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EXPLORATIONS IN HITTITE ASIA MINOR

A Preliminary Report

By

H. H. VON DER OSTEN



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FOREWORD

The first object of the organization of the Oriental Institute was the recovery of as much as possible of the surviving evidences of early civilization in the ancient Near East. There is no region where such researches have been more noticeably lacking than the Hittite country of Asia Minor. The recent decipherment of the cuneiform documents of the so-called Hittites has brought us the most unexpected revelations, even including the movements of the prehistoric Greeks, of which the Trojan wars were a part. One of the results of Hittite research will undoubtedly be the further development of our knowledge of the important part played by Asia Minor in the earliest history of civilization, both Greek and oriental.

Under these circumstances it was with the greatest interest that the present editor undertook arrangements for the dispatch of H. H. von der Osten on a preliminary scouting expedition in the important region encircled by the great curve of the Halys River. The proposal for such an expedition, however, arose so suddenly that it involved the Oriental Institute in hastily raising most of the funds necessary for the support of the project. By absorbing the entire contingent fund, however, and likewise the publication fund, the Oriental Institute was able to supplement the available resources already in Mr. von der Osten's hands. Through the New York University he had been granted a fellowship by the Carnegie Corporation, and Mrs. W. Murray Crane likewise came forward with a generous contribution. These resources when combined made it possible to dispatch Mr. von der Osten for a summer's exploration in the heart of the great Hittite empire in central Asia Minor. It is probable that he was the first archeological explorer in this region to be equipped with the modern automobile. He was, for this reason, able to penetrate regions not before visited by archeologists and the results have been correspondingly valuable. The journey has proved to be an unexpected success and Mr. von der Osten is to be congratulated on the results achieved.

The Oriental Institute has planned to continue these researches in

the Hittite country. Mrs. W. Murray Crane, Mr. Henry J. Patten, Mr. James A. Patten, and Mr. Frank G. Logan generously pledged initial subscriptions for the support of a second expedition under Mr. von der Osten, and the General Education Board then demonstrated their further interest in the Oriental Institute by the appropriation of funds for a five years' campaign of Hittite research. To all these friends we are deeply grateful for the generous support they are furnishing.

The expedition is now already at work in Asia Minor on its second campaign, the Angora government having promptly issued the desired permit for the excavation of the mound of Alishar Hüyük (see pp. 33 f.), some one hundred twenty-eight miles (two hundred five kilometers) east-southeast of Angora in the heart of the ancient Hittite country. This mound is roughly two thousand three hundred feet in length and about two thousand feet wide (six hundred by seven hundred meters; see Figs. 29 and 30). The ancient capital of the Hittite empire, now known by the name of the neighboring village as Boghaz, is in the same region, not far toward the northwest. Having reached the site late in May, the expedition broke ground before the end of the month.

Besides the Field Director, Mr. von der Osten, the members of the expedition are as follows: Government Commissioner; Mr. Erich Schmidt, in charge of excavations; Mr. Frank H. Blackburn, assistant; Mr. Reifenmüller, foreman; Mrs. H. H. von der Osten; Neddj-meddin Kadry Bey, interpreter; Lutfi Tachsin Bey, Turkish teacher and assistant; Ramona Gonzales, cook.

It is a great pleasure to state here that from the beginning, the officials of the Turkish government have shown an attitude of cordial co-operation, and I take this opportunity of extending to them our hearty appreciation of their kind offices and good will.

JAMES H. BREASTED

THE ORIENTAL INSTITUTE
UNIVERSITY OF CHICAGO
June 20, 1927

EXPLORATIONS IN HITTITE ASIA MINOR

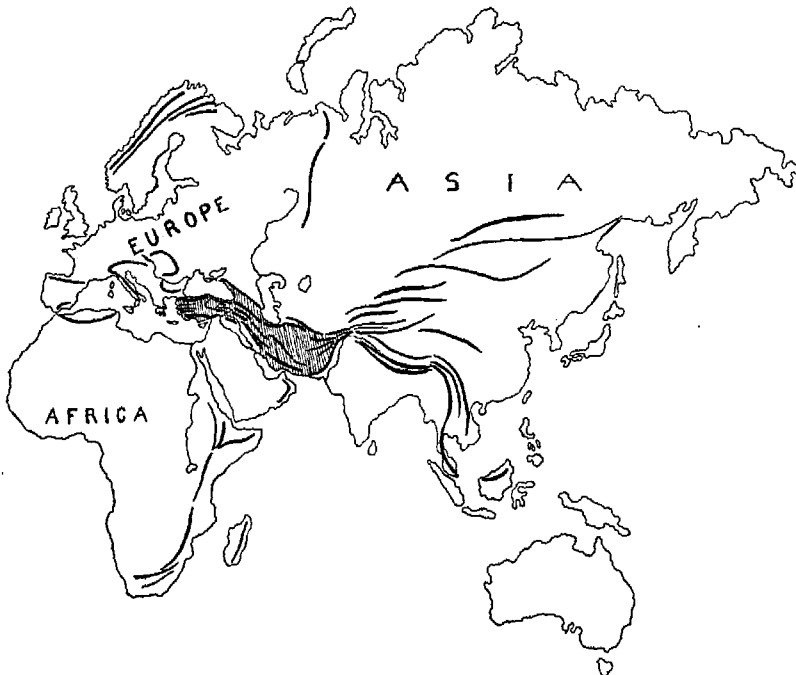
INTRODUCTION

Some thirty years ago we did not know much more about the Hittites than their name, mentioned in the Bible; but one of these citations is quite remarkable, as it reveals the main characteristic of the Hittites. I refer here to the story of Uriah in II Sam. 11:1 ff., which shows us Uriah the Hittite, with the character of a real soldier, refusing even to sleep in his own house with its comforts, while for a short time relieved from the battling army, and explaining it to King David in the following words: "My lord Joab [his general], and the servants of my lord, are encamped in the open fields; shall I then go into mine house, to eat and to drink?" Now, as we learn more of the Hittites' history from themselves, we know that their governmental organization was especially a military one. And a survey of their few archaeological remains known until now in Asia Minor, the actual seat of their greatest power, confirms this fact. It cannot surprise us to find a Hittite as a mercenary fighting under King David, after the great Hittite Empire had perished (*ca.* 1200 B.C.) and the survivors had settled in North Syria in tiny city-states. Active men went out to take service in other armies, to win glory, and to fulfil their real destiny as warriors.

Governmental organization is conditioned by the geography of the territory to be ruled, including not only the geographical situation of

this territory itself, but especially the general situation of this territory in a larger complex of lands. Asia Minor, as a center of gravity for an empire, required a strong and elaborate military organization on account of its geographical and topographical features.

Asia Minor is a part of that immense bridge, geographically speaking, which connects the territories of Far Eastern culture with

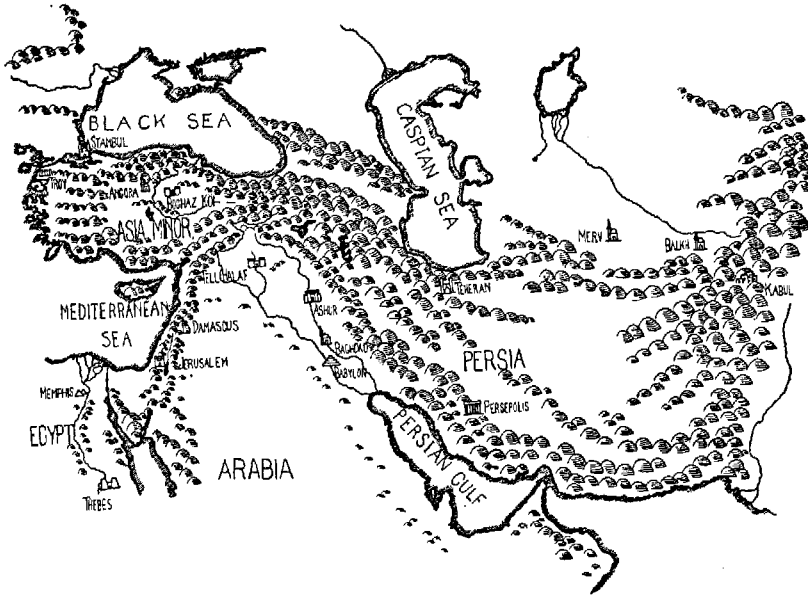


Map I. The position of the intercontinental "bridge"

those of the Mediterranean (Map I). Seen from east to west, this bridge includes the modern states of Afghanistan, Baluchistan, Persia, Azerbaijan, Georgia, Armenia, and Turkey—the highlands of Iran, Armenia, and Asia Minor. These three form an absolute unit nearly hermetically inclosed on the south, north, and east by mountain chains with only a few outlets, and open only toward the west (Map II).

The highland of Iran is bounded on the north by the Hindu Kush and the mountain chains following it toward the west, separating it

from the steppes of western Turkestan, and then by the Elburz, whose slope descends nearly vertically to the Caspian Sea. In only two places do natural roads lead into it from Turkestan: at Merv and Balkh. To the east, it is limited by the Sulaiman and Kirthar mountains, separating it from India, although the Indus Valley itself must be considered a part of it, the real frontier being formed by the Indian Desert. To the south, the mountains of Mekran and Laristan in



Map II. The "bridge": Iran, Armenia, and Asia Minor

southern Persia slope down directly to the Persian Gulf; and further to the west the chains of the Zagros Mountains close it up toward Babylonia and Mesopotamia. To the east, a road leads over the famous Pamir Plateau in Central Asia to Mongolia. And in the south the road from Hamadan to Baghdad connects the interior of Iran with Mesopotamia.

In the west, the highland of Iran goes over into the Armenian mountains, a group of nearly parallel mountain chains running from east to west. These parallel ranges open to the west, toward the peninsula of Asia Minor. Asia Minor again is closed in on both north and

south by high mountain chains sloping abruptly into the sea. Only in the south it has a road leading to North Syria through the famous Cilician Gates. Toward the west it is open, spreading finger-like toward Europe. Two more doors to this whole complex must be mentioned, connecting it with the vast plains of southern Russia: the Ossetic and Georgian roads over the Caucasus, which is more or less the last chain of the Armenian mountain system.

All in all, this complex consists of two great basins, one in the east, one in the west, Iran and Asia Minor, connected by an enormous "sieve," Armenia. One must have this situation clearly in mind if one would understand the great connections between east and west, historical and cultural, in the history of mankind. The natural wall of mountains terminating Mesopotamia and Syria in the north forms a dam which effectually barred all waves of peoples coming from the south except the Islamic one in the seventh century A.D.

On the other hand, these two great basins constantly menaced all the cultured lands to the south, overflowing only too often with peoples and tribes coming out and invading the fertile plains of Mesopotamia and North Syria. This is the key to an understanding, not only of the ancient history of the Near East, but also of the modern. The natural roads leading into this great complex are still of the same importance as in former times; and, as in 331 B.C. when Alexander took Hamadan and thus sealed the fate of the Persian Empire, so, nearly a thousand years later, was the destiny of the Sassanian Empire settled when the Arabs had fought their way along the same road followed by Alexander the Great.

We shall concern ourselves now especially with one part of this complex—with Asia Minor. As yet we know very little of the history of Asia Minor up to the middle of the second millennium B.C., when it suddenly comes into the limelight of history as we hear of an immense empire there stretching far out on the south toward Egypt and to the southeast toward Babylon—the Hittite Empire. It is only recent years which have brought us the revelation of its connections in the west with an early Greek kingdom having its main seat in the Balkan Peninsula. Archaeologically, this Greek empire has been known to us for a long time; but from the archives of the Hittite kings we have learned its historical significance and have had to recognize that the Trojan War also is a historical event.

But, shortly after 1200 B.C., the history of Asia Minor again becomes obscure. "Barbarians" invading Asia Minor from the west, and perhaps also from the Armenian mountains, destroyed the Hittite Empire. In rapid succession other empires arose on its ruins until about 600 B.C., when the Lydians succeeded in forming a fairly stable state in the western part of the peninsula. Then again a new flood broke over Asia Minor, this time coming from the east. The Persians conquered Lydia and, after having subdued Mesopotamia, Egypt, and all lands between, possessed Asia Minor as far as the Aegean Sea. Then, for the first time in history, the great geographical unit composed of Persia, Armenia, and Asia Minor, with all the surrounding territory, was under the sway of one people. Logically, the Persian rulers, the Achaemenids, took the consequences.

On the east and south their direct empire, Iran, was guarded against all attack by a wide "glacis," the Indus Valley on the east, Mesopotamia and Syria on the south. But on the north and the west there was no such glacis. It is from this point of view that we must understand the expeditions of the Persian kings against the Greeks and the Scythians, both apparently unsuccessful, but still holding back the "barbarians" for about two hundred years from invading the real empire. But finally the Persian Empire, weakened by constant attacks from the north and by attempts of nomadic tribes to enter Iran from Turkestan in the northeast, succumbed to the attacks of the Greeks under the leadership of Alexander the Great. Until then the history of Asia Minor had been more or less the history of an outpost of Asiatic culture. But, from now on, it was the point from which Western culture tried to invade Asia, until it became, after its conquest by the Mohammedans, again the starting-point for Asiatic invasion of Europe.

The great Hellenistic empire of Alexander the Great collapsed with his death, and the Asiatic element pushed the Greeks back step by step toward the west, for a time even regaining a part of Asia Minor. At this moment there started in the west the expansion of Rome. After many wars, Rome succeeded in establishing Asia Minor and a part of northern Mesopotamia as its glacis toward the Asiatic empires; and the followers of the Roman Empire in the east, the Greek emperors of Byzantium, struggled for the same goal more or less successfully, until in about the seventh century a third great

power arose, the Arabs. These conquered first the Sassanian Empire and, later on, their followers won Asia Minor, starting the advance from east to west which found its climax when Sultan Muhammad II conquered Constantinople in 1453.

The first historical references to Asia Minor are in the form of clay tablets with cuneiform inscriptions of the third millennium B.C. from Kül Tepe, a small hillock of ruins a few kilometers northeast of Kaisariyeh. There are business documents of merchants or other



FIG. 1.—A cuneiform tablet from Kül Tepe.

private documents telling us of a flourishing commerce in Asia Minor in these early times. This merchant colony seems to be one of a great number, all of which seem to have been more or less closely related with Assyria. In these documents are mentioned various native princes and states. We do not know exactly what kind of people they were ethnographically; but from impressions of cylinder seals and other small objects found in the same place they seem to be at least closely related with those peoples whom we are accustomed to

call the Hittites. Then comes a long, dark age for all historical knowledge of the whole of Asia Minor. Recently published historical texts from the Hittite state archives take us back only to a time around 2200 B.C. Nevertheless, as not all the material is yet published, we shall perhaps find documents to carry us farther back.

According to the original documents so far published, we may reconstruct Hittite history in outline perhaps as follows:

Already in very early times there were in Asia Minor small states scattered all over the highland. Where they came from we do not know. But it is possible that they are related to the oldest cultured people in southern Mesopotamia, the Sumerians. At the end of the

third millennium one of these kings, the king of Kusharra, started to subdue one after the other of these little principalities, until he or one of his followers conquered Hattushash, the modern Boghaz Kõi, a town in the center of Asia Minor. Hattushash became the capital of the Hittite Empire. All of this earliest period is very obscure to us, although there may be many documents still unpublished which will tell us more about it. The only fact we are sure of for the present is that the Hittites had even then started to expand to the east and southeast. From a Babylonian chronicle we know that the famous Hammurabi dynasty had been brought to a sudden end through the sack of Babylon by the Hittites. At about this time also occurred the great flood of peoples which overflowed Mesopotamia, Syria, Palestine, and Egypt. It is the period of the Hyksos in Egyptian history. We do not know their exact relation to the Hittites, nor to the Mitannians, a people closely related to the Hittites, who, as far as we know, established an empire in northern Mesopotamia about the time that the Hyksos were ruling in Egypt. This Mitannian Empire was so important and strong that for three generations the great Egyptian pharaohs of the Eighteenth Dynasty married Mitannian princesses. But gradually this Empire succumbed, weakened probably by continual pressure from the east, where Assyria was beginning to rise, and in the west by the Hittites, who, led by able kings, gradually advanced their frontiers more and more to the east and south.

Around 1400 B.C., after a temporary decline, the Hittite Empire reached its greatest period, under Shubbiluliuma, the son of Hattushil. He absolutely controlled Mitanni, for one of his daughters had married a Mitannian prince who could maintain his power only with the help of his father-in-law. The widow of Tutenkhamon, or one of his followers, wrote a letter to Shubbiluliuma, asking him to send her a son so that she might marry him in order that he might become Pharaoh of Egypt. Seemingly the Hittite prince went thither but never reached Egypt, having probably been assassinated in Syria by some Egyptian nobleman of the party opposing Asiatic influence.

Under the followers of Shubbiluliuma, the Hittites pressed more and more southward, and soon Syria was under their influence. On the other side, the Hittite monarchs had friendly relations with the king of the Aeolians, whose capital was Orchomenus in Greece. In

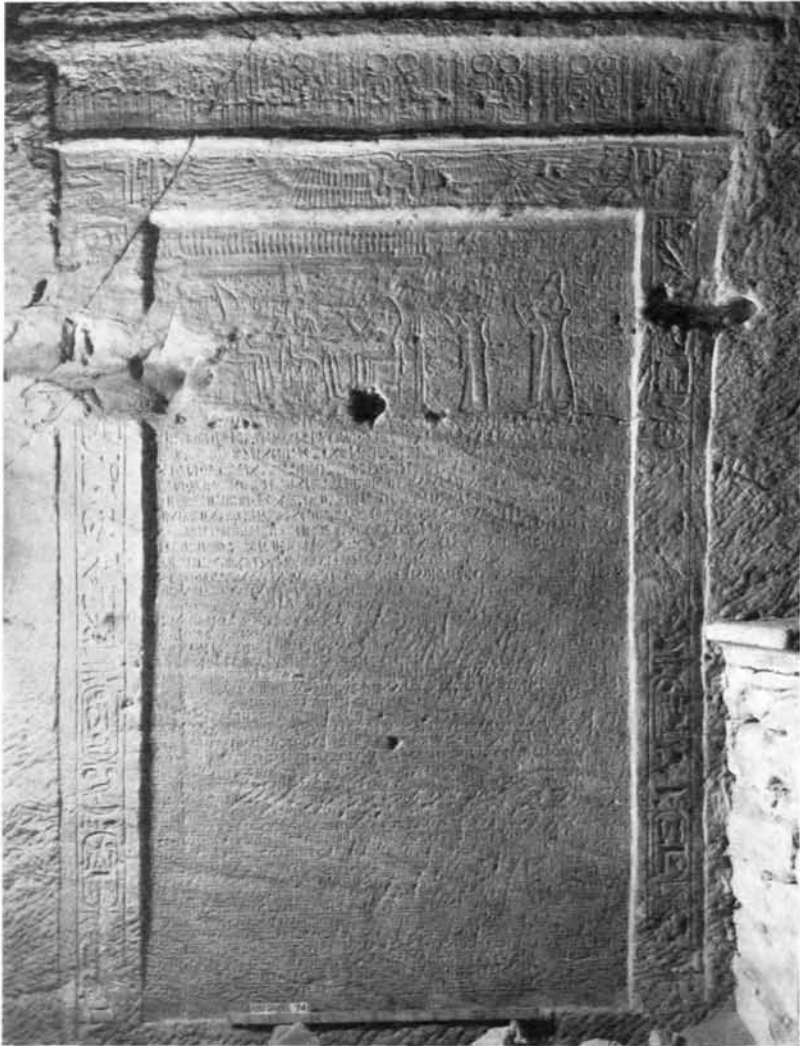


FIG. 2.—The "Hittite Marriage Stela" at Abu Simbel in Nubia. Carved in the court of this great Egyptian temple, it pictures the Hittite king Hattushil and his daughter doing homage to the Egyptian Pharaoh Ramses II.

Syria, it came to a war with Egypt. Ramses II tried to restore the Egyptian hegemony, but in the year 1288 came the indecisive battle of Kadesh. Egypt and the Hittite power made a treaty, and the Egyptian Pharaoh even married a daughter of the Hittite king Hattushil. Until 1200 we are fairly well supplied with documentary material showing the diplomatic intercourse of the Asiatic powers. Then suddenly the records are at an end. A terrible catastrophe must have overtaken the Hittite lands. Probably in the same year that Troy was destroyed, or a little later, Hattushash shared the same fate. The Hittite Empire was practically wiped out, and the surviving Hittites themselves retired to the south. They formed in North Syria and northern Mesopotamia a number of small city-states more or less dependent on the young, rising Assyrian power, until Sargon II made them also practically a province, after having conquered Carchemish in 717 B.C.

This outlines in brief the main events of Hittite history. As may be seen from the foregoing, Hittite history divides itself into two main parts: the early history extending down through the Great Empire with its center in Asia Minor; the later concerning the Hittite city-states in North Syria with their center at Carchemish on the Euphrates.

If even historically the Hittites form a very uncertain factor in the ensemble of the history of the Near East, with the exception of the short period from about 1400 to 1200 B.C., they are archaeologically an utter interrogation point to us. Quite a number of "Hittite" monuments are known in Asia Minor and North Syria, but we are not able to connect them with historical periods; and it is uncertain whether a great group showing the so-called Hittite hieroglyphs is Hittite at all. In Asia Minor the Hittite monuments are situated especially in the southeastern part. In the very heart of the empire, the central part of Asia Minor; we knew only two cities. Farther to the west there are very, very few, scattered from the Aegean Sea to the Kızıl Irmak.

Such was the historical and archaeological background which called for this preliminary expedition. And, before telling in order about our various observations and experiences, a few words must be said as to the geographical structure of Asia Minor, with particular emphasis on its central part.

Most descriptions of Asia Minor approach this subject from a special point of view. Asia Minor has always been considered in the light of its relations with the Western world, rather than as a part of the great Asiatic unit of which it is the westernmost outpost. In fact, our whole historical conception until very recent times has emphasized the historical and cultural development of the West. This point of view is especially unfortunate for the study of Asia Minor, just because of the very important part which it plays in the later Greek and Roman history. The principal factor—namely, that Asia Minor has been a hand extending toward the West rather than an outpost of Western civilization—has never been strongly enough emphasized. Historically and culturally, Asia Minor is fundamentally conditioned by its geographical position in the east, and consequently a survey of Asia Minor has to start in the east (Map II).

A real geographical frontier to the east does not exist for Asia Minor. As the high plateau of Iran slopes gradually over into the Armenian highland, the Armenian highland in turn opens to the west, toward Asia Minor, without any marked features. We may put the limit of it in a straight line from Sinope to Tarsus with the same right as we would put it from Batum southward to the mountains of Kurdistan. It is sufficient to know and to understand that the rather small and wild valleys of Armenia gradually enlarge toward the west and so lead over to Asia Minor. In the north and south, Asia Minor is bounded by mountains sloping abruptly to the sea, with only very few places favorable for harbors. In the southeastern part, mountains shut it in also toward North Syria.

In the heart of Asia Minor is a territory nearly surrounded by its most important stream, the Küzül İrmak,¹ the ancient Halys River, which originates in one of the extensions of the Armenian mountain chains not far from the Euphrates before it turns to the south. The Küzül İrmak fights its way through small valleys until it reaches Sivas, from there turning southwest, following the slope of the Ak Dagħ. Then it turns, a little west of Kaisariyeh, to the northwest, gradually turning to the north and northeast, until, after a few detours, it pours its waters into the Black Sea. The territory thus surrounded is in itself

¹The transliterations of Turkish geographical names are based on the American Library Association's principle of rendering consonantal sounds by their simplest English equivalent, while the vowels are given as in Italian or German.

again a real geographical unit, sharply limited on all sides by mountains sloping toward the river. It includes a mountain plateau, divided by fertile valleys widening sometimes into larger plains. The mountains are gently undulated chains alternating with wild, picturesque rocks. In the southern part are steppes and desert on a broad plateau.

The characteristic structure of this region is that of Asia Minor as a whole. Only, the peninsula itself is absolutely open to the west, through valleys running east and west, while the Aegean Islands beyond seem like steps across the sea from east to west.

In the very center of the territory surrounded by the Küzül Irmak lies Yozgad, the seat of a modern governor, not very far from Boghaz Köi, the ancient capital. A little east of the Küzül Irmak is Angora, the capital of the new Turkish Republic, whence roads lead to the south, southeast, and east, to Konia, Kaisariyeh, and Sivas. This is the region in which we traveled, the seat of ancient Hittite power.

Summarizing, the main structural features of Asia Minor are: from the west coast, valleys leading upward toward the east; in the north, a rather broad region of high parallel chains, Paphlagonia, going over into the Armenian mountains; in the south, the wild mountains in Pisidia going over into the Taurus and Anti-Taurus, which also end in the Armenian system; in the middle, a plateau, divided generally by mountain ranges running east and west into smaller or larger valleys and plains, the plains being usually steppes. Then comes the Küzül Irmak, forming a unit for itself, the surrounded region seeming to be a miniature repetition of the whole peninsula. Toward the east the chains of mountains close in more and more, until they form the highland of Armenia, which farther to the east expands again toward Iran, where the general features of Asia Minor are repeated. Only it is closed in toward the east also, having outlets only to the north.

In central Asia Minor there are four principal types of landscapes. I will describe for each an example which we saw ourselves.

The first type is the steppe. Coming from Kirshehir we entered the Malya Chölü, the great steppe in the Küzül Irmak basin. It is a great plain, desolate and arid, covered with dry, yellowish-gray grass, with mountains bare and wild rising suddenly to great heights,

their tops usually showing picturesque rock formations. Far away from one another lie small villages with little, flat houses built of sun-dried bricks. The plain suggested the bed of a great, dry lake on whose surface the tops of the mountains had once formed small, rocky islands, while dry river beds served as roads leading toward the north, where the plateau sloped gradually upward to the mountains limiting the Chölü to the north.

These mountains may be regarded as examples of the second type of landscape. The mountain ranges run in parallel ridges, one after another, partly covered with scrub; deep valleys and gorges with dry river beds divide them. But the mountain faces are mostly bare and rocky, showing a beautiful color scheme of purple, blue, red, yellow, and even emerald-green strata of clay sprinkled in between the different strata of limestone of which all these mountains chiefly consist. After having crossed them, we came to the third type of landscape. This includes the larger valleys. Correctly speaking, we should distinguish three phases of them. But since they usually follow one another, as here, I will describe them together.

After having passed the watershed of the mountains just described, their slope becomes gradually more and more gentle, going slowly down to the valley of the river. They are covered by a poor grass, but the wheat fields seem to prevail more and more as one approaches the valley level. Near the river itself trees appear; the ascent of the other side shows the same characteristics. Following this particular valley to the east, the mountain chains on both sides close in more and more as the valley becomes narrower; but the vegetation becomes richer. On the slope of the hill are vineyards, and along the river one garden after another, among fruit trees and cypresses, producing all kinds of delicious vegetables and beautiful flowers. Still farther to the east the valley becomes a wild, rocky gorge, leaving practically no space for a road, the rocks ascending nearly vertically and showing picturesque formations.

The fourth type of landscape is generally found only on the coast of the Black Sea. There the mountains, as in other parts of Asia Minor, run in a general direction from east to west, one range after another; but their vegetation is more luxuriant. Real woods are frequently found, and rich meadows give the whole landscape a more

gentle aspect. The valleys are deep green, as are the slopes descending toward the Black Sea, many of them covered with tobacco fields. These are the main types of landscapes in Asia Minor.

A great part of the territories which are now dry and offer only a scant pasturage for goats and sheep was once fertile fields or beautiful woods; but the eternal warfare in Asia Minor, which started almost contemporaneously with its historical début, destroyed the irrigation systems, and the woods were cut down. The new Turkish government is working very hard to rebuild all this; and, if Anatolia could enjoy a long period of peace, it is quite possible that it would regain the fertility which it once had.

Thus Asia Minor is divided by mountains into a great number of units, each one surrounded and limited by natural walls with only a few gateways, which could easily be closed by castles or fortresses; and the people who occupied these castles ruled the whole country. This may explain to us how a rather small group could dominate so large and so divided a territory. But this is just a typical feature of the Hittite Empire, which was more a confederation of small states under a central government than an empire as we generally understand this expression.

This is also the reason why the Hittite kings, after having subdued a number of smaller principalities, shifted their capital from the west to a more central place, namely, Boghaz Kõi, in the very middle of the territory which they were to rule. From there they were able to send to all parts of their sphere of interest detachments of troops; and an elaborate signal system, spreading over the whole central part of Asia Minor, centered in the middle of the Küzül Irmak basin, allowing them to keep in touch with the territories farther away.

FROM STAMBUL TO SAMSUN

The interest of the Oriental Institute of the University of Chicago in questions concerning the ancient history and culture of the Near East, where it was already at work in Egypt and Palestine, brought me the opportunity to carry out an expedition to the region just described. For the director, Professor James H. Breasted, kindly took over into the program of the Institute the project which I had submitted to him of surveying the Hittite remains in Anatolia. Not only



Map III. Asia Minor, with indication of the route of the Expedition

to Professor Breasted am I deeply indebted, but also to Mr. Edward Robinson, the director of the Metropolitan Museum of Art in New York, for his interest in and promotion of my studies. Some additional funds were received through the granting of a Carnegie Fellowship for 1926-27 through the Fine Arts Department of the New York University. The investigations and observations which resulted are described in what follows.

The purpose of our expedition was to survey the central part of Anatolia, especially the large area nearly surrounded by the Küzül Irmak. This territory had been very little visited by scholars in the last thirty years, the period within which the Hittite question has come into the limelight of our scientific research; and aside from Boghaz Kõi, the ancient Hittite capital, and Hüyük, a little farther north, no other Hittite sites in this territory were known. So it was my task to find out as far as possible, in the short time which I had at my disposal, whether or not there were other Hittite remains in this large area and, if so, of what kinds.

From New York I went first to Berlin, where through the extreme courtesy of Professor Otto Weber and Dr. Ehelolf, of the Staatliche Museen, I received a great deal of very valuable information as to the country through which I wanted to travel. I am especially indebted to Dr. Emil Forrer for his opinions on various problems. I was only too glad to meet him in Asia Minor itself and to travel there with him for nearly two weeks. From Berlin, after completing my equipment, I went by the Orient Express to Constantinople. There I was helped in the most courteous manner by the American Embassy and Robert College. Professor Moore and Selim Bey, of the college, were especially helpful in procuring my car and employing the chauffeur, and a student of Robert College was placed at my disposal as dragoman of the expedition. Halil Bey, the director of the former Imperial Museum, received me in the kindest way and helped me most courteously in getting the required permission for the expedition. Concerning the various formalities required by the Turkish government, I received the most expert advice of Professor M. Schede, to whom I am deeply obliged. So, after completing all the necessary requirements, and after Mrs. von der Osten had arrived by airplane to join the expedition, we sailed from Stambul for Mudania on the morning of the first of July.

The automobile and our expedition luggage, accompanied by the chauffeur and the dragoman, had been sent ahead the day before.

In the afternoon of the same day we landed at Mudania, a small port on the Sea of Marmora. There our automobile awaited us. A short ride brought us to Brussa, the beautifully situated ancient capital of the Ottoman sultans in the fourteenth century. From this point our expedition actually started.

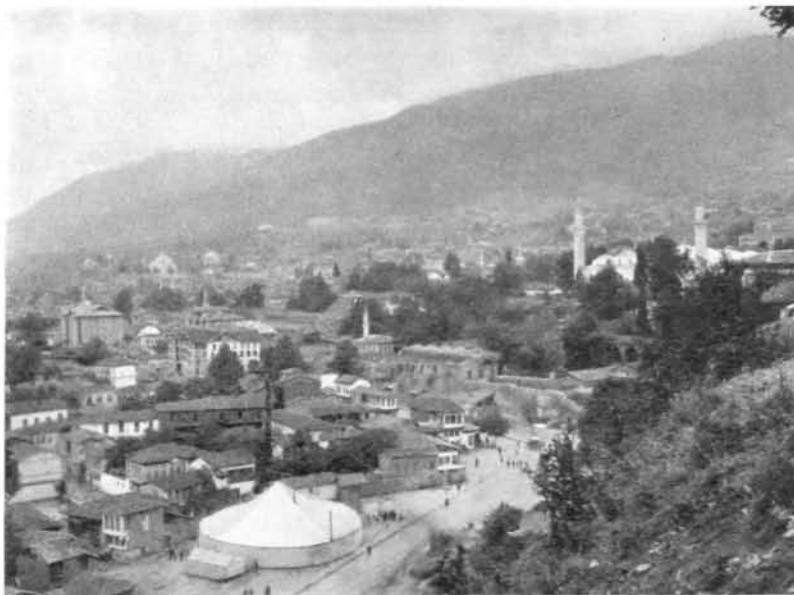


FIG. 3.—Brussa

The staff of the expedition consisted, besides myself and Mrs. von der Osten, who was in charge of all the technical work such as registering photographs and keeping the fieldbook, of Shefket Hilmi Bey, a young engineering student of Robert College, as traveling companion, and the chauffeur, Hüssein. Shefket Bey accompanied us only as far as Samsun, where he was succeeded by Nedjmedin Kadry Bey, a young railroad engineer who was a delightful and very efficient traveling companion. Hüssein was our faithful chauffeur during the whole trip. There was no road so poor or so difficult that he could not conduct us over it. Not only as a chauffeur did he give us the best service,

but, intelligent as most young Turks are, he learned in the course of the expedition to assist in all kinds of technical work.

After securing our *vessica* for Angora from the governor of Brussa, we left there on July 3, early in the morning. The landscape was beautiful. The road followed the rich valley; the mountains on both sides were covered with woods. In gentle, serpentine curves the road ascended a small saddle and from there we had a marvelous view to the west of the Asiatic Olympus, on the slope of which, near the foot, was Brussa. To the east extended the fertile plain, in the middle of



FIG. 4.—The *kaleh* of Bozhüyük

which was situated a clean and prosperous town, Inegöl. Again the road went up, and in twelve serpentine curves we reached the watershed. From there, the mountain chain sloped gently down. We reached Bazarjik just in time for lunch. There for the first time we had lunch in typical oriental style, as later on we had to take it so often. Only here each one of us was able to eat out of his own plate and with spoon and fork; usually in the smaller towns and villages all have to eat from one big dish, each one making his own "spoons" of unleavened bread.

At Bazarjik we saw also the first archaeological remains *in situ*: a few capitals and other architectural fragments of the late classical and Byzantine periods. From Bazarjik the road sloped steeply down toward the small valley which the Anatolian railroad follows toward

Eskishehir. Since noon it had been cloudy, and in the late afternoon it started to rain. Immediately the roads, which until then had been quite good, became nearly impassable. With great difficulty we descended the slope to the valley and reached Bozhüyük in the late afternoon. The rain having stopped, we had a splendid sunset. Bozhüyük is a rather large town at the foot of a truncated hill, the so-called *kaleh*.¹ On its top I noticed two large rectangular basins cut



FIG. 5.—Market at Bozhüyük

in the rock, and the surface was covered with pottery fragments of different kinds. In the nearby sawmill was a remarkable fragment of sculpture showing the face of a man with a snake covering his mouth. This is probably of Phrygian origin, Bozhüyük having been a settlement of these people, who probably shared in destroying the Hittite Empire about 1200 B.C. There is also a very pleasing Seljuk mosque there and a great number of capitals, altars, and other fragmentary remains of the late classical period.

After our first night in an Anatolian *han* (inn), we were ready to proceed early the next morning. It may be worth while, as I have to

¹ The word *kaleh*, which will appear very often in this article, means "castle."

refer to it later on very often, to give here near the beginning some further explanation of our expedition. As already stated, one of our main purposes was to locate ancient sites and especially those with Hittite settlements. One must by no means imagine that the remains of such cities are similar to those known from the classical periods. The usual form of such ruins as we sought is a smaller or larger hill called a *hüyük*. This means in Turkish an "artificial hill." These *hüyüks* are fairly easy to recognize as such, even from a distance, through their form and the color of the earth, which is mostly gray. For this reason the natives call them also frequently *kül tepe*, which means "ash heap." Furthermore, their tops show mostly tufts of grass of a very distinctive kind; and nearly always, if we noticed such, we found an ancient settlement there. Different from the *hüyük* is the so-called *tumulus*, which means a "little round hill." The term is used especially to define a certain type of tomb. The *tumuli* are small hills with nearly regular, circular bases. By the natives they are usually called *tepe*.

As for the attribution of the different settlements to certain periods, this is to be done according to the objects found in them. These are usually fragments of pottery, which are scattered all over the surface of such *hüyüks* and often also in the environs. Very seldom is it possible, without digging, to find other cultural remains or objects which could be helpful in classifying the settlements. More often there are to be found in the nearby villages architectural fragments, sometimes even sculptures and inscriptions, which have come from the *hüyük* or *kaleh* near by.

Our studies of the different kinds of pottery from such ancient times in Asia Minor are not at all far advanced. Usually the *hüyüks* include not merely the ruins of a settlement of one period, but those of six or seven different periods, one above the other, ranging from the third millennium B.C., or perhaps earlier, down to Byzantine and Mohammedan times. Even now, modern villages are on their tops or slopes. Of all the different kinds of pottery fragments found on such *hüyüks*, the type of the Byzantine period is a rather thick pottery with a green glaze, often showing black designs; that of Roman times is the so-called *terra sigillata*, very fine fragments with a reddish slip and of reddish material. I considered a *hüyük* as having also had a

Hittite settlement, if I could find there a reasonable percentage of fragments of pottery like that found at Boghaz Kõi, which we know certainly to have been the Hittite capital. Of this pottery in turn there are two different types. The first is a painted variety, with black-and-red designs on a yellow background, or black designs on a red background, showing mostly geometrical or strongly conventionalized designs. The second and more characteristic type of Hittite pottery has a red slip, highly polished. A variation of this type, which I found on the *hüyüks* in the eastern part of the valley of the Delidje Su, shows a black slip, also polished in the same manner.

As a rule, we tried to visit all the villages or towns which showed a combination of the words *hüyük* ("artificial hill"), *tepe* ("small hill-ock"), *hissar* ("fortress"), *kaleh* ("castle"), *kara* ("black"), *kül* ("ashes"), *yazili kaya* or *yazili tash* ("inscribed stone")—in short, all places where the name suggested that some antique monument might be near by.

After this excursus of more technical nature, I shall continue the description of our road from Bozhüyük to Eskishehir. The road followed the railroad in the small valley, in which were situated three *tumuli*. We passed also a considerable number of smaller or larger sites with classical ruins and often saw in small villages very fine specimens of late classical architectural fragments. We arrived at Eskishehir rather late, as on account of the rain the road had become very difficult. Eskishehir is the seat of a government and of great importance as the junction-point of the three railroads of Asia Minor: those running to Haidar Pasha (Stambul) and to Angora, and the Baghdad Railroad.

I wanted to continue my trip to Angora the next day and, although I had been warned against it on account of the weather, I decided to try it. Accompanied by a *gendarme* whom the governor had the kindness to appoint as a guide for us, we left Eskishehir on a fairly good road to the southeast, again passing small classical ruin fields or single monuments scattered along the road. In the small village of Kaimaz we discovered an ancient inscription, but it was impossible to see to what period it belonged. We were now on a slightly undulated high plateau sloping down to the south into the fertile plain of the Chakara Su. Toward noon it started to rain

and, after a quarter of an hour, we could not make our car move either forward or back, on account of the condition of the road. After half an hour the rain stopped and we walked to a small hamlet fortunately not far away, where we got some *yugurt*, eggs, and cheese. As it was impossible for the automobile to continue the trip, I decided to leave it on the road with Hüssein and to continue our trip with an *araba*, that is, a springless wagon, to Sivri Hissar.

After five hours' ride we saw, suddenly springing out of the plain, a pointed rock wall, and at its foot the small town. The town takes its name from these rock points; for Turkish *sivri* means "points" and *hissar* means "fortress."

There were really remains of an Ottoman castle on one of the peaks. As a friend of ours in Eskişehir had telegraphed to the director of the school in Sivri Hissar, we were fortunate in not having to look around for shelter and food,



FIG. 6.—The inscription at Kaimaz



FIG. 7.—On the road to Sivri Hissar in an *araba*

as we were somewhat tired after this ride in the *araba*. We enjoyed the director's hospitality very much. The next day he presented us



FIG. 8.—Sivri Hissar

to the *kaimakam*, who in his turn showed me around the remains in Sivri Hissar itself, which are mostly of classical and Byzantine times. He also took me to Kepen, a village near by, where there was a *hüyük* which proved, by pottery found there, to have had also a Hittite settlement. A kilometer farther were the remains of a fairly large Roman settlement.

On July 7 we left for Angora at six in the morning, following first a rather fertile valley to the northeast. We then entered a dry, high plateau east of the little town of Mülk, surrounded by bare mountains, the plain itself being

covered with dry grass. From there we descended to the Chakara Su Valley, whose river we crossed a little south of the ruins of ancient Gordium. In this part of the valley were a great number of *tumuli*.



FIG. 9.—The *hüyük* at Kepen

In Polatli, a station of the railroad to Angora, we had our lunch. We then continued our route to the northeast, mostly over steppes;



FIG. 10.—The steppes south of Angora. To the right, a typical Anatolian mill.

only along the rivers themselves are a few cypresses or other trees.

After leaving the railroad at Maliköi, we entered a rather narrow valley leading toward the plain on the northeast corner of which Angora is situated. Near a spring in this valley we passed the ruins of a Byzantine building. Re-used in the curb of the spring itself was a small rectangular relief of probably Phrygian origin. This relief shows two lobes projecting above a stone bench, beneath which are two panels: one with a swastika, the other with small vertical lines. As we emerged from this valley, we had an indescribably beautiful view of Angora at the end of the plain lying in the late



FIG. 11.—Phrygian relief built into the curb of the Vaharet Chesmeh near Angora.

afternoon sun. Behind it rose the dominating mountain peak of the Mireh Dagh, and before it a number of *tumuli*.

At Angora we had to stay four days in order to get the necessary permit for an expedition to the interior of Asia Minor. Without any difficulty, the official permits were granted to us in the most courteous manner; and His Excellency, the Minister of the Interior, as well as the Ministry for Public Instruction, gave us personal letters of introduction to the government officials of the different towns through which we wished to pass. These were very valuable and helped a great deal toward the modest success of this expedition. Meanwhile, we had time enough to see Angora, which is a remarkable city. The



FIG. 12.—Angora

town surrounds the very imposing acropolis, whose immense walls are still standing on the south slope. A thoroughly modern city is being built there; and, on the gentle slope a little eastward from Angora itself, there is already a modern suburban settlement with single villas in great gardens. To the south of Angora the president of the republic has built a model farm with all the latest equipment on a very large scale. Everywhere is to be seen a fabulous activity in building and modernizing the city.

On the acropolis itself they have a small museum with very interesting objects; but it will shortly be transferred to a new building down in the city, which will be especially rich in Hittite antiquities. The walls of the citadel are in themselves a museum, as they have been built with remains of various ancient buildings, such as inscriptions, sculptures, and various other architectural fragments. Naturally we

visited also the famous Augustus Temple, on the walls of which is engraved the so-called *Monumentum Ancyranum*, the political testament of the Roman emperor Augustus. The climate of Angora is not very agreeable. It is terrifically hot there in the summer time and again very cold later in the year. From Angora the Turks are building a railroad to Kaisariyeh, which is now already in use as far as Yerköi, a little village south of Yozgad. Later on this line will also be connected with the railroad running from Samsun to the south via Amasia to Sivas; furthermore, a track is to be laid from Kaisariyeh south to Uluküşlar on the Baghdad Railroad. If the Turkish government is able to continue the work on this railroad with the same speed as now, it will not be very long before this network of railroads is completed.



FIG. 13.—Angora. The outer wall of the citadel.



FIG. 14.—Angora. A "Hittite" hieroglyphic inscription.

On the morning of the twelfth of July we left Angora, following the route along the Tabakshaneh Su to the east. It is a rather narrow valley, but it forms two small fertile plains, in each of which we found an ancient settlement. We then went up gradually until near Azi Yozgad we reached the height of the Disgurt Dagh, an absolutely bare and dry plateau. We then dropped down to the east by different levels with mostly steep slopes until we reached the dry valley of the Chukurjuk Su. At Külüjlar we reached the level. Around Külüjlar are a few gardens

and groups of cypresses. It is an amazing landscape, with steep, rocky slopes of the mountains showing all kinds of colors due to the



FIG. 15.—Azi Yozgad. A typical Anatolian village

different strata of limestone and clay, the dry, sandy river valley, and then the fresh green of the gardens and the dark color of the cypresses. From Külüjlar ascend the famous serpentines leading over the mountain chain that forms the west bank of the Küzül Irmak. The descent is terrible, and it was one of the most dangerous roads which we had to pass during this expedition. Even Hüssein, our



FIG. 16.—Külüjlar

chauffeur, for whom almost no road was too difficult, refused flatly to go over this road again when two months later, after we had failed



FIG. 17.—The Küzül Irmak near Yakhshi Han

to cross the Küzül Irmak to the north, I wanted to pass it a second time in going to Angora.

At Yakhshi Han, a little south of there, where the railroad crosses the Küzül Irmak, we reached the valley of the river itself. This river deserves its name; for *küzül* means "red," and its water is really of a reddish brown. At Yakhshi Han I heard from the commander of



FIG. 18.—Kürigin Kaleh

gendarmes that ruins were being unearthed at Kürigin Kaleh through preparation for the installation of a huge factory. So we went there and were very kindly received by Austrian and Hungarian engineers working there for the Turkish government. Kürigin Kaleh itself is a truncated hill in the middle of a plain. On its top are the remains of a very ancient settlement, as proved by pottery which I collected there. Around it has been a classical city, the foundations being partly destroyed now by the building of terraces for factory buildings. On



FIG. 19.—Kürigin Kaleh.
The Egyptian statuette.

the day of my visit a small Egyptian statuette of the Middle Kingdom was found in the late classical necropolis. The only explanation for its being in that situation is that it had been incidentally found in the late classical time during building activities which pierced the earlier strata and had been kept as a curiosity until it found its final resting place in the necropolis. Aside from a few Greek inscribed tombstones and fragments of Ionic capitals, there has been found nothing more of importance.

The next morning we made an excursion to the Keskin Sivrişi, accompanied by Dr. Teur, Mr. Regenärmel, and Nagy, as I had been told that there was a cave. The *sivri* is a pyramid-shaped mountain on the high plateau northeast of Kürigin Kaleh, dominating the whole region. An ancient road, probably a procession road, leads to the mountain; it ends at a certain place on its slope in a small terrace, just large enough for turning a wagon. Two hundred meters higher up is the entrance to a cave consisting of two floors connected by an 18-meter tunnel and a pit 3 meters high. Especially interesting is the cave on the second floor, the dome of which is supported by four pillars, one of which is unfinished. This immense worshipping place was probably never finished, as proved by earth and stone on both floors and nearly filling the tunnel, so that we could pass only by crawling like snakes. A little south of Kürigin Kaleh, we found a huge monolith in which was carved a small cave with a bedstead and a little fireplace.



FIG. 20.—Keskin Sivriisi. The procession road

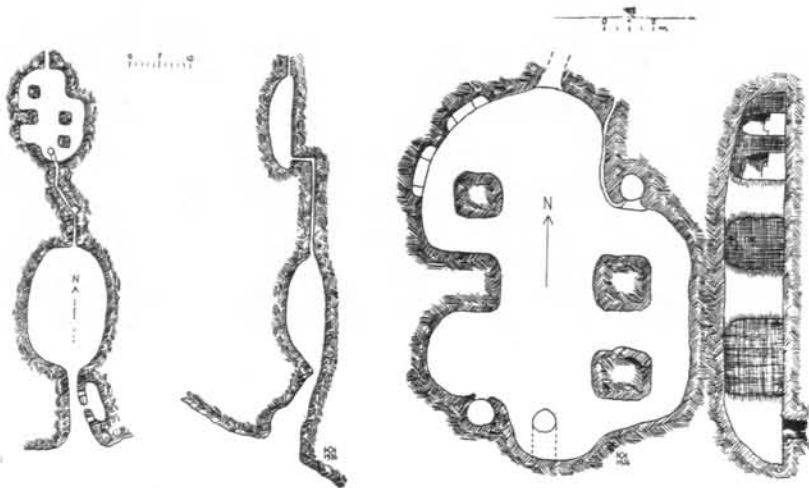


FIG. 21.—Keskin Sivriisi. Cross-section of the cave.

FIG. 22.—Keskin Sivriisi. Plan of the second floor.

We enjoyed the hospitality of our engineer friends very much, and we were only too glad that on our way back to Angora destiny brought us back to this place.

On July 14 we left Kürigin Kaleh, ascending the mountains southeast of it and reaching Keskin in the night.

The next morning we left Keskin quite early, as I wanted to reach Yozgad that day. From Keskin the road leads straight to the east,



FIG. 23.—Kürigin Kaleh. A piper

going up and down through desolate, dry, and bare mountain plains or through valleys of abundant fertility. But this landscape changed as we approached the Delidje Su Valley. There it assumed more and more the aspect of a real, dry steppe. We passed Aivalü, the famous *hüyük* which had been discovered by E. Chantre. This landscape has a sad and sinister aspect, especially when the sun pours down without any compassion whatever. Bare mountains and dry grass steppes alternate with salt steppes. But the coloring is marvelous. The mountains show

violet, blue, red, and greenish-yellow layers of clay and limestone, the typical sedimentary formations. The steppes are covered with dry yellowish or gray grass. In some places the salt excrescences appear like snow. The landscape changes little even after reaching the Delidje Su; the same aridity continues.

At Sekili we crossed the river, which flows slowly through a girdle of marshes varying in width. To the north the mountain slopes slowly upward toward high mountain ranges behind which lies Boghaz Köi. This undulated slope is divided by valleys leading to the north, in each usually a dry river bed. Shortly before the Sarai Su, coming from the north, joins the Delidje Su, the valley enlarges, and gradually the terrible dryness changes. First near the river bed, then increasing

more and more until they occupy the whole valley, appear grainfields. The road turns then to the northeast, following the valley of the Sarai Su, which originates a short distance beyond Yozgad.

Yozgad is the seat of the government and a very important city, as it is situated on the main road connecting the Black Sea with Kaisariyeh. It is a rather clean and very prosperous-looking town.

The first day of our arrival, after we had paid our respects to the



FIG. 24.—Salt steppes near the Delidje Su Valley

governor, we made an excursion to Yerköi, following the Sarai Su southward. On the way I investigated a Hittite settlement in the valley itself near Sarai. At Yerköi we met a few European engineers who had their headquarters there, as they were building a part of the railroad from Angora to Kaisariyeh. Two months later we passed here again and were their guests for nearly six days. But this day we did not stay there at all but went farther to the south, crossing the Delidje Su and entering the Malya Chölü by a small valley. There we found a rather large *hüyük*, on one end of which was a modern Turkish hot bath, a so-called *hammam*. From this *hüyük* a dam leads

to the south. It is a remarkable feature, and I do not know any explanation for it. Near the end of this dam I found by a heap of stones



FIG. 25.—Sarai

the remains of a huge Hittite stone eagle. The site is called Bulumashlü. Around these stones were bits of cloth placed there by the Mohammedans, showing this to be a holy place.



FIG. 26.—Bulumashlü

For the next day the governor was kind enough to place one of his officials at our disposal, so that he might guide us to some interesting parts of this *villayet*. We left Yozgad on the road leading to the east. Near Köhnen we passed another *hammam*, near which were the remains of two ancient buildings. We then worked our way to the southeast, until after passing the Chomak Dagh we reached Terzili Hammam, a little south of the Konak Su Valley. There are the remains of a Roman bath, of which parts of the façade and of the huge marble basin are still extant. We stayed there that night; the next morning we started back to Yozgad, but followed another road. Near the village of Alishar is a remarkable mountain, a so-called *sivri* ("points"). Near the *sivri* we found a most remarkable *hüyük*. This *hüyük* consists of a round hillock on a wider circular terrace. Judging from

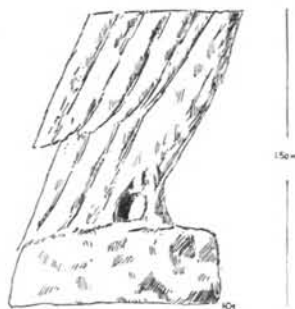


FIG. 27.—Bulumashlü.
Fragment of stone eagle.

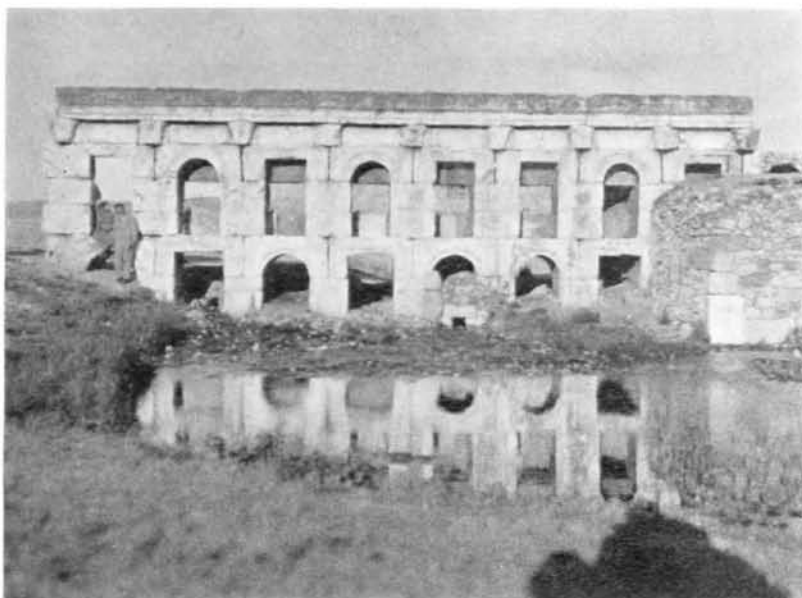


FIG. 28.—Terzili Hammam

the marshes which surround this formation, it was once completely surrounded by water. We found very fine specimens of ancient painted Hittite pottery and also red slip pottery of the later Hittite



FIG. 29.—*Hüyük* near Alishar

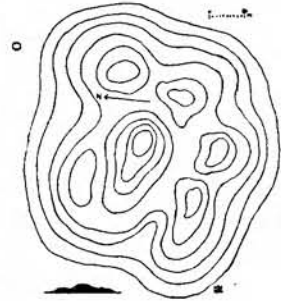


FIG. 30.—Plan of the Alishar *hüyük*.

period. The road then leads northward through the gently undulated plain, often crossed by irrigation canals which were very difficult to cross in our automobile. At Yazili Tash, a small village, we found a great number of architectural fragments of the late Roman and Byzantine period and also fragments of sculpture which may be Hittite. The road ascends then toward the Kyerkyanos Dagħ, which we reached near Alizi. On its summit is a big fortification of probably Hittite



FIG. 31.—Our automobile on the "road"

origin. North of this mountain chain extends a high and very dry plateau which slopes down toward the valley of the Egri Özü, in which valley runs the road which we had followed the day before. We passed another *hüyük* before we crossed the river and reached the road leading to Yozgad.

On July 20 we left Yozgad for Boghaz Köi, following a road which leads northward over the mountain plateau and then descends in steep, serpentine curves to a plain in the middle of which the town of



FIGS. 32 and 33.—Hüyük. The standing sphinx

Aladja is situated. There we turned westward to Altü Yapan, a small village on a *hüyük* with architectural remains and inscriptions of the Roman and Byzantine periods. There was also a Hittite lion. From there we turned northward again until we reached the famous Hüyük, where excavations had been made by Makridi Bey, of the former Imperial Museum at Stambul. One of the sphinxes there is still standing, the other one having been thrown over and broken. The reliefs have been brought to a place outside the village where, if they are not soon transported to the new museum in Angora, they will be completely ruined. These sphinxes and reliefs had always been considered as Hittite; but since four Phrygian inscriptions have been discovered, two on these pieces and two more on a relief and a huge lion, respectively, they were evidently either made or at least re-

used by the Phrygians. The Hittite city itself is probably beneath the Phrygian settlement. But further statements must wait until the very interesting and important final publication of Makridi Bey appears.

A few kilometers beyond Hüyük, in a circular valley, is situated a *sivri*, the Kara Hissar, near Cherkess Köi. At its foot are the remains of two large, probably Seljuk, buildings; and on its top I could see



FIG. 34.—Hüyük. The reliefs

remains of walls of a late period. As I had no time that day to investigate any more, I made up my mind to come back here for a longer stay, which I did two months later. Then I made very interesting observations, especially here and on the *tumuli* situated on the mountain range limiting this valley to the south. From Hüyük we followed a "road" to the west, until we reached the valley of the Budak Özü Chai, in which Boghaz Köi is situated. This whole road as far as Boghaz Köi is beyond description. It is really one mudhole after another; and it took us seven hours with our automobile to reach Boghaz Köi, a distance which on horseback can be made in three

hours. Very tired, we arrived at dawn in Boghaz Köi, where Zia Bey, a Turkish nobleman who has a beautiful house, received us with typical oriental hospitality.



FIG. 35.—Hüyük. Hüssein behind a lion

The first thing the next morning we went to the site of the ancient city of Hattushash, the Hittite capital, which extends behind the modern village toward the south. The position for a city was one of considerable natural strength. Its walls surround the broad top of an outlying hill; on either side it is cut off by the steep valleys of two



FIG. 36.—Boghaz Köi. General view

rivers flowing northward, which meet just below the modern village. The ancient city occupied this whole slope, on which are a few outstanding large rocks and especially the Boiyük Kaleh, the ancient citadel.¹ There are so many good descriptions of this famous site that I will mention only the features in which I was especially interested. Coming upward from the village, we entered the city at a point where



FIG. 37.—Boghaz Köi. The lion gate. Interior

the excavations had brought to light an ancient gateway. Then we came to the so-called large "temple" or palace. In the eastern part of it were found some of the famous state archives. The rest were found to the northwest at the foot of the citadel mountain. These tablets were found so injured and broken that there is no doubt that they had already been destroyed in ancient times. Probably the conqueror of Hattushash in the twelfth century B.C. cast them down from the citadel and then later on used some of them to fill the foundations of

¹ For further description, cf. *Wiss. Veröffentlichungen der deutschen Orient-Gesellschaft*, Vol. XIX; Otto Puchstein, *Boghazköi, die Bauwerke*; also John Garstang, *The Land of the Hittites*, pp. 196 ff.



FIG. 38.—Boghaz Kõi. A huge water jar



FIG. 39.—Boghaz Kõi. Entrance to the postern.



FIG. 40.—Boghaz Kõi. Natives



FIG. 41.—Yazili Kaya



FIG. 42.—Yazili Kaya

the big temple, which is surely post-Hittite. Following the slope farther upward, we found the ancient expedition house. In the courtyard, in shipping cases now spoiled by the sun and rain of nearly ten years, were a few great clay vessels and the famous warrior that once decorated the so-called "Gate of the King" in the outer wall. The most southern point of the wall is on the top of a mountain. From the outside two stairways lead up to it, and a postern leads through the

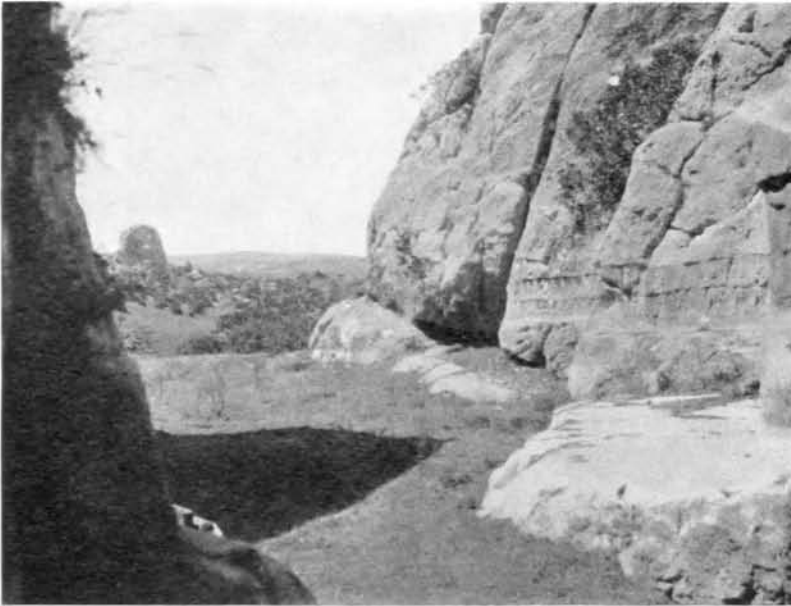


FIG. 43.—Yazili Kaya

hill into the city. There are several more posterns at other points along the wall.

Aside from the finished excavation of the big temple and of a few other buildings, Boghaz Kōi is hardly excavated at all. Especially the deeper strata, the real "Hittite" ones, remain practically untouched.

Not far from Boghaz Kōi is situated Yazili Kaya, the far-famed rock sanctuary. It is in a group of rocks, situated on the slope of the mountain range, which form at one side an immense natural courtyard. This courtyard is surrounded by sculptures. From one side

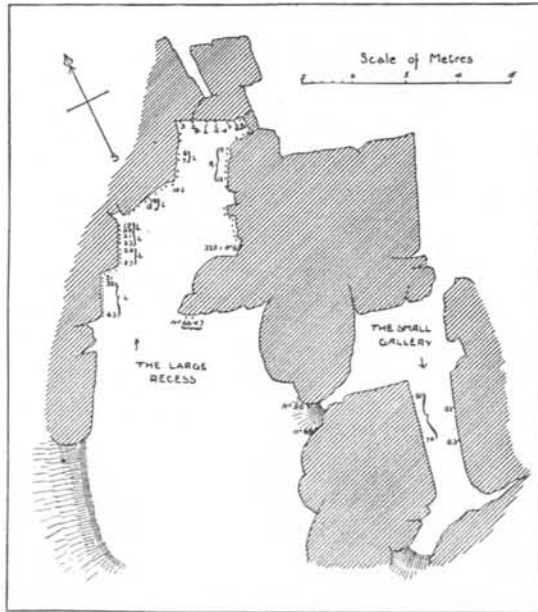


FIG. 44.—Yazili Kaya. Plan (From Garstang, *Land of the Hittites*, p. 221)



FIG. 45.—Yazili Kaya. Sanctuary, with altar at right and main relief in center.

various male deities, from the other side females in long garments and wearing cylindrical headdresses, are shown proceeding toward the center. These two long processions meet in the middle, where on an immense relief is shown the principal god, standing on the curved backs of two smaller human beings, meeting the principal female deity, who stands on the back of a lion or panther. On the side where the female procession is shown appears also an altar cut in the living rock.

Not far from the entrance to this large courtyard a natural rift in the rock leads to a smaller courtyard, and on both sides of this rift are reliefs. From the small courtyard a narrow passage with very high, steep walls leads southward. On these walls are a few more sculptures and some rectangular niches. The sculptures in this passage are especially interesting. One of them, the so-called "idol," is the head of a deity over a symmetrical composition of four lions ending in the point of a dagger. Artistically, the best sculpture of Yazili Kaya is a frieze of running warriors at the south corner of this courtyard. There is also a small relief which has not yet been published, showing a bearded man standing under an *aedicula* formed by two columns supporting a winged disk and at the sides two long objects. This *aedicula* appears two more times in Yazili Kaya; and, as it appears also on other monuments showing "Hittite" hieroglyphs, but with different designs between the columns and the winged disk, it is believed to frame royal names. There are also, in one corner of the



FIG. 46.—Yazili Kaya. Sculptures in the small courtyard.

great courtyard, remains of a hieroglyphic inscription. So I doubt that we really are still entitled to call this remarkable monument Hittite without putting the term in quotation marks, as it is very probable that the so-called "Hittite" hieroglyphs were used in this region only after the destruction of the Hittite Empire.

The last day of our stay at Boghaz Kõi I decided to make an excursion on horseback to look for possible remains of ancient roads



FIG. 47.—Yazili Kaya. Sculptures in the small courtyard

leading southward. Zia Bey told me that in the spring traces of a road leading northward to Hüyük could easily be recognized by lighter-colored stripes in the pastures. We entered a rather wild gorge leading to the south; and after half an hour, just before the gorge becomes still narrower, we arrived at a place where there were the remains of an ancient building. Not far from it we saw an ancient road which we could follow, with only a few interruptions, over the whole mountain range and even afterward when it divided, one branch leading toward Nefez Kõi and the other following the valley straight to the south. The mountains separating Boghaz Kõi from the Delidje

Su Valley are a system of parallel ranges wildly torn and incised by valleys. Following the ancient road, I could observe that always



FIG. 48.—Kurds on the ancient royal road

where it reached the summit of such a mountain chain there were remains of ancient buildings, probably military posts for guarding



FIG. 49.—The ancient royal road

the road. The modern road, if we may call by that name a path which was barely passable on foot or horseback, does not directly follow the ancient road. The latter is built of small stones filled in between two rows of rather large stones. I measured its width several times. It was in general between 5.50 and 6.20 meters wide.

Boiyük Nefez Kõi lies in the wider part of the valley leading to the south. It is probably the Roman Tavium. Near the modern village, which is filled with fragments of inscriptions, sculptures, and architectural fragments, there are two *hüyüks* covered with pottery of the



FIG. 50.—Mosque at Tambassan

Roman and Byzantine periods. These late classical strata are probably very deep, so that remains of the Hittite settlement could not be found without digging; but I believe that there is a very important Hittite site at this place.

We arrived at Nefez Kõi late in the afternoon and my guide did not wish to return the same evening to Boghaz Kõi as it would be difficult to find our way back. But I insisted, and we went on. We followed a smaller side valley to Tambassan, whence the defile leads to Boghaz Kõi. This small valley is rather difficult to cross. I noticed, nearly at its beginning, a small cave; from the top of the rock in which it is carved, I could see farther up the valley a second one; and after we reached the second one, I could see from there a third, rather big one. This was in a single rock on the summit of the range, whence

we descended toward Tambassan. We arrived at Tambassan after dark. Again my guide wanted to stay, because he was afraid to cross the mountains in the nighttime. But, as we had a full moon, I thought we could risk it.

A quarter of an hour after leaving Tambassan, we of course lost the path. Now followed a wild climbing party over bare or scrub-covered slopes, up and down, as the North Star directed. After two hours of this strenuous exercise, my guide sat down on the summit of a mountain range which we had just reached and refused to go any farther. These ranges have no special landmarks. They all look alike.



FIG. 51.—Kaleh Boinu

After a half-hour rest I finally succeeded in persuading the man to continue. I had noticed a group of scrub on the range before us which I thought I had seen in the daytime. Thither we went and by chance, not far away from it, we struck the ancient Hittite road. We followed this road, although it was partly covered with thick scrub or cut by dry mountain streams, as I did not want to take a chance by following the modern path. So finally at three o'clock in the morning we reached Boghaz Köi.

The next day, toward noon, we left the hospitable home of Zia Bey and worked our way through the marshes and muddy roads to the north. We reached Sungurlu at three, and after a short rest continued northward. This is a bare and dry mountain region, steppes alternating with complete desert, the mountains being mostly of limestone. At Kaushut we crossed the large, dry bed of a tributary of the

Delidje Su, and finally, pushing our car forward over hills covered with a slippery, dry grass, we reached Kaleh Boinu, near the junction of the Küzül Irmak and the Delidje Su. At this point are the remains of a large ancient settlement. Parts of the foundations are still to be seen, though some have been dug out by the natives in order to get building material for their homes. Pottery collected there showed also a larger percentage of Hittite specimens. From this site one has a marvelous view, especially westward, far over the Küzül Irmak. East



FIG. 52.—Kaleh near Chorum

of it extends a high plateau, undulated and sloping down gently to the east. Kaleh Boinu is located at a very important strategical place, and I am sure that excavations there would bring to light strong fortifications reaching from Byzantine times back to the earliest periods. Although the little village is very poor, its people prepared us a most elaborate dinner, even chicken, the only real chicken which we got during our whole Anatolian trip. In the other places they were mostly quite antique birds!

The next morning I made a survey of the most important foundations, and then we started for Chorum, descending to the valley of the Küzül Irmak, here broad and fertile. At Tosun Burun we struck the main road leading to Chorum. It runs directly eastward, first along a valley with slopes covered thickly with scrub. Then, winding up in steep, serpentine curves, it reaches the wood-covered summit, which we followed until again the road winds down to the valley in the east end of which Chorum is situated. This road is a masterpiece of construction and in excellent condition. We reached Chorum at sundown and found shelter in the only big *han* there, rather large and clean, but of course full of other living creatures besides the humans. The governor, to whom we made a visit the next morning, assigned an

official of his staff to accompany us southward in the afternoon to the valley of the Chorum Chai, where I wished to investigate.

We were waiting for him, drinking coffee in a garden near the Konak, when suddenly there came to the door another automobile with a group of very well-dressed Europeans. It was the New York University expedition under Professor R. M. Riefstahl, who had learned from *gendarmes* that our expedition was at Chorum and so had stopped to meet us on his way to Amasia. We spent a few very pleasant hours together. Then the New York party had to leave, and our work called us also. We agreed to meet again, if possible, at Tokat three weeks later.

This excursion to the valley of the Chorum Chai proved most profitable. Besides a *hüyük* at Sarai, we found a rock *kaleh* of the kind of which we encountered more later on. It is situated on a huge rock at a narrow defile of the river, and from its top three tunnels lead down to its base. They were partly filled up with stones and sand. Furthermore, there were a number of steps, irregularly dispersed on the slopes, and two cisterns. In one



FIG. 53.—*Kaleh* near Chorum. Entrance to a tunnel.

place we found also the remains of a wall built of rather large stones without any mortar binding. On the top a platform and a bench were cut in the native rock.

On July 27 we proceeded from Chorum northward to Osmanjik, a large town on the banks of the Küzül Irmak. Shortly before reaching the town itself we discovered a rather roughly done rock tomb. The town is situated around a big castle showing the remains of strong Byzantine and Seljuk fortifications. From there we turned eastward, hoping to reach Merzivan by night. But we got only halfway, to Hadji Kõi, thanks to the extraordinary condition of the road. On

this short stretch we broke three springs and had flat tires nine times. It is a road newly built and not completely finished, cut by ditches for draining the very wet and fertile valley. We had to go through them, which means that the car went into the ditch and then had to be pushed out. So one can imagine our feelings when we sat down on the road at ten o'clock at night with all four tires flat and not absolutely sure how far we had still to ride before reaching a town. Fortunately, after



FIG. 54. The cliff tomb near Osmanjik

having the tires repaired, we arrived at one within half an hour. As all "restaurants"—that is, the one public kitchen—were closed, we would have been forced to go to sleep hungry if the *kaimakam* had not occupied himself in getting us delicious food consisting of *yugurt*, eggs, and mutton. Without any further incidents, in the afternoon of the next day we reached the coast of the Black Sea at Samsun. From Hadji Kōi the road leads eastward via Merzivan until it reaches the ancient Amasia road, which bends northeast to Samsun. We had lunch at Khawsa, the Turkish Vichy. The natural hot springs there are the most famous next to Brussa. From there the road ascends,



FIG. 55.—Osmanjik



FIG. 56.—The new railroad track from Samsun to Sivas

over beautiful mountain routes, to the summit of the northern mountains, which slope down toward the Black Sea. The panorama is beautiful, especially after the Black Sea itself becomes visible with the two immense *tumuli* of Karamut, behind which appear Samsun and its harbor. One can imagine how we enjoyed being again in a city of some sort, with at least some European comforts. For several



FIG. 57.—Serpentines on the road from Amasia to Samsun.

reasons I here dismissed our dragoman, who returned by ship to Constantinople. As very kind and helpful Turks and Europeans were at hand, this little incident had no further influence on the rest of the expedition.

We may now sum up the main investigations and observations made in this part of our expedition. We had discovered a three-story subterranean temple, with a procession road leading to it and a small single cave, near Kürigin Kaleh. I had also surveyed Kürigin Kaleh, encountering there, in the middle of Anatolia, an Egyptian statuette of the Middle Kingdom. Around Yozgad we had found the remains of six ancient "Hittite" settlements. At Terzili Hammam we had studied part of the well-preserved façade of a Roman bath. Besides the study of Boghaz Köi itself, I had traced an ancient road leading southward to Nefez Köi and had photographed Yazili Kaya thoroughly. At Kaleh Boinu we had investigated large fortifications; and, south of Chorum, we had discovered a rock *kaleh* of the type of which I speak definitely later on. Near Osmanjik we had found a rock tomb until now unknown. In connection with the foregoing a number of other observations had been made, some of which were carried further in the second part of the expedition, as for instance at Kara Hissar near Hüyük.

FROM SAMSUN TO ANGORA

With the very kind assistance of Mr. Hirschbold and Mr. Margolis we soon found at Samsun a very pleasant young Turk, Nedjmedin

Kadry Bey, who was willing to accompany us as dragoman to Angora. We never regretted this choice. He was a very agreeable companion and, moreover, absolutely reliable.

We had to stay nine days at Samsun, but we did not waste any time. The Turks are now making at Samsun a naval base, commercial and military. Its situation is very favorable for this purpose, other-



FIG. 58.—Samsun and Kara Samsun

wise the ancient Greeks would not have chosen it in their time. For it was the ancient Amisus. The ancient city, now called Kara Samsun, lies on a rocky plateau north of the modern city. Looking down to the sea from its height, part of the ancient harbor may still be recognized. The modern city itself is filled with remains of the classical periods, but mostly small fragments only. But the *tumuli* surrounding it form the main feature of Samsun. We counted no less than twenty-one, some of them very large, especially the two near Karamut on the road to Amasia. Very imposing, also, are the two groups to the north and

south. The mountain ranges there directly touch the Black Sea, shoulders of the mountains extending into it. And on their ends are *tumuli*. I do not think there can be any doubt that the greater part of them are burial places, as they are too closely grouped to be signal stations. Of course it may be possible that some of them, like the two at Karamut or the big one on the Dervent, were at the same time landmarks guiding ships to the harbor entrance.

One day we made an excursion to Akalan, where Makridi Bey had conducted a small excavation. It is a very archaic fortress with



FIG. 59.—*Tumuli* on the Dervent

a surrounding town. The outer walls of the citadel are fairly well preserved; the site of the town itself is untouched. It is certain that a systematic excavation would bring the most astonishing results here. That it had been an important Hittite stronghold is proved by the large quantity of Hittite pottery scattered all over the ground.

Through the courtesy of Dr. Zia and some railroad engineers, I had the opportunity to visit a burial place which had been struck a few days before during the work on the railroad from Samsun to Sivas. It was a small grotto with three clay coffins. Unfortunately, the workmen had destroyed them nearly completely and scattered the bones of the skeletons. A few bronze pieces of uncertain meaning were all, besides three small clay vessels, that I could investigate. It was a rather late tomb, perhaps of the first century A.D.

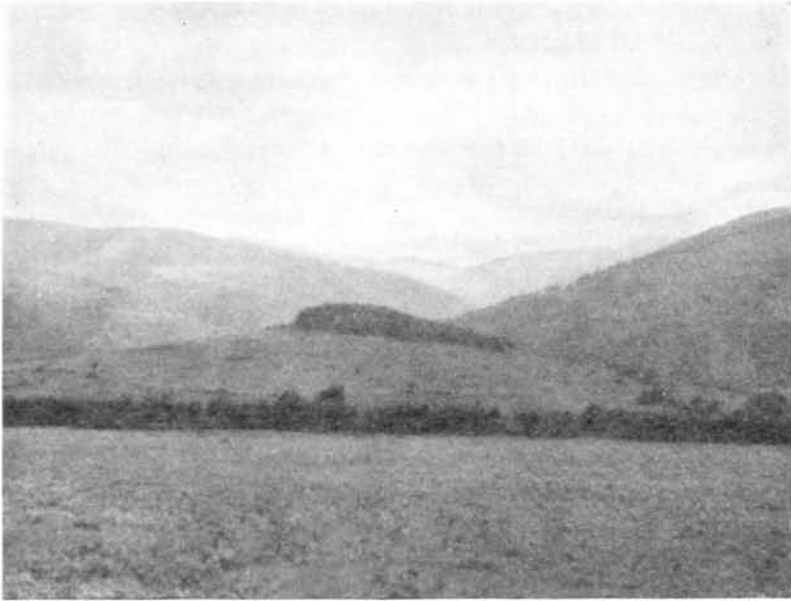


FIG. 60.—Akalan



FIG. 61.—Akalan

The whole region around Samsun is dominated by an enormous mountain about 12 kilometers west of Samsun, the Hodja Dagh. As I had been told that there was an immense fortification system on this whole summit, we started from Samsun on August 4 at four o'clock in the morning to climb this mountain. Thanks to our Ford car, we could reach a point only 700 meters below the actual summit of the Hodja Dagh, where we had to leave the car. Accompanied by Mr.



FIG. 62.—The Hodja Dagh

Hirschbold and Mr. Kuckhoff, both of whom had been living for years at Samsun and were expert mountain climbers, we started the difficult ascent. It is a rather steep slope, covered thickly with pine and oak trees; and orientation was not possible before we reached the summit, as the woods were so dense.

The summit was partly covered by meadows and blackberry bushes, and we had an indescribably marvelous view on all sides. To the north and east we saw the coast of the Black Sea, forming here the famous bay of Samsun; and we could even see

over the rather high mountains which extend into the middle of the bay. From the foot of the mountain extended a fertile plain, sloping gently upward until it broke steeply down into the sea. The alluvial plain in which Samsun itself lies was hidden by this elevation, but we could see the famous road from Samsun to Amasia winding up out of the deep valley. Behind it, farther to the east, we could see one mountain chain after another, the last fading into the dim outline of the Ak Dagh near Amasia, about fifty-six miles away.

Especially interesting was the view toward the west. This region is practically unexplored, and has never been surveyed. It is wild mountain land covered with shrubs and virgin woods and deeply incised valleys, sometimes with bare rocks visible beyond the trees.

As to the main purpose of our coming here, we were disappointed. There are on the top, running nearly around the whole summit and partly also on the slopes, immense walls which from a distance look as though they had been built by man. But with one exception they seem to be natural strata of a harder limestone, perhaps 1.50 meters thick, cropping out vertically 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. As already stated, in only one place do these strata seem to have been used as part of a huge tower—on the northwest end of the summit. As it had become rather late, we had to hasten our descent of the mountain, in order to arrive by daylight at the small village where we had left our automobile.

The next two days were devoted to making careful surveys of the situation of the *tumuli* around Samsun, again with the courteous assistance of our friends in Samsun. August 7, toward noon, we left the city, following the Amasia road southward to Khawsa, where we had been previously. The "hotel" was fairly good, but had New York prices.

The next day we left the main road, as I wanted to see the region around Ladik. Without any road, we fought our way through all conceivable difficulties. Ladik itself is situated in a very fertile plain, and it required only a short search to discover the site where an ancient city could have been. And we were not mistaken; Hittite pottery proved the settlement. Ladik has a very fine unpublished Seljuk mosque, and is full of late classical and Byzantine stone fragments. From Ladik the road to Amasia ascends in difficult serpentine curves. In respect to landscape, it was perhaps one of the most beautiful stretches of our trip; but the condition of the road is not to be described. It crosses one mountain chain after another, and then runs along halfway up the slope until it descends into the Yeshil Irmak Valley. There the road had been partly washed away, and those two hours during which we had to follow this road I shall never forget in my life. At least four times a wheel of the automobile slipped over the brink. We arrived at Amasia just in time for luncheon. The beauty of Amasia and its valley has been often described, but any description could be only a feeble attempt. The towering limestone

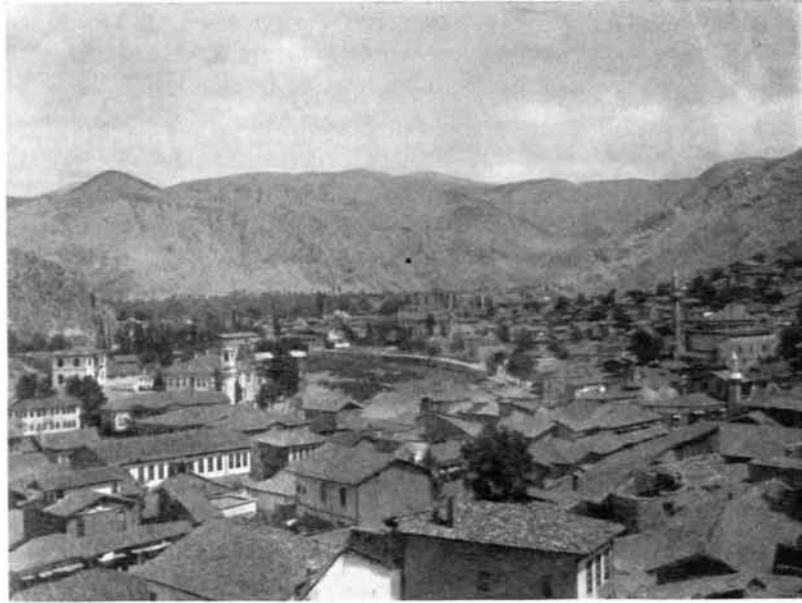
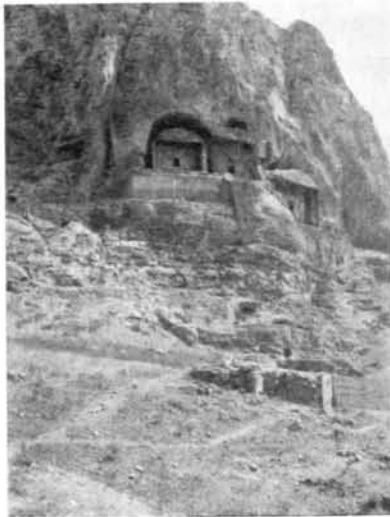


FIG. 63.—Amasia



FIGS. 64 and 65.—Amasia. The cliff tombs

rock on which the famous castle is situated, looking down on the city rich in the most beautiful Seljuk monuments, the imposing rock tombs, the deep green of the gardens along the Yeshil Irmak, are indescribably beautiful. Of course, Amasia is overflowing also with monuments of classical and post-classical times; but there was no time that day to look at all this wealth, as I wanted to reach Tokat that night, where I knew I should find Professor R. M. Riefstahl with the New York University expedition. Already on this first day of his traveling with us, Kadry Bey proved his efficiency, which we had ample opportunity to test all the way to Angora.

The road was fairly good. A few miles south of Amasia it turns sharply to the east, entering a large, fertile valley, where the mountains are covered with all sorts of bushes and shrubs. There were only a few villages, but all rather prosperous looking. Then the road turned again southward until we reached the val-

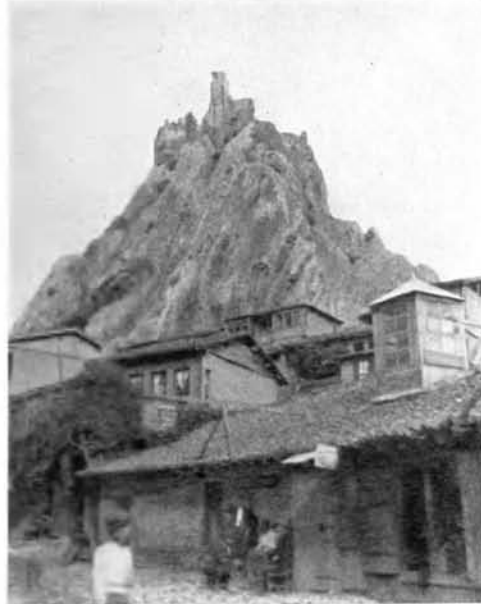


FIG. 66.—Tokat (By courtesy of Professor R. M. Riefstahl).

ley of the Yeshil Irmak, which we followed to Tokat. Archaeologically, this section of the road, as far as Turkhal, was rather uninteresting. But from Turkhal to Tokat, where the Yeshil Irmak flows through a large plain, we observed different points which we decided to investigate on our way back from Tokat. We reached Tokat at eleven o'clock at night, and after much futile searching found the New York expedition in a "hotel." As we could find no other rooms, we accepted the invitation to pass the night in their one room. It was a bit close; but as we were dead tired we did not mind sharing this small room with eight human and innumerable other living beings.

Tokat is situated very similarly to Amasia, also at the foot of an immense citadel rock. The day after our arrival we made an excursion to the nearby site of the ancient Comana Pontica. It is marked by a small mound overhanging the Yeshil Irmak near a bridge crossing the river. At its foot are the ruins of a probably Seljuk building, and a few hundred meters farther, on a small hill, a Seljuk *türbeh*. On its slope is an immense monolith, in which are carved two rock tombs.



FIG. 67.—Comana Pontica. The monolith

One of them shows on its façade a Greek inscription. I feel sure that the grave itself is older and that this inscription was added in the classical period.

The evening of the same day, we had a celebration in honor of the birthday of Professor Riefstahl. Professor Riefstahl, who had come there to investigate the Seljuk monuments, was kind enough to show us

all the beautiful monuments of this period, in which Tokat is extremely rich.

Another excursion a day later was made to Bairam Tepe, a huge rock jutting out in the narrow valley of a small tributary which joins the Yeshil Irmak from the south. Through this valley leads the main road to Sivas. Just facing this large rock is a smaller one, also detached from the high bank of the valley. On the top of this mountain can be seen the remains of a Byzantine or perhaps Seljuk fortress. But originally this rock supported a fortification of the same type as the *kaleh* which we had discovered near Chorum. On the steepest slope we found again, irregularly scattered about, groups of three or four steps and, on the summit, a large tunnel leading deep down into the rock but filled up with big stones and sand after about 100 meters. Not far away was a second smaller tunnel, also with steps leading

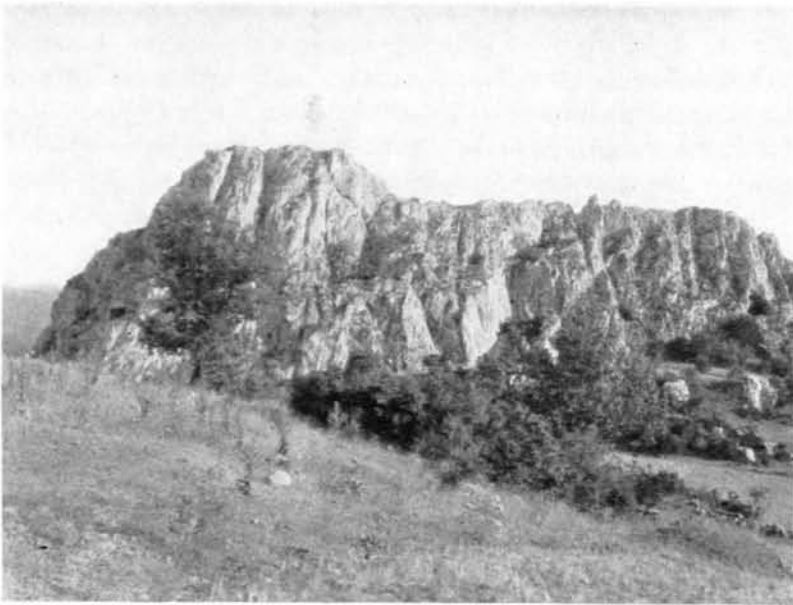


FIG. 68.—Bairam Tepe

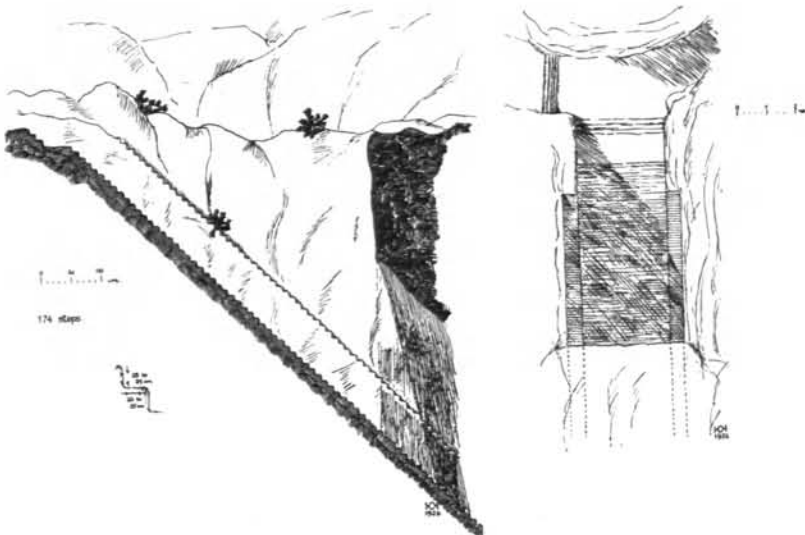


FIG. 69.—Bairam Tepe. Cross-section and plan of the tunnel

downward and equally filled up, even the entrance being closed by a big piece of rock, so that I could squeeze myself into it only with the greatest difficulty. Furthermore, cut into the living rock there were two rectangular basins and a cistern shaped like a great jar, narrow at the top and widening toward the bottom.

From the entrance to the big tunnel a small path with steps broken



FIG. 70.—Bairam Tepe. One of the cliff tombs

in three zigzags leads down nearly to the base of the cliff. On the other side of the rock are two big cliff tombs, very cleanly and exactly executed. The military character of this monument as a whole is evident. It offers another proof for my interpretation of the military character of the tunnels as posterns along which troops might be maneuvered unseen by the enemy. To consider them as tunnels leading to water seems wrong, as one very small one would be sufficient. Their spaciousness and the occur-

rence of two or three together in such a small space at the actual castles are, I think, proof enough for their interpretation as posterns. This does not imply that some of them were not likewise used for providing the castle with water, as, for instance, the tunnel at Amasia.¹ That we could not locate the exits of these tunnels does not at all prove that there were no exits. Another scholar who investigated similar monuments west of the Küzül Irmak interpreted these tunnels as worshiping places for the mountain deities.² At

¹ Cf. on this subject *Studia Pontica*, II, 157 and 243.

² Leonhard, *Paphlagonia*, p. 232.

Gökchali Kaleh we located the exits of two tunnels, and near neither was there any spring or pool.

On August 11 we made an excursion toward the northeast. We followed the Yeshil Irmak to the northeast and entered then a beautiful gorge at the mouth of which was situated a small *tumulus* on the high bank of the wide, fertile valley of the Germili Irmak. A wooden bridge about a mile and a half long brought us over the rather marshy valley to the other side, on the slope of which Niksar is majestically situated. At a small modern well we found used as decoration two small ancient reliefs of a very peculiar style. Niksar itself is a very interesting city and full of classical and later historical remains. For instance, a beautiful Seljuk *türbeh* directly at the entrance to the city shows in the middle of its portal a stone slab with a crouching antelope, a typical piece of Hittite workmanship re-used as centerpiece under the stalactite ornament over the entrance. But the most imposing monument of Niksar is the citadel. It crowns a strong, isolated rock and commands a fine view of the town and the plain. Huge ruins of the later Roman and Byzantine periods still remain, while on its outer wall I could make a very interesting observation. Four different methods of wall-building can be seen, one above the other. After the destruction of the first wall, of polygonal stones carefully put together, it had been repaired with another method showing more or less round stones arranged in rows. On this stratum is superimposed one showing more or less rectangular ones; and this again is surmounted finally by a wall constructed in the late classical style of binding the stones with mortar. From this castle again there descends such a tunnel as we have seen at Bairam Tepe, but filled nearly up to its entrance with stones and sand.

On August 12 we left Tokat, accompanied by a Turkish school-teacher of Tokat whose home town was Turkhal, where he wanted to show me the antiquities. We often had occasion to admire the energy and the deep earnestness and interest which these young teachers in the Anatolian towns show. The work which these young Turks are doing is splendid. Almost all of them are well informed about the spots where there are archaeological remains and are extremely courteous. After leaving Tokat, following the south bank of the Yeshil Irmak, we passed near Pazard Köi a Seljuk *ulu han*, an unusually beautiful ruin.

Shortly before Pazard Kõi there was an immense *tumulus*, one of a group arranged in an almost straight line from the northern slope of the valley to its southern one, consisting of five hillocks, two of them situated one on each side of the valley bottom. The one on the south side is a great deal bigger than the one on the north side. There is an interesting native legend concerning these two. As Sultan Muhammad IV went down with his army to conquer Baghdad, he passed along the south bank of the Yeshil Irmak; and on the spot where now the



FIG. 71.—The big *tumulus* near Pazard Kõi

southern *tumulus* is situated he made a sign and ordered that all the soldiers should fill their bags with sand to be deposited at this spot, thus forming the *tumulus*. On his way back from Baghdad, he passed along the north bank, and again he made a sign and gave the same order; but this second *tumulus* was much smaller because so many of his soldiers had been killed in battle around Baghdad.

About 2 miles west of Pazard Kõi, we turned to the north and crossed the Yeshil Irmak by a ford. We were now approaching Turkhal. It is a small town at the base of an isolated conical hill on which stand the ruins of a castle. The valley of the Yeshil Irmak

narrows before the river reaches Turkhal, forming a defile. Around Turkhal itself, the valley expands and forms a bowl-shaped basin surrounded by high mountains. Five valleys enter this valley from all sides, and the conical fortress hill dominates them all. The valley is very fertile, but very dangerous on account of enteric fever and the bad water.

The teacher brought us to the house of his parents, who invited us to spend the night with them. After having some coffee, I went up



FIG. 72.—Turkhal

the hill to visit the castle. The ruins at present above ground are of Byzantine origin; and, cut into the living rock, I saw three badly worn Greek inscriptions. On the very summit was another jar-shaped cistern similar to the one at Bairam Tepe. There was also a large subterranean passage with stairs leading toward the center of the mound. The steps near the top were in quite good condition; but gradually they became so much obliterated that it was nearly impossible to gain a foothold on the smooth surface, which sloped at an angle of 45° . Furthermore, they were covered with slimy mud. After I had descended about sixty-five steps, my feet slipped. I slid about 10 yards, and only the presence of mind of Nedjmedin Kadry and Hüs-

sein saved me from sliding to the bottom of the cave. With the help of the long rope which they threw down to me, I continued my sliding, but now slowly and deliberately, to the bottom. There I found at two sides a horizontal tunnel, both ends of which were filled with stones and earth. The whole length of this tunnel is about 250 meters. The return was by far the most difficult part of the journey, and it took me at least one hour to get out of the tunnel. I did not feel at all well after my fall; but we had no time for rest, as I wanted to be in Angora by the twenty-fifth of that month and we had still much to do. From Turkhal on, for the next five weeks I suffered very poor health as a result of this experience.

In the valley north of Turkhal, through which runs the road to Amasia, some 7 kilometers from Turkhal are the remains of a probably classical bridge and, not far from it, a ruin site with the remains of a Roman bath.

The next day we left for Zileh. We stopped at the entrance of the Hamidiyeh Boghaz, the valley leading toward Zileh, and I climbed up the steep rock to a monolith on its top where I had been told there was a rock inscription. In a big crack across its center, about 1.50 meters wide, was a badly worn early Christian inscription, along with three engraved crosses. On both sides, at a height of about 2 meters, were rectangular holes in the rock wall, which had probably once supported the wooden framework of a roof. There were many pottery fragments of a late classical period scattered about the rock. As I did not feel any too well, I did not take a squeeze of this inscription. I think that the spot was a hidden chapel of the early Christians living at Turkhal, which was a rather important city in Roman and Byzantine times.

The situation of Zileh is similar to that of Turkhal, except that the fortress, which is on a hill rising abruptly from the plain, is not quite so high as the one at Turkhal. In the town itself I saw only a few remains of the classical period, mostly pieces of architecture re-used in walls or wells as usual. Here also a subterranean passage is said to exist, leading downward from the castle hill; but I did not investigate it.

From Zileh we went northward up the valley, very fertile and covered with gardens and vineyards, until we reached a gorge where

a winding road led along the bottom ascending to the pass. The summit is a nearly bare plain: the vegetation is poor and scanty; except for a few stunted oaks, there are no trees to be seen. Near this place probably the great battle between Caesar and Pharnaces, king of Pontus, took place, where Caesar pronounced the famous words: *Veni, vidi, vici*.

Leaving the highland, we descended the mountains on a road sloping rapidly down toward the valley of Amasia. In the late afternoon we reached there and, after taking our car to a blacksmith to have our broken spring primitively repaired, we went to the Hotel Yeshil Irmak, where we found shelter in the "Pasha suite." The features which gave this room its distinguished name were rugs of a remarkable filthiness along its walls.

The next morning early we left for Gönneñjik, in the valley of the Chekerek Irmak, where I had heard that there were a number of very ancient monuments. We followed the road south from Amasia and crossed the Yeshil Irmak a little before its junction with the Chekerek Irmak. To the west extends a broad, very fertile plain, through which we went as far as the entrance to a valley on the south, from which the Chekerek emerges. There was situated the farm of a German who had lived there for thirty-three years with his family and who gave me very valuable information on the surrounding territory. Gönneñjik itself is a small mountain town halfway up the east slope of the Kara Dagħ. We spent the night in a clean and well-equipped guest room. Of course the inevitable insects were there also *en masse*.

Although I had a very high fever the next morning, I decided to climb the rocky slope to the *kaleh*, which we could see as a great



FIG. 73.—Gönneñjik *kaleh*

tower-like rock on the summit. As Hüssein and Kadry Bey also were stricken with fever, I had to go alone with two guides. It was a very strenuous and hard climb; and, although we had started very early, we did not reach the summit before the extreme heat of the day. On the bare limestone surface, exposed as we were to the pitiless rays of the noonday sun, the hardship can be imagined. With the condition of my health, I had to rest every fifteen minutes before going on.



FIG. 74.—Gönnenjik *kaleh*. The small tunnel.

Fortunately, halfway up, Mrs. von der Osten overtook us. She had decided at the last moment to join me, and had engaged a donkey-driver with a donkey in order to reach us. I had to mount the donkey, as otherwise I could not possibly go on; so we arrived, near noon, at the summit. The *kaleh* proved to be of the same type as the ones near Chorum and Tokat, covered with pottery remains and having two cisterns and two subterranean passages leading to the bottom of the rock. We located the exits of both. While Mrs. von der Osten made the sketches and surveys of them, I rested, so that we might descend as quickly as possible.

On our way back to Amasia we investigated the rather large *hüyük* in the plain near Olas, near which town I noticed also a rock tomb. This whole plain and the surrounding mountains are full of remains of ancient settlements; but on account of the poor health of myself and the other members of the expedition, with the exception of Mrs. von der Osten, I could do nothing there this time. The next day, in Amasia, I visited the famous rock tombs in the cliff on which the castle stands, and discovered a smaller one on the other side of the city. All the cliffs surrounding Amasia are full of rock tombs of varying execution and periods, and it would be a worth-while task for a special expedition to study and survey them all.

Besides the rock tombs, I saw about twenty mummies, now going to ruin in the cellar of an old Seljuk mosque; but there is no possibility of saying to what period they belong.

On August 17 we left Amasia, following the valley to the northwest until we reached the wide plain on the northern end of which Merzivan is situated. Looking back, we had a marvelous view of the big mass of the Ak Dagh behind Amasia. I had occasion to observe the situation of the six *tumuli* around Merzivan which I had already noticed when I had come there from Osmanjik. They seem to be also military posts and signal stations, to judge by their strategical positions and their shape, rather broad and truncated. At Merzivan we visited the American College and were received with the greatest hospitality. It has a very good museum containing quite a number of Hittite and classical objects which it would be worth while to study.

In the afternoon we left Merzivan and went to Chorum. The road ascends toward the southwest following a valley which pierces the mountain chains that limit the plain of Merzivan to the south. The road then descends through a steep gorge to Chorum, where we found accommodations in the same room of the *han* as a month before. The next day we had to rest, as the condition of our health had become worse. We had to call a doctor from the Turkish infantry there, a courteous young man who prescribed remedies for our sickness which enabled us to continue the next day to Hüyük, where I wanted to stay some days to investigate some places which I had observed there on our first short visit. Hüyük is inhabited by the Küzül Bash. They are not Turks, and we do not yet know to what race they belong. They have very strange customs and, in striking contrast to the Turks, are not very hospitable. But the energetic manner of Kadry Bey procured us a room for ourselves where we could stay a few days. As food we got as usual coffee, *yugurt*, fried eggs, unleavened bread and, fortunately for Mrs. von der Osten, each day an elderly chicken.

The afternoon of our arrival I made squeezes of the double eagle on the sphinx and of the Phrygian inscriptions on the relief and the big unfinished lion, and took photographs of different sculptures. They are almost all published and known, but with very unsatisfactory illustrations. The first investigation was of the situation of the different *tumuli* which I had noticed. On the mountain chain north of Hüyük were five of them, four quite big, the fifth small and seem-

ingly unfinished. Two others, situated a little farther away, were of another kind, broader but flatter, and apparently did not belong to this group, in which we must see royal tombs. From the biggest one, in the middle of the group, I had a marvelous view over the valley south of Hüyük; and I could see on the other side of it a number of other *tumuli*.

From the broad *tumulus* situated on the east end of the chain, I



FIG. 75.—Kara Hissar

could see the *tumulus* at the entrance of the gorge leading from Chorum to Aladja, also another, farther north, situated on the summit of the mountains of the same valley where the road turns coming from Chorum to the south. Finally, I could see a third one, south of Hüyük, on an outstanding mountain. This same *tumulus* I had already seen from the highest point of the outer wall of Boghaz Köi. The second broad *tumulus*, on the west side, was in sight of about four other *tumuli* on different heights to

the northwest and west, besides being in view of the one south of Hüyük. There is no doubt in my mind that these two *tumuli* are links in the immense signal system covering nearly all Cappadocia.

To the north the mountain chain on which these *tumuli* are situated slopes down to a circular valley, from the middle of which rises the isolated, bare, double-peaked rock of Kara Hissar. The exploration of this mountain was the object of the next day's work. The rock is of volcanic origin. It rises about 500 feet out of the little plain, in appearance not unlike a pointed tent. On a small saddle between the

two peaks are to be seen the remains of a Byzantine castle. Accompanied by two Küzül Bash guides, we climbed up the slippery incline. I had to take off my shoes, otherwise I should not have been able to gain a foothold. I noticed two groups of three or four steps irregularly scattered on this side of the slope, but they had no connection with each other. On the larger peak were traces of human work, and soon I discovered a Phrygian altar with a two-line inscription cut into the



FIG. 76.—Kara Hissar. The Phrygian altar

living rock on the very summit. Near by was a rather large stone bench, of which two crouching lions, also cut in the native rock, formed a part. It is a beautiful specimen of a Phrygian worshiping place, especially interesting since there has been until now not one known so far in the east. It is clear that it had been made in connection with the city at Hüyük, which the Phrygian inscription found there and the other inscriptions on sculptures from there necessitate our calling Phrygian. Probably this city was built on the site of an earlier Hittite city which had been destroyed. All the sculptures from Hüyük are made of stone quarried here. At the foot of the rock

I found still a huge rectangular stone block which had never been transported to Hüyük. Unfortunately, I could not investigate the other slope of the mountain; for my two Küzül Bashes refused to go on and to do it alone was impossible, as I had to carry the rather large camera. Probably the real ascent to the worshipping place is to be found there. The Mohammedan ruins at the foot of this rock I did not visit again, as I had already surveyed them the first time I was there.



FIG. 77.—Imatli. The members of the Expedition

On the twenty-first of August, at noon, we left Hüyük for Sungurlu, searching our way along small valleys, some of them exceedingly muddy. I noticed near a small village a number of large worked stones and recognized near by the site of an ancient settlement, undoubtedly Hittite. In Sungurlu we had a case made for our squeezes, and started about three o'clock in the afternoon on our way to the northeast. I had hoped that evening to reach Changri on the other side of the Küzül Irmak, after receiving an affirmative answer that there was a bridge over the river. West of Sungurlu extends the arid plain with mountain ranges, bare and rocky, which we had already

passed once on our way to Kaleh Boinu. At Kaushut we passed the Delidje Su, and arrived at dusk at Hüsseinli on the banks of the Halys. There was of course no bridge, and until half-past ten at night we tried in vain to cross the river. Finally we applied for hospitality in the small village of Imatli, where we were received in the customary generous manner of the Anatolians. The whole next day, until five o'clock in the afternoon, we tried to cross the river; but it was im-



FIG. 78.—On the "road"

possible. The river is here a very broad stream in a deeply incised bed. On the east side extends a rather dry region, plains alternating with smoothly undulating mountain chains. The western bank is formed by steeply inclined rocks and mountains in the beautiful color scheme of the bare mountains of Anatolia. Finally I decided to drive southward to Yakhshi Han where I knew there was a bridge, as I had ridden across it once before. Late at night we arrived there, were joyously received by the engineers at Kürigin Kaleh, and passed a very pleasant evening. No further discoveries of archaeological importance had been made since our former visit. The Greek inscrip-

tions and the Egyptian statuette had been taken to Angora as a result of my report. From Kürigin Kaleh we went the next morning to Keskin and from there continued southward until we reached the big main road from Köprü Köi to Yozgad. For the first time during our whole expedition, our gasoline was exhausted and we had to feed our motor petroleum. Shortly before reaching the main road, we passed a rather large *hüyük*, then turning westward we passed the imposing defile to Köprü Köi where we crossed the Küzül Irmak. It was long after sundown when we reached this point, since we had lost our way and made a detour of about 28 miles. After a beautiful night ride on the fairly good road, we arrived at three o'clock in the morning of August 24 at Angora.

The general results, then, of our trip from Samsun to Angora were as follows:

We had surveyed the *tumuli* around Samsun and made other very interesting studies in this northern region. Around Amasia and Samsun we had discovered hitherto unknown, or investigated thoroughly already known ancient sites. Especially important were the discovery of the two rock *kalehs* similar to the one at Chorum and the investigation of the tunnel at Turkhal, which had been known but never surveyed. Near Hüyük we had found a very interesting Phrygian worshiping place and studied *tumuli* which had been until now unnoticed. Besides this, we had made a number of smaller observations, as for example the location of three Hittite settlements.

FROM ANGORA TO YERKÖI

The first thing the next day was to have our car taken to a garage. A careful examination disclosed that it would take at least five days to get it again into condition. The last few days had been too hard, not only for our car, but also for ourselves. On August 25 Dr. Forrer, of the University of Berlin, and Professor Weigand, of the University of Würzburg, arrived at Angora. In the next four days we undertook together—there was another expeditionary party including Professors Schede and Krencker and Dr. Heck besides a Russian expedition in Angora—a number of excursions in the neighborhood. The first one was to the group of *tumuli* on the outskirts of Angora which had been partly excavated by Makridi Bey some years ago. It was



FIG. 79.—Angora. The largest *tumulus*



FIG. 80.—Angora. The second *tumulus*

very interesting, as one could study the technique of their erection. Another such excursion was to a small *hüyük* on the railroad west of Angora, on the top of which stood a basalt slab with a Hittite lion on it. Another day Professor Schede and Professor Krencker took us around in the Augustus Temple, where they had been working for several weeks, making very interesting observations. During these days Kadry Bey left us. We were very sorry that he could not go on with us, as we liked him very much. He was a very fine and reliable man, much more a friend than a dragoman.

August 30 was the Turkish national holiday. We were invited to see the parade of the troops in company with some officers of the general staff. It was a remarkable sight to see the Turkish soldiers, well disciplined and organized, in their attractive but simple uniforms, pass in review. We went also to see His Excellency, the Minister of the Interior, who again gave us his assistance in securing permission and recommendations for our trip to Kaisariyeh. It is remarkable to notice the courtesy and anxiety of all Turkish officials to help scientific investigations and to promote traveling facilities to every possible extent. A deep seriousness and desire to build up their country after modern standards is to be seen everywhere. And it is marvelous what they have succeeded in doing in regard to roads, railroads, schools, and hospitals, in the last four years.

Another of these smaller excursions we made to a Phrygian necropolis, also partly excavated, but without anything especially interesting. A longer auto ride to a place of which we had been told, where there were said to be remains of a "Hittite" site, proved futile. Meanwhile, I had decided to travel now together with Dr. Forrer and Dr. Weigand over part of the territory which I wanted to visit. To try out our car after its repair, we made a day's excursion to the south of Angora where the map of Asia Minor by R. Kiepert showed the ruins of a big fortress. Arriving there, we found out that it was nothing but a natural rock formation looking from the valley like the remains of an enormous wall. But fortunately Dr. Forrer noticed the remains of a Byzantine or Seljuk site in a valley on the other side of the *kaleh*, so that we came back to Angora with at least some results.

We had planned our departure from Angora for September 2. At six o'clock we left the hotel with our small luggage, having arranged

that the valet of Forrer and Weigand should bring our luggage along with their quite elaborate expedition cases by rail to Yerköi. There we were to arrive in about one week, making first some investigations south and southeast of Angora. All was prepared, the benzine tins, our four little bundles, the blankets, and the other equipment tied on to the car, and we four and Hüssein inside. But our car would not move. At last, at three o'clock in the afternoon, after much swearing at the rotten garage service in Angora, we got her started.



FIG. 81.—Hüyük (near Chakal)

At eight o'clock we arrived at Chakal, a miserable little town on the Angora-Köprü Köi road. There were no guestrooms, and we had to look for shelter in the *han*. The only room available to us was a stable, which we five had to share with three Anatolian citizens. Fortunately, Forrer and Weigand had "Flit" with them, and so we could rest relatively comfortably until five o'clock in the morning. After some tea and unleavened bread, we went on, going first westward toward a little village called Hüyük. As was to be expected, a beautiful *hüyük* was in fact situated at one end of the village. Pottery fragments collected there proved that it was a Hittite settlement.

Near this village were three more *tumuli*. Then we ascended the slope of the plateau southwest of Angora, and followed it to where it is



FIG. 82.—Giaur Kalessi. Bas-relief

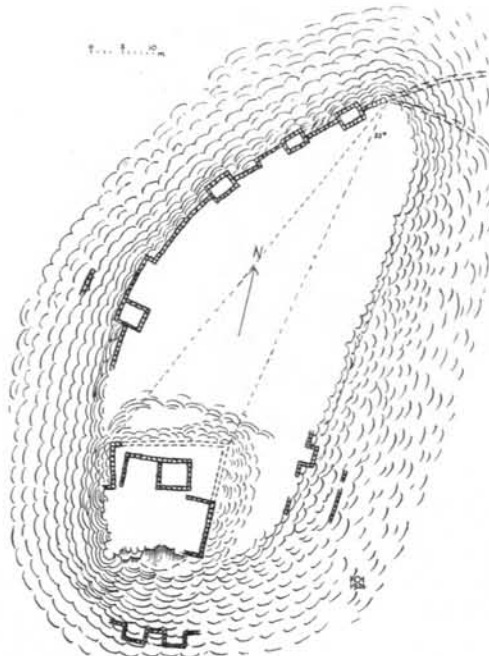


FIG. 83.—Giaur Kalessi. Plan of the ancient fortress

broken by a deep valley. This valley is guarded by an ancient Hittite castle, Giaur Kalessi, known for a long time. But our visit to it proved very interesting. First, we found not only the two already known rock reliefs on its summit, but discovered two more; and on examining the lower part of the fortress we realized that the truncated hill which bears the castle on its top was only the acropolis of a city extending east of it. It is not impossible that we have to see in Giaur Kalessi the ancient Kusharra, the capital of the Hittites before they conquered Hattushash (Boghaz Köi). After a brief reconnaissance around it, we turned back. Then, driving straight east, we tried to reach Köprü Köi; but, as so often, we did not. Halfway thither it became dark, and the lights of our car refused service. Another opportunity for us all to express in Turkish, English, German, and Spanish our appreciation of the marvelous repair work of the Angora garage. But, as there were no villages in the vicinity, we had to go on. It would be futile to describe this nocturnal ride of ours. Anatolian roads are very difficult to follow, even the regular ones in the daytime. How it would be in absolute darkness, anyone can imagine. At last we arrived at Bahla, Forrer sitting on the radiator and illuminating the road gloriously with his pocket flashlight. We had great luck. Bahla was a fairly large town with a good-sized *han*, and we got a clean, large room for ourselves. The next day we sent Hüssein back to Angora with the car, in order to double our supply of gasoline and to have the lights repaired; and we took advantage of this rest day to complete our notes and execute the survey of Giaur Kalessi which I had made.

On September 5 we started south, visiting and investigating three big *hüyüks* north of the Pasha Dag. Then we turned northward in order to cross the Küzül Irmak at Köprü Köi and to stay there overnight. The landscape was the same as on the previous day, a dry, undulating plateau with mountain chains and rocky peaks limiting it to the south, sometimes divided by rather deep valleys with small rivers, tributaries of the Küzül Irmak. As usual, we finished our last investigation at sundown. We thought, relying on the repair of our lamps, that we could afford another short night ride; but after half an hour we were again in the dark. This time the situation was not very amusing, as our so-called "road" ran along the steep bank

of the Küzül Irmak; but, as usual, we reached our goal safe and sound. The *han* in Köprü Kõi, in which we had to stay that night, had only a stable room for our accommodation. It was perhaps the most primitive shelter—aside from our camping on the road near Jiblahk—of our whole trip. But anyway, we got some tea and *yugurt* and even a boiled chicken, in itself perhaps of Hittite origin. At Köprü Kõi the Küzül Irmak enters an imposing gorge, overhung on its west bank by the remains of an ancient fortress. From Köprü Kõi we followed the road southeast toward Kirshehir. It clings mainly to the northeast slope of the Karaboga Dag, passing five fairly large *hüyüks*. At



FIG. 84. Kirshehir

Chugun the road turns sharply to the south, following the valley of the Küljli Su. This part of the valley, extremely fertile on both sides, is closed in by high mountains with rocky peaks. Near the river itself are gardens and rich pastures. At sundown, we entered Kirshehir. It was a splendid sight to see this extensive city with its numerous minarets and cypresses in the last rays of the sun. The surrounding mountains show the indescribably beautiful color scheme typical of Anatolia.

The next morning, after paying our respects to the governor, we visited the citadel mount, which is nothing other than a big *hüyük*, on whose slope I collected more fragments of Hittite pottery. In the afternoon we made an excursion on the western mountain plateau, where we found a small *hüyük* and near it three small *tumuli*. The mountains west and south of Kirshehir itself have a number of rather large *tumuli* on their tops. In the same *han* in which we stayed, we

met in the evening Professor Gollevski, the Russian Turcologist, whom we had already met at Angora. For the next day we decided to visit the village of Göl Hissar, a few miles east of Kirshehir, as the name made it probable that there were some ancient remains. We found there a small *hüyük* and not far from it two *tumuli*. There also I found Hittite pottery. At ten-thirty we were back at Kirshehir and, after packing our car, started for Yerköi.

We followed the road along which we had come from Köprü Köi northward as far as Chugun, where we left the fertile valley of the Külijli Su and entered the plateau of the Malya Chölü. It is an imposing view: a very slightly undulating, nearly flat plain extending to the east; dry steppes, with a dusty grayish-yellow coloring. Since there is now a railroad station at Yerköi, the Turks are constructing a new road in an almost straight line from Chugun northeast to Yerköi. But it will be still some years before it will be ready, and we had to follow the old road which runs along the gentle slopes on the west side. We had a splendid view and could even see the small silver band of Magli Göl. A few small villages, very far away from one another, are scattered over the plain, and in the background high and pointed mountains rise suddenly out of it. One could not help comparing it with the bed of an immense, dry lake, the pointed mountains having been small islands on its surface. Toward the west it slopes up toward a compact-looking mountain system—no trees or shrubs, only the dry steppe grass. It is impossible to understand how the natives in the few desolate villages are able to raise wheat on this dry soil.

We passed Üjayak, the ruins of a Byzantine church. Near it was a camp of Kurds, with a great flock of goats and sheep seeking shelter



FIG. 85.—Üjayak

from the burning sun beneath the walls of the ruin. A little farther to the north we saw an immense but very flat *hüyük* near a village by the name of Khas. It must have been a very important settlement, judging by its extensiveness; but I found fragments of Hittite pottery only. This would explain its relatively low elevation and would make it especially worth while to excavate, as we would there touch directly



FIG. 86.—Yarüm Kaleh

the Hittite stratum, without being forced to cut first through thick later strata.

Near a small village some miles east of it we saw another, but smaller, *hüyük*. Going on along the road toward the north, we approached a rock formation on one corner of which we could soon distinguish some caves. It was Yarüm Kaleh. This is a great rock forming a plateau which drops straight down on all sides, especially on the south side, along which a small river runs in a deep gorge. The *kaleh* is a big cave of three levels cut in the nearly vertical slope of the rock. The road leads from Yarüm Kaleh to the north. The slope increases in steepness until we reach the different mountain ranges running nearly parallel northwest to southeast and closing the Chölü toward the Delidje Su Valley. The panorama to the north assumes a real Alpine aspect. The ranges are partly covered with scrub, the deep valleys and gorges with dry river beds and pic-

turesque rocks—all showing again the marvelous color scheme of purple, blue, red, yellow, and emerald green. After reaching the watershed we descended the gentle slope covered with steppe grass of the Delidje Su Valley, which is here very broad, almost forming a plain. We passed through Boyalik, near which is a big *hüyük*; and from there we reached the railroad station of Yerköi, where Ali, the servant of



FIG. 87.—At Yerköi

Forrer and Weigand, was already awaiting us with all the luggage.

As Mrs. von der Osten and I had already been there, we knew the only possibility for finding shelter would be to go to the village of Yerköi itself, where a number of engineers of the railroad had their headquarters. The so-called hotels and cafés at the railroad station were indescribable in their filth and their building material. There was nothing which had not been used to build them, from steel rails to empty tins, *kelims* (cheap native carpets), boxes, and corrugated iron. But these buildings are of course built only by adventurers for taking advantage of the hundreds of workmen employed there in building the railroad station. So we went on, leaving Ali

and all the luggage at the station, toward Yerköi. The road was still as bad as it had been two months before, but it was remarkable to see how the work on the railroad had advanced. In fact, the railroad track had been completed up to a point 20 kilometers farther east. We arrived at Yerköi just at dinner time, and immediately the engineers, Mr. Gminder and Mr. Bejrano, prepared quarters for us. We felt ourselves in the seventh heaven after the more or less strenuous trip of the last days.

When I was here two months before I had decided to come a second time, to make an investigation which was impossible at that time. I wanted especially to see this part of the Delidje Su Valley and then, farther eastward, the part west of the *sivri* near Alishar, close to which we had found the great *hüyük* (see p. 106).

So, after having established ourselves comfortably in the village, I left Yerköi the next morning and climbed the high mountain chain behind it to get a better survey of this whole region. The view was splendid. To the north extended the highland, one mountain range behind another, gently undulated. To the east the mountains became sharper and more rocky, and the majestic Kyerkyanos Dagħ with the two big *tumuli* at its ends overtopped them all. Eastward the chain continued, and I had a splendid view of the end of the narrow gorge of the Delidje Su Valley. To the south, I could see far into the Chölü, here by no means a flat plain, but a wild, torn mountain complex. The picturesque top of Kechi Kalessi appeared as a landmark. Westward the broad valley of the Delidje Su sloped up gently toward the north to the high mountains of the Aghara Dagħ, behind which lies Bogħaz Köi. I counted five *hüyüks* from here, the investigation of which was the purpose of my return. On all sides I could see *tumuli* on prominent mountains. Even at the entrances of some valleys and along the Delidje Su, a small number could be distinguished with the field glasses. The plan for my work here was the following: investigation of the *hüyüks* around Yerköi, an excursion to the south in the Chölü in order to become acquainted with its characteristics, and finally ascent of the valley in which Nefez Köi is situated, to find if possible the continuation of the road which I had followed down from Bogħaz Köi to this village.

The next day we went to Bulumashlü, as I wanted to show it to

Forrer. Although he thinks this is not a "Hittite" site, my second visit to it convinced me that it must be considered as such. From there we pushed farther to the south. In a small village we were told that only a half-hour away there was a great cave, and we decided to investigate it. With a native as guide we went for about ten minutes with our car to a dry river bed deeply incised in the plateau. As there



FIG. 88.—Kavass Maghara

seemed to be no village in the neighborhood, it seemed improbable that any human being would be around this desolate place; so we left the car as it stood and climbed down the slope to the river bed. The guide showed us the path, up and down steep slopes and sandy river beds, sometimes rock formations. It is impossible to describe how this region is torn and incised.

After an hour and a half we were still not even in view of the *boiyük mara* ("big cave"). The sun burned down upon us pitilessly and it was an infernal heat, reflected as it was from the limestone rocks. Mrs. von der Osten refused to go any farther; so we left her alone in the imaginary rather than real shade of a rock, considering

it very improbable that anyone besides ourselves would be in this desert. At last, after a tiring climb of one hour more, we reached a vertical rock wall in which was carved a cave in three levels similar to those at Yarüm Kaleh. The small hollow before it was covered with green grass and small bushes, a remarkable contrast to the desolate gray and white of the main landscape. A spring originating in this rock, but disappearing a hundred yards from it in the dry soil, produced this miracle. We entered the cave from the ground floor, from

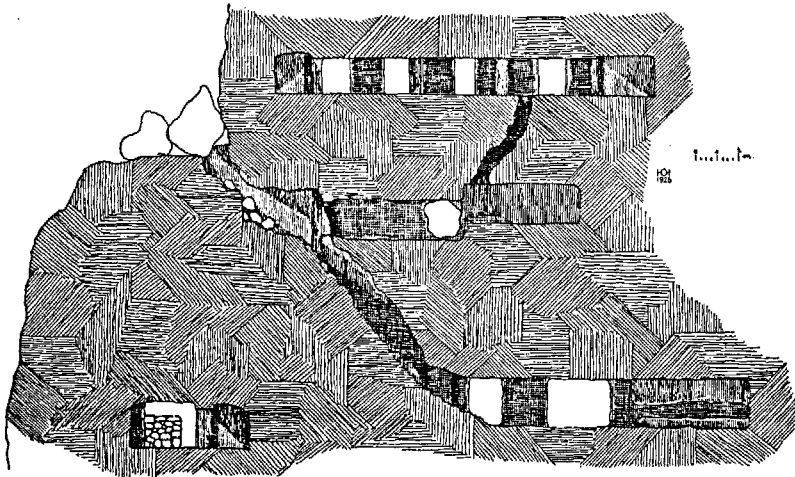


FIG. 89.—Kavass Maghara. Cross-section of cave

which a step leads to the second room and from there a pit in the roof leads to the third one, which was by all means the best executed. Forrer and I busied ourselves in making a plan of this cave, called Kavass Maghara. Weigand, Hüssein, and the native went back to the automobile to take Mrs. von der Osten back. As they told us afterward, they found her sitting in the same place surrounded by five native hunters with their dogs and guns, and two women. They had suddenly appeared after we had left her and, understanding that she belonged to a party which was supposed to return hither, they had camped around her to keep her company. This showed again the typical courtesy of the Anatolians toward strangers, which we so often had occasion to observe. Since the present government, a few years ago, cleared Anatolia of bandits and non-Turkish

elements, there are few places in the world where one can travel as safely as in Anatolia.

Our guide invited us to have our lunch, or rather our dinner, as it was by this time five o'clock, at his home in the village—an invitation which we accepted gladly.

The investigation of the other *hüyüks* took us two more days. Around another hot spring, Uyuz Hammam, on the north of the Delidje Su, was a rather large settlement covered with pottery fragments of late classical times. Nevertheless, I am sure that there are Hittite strata under this. Of the other two sites, one was near the station, near which are the remains of a Roman bridge; and in the other, a little east of Yerköi, late classical pottery again predominated.

After this we made the excursion to Nefez Köi, following a rather broad valley upward to the north. Unfortunately, we could not discover any trace of a road. Not far from Nefez Köi were the remains of a large late Roman building; and at Nefez Köi itself we saw a great number



FIG. 90.—Classical remains at Nefez Köi

of ornamental bas-reliefs, inscriptions, and other remains of the Roman city of Tavium, which had been situated near this village. On the mountains behind Nefez Köi were two *tumuli* which we ascended and from which we had splendid views toward north, east, and west. We could see for the last time the scrub-covered mountain ranges through which two months before I had passed toward Boghaz Köi. From one of these *tumuli* again could be seen a number of others, even those on the Kyerkyanos Dag. The way back was not so pleasant, as we lost the "road" and had the pleasure of pushing our car several times through muddy ditches.

Another day the engineers invited Mrs. von der Osten and myself

to visit the tunnel which they had built in the Delidje Su Valley where it forms a small gorge with high, steep banks. The chief engineer of this station, Mr. Ertl, invited us to dinner, and Mrs. Ertl asked us to stay with her for one day before we continued our trip—an invitation which we accepted gladly later.

My last excursion here in the "land of the city of Hattushash," the central seat of the ruling Hittites, was on horseback to Elma



FIG. 91.—View from one of the *tumuli* behind Nefez Köi

Hajilar, where the Sarai Su breaks in an imposing gorge through the mountains dividing it from the Delidje Su, which it joins not far from Yerköi. There is also an ancient settlement, and the village itself is full of architectural fragments of different periods re-used for the building of it. The same evening the secretary of the Italian Embassy arrived for a short visit at Yerköi. As we had already met him in Angora, we asked him to take all our baggage, with the exception of a small bag and suitcase, back to Angora, which he was kind enough to do. The next day all four of us planned to leave for Kaisariyeh. From there Forrer and Weigand would return here, while we would go southward to Uluküşlar to take the railroad to Stambul.

Summing up the investigations and observations made on our trip from Angora to Yerköi, we had discovered or investigated eighteen *hüyüks* with Hittite settlements, besides the great three story cave of Kavass Maghara. On our visit to Giaur Kalessi we had not only discovered two new rock carvings but had recognized that it was a city as well as a castle. Especially valuable were our stay at Yerköi and our investigations in its vicinity, as they gave me the opportunity to become better acquainted with this very important part of Asia Minor.

FROM YERKÖI TO STAMBUL

On September 14, at six-thirty, Hüssein had the car in front of the house, ready to be packed. Forrer, Weigand, Mrs. von der Osten, and myself went out with our little luggage, just as much as each one could carry. But Hüssein, seeing the four of us, lifted both arms, bent his head backward, and said "Yok!" and again very energetically, "Automobile yok!" We were a little perplexed; but after a careful examination of the car by the engineers, they told us that it really would be a risky business to force our poor car to carry all four of us. So I had to decide to leave Forrer and Weigand at Yerköi, hoping that they would find some other means to continue their travels; fortunately they were able to buy an old Ford truck. Then Mrs. von der Osten and I got into our car and started for the last lap. Hüssein was in a remarkably good humor and started to speed madly eastward. The road followed the Delidje Su toward Stambulolu, where we had already been. At Stambulolu we left our few grips, accepting the kind invitation of Mrs. Ertl to stay one night there. Since it was quite early, I decided to make an excursion to the opened *hüyük* of which I had heard in Yerköi; it was supposed to be near Jiblahk, the headquarters of some other engineers building the railroad. At Stambulolu the road left the Delidje Su Valley and in serpentine curves wound up the very steep slope on the south, bringing us to the height of the plateau. Perhaps 4 kilometers beyond Stambulolu, we passed the little village of Aya Koyun; and not far beyond it we saw a magnificent *hüyük*. Hüssein, in his mad joy to be again on the road, drove us nearly to the top of it, and stepping out of the car was more or less an acrobatic masterpiece; but at least we collected good specimens of Hittite pottery from the *hüyük*. Then we

followed the road until we came to the slope descending to the Karajerli Su Valley at its junction with the Delidje Su. Just at this point there was a small *tumulus* with a marvelous view to be seen from its top in all directions, all of the more important mountains showing *tumuli*. And far, far away to the southeast we saw the immense pyramid of the Erdjas Dagh near Kaisariyeh overtowering all the other mountain ranges.

We went down the slope and turned then to the south, following

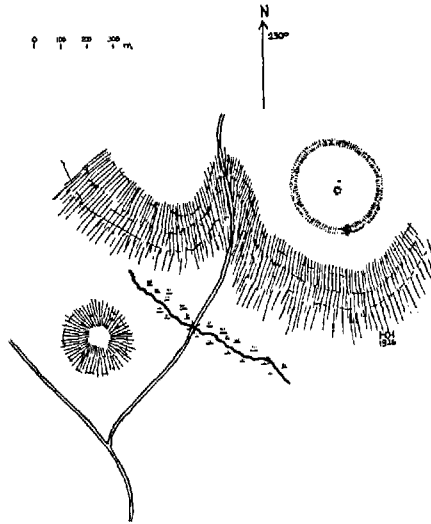


FIG. 92.—Temlik

the Karajerli Su. The road was very poor; the railroad track, more or less finished, forced us to make many detours, and detours in Anatolian valleys mean riding through marshes or ditches. At any rate, luck was with us, for only three times on this day did we have to push our car out of muddy ditches. The valley opens toward the south, and we passed two more *hüyüks* in the valley itself and noticed a very large one in a western side valley. At Jiblahk we were received in the same extraordinarily kind manner which we had experienced at all the railroad construction camps. I received very valuable information, so that I decided to come here for one or two days on my way back from the eastern Konak Su Valley, which I wanted to visit before going to the south.

On our way back, accompanied by a young engineer, we stopped at the immense *hüyük* which we had noticed in the small western side valley. It is a truncated hill with a nearly circular base, its surface covered with very fine specimens of all kinds of pottery, especially of the red slipped and painted varieties. Mr. Sturm, the young engineer, told me that he had noticed on the plateau north of this *hüyük* a kind of arena. We quickly climbed the slope, and on the top we found a nearly circular plain about 300 meters in diameter, surrounded by a small wall on the eastern part of which was a small *tumulus*. In the middle was a small elevation and, not far away from it, a pitlike hole, filled with earth and stones. As Mr. Sturm told me, the natives of Temlik believe that this is the entrance to a subterranean communication with the *hüyük*. This arena, near this immense *hüyük*, was a remarkable thing. The only explanation which I have for it is that the *hüyük* was an important royal castle, with perhaps a small town around it, where the king could live with his retinue and bodyguard, the arena being nothing else than a large camp where the greater part of his troops would be stationed. A proof of the military character of the arena was the small *tumulus* on its wall, in which I see a signal station in relation with all the other *tumuli* spread over the whole territory from Merzivan, yes, even from Samsun, down to Kaisariyeh. They were always so situated that from the smaller ones at least one, and from the bigger ones two or three others, could be seen. The next day we made some observations confirming this interpretation of mine.

After having made a quick sketch of the arena we left Mr. Sturm there and continued our way back to Stambulolu, this time following a road leading directly through the plateau. As the lights on our automobile were not working, we had to speed up in order to reach the town before sundown. At Stambulolu we were expected, and spent a very pleasant evening there. All of the Europeans who have to live and work there, under the most difficult and primitive conditions, are touchingly hospitable, sharing all their "luxuries." As in Yerköi, we slept here too in clean beds without other living creatures.

The next morning early we left Stambulolu, following first the road which we had taken the day before, until we reached the Karajerli Su Valley. This time we did not follow it to the south, but turned

again into the valley of the Delidje Su. Just at the junction of the two rivers is an enormous *hüyük*, a natural rocky hill with settlements of

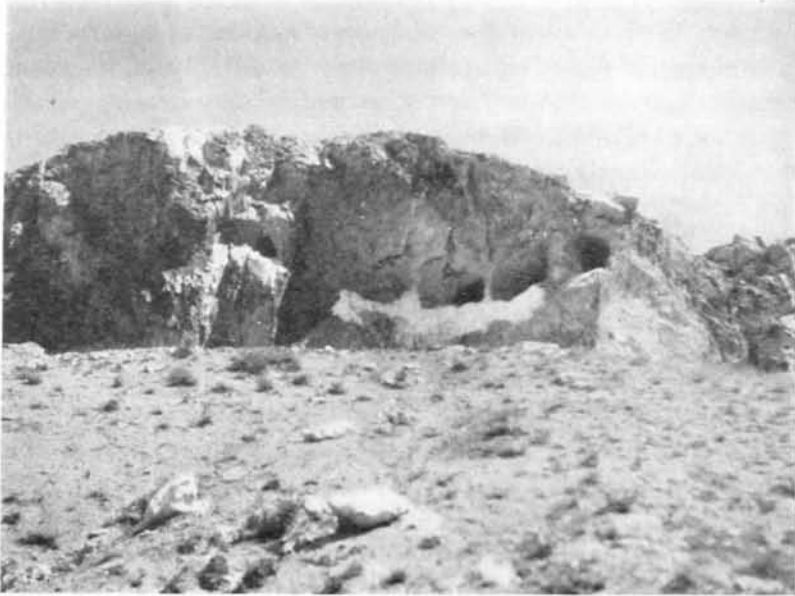


FIG. 93.—Tashan Kaleh

different periods on its top. The hill lies in the valley itself. On its top are still to be seen remains of walls probably of Roman times; but on the slopes I found also a great quantity of the early potteries.

The Delidje Su Valley widens gradually from this point toward the east. Not very far from this *hüyük*, at about the same elevation

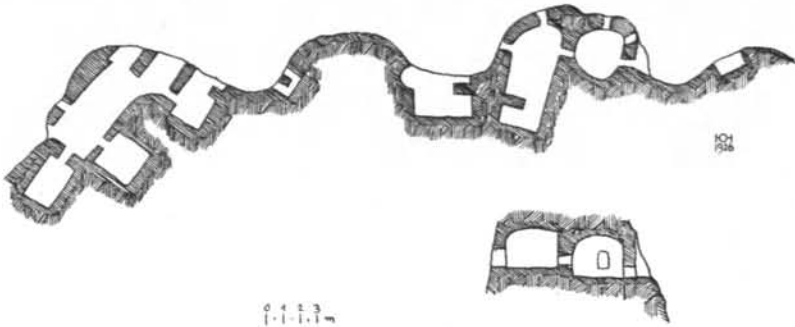


FIG. 94.—Tashan Kaleh. Plan of caves

as Hadji Shefatli, but south of the river, we noticed a number of caves cut into the rock on the top of a mountain. These caves of Tashan Kaleh are similar to those at Kavass Maghara, but not so well executed and on only one level. After fruitless attempts to cross the river at this spot, we had to return to the big *hüyük*, near which the only bridge leads over the river. The whole valley from Hadji Shefatli to the east is extremely fertile and must have been settled very thickly in ancient times. We observed on this small part alone three more *hüyüks*.

Shortly before the junction of the Yarmen Chai with the Delidje Su, we had to leave the valley and to ascend the plateau to the south. We crossed the old Yozgad-Kaisariyeh road a little north of Battal, observing two more *hüyüks*, one of which I surveyed and investigated thoroughly. Besides the usual Hittite pottery, I found specimens of black pottery highly polished on one side. This kind seems to be typical for the *hüyüks* in this region, as I found it on all the *hüyüks* which I investigated in the Delidje and Karajerli Su valleys. This last *hüyük* was situated a little northeast of the village of Sarnen Ören. We then descended from the plateau again to the Konak Su Valley and arrived at Dedik just in time for lunch. As usual, we were received with all hospitality by the natives and were led to the guest-room, which in this town was especially richly and tastefully decorated. We were surrounded by nearly all the male inhabitants of the village, each of them trying to show us courtesies. The conversation went along very well, and it was amusing to see how very important Hüssein felt himself in his rôle of dragoman. After we had drunk several cups of coffee, the usual lunch arrived: *yugurt*, fried eggs swimming in butter, unleavened bread, and, fortunately for Mrs. von der Osten, some *karpus* (watermelon); otherwise she would, as often, have had to go without anything to eat. The lunch finished, I visited a very big *hüyük* not far away from the village at Jamarli. Coming back through Dedik, after having examined the *hüyük* at Dedik itself, we pushed farther toward the east where we could see two more *hüyüks* close to the *sivri* near Alishar on which we had been in July. It was already quite late, and if we wanted to reach Jiblahk that evening we would have to hurry. Hüssein wanted to go back the same way; but as I never liked to follow the same route twice, I

decided to go up to the plateau on the south and to reach Jiblahk in a straight line. There was no road, but the whole plateau was covered by the dry steppe grass.

At first all went along smoothly. We reached Battal, and I noticed three rather large *tumuli* around it and a *hüyük* farther to the south. After this, the pleasure started. A road which we found at last going in the approximate direction of Jiblahk was terrible. The automobile jumped and bumped in a dangerous manner. Hüssein started to swear, and as usual when he was in bad humor gave full gas to the motor. After half an hour not only one but two tires were



FIG. 95.—Three *hüyüks* near Dedik

flat. When we had repaired the damage and after Hüssein had eaten, against the serious advice of us both, two large unripe quinces, we proceeded; no town, no human being, and our road leading just somewhere. Darkness came, and we positively did not know where we were. That our direction was right I knew by my compass; but that did not help us very much. Hüssein started to groan and to hold his stomach.

At nine o'clock there was still no town in sight. Then, when I felt that we could not be very far away from Jiblahk, the water in the radiator cooler was gone at the same moment when another tire blew out and Hüssein stopped the car with a jerk, jumping out and casting himself on the ground, doubled up in cramps. There was nothing else to do but to spend the night where we were and to walk the next morning to the nearest village to get water. So we arranged ourselves as comfortably as possible: Hüssein, groaning, crumpled himself into

the front seat, covered with one blanket; Mrs. von der Osten was in the back seat, also with one blanket; and I lay down on the road, covered with my overcoat. The night was terribly cold, and an icy wind blew over the steppes. I had a very nice time watching the stars and listening to the none too joyful exclamations issuing from the front seat of the car.

Finally the dawn came and Mrs. von der Osten crept out of the back seat, while Hüssein slept like the dead. So we two went on westward; and when we had rounded a little *hüyük* we saw Jiblahk not 6 kilometers distant. Like ghosts, we approached a little village 1 kilometer away. The good Turks looked quite surprised at seeing come out of the *chöl* (desert), at five o'clock in the morning, two Europeans in rather unrepresentative attire. I mobilized the *muktar*, who was a reasonable man and understood immediately what we needed. A great fire was made in the guestroom; they brought blankets and cushions, and a few minutes later we were comfortably installed there, drinking coffee. I had a donkey sent with water to the automobile; and after having rested an hour we continued our walk toward Jiblahk, not before climbing and examining the *hüyük* near this village.

Before we reached Jiblahk Hüssein overtook us with the car, and a few minutes later we arrived there. For the remainder of the morning we rested. But in the afternoon I started with Mr. Sturm to investigate the different *hüyüks* around Jiblahk and visited also the opened *hüyük* near Kandlija. The Turkish government engineers procured me permission to dig there, and Mr. Endel, the senior engineer of this section, placed six workmen at my disposal for the next day.

This investigation was very interesting to me. First of all, it showed how the *hammals* work; and next, it showed the structure of such a hill of ruins. The Kandlija *hüyük* is only a very small one and was probably in ancient times merely a very small town. Nevertheless, we could distinguish six different strata, of which the deepest two were Hittite, as proved by the pottery fragments found there, while the one nearest the surface was late classical, as shown by the *terra sigillata* fragments. Two vessels of clay found there are of uncertain type, and the whole *hüyük*, from being used as material for



FIG. 96.—Kandlija *hüyük*

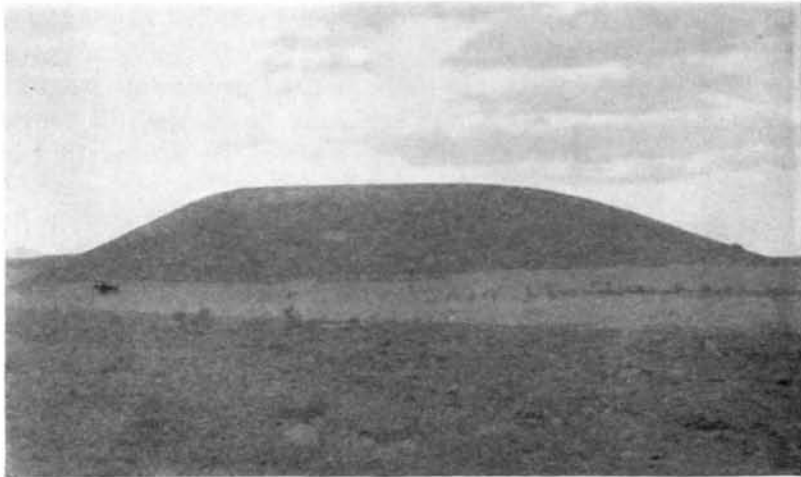


FIG. 97.—Düvel *hüyük*

grading the railroad, is almost completely destroyed. So I was content to make only three small cross-sections from strata one to six. That evening we returned to Kandlija, another construction camp with European engineers, where we again shared their hospitality.

After repairing our car as well as possible, we left the next day for Kaisariyeh. We followed the railroad to the south, investigating four more *hüyüks* before we reached Karafakeli. From there on, to the mountains forming the north bank of the Küzül Irmak, the landscape is completely flat. The dominating pyramid of the Erdjas



FIG. 98.—Kül Tepe

Dagh is visible always. Shortly before descending into the Küzül Irmak Valley, I investigated another *hüyük* of very great dimensions near Düvel Köi. At Boghaz Köprüsi we crossed the river and entered the plain of Kaisariyeh, which extends around the immense mass of the Erdjas Dag, a mountain of volcanic origin which ascends steeply directly from the plain. It was already dark when we entered Kaisariyeh, and we had a hard time finding the only European *pension* which had been recommended to us. Kaisariyeh, the ancient Caesarea, earlier Mazaka, is a very remarkable city. In reality, it is nothing else than an immense ruin. Among all these remains of different periods dwell the modern inhabitants. Near the walls of the ancient city, where the Konak is situated, is a lovely flower garden, and everywhere can be seen the immense effort of the government to rebuild and to modernize the city.

In the morning of the next day we paid our visit to the governor, accompanied by Mme Meyer, a French lady who conducts the *pension*. We were received very kindly, and a *gendarme* was appointed

to accompany us to the Kül Tepe, the famous *hüyük* northeast of Kaisariyeh from which came the earliest documents for our historical knowledge of Asia Minor. A Czecho-Slovak expedition under Professor Hrozny, the scholar who first deciphered the Hittite cuneiform



FIG. 99.—Pottery from Kül Tepe

texts, had been excavating it. So the *hüyük* now has a very sad aspect. The surface is partly torn up, and destroyed foundations are to be seen everywhere.

During the next few days we made an excursion to the neighborhood at the foot of the Erdjas Dagh. At Zinjidereh we visited the Near East Relief and enjoyed very much the hospitality of the American ladies in charge of this post. I had tried vainly in Kaisariyeh to get some parts for our car. I wanted especially to buy some new tires, because it was practically impossible to travel longer without them. But it was impossible to get any. So we had to start for Nigdeh with our car in very delicate health. The road, in quite good condition, led through the plain west of Kaisariyeh to the south. On several distinct mountain formations *tumuli* were in sight from the road. After crossing the mountain range, we came to a plateau from which a valley leads down to Nigdeh. On the evening of September 22



FIG. 100.—Nigdeh

we arrived there, finding a more than primitive shelter at a *han*. It is a big town, beautifully situated on the slope of the valley which opens here to the south toward the great plain. A number of beautiful mosques and *türbehs* of the Seljuk period are there, and at the end of the valley, facing the city, are two *tumuli*. From Nigdeh we followed the road to Uluküşlar, a railroad station from which I decided to take the train, as further traveling with our car was impossible. On the way to Uluküşlar I visited Öküzli Hissar (Klissé Hissar), the site of the ancient Tyana.

It is an immense field of ruins showing especially remains of the classical period. The remains of the ancient aqueduct are very imposing. In the great Mohammedan cemeteries are survivals of all kinds of periods. Near Öküzli Hissar also were found the famous "Hittite" royal *stelae*. I noted the remains of two huge stone eagles, very similar to the one which we had found at Bulumashlü, south of Yerköi.

Uluküşlar is a small town on the railroad. It has, aside from its very good climate and wine, nothing interesting. There the railroad enters the mountain chains of the Anti-Taurus. Not far to the south is Ivris, near which village are famous "Hittite" rock carvings. On September 24 we left Uluküşlar by railroad, after having dismissed our faithful Hüssein. The boy nearly wept when he said goodbye to us. To his great joy, we had given him instead of his salary the remains of our Ford.

Summing up the investigations and observations made on this last part of our expedition, we had discovered nineteen *hüyük*s, from all of which we collected Hittite pottery fragments. Especially interesting because of its connection with the "arena" was the one at Temlik, and for its extent, the one at Jamarli. We had also had occasion to study the interior of a *hüyük*, though we did not make any "finds,"



FIG. 101.—Uluküşlar. The end of the expedition.

that being indeed not our purpose. The important result of our *sondages* at the *hüyük* near Kandlija was the establishment of the relative chronology of five kinds of pottery. Furthermore, my observations during this part of the expedition confirmed again my opinion of the military character of the smaller *tumuli* seemingly scattered without any plan on mountain tops and valley sides. In reality they are arranged in this way with a purpose: for instance, in the Konak Su Valley, there is no place where one is not in constant view from at least two *tumuli*, one before and one behind. As already stated, these smaller *tumuli* are again within sight of larger ones. Of course, not all *tumuli* are necessarily such signal stations. Many are burial places; but then they appear mostly in groups.

From Uluküşlar the railroad brought us in two days to Haidar Pasha, the Asiatic terminal for Stambul, to which we crossed by ferry. Our clothing and our "luggage"—a small kit bag, an embroidered Anatolian donkey bag and a small, well-worn suitcase—were not very fashionable; and the people at the hotel, until they recognized us, did not know whether they should let us in or not. As was to be expected, not all of our baggage had arrived, and it took us nearly twelve days to collect all our things from Angora and Samsun.

In the interval we found good use for our time. Miss Dodd, of the Constantinople Woman's College, gave me permission to work and photograph in her museum at the College, where she has a remarkable number of objects coming from Kül Tepe. We passed delightful afternoons and evenings there and at Robert College, the two great American educational institutions of the city. Another day we went to the museum in the new Serai in Stambul, where Halil Bey, the director, and Makridi Bey in the most courteous manner showed us the treasures of their museum. Two days after the final arrival of our luggage we left Stambul; and within three weeks, after short stays in Berlin and Paris, we were back in New York.

THE ROUTE OF THE EXPEDITION

From July 1 to September 26, 1926

		Kilometers
July	1. Stambul—Mudania—Brussa	24
July	2. Brussa; excursion to Chekirge	18
July	3. Brussa — Inegöl — Gümüş Dere — Bazarjik — Boz- hüyük	106

EXPLORATIONS IN HITTITE ASIA MINOR

101

		Kilometers	
July	4. Bozhüyük — Chepni — Porya — Chukur Hissar — Eskishehir	42	
July	5. Eskishehir—Hamidiyeh—Kaimaz—Sivri Hissar.	112	
July	6. Sivri Hissar; excursion to Kepen.	28	14
July	7. Sivri Hissar — Mülk — Jamarli — Beli Köprü — Polatli—Maliköi—Angora.	144	
July	8. Angora		
July	9. Angora; visit to the Augustus and Roma Temple		
July	10. Angora; visit to the citadel		
July	11. Angora		
July	12. Angora — Arablar — Zela Han — Azi Yozgad — Kü-lüjlar—Yakhshi Han—Kürigin Kaleh	64	
July	13. Kürigin Kaleh; excursion to Keskin Sivri	38	16
July	14. Kürigin Kaleh; excursion to Ahali; leaving for Keskin via Hassan Dede	44	
July	15. Keskin—Aivalü—Ashak Elma Hajilar—Yozgad.	138	
July	16. Yozgad		
July	17. Yozgad; excursion to Bulumashlü via Yerköi—Sarai.	84	
July	18. Yozgad—Chalatli—Kara Kaya—Können — Churuk Köi — Nizahur — Dehaidin — Pörnek — Kara İli — Terzili—Terzili Hammam.	96	
July	19. Terzili Hammam — Karaila Köplü — Alishar — Karahaji Köi — Yazili Tash — Chavush Köi — Alizi — Giaur Ören—Balali—Chalatli—Yozgad.	98	
July	20. Yozgad—Aladja—Hüyük—Boghaz Köi.	101	
July	21. Boghaz Köi; visit to the ancient city		
July	22. Boghaz Köi; Yazili Kaya.	10	
July	23. Boghaz Köi; on horseback to Nefez Köi via Tambassan — Bajili— and return		46
July	24. Boghaz Köi—Sungurlu—Boz Tepe—Kaleh Boinu.	84	
July	25. Kaleh Boinu—Kuntshaltak—Chorum	82	
July	26. Chorum; excursion to Sarai and <i>kaleh</i>	52	
July	27. Chorum—Osmanjik—Hadji Gümüş Köi	110	
July	28. Hadji Gümüş Köi—Merzivan—Khawsa—Kavak—Samsun.	114	
July	29. Samsun		
July	30. Samsun; employment of a new dragoman		
July	31. Samsun; excursion to Kara Samsun.	10	
Aug.	1. Samsun		
Aug.	2. Samsun; excursion to Akalan.	32	
Aug.	3. Samsun; excursion to a necropolis.	24	
Aug.	4. Samsun; excursion to the Hodja Dag.	36	
Aug.	5. Samsun; excursion to the <i>tumuli</i>	16	

	Kilometers	
Aug. 6. Samsun; excursion to the <i>tumuli</i>	28	
Aug. 7. Samsun — Chakalli — Kavak — Utahkanlar — Darukk Han—Khawsa	64	
Aug. 8. Khawsa — Hammam Chak — Hillas — Kurun Köi — Ladik—Amasia—Inepasan—Turkhal—Tokat	196	
Aug. 9. Tokat; excursion to Comana Pontica	24	
Aug. 10. Tokat; excursion to Bairam Tepe	31	
Aug. 11. Tokat; excursion to Niksar	96	
Aug. 12. Tokat—Cherchi—Sonyud—Pazard Köi—Turkhal	52	
Aug. 13. Turkhal—Han Öni—Turkhal—Zileh—Amasia	79	
Aug. 14. Amasia—Aleman Chiflik—Gönnenjik	42	
Aug. 15. Gönnenjik — Gökechali — Aleman Chiflik — Olas — Zara—Amasia	48	10
Aug. 16. Amasia		
Aug. 17. Amasia—Merzivan—Chorum	106	
Aug. 18. Chorum		
Aug. 19. Chorum—Aladja—Hüyük	68	
Aug. 20. Hüyük; excursion to Kara Hissar		21
Aug. 21. Hüyük; excursion to the <i>tumuli</i>		17
Hüyük — Gafuslar — Kiran Kishlar — Sungurlu — Iniji — Kara Chai — Büyük Küzül — Kaushut — Chadirjük—Korchullu—Hüsseinli—Imatli	76	
Aug. 22. Imatli — Hajilar — Bostanlü — Küi Helleji — Kavurüllü — Yeshillü — Hamzalü — Sarim Bey — Shekh Shamil—Hisir Shekh—Bali Shekh—Kürigin Kaleh	124	
Aug. 23. } Kürigin Kaleh—Keskin—Köprü Köi—Angora	196	
Aug. 24. }		
Aug. 25. Angora		
Aug. 26. Angora		
Aug. 27. Angora; excursion to the <i>tumuli</i> near the city	18	
Aug. 28. Angora; inspection of the excavations at the Augustus and Roma Temple; excursion to the so-called "Phrygian necropolis"	9	
Aug. 29. Angora; excursion to km 18 on the Angora—Haidar Pasha Railroad	42	
Aug. 30. Angora; the Turkish national holiday		
Aug. 31. Angora; excursion to Ak Hüyük	41	
Sept. 1. Angora; excursion to Takhta Kaleh and Bozhüyük via Vaharet Chesneh	109	
Sept. 2. Angora—Gölbashi—Chakal	32	
Sept. 3. Chakal — Hüyük — Oyaja — Giaur Kalessi — Dere Köi — Oyaja — Urungush — Karegedik — Germik —Makhmatlü—Bahla (Kartal)	106	

	Kilometers
Sept. 4. Bahla	
Sept. 5. Bahla — Chikdemlü — Karaburun — Suyu Güzel — Sofular Hüyük—Shedid Hüyük—Kesik Köprü—Köprü Köi	102
Sept. 6. Köprü Köi—Kara Kaya—Ghaman—Sofular—Chugun—Kirshehir	96
Sept. 7. Kirshehir; excursion to the Sevdigin Hüyük	32
Sept. 8. Kirshehir — Göl Hissar — Chugun — Tosun Burun — Üjajak — Üchleri — Khas Hüyük — Yarım Kaleh —Mejidiyeh—Yerköi Station—Yerköi	96
Sept. 9. Yerköi; excursion to the mountains north of Yerköi	14
Sept. 10. Yerköi; excursion to Kavass Maghara via Bulumashlü —Kechi Kalessi—Hajoll	44 16
Sept. 11. Yerköi; excursion to Boiyük Nefez Köi via Uyuz Hammam — Kara Shehr — Yamuklar — Hojan — Mengen — Altükara — Boiyük Nefez Köi — Bakshejik —Kütshük Nefez Köi (Nefesi)—Hattibin—Gümüş—Ören	84
Sept. 12. Yerköi; excursion to Karagedik via Huk Köi—Stambulolu	48
Sept. 13. On horseback to Ashak Elma Hajilar via Uyuz Hammam and back to Yerköi via the Sarai Su Valley	25
Sept. 14. Yerköi—Huk Köi—Stambulolu—Aya Koyun—Jiafarli—Hadji Shefatli—Hamzali—Temlik—Jiblahk—Bash Köi—Karasenir and back to Stambulolu via Kazushak—Aya Koyun	68
Sept. 15. Stambulolu—Aya Koyun—Hadji Shefatli—Tashan Kaleh—valley of the Konak Su—Pasha Köi—Saviviran—Sarnen Ören—Dedik—Jamarli—6 km east of Dedik in the Konak Su Valley—Sarnen Ören—Battal—Ibrahim Hodjali —Güzeli Chiflik—5 km east of Kuzaji	96
Sept. 16. 5 km east of Kuzaji—Kuzaji—Jiblahk—Kabani—Bash Köi—Karasenir—Kandlija and back to Jiblahk	51
Sept. 17. Jiblahk—Kabani—Bash Köi—Karasenir—Kandlija—5 km southeast of Kandlija and back to Kandlija by the same road	48
Sept. 18. Jiblahk — Kabani — Bash Köi — Karasenir — Kandlija—Karafakeli—Eski Ören—Almalü—Düvel Köi —Himmat Dede — Malkanjik — Demtrji Kaya—Boghaz Köprüsi—Ambar—Kaisariyeh	123
Sept. 19. Kaisariyeh	

	Kilometers
Sept. 20. Kaisariyeh—Kül Tepe and back to Kaisariyeh.	36
Sept. 21. Kaisariyeh—Ardja Kaya—Talas—Zinjiderch and back to Kaisariyeh.	28
Sept. 22. Kaisariyeh — Boghaz Köprüsi — Injesu — Devili Ka- rahissar—Arabli—Eski Andaval—Nigdeh.	128
Sept. 23. Nigdeh—Öküzli Hissar—Uluküşlar.	54
Sept. 24. By railroad from Uluküşlar via Eregli—Konia.	} 978
Sept. 25. Afun Karahissar — Eskishehir — Ismid — Haidar Pasha—Stambul.	

SUMMARY

July 1-28. Mudania—Samsun.	1,589	76
July 29-Aug. 24. Samsun—Angora.	1,348	48
Aug. 25-Sept. 12. Angora—Yerköi.	859	30
Sept. 13-23. Yerköi—Uluküşlar.	632	25
	4,428	179 ¹

A final publication of the explorations during this expedition will appear as Volume V of the *Publications of the Oriental Institute*.

¹ Of the two columns of figures above, the first represents kilometers covered by automobile, the second kilometers covered on foot and on horseback.