south of Hüyük. There is no doubt that these tumuli, in contrast with the five first mentioned, belong to the signal system which covered the greater part of Cappadocia. Along the valley of the eastern part of the Delidje Su, on the height of the slope as well as on outstanding mountains of the region north and south of this river, such rather flat tumuli were visible. And always one could see from each of them at least two or three of the same size and one larger one on an outstanding mountain. Furthermore, especially along the Delidje Su, they are arranged in such a way that they cover the whole valley, although it winds sometimes in very pronounced curves. It does not seem very likely that all these tumuli, dispersed over such a large territory and situated far away from one another in places often very far from ancient settlements, could be burial mounds. Tumuli which are burial mounds are mostly arranged in groups, as at Gordium, Angora, Samsun, and Hüyük. Furthermore, burial tumuli are proportionally higher and have a smaller base than most of the tumuli dispersed with such seeming irregularity over Cappadocia. The only reasonable explanation, therefore, for

1 The ones described at the beginning of this paragraph.
this type of tumuli is to suppose them to be posts of a signal system of the great Hittite Empire, required as a part of the highly developed military organization by which the rulers of that empire maintained their supremacy.

Boghaz Kôi is situated 28 kilometers southeast of Hüyük at the south end of the broad and fertile valley of the Budak Özu Chai (Fig. 173). The ancient city occupies a mountain slope bounded on two sides by gorges in which flow two small streams that unite near the modern town. The excellent natural situation is reinforced by very carefully planned walls which form a highly developed system of defense. Boghaz Kôi also has been partly excavated. The publication of the architectural remains, including the fortifications, appeared as early as 1912; a second volume, dealing with the smaller objects and ceramics, will appear soon. The main find consisted of cuneiform tablets from the state
archives of the Hittite Empire.\textsuperscript{1} Fragments of such tablets can still be found there, especially among the east chambers of the lower palace and at the foot of the Büyük Kaleh.

In badly weathered cases lying in the courtyard of the expedition house are a few large water vessels and the warrior relief from the “king’s gate,” besides three reliefs from Hûyük waiting to be taken to the museum at Angora.

Natives told me that in the spring traces of an ancient road leading toward Yûkbash and from there toward Hûyük are recognizable by the different coloring and height of the grass in the pastures. From the same people I heard also

\textsuperscript{1}See on the architecture Boghazköy, die Bauwerke, von O. Puchstein, unter Mitwirkung von H. Kohl und D. Krencker (Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft, No. 19). The tablets are now being published by the Vorderasiatische Abteilung der Staatlichen Museen zu Berlin under the title Keilschrifturkunden aus Boghazköy (1921—), continuing Nos. 30 (1916) and 36 (1921) of the before-named D. O.-G. series, in which also two volumes, Nos. 41–42 (1922–26), appeared in transcription. The hieroglyphic inscription at Boghaz Koi is well published by Benson B. Charles, “Hittite Inscriptions,” Travels and Studies in the Nearer East, Vol. 1, Part II (Ithaca, N.Y., 1911), Plate 3 and pp. 7–10.
of another ancient road leading to the south toward Büyük Nefez Köi, the ancient Tavium.\footnote{For the identification, see Studia Pontica, I, 19.}

From Boghaz Köi the deeply incised, narrow valley limiting to the west the plateau on which the ancient city is situated leads upward toward the mountain slope south of the modern village. About 1 kilometer from the town one sees the remains of a small group of ancient buildings so destroyed that their plan could not possibly be rec-

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{fig157.png}
\caption{HÜYÜK. THE FALLEN SPHINX}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{fig158.png}
\caption{HÜYÜK. BAS-RELIEFS}
\end{figure}
ognized without digging; but the great number of partly worked stones proves that there have been buildings, or at least a post, guarding the en-

Fig. 159.—HÜYÜK. BAS-RELIEF

Fig. 160.—HÜYÜK. BAS-RELIEFS
trance to the valley (Fig. 174). The ascent is very steep and difficult until one reaches a terrace-like formation where a small village is situated. Here one sees for the first time the traces of a great ancient road paved with rather large, irregular stones between borders of huge, nearly rectangular ones. From the terrace the modern road in many curves again ascends the steep slope, intersecting about three or four times the ancient one, which has been partly washed away by torrents. Before the road reaches the watershed there is another terrace-like formation, covered with fresh green grass and such shrubs as clothe the slope. After passing the first terrace, scattered trees also appear (Figs. 175 and 176). On the second terrace the ancient road is fairly well preserved. Measurements taken here show an average width of about 6 meters. There are also the remains of another ancient building.
The mountain slopes gently upward now until the road reaches the watershed, the actual summit of the mountain chain, which consists of several parallel ridges (Fig. 177). Their crests are more or less covered with shrubs, the slopes and valleys between them being bare except for patches of steppe grass. An interesting feature is that at every point where the ancient road reaches the crest of such a ridge there appear the remains of ancient buildings, consisting mostly of small elevations covered with stones, some of which show human handiwork, and with a special kind of bushy grass which appears in no other places (Figs. 178 and 179). The road then starts to descend southward. Though this south slope is not as steep as the north one, it is more torn and irregularly divided. In addition, the sides of the torrent valleys, dry now and containing water during winter and spring only, are bare and sandy.

Near the rather large village of Tambassan this landscape changes to a more gently undulating slope covered with grass and in the valleys even showing small groups of trees. A special feature of this slope is its series of steplike formations. Near the edge of each terrace, judging from two instances which I observed (Figs. 180 and 181), remains of buildings are again to be seen near the ancient road. On the second "step" from Tambassan, before the modern road
descends toward Bajili, the ancient road forks. The main road seems to follow the valley leading toward Bajili; the branch stays at the height of the terrace for about 3½ kilometers more, then follows another valley southward to Büyük Nefez Köl. This last part of the ancient road is very badly preserved, and the road itself in the preserved places is narrower than before. Probably the main road follows the valley toward Bajili and then swings around the end of the mountains toward the west, where it also probably reaches Nefez Köl. Beside the branch, just before it descends into the valley, were again to be seen the remains of a building. This time the foundations were still recognizable. They consisted of irregular stones carefully put together without mortar (cf. Fig. 181).

Near Nefez Köl are two isolated natural hills with the remains of a great ancient settlement (Figs. 182 and 183). This is generally believed to be the
Roman Tavium. Over the two hills and especially in the modern town and its cemetery are scattered a great number of architectural remains of this period (Plate IX), such as fragments of columns, very well sculptured architraves, and inscriptions, while the surface of the hills is covered with a great quantity of pottery, mostly *terra sigillata*. On one spot between the two hills I collected also a few pieces of pottery with red slip. On the summit of the mountain behind Nefez Köi are two *tumuli* from which one has a splendid view, especially eastward over the mountain system east of the valley. Far in the dim distance are visible the two *tumuli* situated on the Koch Tashak. On the other side of the valley, facing these *tumuli*, are one or two more.

Looking northward one can see also the *tumulus* south of Tambassan on an elevation not far from the point where the road forks. A little southwest of Nefez Köi, shortly before Altükara, are the remains of a rather large classical building (Fig. 184). On the way back I followed from Nefez Köi a small gorge leading up the slope east of the ancient road, which I reached after climbing the summit of this terrace. In this gorge I noticed three small rectangular caves so arranged that each could always be seen from the next one. Since on the
slope of the mountain behind Nefez Köı there are a great number of such caves, more or less irregular in shape and of uncertain period, I do not know whether any special significance attaches to them or not.

We know that a Roman road is supposed to have led northward from Tavium. The before-described road is quite certainly to be identified with it; but, considering its unusual width, it is probably to be considered an ancient "Hittite" road leading southward to the valley of the Delidje Su, still used in classical times. An attempt to find the continuation of it southward, which I made together with Dr. Forrer and Professor Weigand, entering the valley from the south as we were coming from Yerköı to Yamuklar and Hattibin Köı, failed unfortunately since we had not enough time at our disposal to investigate carefully the whole valley, which is very difficult to survey.

Over the mountains which shut in the valley of the Budak Özü Chai northeast of Boghaz Köı are scattered a number of rock exposures (Fig. 185). One of them (Fig. 186), situated at the foot of the ridge about 2 kilometers northeast of Boghaz Köı, is the famous Yazili Kaya ("inscribed stone"). The limestone forms two natural courtyards, which are decorated with bas-reliefs cut in the living rock (Plate X). These have been known for a long time and have been published, but mostly in an unsatisfactory way. The representations have
EXPLORATIONS IN CENTRAL ANATOLIA

FIG. 167.—KARA HISAR. THE PHRYGIAN ALTAR

FIG. 168.—KARA HISAR. THE PHRYGIAN ALTAR
been subject to many interpretations and descriptions. Casts have been taken of some of the sculptures.²


² Humann (cf. op. cit.) took eleven casts of figures from there, corresponding to Nos. 29, 30, 35, 37, 38, 39, 43–47, the hieroglyphic signs before Nos. 48 and 49, the cartouche and head of No. 65, a group of warriors from the bas-relief in the small courtyard (Nos. 68–79), Nos. 81 and 82.
Altogether there are at Yazili Kaya representations of eighty-two figures (Fig. 187). The first thirteen figures, twelve of them running men, each with high conical headdress and short skirt, and one with a conical headdress but a long robe, are very much worn (Plate XI A). Of the following three (Nos. 14–16), No. 14 has almost completely disappeared (Plate XI B), like the first two figures of the next group (Nos. 17–25, Plate XII A). Of the group numbered 26–34, Nos. 29 and 30 are especially interesting. They show two smaller figures with horns, standing on some object and holding above their heads a crescent-shaped object (Plate XII B). The group 35–40 shows six different types of figures. First comes a personage in a long robe and a round cap, as in No. 65, but with a winged disk above the head. Then follow a winged figure with a short skirt, two figures with long, flowing robes, a second winged figure with conical headdress and long garment, and finally a figure with short skirt, conical headdress, and a club held in one hand (Plates XIII and XIV A).
HÜYÜK, BOGHAZ KÖI, AND YAZILI KAYA

FIG. 173.—BOGHAZ KÖI

FIG. 174.—RUINS SOUTH OF BOGHAZ KÖI
FIG. 175.—THE ANCIENT ROAD SOUTH OF BOGHAZ KÖI. THE TUFTS OF VEGETATION IN FOREGROUND ARE PECULIAR TO ANCIENT RUINS.

FIG. 176.—THE ANCIENT ROAD AGAIN
FIG. 177.—Mountain ridges crossed by the ancient road

FIG. 178.—Ruin mounds (at left and at right) along the ancient road. The road itself comes into view at the right.

FIG. 179.—A wrought stone from beside the ancient road
The whole representation in the great court seems to show two processions meeting in the large central relief. This consists of seven figures (Nos. 41–47) three belonging to the group coming from the west side, the remaining four belonging to the group coming from the east (Plates XIV B and XV). The western procession is headed by a large figure of a god with conical cap, who
FIG. 182.—One of Two Natural Hills near Büyük Nefez Köi

FIG. 183.—The Other Natural Hill near Büyük Nefez Köi

FIG. 184.—An Architrave Fragment near Altükaha
stands on the bowed backs of two smaller figures wearing the same headdress as the two figures Nos. 17 and 18. Seemingly represented as standing beside him appears the front part of a jumping animal which also wears a conical headdress. The left hand of the god is extended toward a goddess approaching from the east, who stands on the back of a lion or panther. She wears a cylindrical hat and a long, flowing garment. In her outstretched hand she, like the god, holds a symbol; and beside her also appears the front part of an animal with conical headdress. Behind her stands a smaller figure of a god with conical headdress and short skirt. He too stands on a panther or lion, while another symbol appears before him. The last two figures, with cylindrical headdresses
and long, flowing robes, are standing on a double-headed eagle. The remaining figures of the eastern procession (Nos. 48–64, Plate XVI), are all more or less alike, with the exception of No. 56, whose robe seems to be draped in another fashion (Plate XVI A, at right). Before Nos. 48 and 49 appear a few signs of hieroglyphic writing. No. 65 is a single relief showing a figure in long garment and round cap standing on two mountains, represented in the same conventional way as on seals (Plate XVII). Over his outstretched hand appears a "cartouche" similar to relief No. 80 in the small courtyard.

Two reliefs, one on each side (Nos. 66 and 67), flank a rift (Plate XVIII A) leading back to a narrow inner court. Both show human figures with animal heads (Plates XVIII B and XIX A).

The inner court, also called the sanctuary, has four groups of sculptures, one (Nos. 68–79) showing the same motive as the group Nos. 1–12, but much better executed (Plates XIX B and XX). On the other side is a relief (No. 80, Plate XXI) showing a "cartouche" similar to that which forms part of No. 65. The last two reliefs (Nos. 81–82) are especially interesting (Plate XXII). First comes the so-called "sword idol." It consists of four symmetrically arranged lions, over them a human head with conical cap. The ensemble forms a "handle" from which a sword blade extends downward. The final relief (No. 82) shows a huge figure with short skirt and conical headdress. He holds in his arms a smaller figure dressed like No. 65. Behind his head appears a "cartouche," but this time not with a figure in its center but with an oval object. In this inner court are also three rather crudely executed niches.

The whole monument is of an extraordinary kind. Its interpretation is still one of the many unsolved problems of "Hittite" archaeology.
A CLIFF TOMB NEAR OSMANJIK

Osmanjik is a large town situated on the bank of the Kızılırmak about 200 kilometers northeast of Angora. At this spot the Kızılırmak changes its northeasterly direction, turning at a sharp angle to the northwest. The valley itself is here wide and fertile. The town is situated at the foot of a steep cliff which bears the remains of a big Seljuk castle probably rebuilt on the remains of a Byzantine one (Fig. 188). A few irregular cave entrances are to be seen on the face of this cliff. In the town itself are various remains of the Seljuk period, among them a mosque, some inscriptions, and, in the cemetery, a marble slab showing a conventionalized peacock and palm tree and a short inscription in Arabic characters (Plate XXIII A). East of the town, emerging from the level of the valley, are a few high cliffs of picturesque aspect.

In the cliff rising south of the main road, about 1 kilometer east of the town, is a tomb situated about 12 meters up the nearly vertical face of the rock. An incised path about 60 centimeters deep, very irregularly cut, leads to it, ascending at an angle of about 29 degrees (Fig. 189). Another such path, running parallel to the first, appears about 2 meters under it, passing below the tomb and leading toward the summit of the cliff.

The tomb itself consists of a large anteroom connected by a narrow entrance with a small chamber (Fig. 190). The anteroom (5×3 meters) is supported by a pillar so nearly destroyed that it appears very crudely and carelessly worked in contrast to the even and sharply angled room itself. The small passage leading to the second room is only 1.30 meters high and .95 meter wide. The inner room (4×2.5 meters) has at its back wall a stone bench 2 meters long, 1 meter wide, and 1 meter high from the floor. There are no other traces of human
A CLIFF TOMB NEAR OSMANJIK

FIG. 189.—CLIFF TOMB NEAR OSMANJIK

FIG. 190.—CLIFF TOMB NEAR OSMANJIK. PLAN AND SECTION
handiwork in this tomb. The whole monument is rather plain and does not show any particularly interesting features.

The situation of Osmanjik is a very important one, as it is at the junction of the great road leading from Merzivan to Kastamuni and the road coming northward from Chorum. The road leading to the east enters a defile not far from Osmanjik and follows the valley of a small tributary of the Küzül Irmak. This narrows more and more until it becomes a real gorge, opening then again slowly to the east toward the fertile plain in which Hadji Köi and Merzivan are situated. Along this road I observed five small rectangular caves about halfway up the slope of the valley or gorge at more or less strategical points. That means they are situated in places from which a large part of the road in each direction would be visible. It is not yet possible to attribute them to any particular culture or even to define their meaning with certainty; but their situation in such places as just described suggests observation posts for controlling the road connecting the settlement (important even in ancient times) at or near Osmanjik with the settlements in the plain of Merzivan.
THE KALEHS WITH TUNNELS

Twenty kilometers south of Chorum the Chorum Chai, leaving the fertile plain on the northeastern corner of which Chorum is situated, enters a narrow valley between the mountain chains of the Kara Dagh and the Saruluk Dagh. The entrance is a defile between two tower-like rocks emerging from the general line of the valley slope on each side (Fig. 191). One of these natural towers, the one on the north bank, has been fortified. The huge rock face drops almost vertically toward the valley; its only connection with the general slope of the valley is a small saddle (Fig. 192). On this saddle are still the remains of an ancient wall (Fig. 193). Groups of three or four narrow steps cut in the native rock, irregularly dispersed over the slope, lead toward the summit. Halfway to the top, a narrow rock-cut path leads toward a small, carefully worked tunnel entrance.

At a slope of 45 degrees steps lead down toward the foot of the rock. The vault is carefully smoothed. The steps are of course much worn, and after 33 steps the tunnel is filled up with stones and earth (Fig. 194). The entrance itself, blocked by two huge rocks, measures 2.50 meters in height and 1.75 meters in width. Not very far from it a circular shaft (Fig. 195) 1.50 meters in diameter and 2 meters deep leads to a similar vaulted tunnel, the steps of which form a slight curve. This tunnel is filled after 36 steps (Fig. 196). Not far from the summit is the entrance to a third, very large tunnel (Fig. 197). It is 3 meters wide and 3.60 meters high, and again steps lead downward; after 33 steps it is filled up.

The summit of the rock itself is transformed to an artificial platform with a huge stone terrace (Fig. 198). A few rectangular holes suggest that there may
have been also a wooden construction. In two or three places, where the natural formation of the rock permitted, small platforms or terraces had been cut, and on some of them a few remains of walls are to be seen. Pottery fragments are scattered all over the place, but I did not find any examples of a definite type.

In a similar situation we found, near the small town of Gönenjik south of Amasia, another rock kaleh with three tunnels. South of Amasia the Yeshil Irmak receives the Chekerek Irmak, which, before uniting with the Yeshil Irmak, flows through a broad and very fertile plain. At the south end of this plain the Chekerek Irmak receives the Chorum Chai. Twelve kilometers above where the Chekerek Irmak enters this plain from the south, Gönenjik is situated on the west slope of the valley, and not far from it is the large rock tower called Gökhali Kaleh (Fig. 199).

Gökhali Kaleh slopes down on all sides nearly vertically; only from the southeast is it possible to climb up, with a few ancient rock-cut steps showing the way. One then reaches a natural terrace 15–20 meters in width, the actual summit rising behind it. At the south end of this terrace a small tunnel 1.50 meters high and 1.10 meters wide leads downward. After 37 steps it is filled with rubbish (Figs. 200–202). In the middle of the terrace a second, very large, tunnel, 3.50 meters high and 2.80 meters wide (Figs. 203 and 204), its entrance...
THE KALEHS WITH TUNNELS

very carefully cut and smoothed, leads down diagonally through the whole rock to its base on the opposite side. Midway occurs a horizontal platform 2 meters long, with a depression at one side. From end to end the tunnel measures 55 meters. Not far from the exit of the large tunnel, a small entrance to a third tunnel is hidden behind a few large stones. After 5 meters, this third tunnel divides into two branches. One, continuing in the same direction, is soon filled. The other starts to ascend and continues for nearly 12 meters before a few huge stones fill it up. I think there is no doubt that this branch of the third tunnel once led to the second tunnel,

FIG. 194.—THE KALEH SOUTH OF CHORUM. THE FIRST TUNNEL. PLAN AND SECTION.

FIG. 195.—THE KALEH SOUTH OF CHORUM. MOUTH OF SHAFT LEADING TO SECOND TUNNEL.
striking it at the point where a depression is still to be seen in the floor of the small platform. After a very careful study of the back of the rock we found, perhaps 3 meters above its base, an irregular hole which was probably the exit to the first tunnel.

But it was filled from above, so that it was not possible to follow it. Only the vault and three or four steps could be recognized.

On the rock terrace, now covered by thick scrub, pottery fragments are scattered in abundance. On the summit of the rock two fairly large stone terraces similar to that at the Chorum kaleh have been artificially created.

A third rock castle of the same type was encountered 6 kilometers south of Tokat in the narrow valley of the Tokat Su. On each side of the river is a towering cliff showing traces of artificial
fortification (Figs. 205 and 206). The larger and more important is situated on the east side. These cliffs were known already, and F. Cumont calls the larger one Horosh Tepessi.¹ I was told that it was called Bairam Tepe. On its summit are the remains of walls of a late period. A rock-cut path, alternating with steps, leads toward the summit. Besides a large rectangular water-basin and a flask-shaped rock-cut cistern, there are two tunnels and two tombs in the cliff. The first tunnel is very re-

¹ Studia Pontica, II, 243-47.
after some forty steps it is likewise filled with stones and earth. The two rock-
cut tombs are on the east slope of the cliff (cf. Fig. 206, at left). One is quite
easily reached by means of a rock-cut passage with steps from a terrace below
the summit. It consists of a wide terrace and a very narrow vaulted rectangular
room (Figs. 210 and 211). The second tomb is smaller and
only to be reached from the base of the cliff by a ladder or by rather dangerous climbing.
Its carefully smoothed façade
is 5 meters high; its terrace,

14×2.50 meters. In the middle, four steps lead to the entrance of a rectangular
vaulted room 4×4×3 meters (Fig. 212).

Many tunnels such as those just described are known, not only in
central Asia Minor, but also in Phrygia and far to the east in Armenia. Nearly
always they appear in strategically important places, such, for instance, as the
fortresses of Tokat, Turkhal, Niksar, Zileh, and Amasia. Various theories have
been offered to explain their use, the most common being that they were a

1 Cf. Leombard, Paphlagonia, pp. 232-41; Studia Pontica, II, 157-59; W. Belck in Zeitschrift für
Ethnologie, XXXIII (1901), Verhandlungen, pp. 471-73.
Fig. 203.—Görchali Kaleh. Entrance to Second Tunnel.

Fig. 204.—Görchali Kaleh. The Second Tunnel. Section and Plan.
device to supply the castles with water. R. Leonhard suggests a religious
significance, stating that, with the exception of a rather late one in Armenia,
they have no exit. But at Gökchali Kaleh we found the exits of all three tun-
nels, and I am sure that by careful search the exits of many other tunnels could
be found. Of course it would be a very hard and tiresome task, as the rocks are

quickly weathered and earth deposits over plug-blocks may easily conceal the
exits.

The tunnels are found in connection with castles which occupy in almost
all cases an important strategic site. For religious purposes or to guarantee the
water supply, one tunnel would be sufficient; and for supplying water it would
not be necessary that the dimensions be so extraordinarily large as, for instance,
at Turkhal, the kaleh near Chorum, Bairam Tepe, or Gökchali Kaleh. Only one
Fig. 206.—Bairam Tepe. The Eastern Cliff

Fig. 207.—Bairam Tepe. The Larger Tunnel. Section and Plan
tunnel, one of those at Amasia, leads to a subterranean water-basin. Again, if these tunnels were for religious purposes only, it seems rather strange that at so many places there are as many as three together, for the tunnels represent hard and expensive work. As for explaining them as wells, I could not find any spring near Gökchali Kaleh, the water supply there having been kept in the two big rock-cut basins on the top. So the only explanation to me is that they were military posterns. The width and height of the tunnels permitted quick moving of part of the castle garrison down to the level of the valleys, unseen by the enemy, who could easily observe any tactical movement that took place on the bare rock. By using these posterns, hostile observation was eliminated. Strabo cites such a type of defense used by the Pontic king Mithradates; and Pompey
FIG. 209.—BAIRAM TEPE. THE SMALLER TUNNEL. SECTION AND PLAN.
BELOW, GENERAL PLAN OF THE SITE.
is said to have filled up these subterranean communications after capturing the fortresses.

A much more difficult and important question is, During what period were the fortifications built? I am inclined to date them very early, perhaps even to the time of the great Hittite Empire, which would not prevent their having been used in later periods also. In the Hittite capital itself, near Boghaz Köl, we find the frequent use of posterns, though in another form. But the idea is the same—the possibility of attacking the enemy by surprise; and even if the postern exits were known, they were much more easily and effectively barricaded than were real gates in the city walls. To give these tunnels any dating it would be necessary that at least one of these castles be examined very carefully and partially excavated. As to the date of the two rock-carved tombs at Bairam Tepe, the same applies; for the whole absolute chronology of the cliff tombs in Cappadocia and Paphlagonia, with very few exceptions, is vague.

1 Cf. Studia Pontica, II, 158, n. 3.
FIG. 211.—BAIRAM TEPE. THE LARGER CLIFF TOMB. PLAN AND SECTION
FIG. 212.—BAIRAM TEPE. THE SMALLER CLIFF TOMB. PLANS AND SECTIONS.
THE HÜYÜKS SOUTH OF ANGORA AND ON THE ROAD FROM KÖPRÜ KÖI TO KIRSHEHIR

Angora, the capital of the Turkish republic, is situated at the northeastern corner of a plain through which flows, in an east-west direction, the Engürü Özü. Toward the south the plain slopes gently upward, forming an undulating, arid highland bounded on the west by the same stream; for, 30 kilometers west of Angora, after receiving the Ova Chai coming from the northeast, the Engürü Özü changes its east-west direction to a northeast-southwest one. To the east the Inje Su, rising in the south and emptying near Angora into the Engürü Özü, forms the boundary. At its southern end the plateau becomes more broken up into parallel ridges running generally from east to west. The plateau is very dry, and only in the small valleys near springs are a few trees to be seen. The villages are few and rather poor. Especially in the southern part the surface becomes rocky and the summits of the mountains show picturesque rock formations. East of the valley of the Inje Su, toward the Küzül Irmak, is a very irregularly divided mountain land with a few fertile valleys along which lead the main roads toward the east. Along the Tabakshaneh Su, another tributary of the Engürü Özü, a road leads from Angora to Yakhshi Han on the Küzül Irmak. In the same valley now runs also the track of the Angora-Kaisariyeh railroad. Following first the valley of the Inje Su, then turning sharply eastward, another road leads to Köprü Köi. At Köprü Köi the Küzül Irmak, here flowing from south to north, forces its way in a picturesque gorge through this plateau. The southern part of the plateau is formed by the little-known mountain systems of the Kara Şengir Dagh and the Pasha Dagh, which force the Küzül Irmak, coming from the east, to change its direction to the north. The southern slopes of the Pasha Dagh touch the Tuz Chölü (“salt desert”). On its northern slopes are small and relatively fertile valleys.
east bank of the Küzül Irmak, opposite the Pasha Dagh, is formed by the Karabogha Dagh and its various extensions. The road from Kirsehir to Köprü Koi follows its northeastern slope. Not far east of Köprü Koi is the watershed between the Küzül Irmak and the Delidje Su. The road from Angora divides, after crossing the watershed, into two branches, one following the Aghach Dere northeastward, then entering the Delidje Su valley and continuing through the Sarai Su valley to Yozgad. The other follows the northeastern slope of the Karabogha Dagh and then the valley of the Küliji Su to Kirsehir. In company with Dr. E. Forrer and Professor Weigand we visited this region during the last part of the expedition.

Eighteen kilometers west of Angora, in the valley of the Engürü Özü, di-
rectly at the railroad station of Pasha Chiftlik, is situated a small hüyük (Fig. 213). On the Kiepert map this location is indicated as Amakzis. The hüyük is about 175 meters long by 100 meters wide, and its highest point is 8-10 meters high. On its surface it shows foundations and fragments of late classical sarcophagi and also a basalt slab bearing a lion in bas-relief (Plate XXIII B). Although similar to “Hittite” representations of this subject, I am inclined to see in it a Phrygian work of art. South of the hüyük there seems to have been a large Roman or Byzantine settlement; and the hüyük, proved by pottery fragments to have been an ancient “Hittite” settlement, was used during these later periods as a necropolis.

Following the road from Angora to Köprü Köi, after 28 kilometers one reaches Chakal, where the road turns eastward. Nine kilometers west of there, on the east slope of the valley, the small village of Hüyük is situated around a hüyük (Figs. 214 and 215). The hüyük is approximately 250 meters in length, 160-180 meters in width, and 12 meters in height. It is covered with pottery fragments of all kinds, but especially red-slipped ware is to be found there. At the crest of the valley slope, where rocks jut out from the banks, there are
EXPLORATIONS IN CENTRAL ANATOLIA

FIG. 218.—GIAUR KALESSI. THE PREVIOUSLY KNOWN RELIEFS

FIG. 219.—GIAUR KALESSI. DETAIL OF WALL
THE HÜYÜKS SOUTH AND SOUTHEAST OF ANGORA

Fig. 220.—The Suyu Güzel Hüyük

Fig. 221.—The Suyu Güzel Hüyük, Plan
two small tumuli. Three and a half kilometers farther to the southeast is a larger one (Fig. 216). Continuing southeast we reached the village of Oyaja, situated in a small circular valley in which rises a rocky hill. There are several Greek inscriptions and architectural fragments of the Roman and Byzantine periods in the town.

Four and a half kilometers farther, 59 kilometers southwest of Angora, we arrived at the famous Giaur Kalessi, discovered by G. Perrot (Fig. 217). The fortress is situated on a truncated hill on the north bank of a deep and narrow valley running in a general east-west direction. Besides the two large rock-carved figures which have long been known (Fig. 218), we found on the same rock façade a third, a small seated figure with conical headdress toward whom the first two are advancing (Plate XXIV). Investigation proved that Giaur Kalessi itself was only the acropolis of a large town situated on its north and northeast slope. As the rock carvings and the careful and elaborate fortification (Fig. 219) suggest a site of considerable importance, it may possibly be the ancient Kushshar, where the Hittite kings resided before they conquered Hattushash and chose it for their capital. Natives told us that near Dere Kői also, 2 kilometers southeast of Giaur Kalessi, there were rock carvings; but we searched in vain on the many rocks along this mountain range. Turning eastward from this point, we saw between the villages of Karagedik and Mehemedli, about 23 kilometers east of Giaur Kalessi, a medium-sized huyük.

Our last excursion west of the Küzül Irmak was made from Bahla (Kartal) southward. Bahla is a kaimakamat situated not far from the Angora–Köprü Kői road. Twenty-five kilometers south of it we found near the village of Suyu
Giizel a remarkable hüyük (Figs. 220 and 221). We collected all kinds of very fine pottery fragments. "Hittite" specimens were very frequent. A large part of the surrounding territory, slightly undulating, was also covered with pottery, proving the wide extent of this settlement. The approximate dimensions of the hüyük itself are 320–350 meters in length, 200–250 meters in width, and 12–14 meters in height. About 4 kilometers farther south we found another one, called Sofular Hüyük, about 300–350 meters in length, 250–300 meters in width, and 10–12 meters in height (Figs. 222 and 223). Particularly interesting were specimens of engraved pottery which I collected there. The last hüyük which we investigated in this region was the rather small Shedid Hüyük (Fig. 224). Although we collected some "Hittite" pottery fragments there, late classical
and Byzantine types were most prevalent. On the top of the hûyük are remains of a Roman wall. In the small cemetery near the village I saw an illegible inscription, probably part of a Roman milestone.

At Köprü Köi (Fig. 225) we crossed the Küzül Irmak. At the west end of the bridge stands the huge figure of a lion, probably a Seljuk monument. Near Köprü Köi itself Dr. E. Forrer investigated an ancient fortress. Continuing
THE HÜYÜKS SOUTH AND SOUTHEAST OF ANGORA

Fig. 226.—The Hūyük near Ghaman

Fig. 227.—The Chugun Hūyük

Fig. 228.—Kirsehir
EXPLORATIONS IN CENTRAL ANATOLIA

Fig. 229.—Sevdin Hünük

Fig. 230.—Sevdin Hünük

Fig. 231. The Göllı Hisar Hünük
THE HÜYÜKS SOUTH AND SOUTHEAST OF ANGORA

... toward Kirshehir, we passed at 3½ kilometers east of Ghaman a large hüyük (Fig. 226) and at 2½ kilometers west of Sofular a large and a small one. Near Chugun, where the road turns southward following the Külijli Su to Kirshehir, is a very small hüyük (Fig. 227) which might better be called a large tumulus. Pottery found there proved “Hittite” occupation.

The large citadel mound of Kirshehir is simply a very large hüyük (Fig. 228). There also we collected “Hittite” pottery fragments. On the mountains around Kirshehir we saw a number of tumuli of different sizes. About 10 or 12 kilometers west of it is a medium-sized hüyük with three tumuli near by (Figs. 229 and 230). It is called by the natives Sevdigin Hüyük. Near Göl Hissar, 6...
kilometers east of Kirshih on the road to Kaisariyeh, is a small hûyûk which, in contrast to the other ones investigated, has not a relatively smooth surface but shows various slight elevations (Fig. 231) due probably to the remains of sun-dried brick buildings. About 500 meters east of it are two small tumuli (Fig. 232). On the road leading from Kirshih we found, near the village of Khas, a large hûyûk (Figs. 233 and 234) about 400 meters in length, 300 meters in width, and 8-10 meters in height. Chiefly “Hittite” pottery was collected there. It must have been a very large settlement. Near a small village about 2 kilometers east of it we could see a medium-sized hûyûk.

As has been said before, it is to be hoped that at least a few of these hûyûks may be excavated. Places of such dimensions as the Suyu Guzel and Khas hûyûks and Sofular Hüyük, which were probably important settlements during the “Hittite” period, are likely to reward an excavator with a great wealth of archaeological material, if not with works of art and inscriptions.
THE CAVES AT YARŪM KALEH, KAVASS MAGHARA, AND TASHAN KALEH

Of the three monuments now to be described, two are situated in the territory marked on the Kiepert map as Malya Chölü.¹ The Malya Chölü (“desert”) extends in the north to the mountain range south of the Delidje Su, in the south to the Burun Dagh and Küzül Tepe, along the south slope of which runs the Kirshehir-Kaisariyeh road. But at the southeast corner it extends nearly to the north bank of the Küzül Irmak. To the east it is bounded by the Karajerli Su. To the west it slopes gradually up into the great mountain complex of the Chichek Dagh. In its southwestern part is situated the Magli or Saif Göl. This whole region is as yet very little known. As my purposes were of another nature, I saw only the eastern, northern, and western edges of it, without being able to penetrate farther into this likewise archaeologically interesting territory.

The western edge I saw in coming from Kirshehir along the post road to Yerköi. Since there is now a railroad at Yerköi, the Turks are constructing a new road thither in a nearly straight line northeast from Chugun, a town 9 kilometers north of Kirshehir. At Chugun we left the fertile valley of the Külijli Su and entered the Malya Chölü plateau. It is an imposing view: a very slightly undulating, nearly flat plain extending to the east—dry steppes with a dusty, grayish-yellow coloring. As it slopes gently upward on the west side, which we followed, we had a wide view and could even see the small silvery

¹ R. Kiepert, Karte von Kleinasien, Blatt Jozgad.
band of the Magli Göl, a few small villages very far apart, and in the background high and pointed mountains rising abruptly from the plain. One could not help comparing it with the bottom of an immense dry lake, the mountain peaks representing small islands on its surface. Toward the west, as already
stated, it slopes up toward a mountain complex. No tree or shrub, only the dry steppe grass. It is impossible to understand how the natives in the few little desolate villages can raise wheat on this dry soil.

Yarûm Kaleh (Figs. 235 and 236), where the first of the three caves is situated, lies in this region, about halfway between Kirsehir and Boyalik (Mejidiyeh). It is a small plateau with precipitous sides. On the south, along which a stream runs, is a deep gorge. In this gorge, southeast of the kaleh, is hidden the town of Zaramba. At this point is also the actual kaleh, a large cave of three levels cut in the nearly vertical slope of the rock. As this kaleh was already known, I thought that it had been surveyed and so only took pictures of it. But on my return I was not able to find any record of its ever having been investigated. North of Yarûm Kaleh the slope becomes more and more steep until we reach the various mountain ranges which run nearly parallel northwest to southeast. The panorama to the north becomes a real Alpine prospect. The ranges are partly covered with shrubs and are gashed by deep valleys and gorges with dry river beds. And again the marvelous color scheme, a peculiarity of Anatolia.

The second kaleh, Kavass Maghara, lies in the northern part of the Malya Choli, which here reaches quite to the Delidje Su valley. We entered the plateau south of Yerköi through a valley which leads southward—the same valley in which Bulumashlû is situated. Here we found the same desolate, arid land as on the west, but wild and more irregularly incised by deep, dry river beds. Again single peaks are to be seen, especially the marked rock point of Kechi Kalelisi ("goat castle"), but apparently without any trace of human remains. Four kilometers southwest of Bulumaehlû we had to leave our car, since deep gorges rendered the whole plateau impassable for it. For three hours we followed one of the gorges in an approximately southwestern direction, until we arrived at its end. An immense rock wall ascends vertically. Cut in it we saw cave openings in three superimposed rows (Fig. 237). At one end a lovely spring flowed directly out of the rock, its water forming a small, clear pool in a natural basin. For perhaps a hundred meters it formed a small running stream, then disappeared in the dry soil. Around it was a small patch of fresh green grass and shrubs, a striking contrast with the yellowish-gray of the landscape, which, with the bright sun upon it, hurt the eyes.

The ground floor of the cave (Figs. 238 and 239) consists of one rectangular room (below at left) 4x2.30 meters, closed by a stone wall, leaving only a small doorway. At one side a narrow entrance leads to a second, smaller room (3x2 meters). Eight meters beyond is the entrance to the great cave. It leads to a long room (about 12 meters). In the rear wall is a niche. The room was
partly divided by a wall, now destroyed, parallel to the façade, forming two rooms at different levels. Besides the entrance, the outer wall is pierced by a small hole and a great window. At one end steps lead upward to the second floor. There is first a hall partly open at the top, as the rock has fallen in. Then comes a second room with an irregular hole in the outer wall, and lastly a third room at a higher level. From there an irregularly cut shaft of about 5.10 meters in length leads to the third floor, the best executed of all. The room into which
the shaft leads has a rather large window and at each side an entrance to another room, that on one side being small, while on the other side there is a series of small rooms or niches around a larger one. This cave system seems to be of the same type as the one at Yarûm Kaleh.

The third kaleh is situated near Hadji Shefatli, also south of the Delidje Su, but on the east side of the Karajerli Su. Above its junction with this river the Delidje Su valley broadens again toward the east. Most of the mountain tops framing the valley show fantastic rock formations. They are all of soft limestone. Tashan Kaleh, as this castle is named, can be seen as soon as the gorge of the Delidje Su begins to broaden toward the east, and longer still from the eastern part of the chôl plateau (Fig. 240). We were able to proceed with the car to the foot of the mountain slope; then, to reach the top, we had to climb
about three-quarters of an hour on foot. This cave is not so well done as the Kavass Maghara one, but it too is very interesting in its arrangement. It consists of two groups of rooms and three single ones, all on about the same level (Figs. 241 and 242).

The first group (at the right) consists of one big room connected with two smaller ones, itself divided by two deep piers extending inward from its façade. Then follows a single room with a pillar, and then a second, larger one of irregular form. The second group of rooms is far more interesting. From a small platform the entrance leads to a nearly circular vaulted room with two windows.

In the same axis with the entrance, a narrow passage leads to a second room, rectangular in shape, but rounded at one end and having a small dividing wall at the other. It stands at a higher level than the first room and, like it, has two windows. A rather small rectangular niche constitutes the last of this series of caves. On the slope leading down from Tashan Kaleh I found a few pottery fragments of uncertain origin, but rather primitive in appearance.

As to the origin and use of these rock kalehs, we are still in the dark. Similar caves, long known, at Urgüb, south of the Küzül Irnačk, are Byzantine or at least were used by Byzantine monks as cloisters and churches. But they might all be of an earlier origin, perhaps later on enlarged and altered.
### IV

**THE ROUTE AS REGISTERED IN THE FIELD RECORD**

*(July 1 to September 25, 1926)*

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Kilometers

—Altıkkara—Büyük Nefez Köi—Bakshejik—Küchük Nefez Köi (Nefessi)—Hattıbin Köi—Gümüşhören

Sept. 12. Yerköi; excursion to Karagedik via Hüyük Köi—Stambulolu

Sept. 13. On horseback to Asha Elma Hajilar via Uyuz Hamam and back to Yerköi via the Sarai Su valley


Sept. 16. Five kilometers east of Kuzaji—Kuzaji—Jiblakh—Kabani—Bash Köi—Karasenir—Kandlija and back to Jiblakh

Sept. 17. Jiblakh—Kabani—Bash Köi—Karasenir—Kandlija—5 kilometers southeast of Kandlija and back to Kandlija by the same road


Sept. 19. Kaisariyeh

Sept. 20. Kaisariyeh—Kül Tepe and back to Kaisariyeh

Sept. 21. Kaisariyeh—Arja Kaya—Talas—Zinjiderh and back to Kaisariyeh


Sept. 23. Nigdeh—Üküzli Hisar—Ulukışlar

Sept. 24. By railroad from Ulukışlar via Eregli—Konia—Afun Karahissar—Eskishehr—Ismid—Haidar

Sept. 25. Pasha to Stambul
THE ROUTE, JULY 1 TO SEPTEMBER 25, 1926

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