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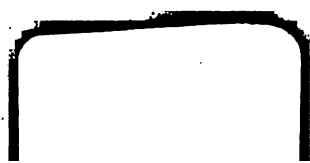
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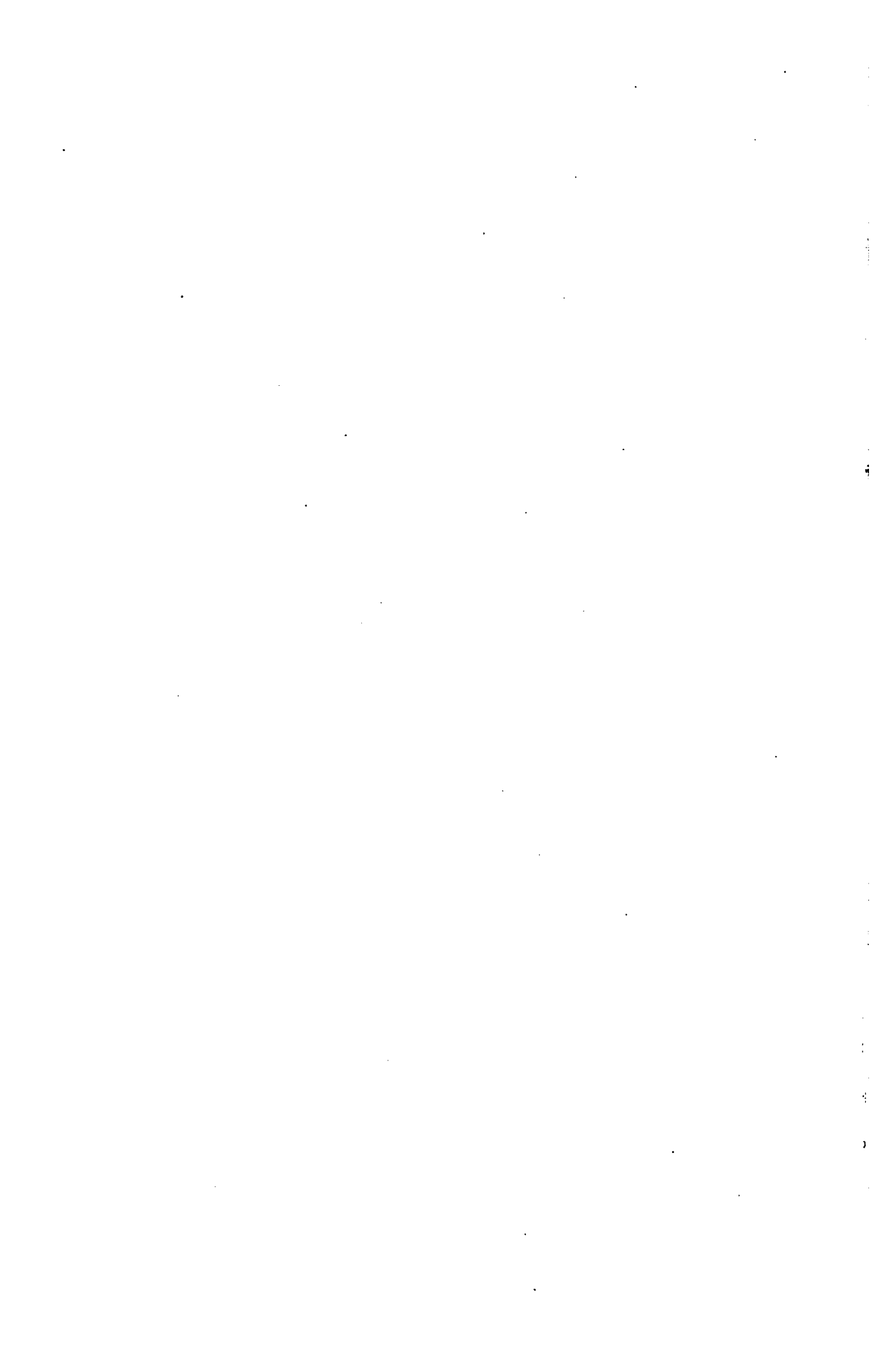
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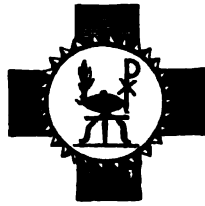
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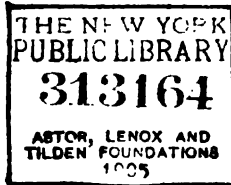
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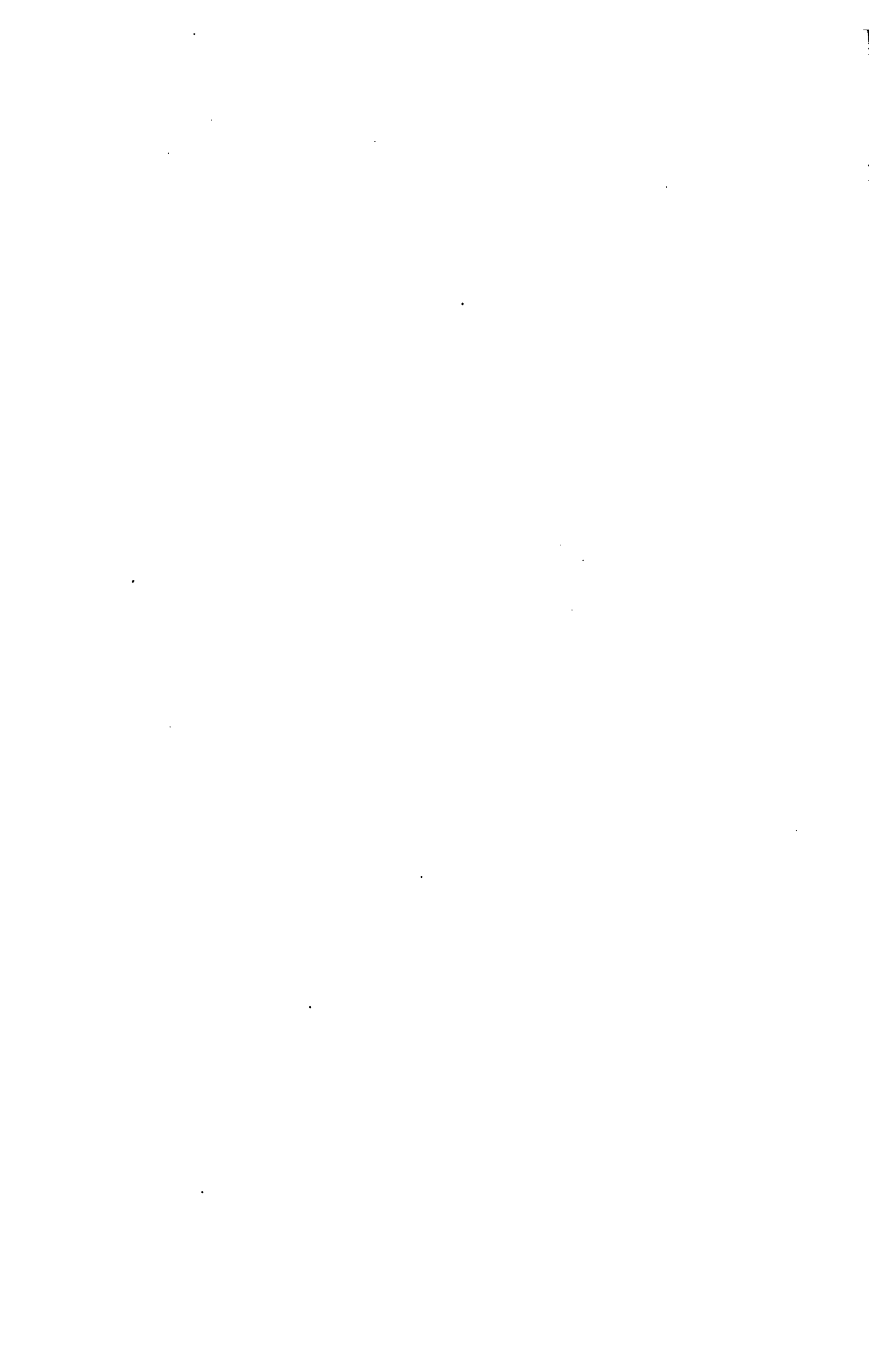
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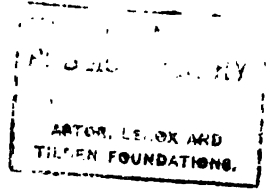
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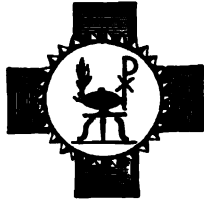


1. VIEW FROM THE SUMMIT OF THE CITADEL LOOKING NORTH



RECORDS OF THE PAST

VOL. III



PART I

JANUARY, 1904



A CLUSTER OF ARIZONA RUINS WHICH SHOULD BE PRESERVED ✓

BY DR. J. WALTER FEWKES

THE wholesale destruction of prehistoric monuments in our Southwest has attracted wide attention, and many appeals have been made to prevent the increase of this vandalism. The results of these appeals thus far have not been crowned with great success, due in part to a lack of intelligent popular interest in the subject. If a strong public sentiment in this direction could be created the indications are that effective legislative action would be brought about. A possible cause of the past indifference to an obvious duty may be an absence of information regarding these early monuments, or a want of knowledge of their importance to science. It is plain that a stronger plea could be made for a ruin or prehistoric monument of which we had some knowledge than for one of which we are wholly ignorant. We may therefore add considerable weight to our plea by stating the particular reasons why the preservation of individual ruins is desirable. Interest may be thus aroused, and a public sentiment created for a monument concerning which the public has some knowledge.

An examination of the geographical distribution of ruined pueblos in Arizona teaches that many of them lie on or near temporary or permanent streams of water, and it is instructive to note that when

these structures are situated near constant water, they are, as a rule, larger and apparently more ancient than when situated on inaccessible cliffs, or in isolated localities where there is a scanty water supply. The cause of this distribution is not far to seek, for an arid climate, like that of Arizona, would naturally force the original colonists to erect their buildings in localities blessed by an abundant and constant water supply, which is absolutely necessary for an agricultural life. But as time passed, these early settlements would attract the greed of nomads, and their inhabitants would be compelled to leave these favored but exposed places, and retreat into more isolated regions where they would be protected from their foes by such natural defenses as a rugged environment would furnish. Such retreats, although more sheltered from foes, are, as a rule, less suited to an agricultural life on account of the uncertainty of the water supply.

The aboriginal ruins in Arizona are practically situated in the valleys of two rivers, and their tributaries. These rivers which unite before they pour their water into the Gulf of California, are the Colorado, on the north, and the Gila, on the south; the latter a branch of the former. The large tributaries of the Gila enter it on the north or right bank, those of the Colorado on the south, or left bank. The belt of high land which forms the water-shed being situated between their sources.

The relation of this water-shed to the branches of the two rivers which drain the territory is intimately connected with the distribution of primitive trails in this region. The sources of the minor waterways are brought close together, and only a short distance separates the headwaters of the tributaries of the two great rivers. In their migrations the primitive peoples followed up the tributaries of the Gila, crossed the water-shed, and descended those of the Little Colorado.

A study of the character and size of the ruins along the Gila, as compared with those of the Colorado, shows that these vestiges of former habitations in the south, are much older than those in the Colorado Valley, and it is logical to conclude that the culture of the pueblos came from them and extended northward. The pathways which this northern migration followed were naturally the valleys of those tributaries, like the Verde and Tonto, along which many existing ruins indicate successive halting places. Having crossed the divide, the people from the south entered the Colorado drainage area and followed down the tributaries of the stream to the northern part of what is now Arizona.

It must not be supposed, however, that these colonists from the south were the only prehistoric sedentary peoples who were making their way into this territory in prehistoric times. The Rio Grande River Valley, in New Mexico, was also a pathway of migration from south to north. The tributaries of this stream, interdigitating with those of the Colorado, also served as trails along which semi-migratory tribes made their way into Arizona, later joining those coming

II. VIEW OF SECTION A OF WUKOKI SHOWING FALLEN WALLS AND MODERN WALL IN THE FOREGROUND



north from the Gila. The indications are that the valleys of this river received their original colonists from the same source as the Gila, viz., the northern portions of the Mexican states, Sonora and Chihuahua.

The migration, thus facilitated by the geographical position of the water-ways in Arizona and New Mexico, was a culture migration rather than tribal. The clans which brought the culture rapidly assimilated with wilder tribes inhabiting the region into which they entered, bequeathing little of their blood or language to the composite people who adopted the introduced culture.

No tributary of the northern river has played a more important role in the distribution of this culture than the Little Colorado, the sources of the tributaries of which adjoin those of the Rio Grande and Gila. From its source to its mouth vestiges of former migrations, back and forth, appear along its banks. There can be no doubt that the valley of this River was once a great highway along which migrated, by easy stages lasting many generations, the prehistoric pueblo clans. Although there was formerly a considerable population along the banks of this stream, and in its immediate neighborhood, the sites of that population are now all deserted save 2 clusters, Thusayan and Zuñi, which contain all that remains of the descendants of the clans which once lived in these now ruined houses. Whatever traditions may still exist concerning these old people are to be sought among the descendants living in these modern pueblos. It is a part of the work of the ethnologist to gather together and record these precious traditions, but it must be done immediately, for every year many are lost through deaths of the natives.

The study of these ancient habitations on the Little Colorado may be considered, likewise, from the historical side, or by a study of old Spanish records in which some of them are mentioned. This field of research is destined to reveal much information concerning these pueblos, in the historic epoch.

We can also approach the subject archæologically by studying the present condition of the ruins. By the aid of excavations we may obtain valuable data which taken in connection with that discovered by the ethnologist and historian will make it possible for us to add instructive chapters to the history of the Southwest.

A complete account of all the ruins on the banks of the Little Colorado, and its tributaries, would mean many years of field work by well organized parties possessing ample means. This work might well enlist the generosity of some patron of science. But a condition of affairs has arisen which makes this work imperative at once, which threatens to destroy even archæological data. Our Southwestern ruins are being rapidly glutted by those who seek for commercial gain, the objects hidden under ground. Valuable objects are dug up and sold, and their archæological data is scattered, and eventually lost. Against this wholesale destruction the archæologist is now protesting.

Manifestly there are certain of these ruins which are typical and



III. HIGHEST WALL OF RUIN A, GROUP C; SHOWING WINDOWS OF THREE ROOMS, ONE ABOVE THE OTHER



IV. REMAINS OF A RESERVOIR, NEAR WUKOKI

merit preservation more than others. It would be well if all were protected by law, but there are some of these monuments which merit immediate legislation, and no one is better able to indicate these than the expert, who is familiar with the nature of the archaeological problems which these ruins will do so much to elucidate, if not to the present generation of students, at all events to that which follows. In the following pages the author, who is familiar with many other ruins in the Southwest worthy of preservation will consider the claims for preservation of a cluster of ruins near the Black Falls on the the Little Colorado River. The pueblo ruins are not many miles from Flagstaff, and were visited by me* in April, 1900, and were described by me in an article in the *American Anthropologist* in the same year. We outfitted at Flagstaff from which town the nearest ruins of the cluster are situated about 20 miles, the most distant about forty. The road from that town to the ruins follows what is called the Moenkopi trail to within a few miles of the ford of the Little Colorado from which place one sees far off to the right a truncated lava hill crowned by a fort. This fort is the central ruin of the first cluster or group A and may be called the Citadel. From its top 20 well preserved ruins of different sizes and shapes are clearly visible. Continuing eastward from group A about 10 miles we find an extensive ruin, the largest visited, which may be designated group B, ruin *a*, and about 5 miles nearer the river lies the best preserved of all the ruins called ruin *a* of a third group, C. The general character of these ruins is not unlike that of other prehistoric buildings in the Southwest. These structures are, as a rule, small with low walls, the largest being not more than three stories high. Their masonry is fairly good, the component stones fitting closely together, and showing signs of having been 'dressed into shape. This is especially true of the walls constructed of soft sandstones, but when the walls were made of lava, the component fragments were roughly fitted together. Apparently the rooms of the lower series were entered from the roof, and never from the lateral doors. When windows were present they were mere lookouts, or small rectangular openings which would admit very scanty light. The roofs were apparently flat. The form and situation of both door-ways and windows recall the older houses in Walpi, and in a general way, we may say that Hopi architecture predominates in the construction of all these buildings.

Citadel, figure 5. The most conspicuous of all the ruins in the first cluster from its commanding position and possible use, is the Citadel. This structure crowns the elevation on which it stands, and consists of a series of rooms, the walls of which are made of rough hewn blocks of lava and sandstone slabs surrounding a central plaza.

From the top of the Citadel the observer's eye commands a fine view over the surrounding plane including many ruins in different stages of destruction. It would appear from its relative position that

* This visit was a part of my field work for the Bureau of American Ethnology in the year mentioned.



V. VIEW OF THE CITADEL WITH TERRACED GARDENS, AND ADJACENT RUIN



VI. THREE RUINS G, H, I, OF GROUP A; RESERVOIR AT ENTRANCE TO THE CANYON



VII. VIEW OF RUIN A OF GROUP C, SHOWING MESA

this building was a centrally placed fort or castle to which the inhabitants of the neighboring pueblos retreated when hard pressed by their foes.

At the base of the hill upon which it stands is a small ruin containing a few rooms, and on the slope near this building are rows of stones forming enclosures, arranged one above the other like terraced gardens. It is highly probable that these areas were protected farms from which beleaguered people may have raised their scanty crops of corn and melons.

Group A, ruin g, figures 9, 11. In order to designate the different ruins in each of the three clusters, the different members of these groups may be indicated by letters, in which nomenclature the ruins in sight of the observer on the Citadel belong to group A. A brief reference to a few of these will suffice to convey an idea of all the others in this cluster. As a rule the majority of these ruined structures stand on the edge of moderately elevated precipices forming the sides of the canyons. Ruin *g* of group A, is one of the simplest of these ruins. Its ground plan is practically rectangular in shape, and its walls of stone still stand about 10 feet high, but are roofless, unplastered and the enclosures deserted. The most marked architectural feature in the walls is a choice of large stones for the basal and flat slabs of sandstone for the upper courses, an almost constant feature in all these ruins.

Group A, ruins g h i, figure 6. The accompanying plate shows two other ruins of the same group, one of which, *g*, is on the opposite side of the canyon from *g*, the other *i*; some distance away is seen in the middle of the plate. The latter ruin from its size and remarkable state of preservation merits a few words. It lies at the entrance to a small canyon, its walls rising from the very rim of the precipice. At the base of the precipice, below the walls of the ruin, there are evidences of other rooms, possible granaries or store houses for the reception of provisions. Passing through the narrow canyon below the ruin which lies on the left hand, and with the steep opposite wall of the canyon on the right, the observer enters a basin-like depression enclosed on all sides by high cliffs. In the sides of these cliffs there are soft strata of rock alternating with hard, which permit excavation of cavities resembling catacombs. The entrances to these cavities were closed by flat stone slabs, which lead to the suggestion that they were columbaria in which were deposited the bodies of the dead accompanied by mortuary offerings. These cysts were of small size and their former contents have been long ago abstracted, leaving nothing to indicate their original character or purpose.

Group B, ruin a, figure 10. Several miles nearer the river than the last group of ruins, lie a few more abandoned houses forming group B, which includes in its number one of the largest ruins, which also bears evidence of being the oldest in the neighborhood. On account of its size it is called by the Hopi, Wukoki or Great Pueblo.



VIII. VIEW OF SECTION A OF WUKOKI; SHOWING MODERN STONE WALL IN THE FOREGROUND, AND DEBRIS AT BOTTOM OF THE MESA



IX. VIEW OF RUIN G, GROUP A; SHOWING RUIN ON PRECIPICE, AND WALL OF CANYON

As shown in the figure (figure 10), this ruin extended along a rocky ridge and consisted of 2 parts connected by a row of one-story houses. The character of the connecting ridge is somewhat modified and the above mentioned figure of it somewhat misleading an account of the prominence of a modern stone wall, erected by sheep herders a few years ago. The ends of the ruin, called in the following description sections *A* and *B*, have their walls still standing, those of *B* being sufficiently well preserved to form a habitable room which is remarkable in having an aboriginal fire-place communicating with a chimney shown in the accompanying figure (figure 14).

Section *A*, shown in figure 10, stands on a rocky elevation and was apparently, when inhabited, several stories high. Its walls in places are still 15 to 20 feet above their bases, exhibiting well plastered surfaces which are still exposed in several places. As a rule the former rooms are now full of fallen debris consisting of broken rafters, fragments of clay which once served for floors and overturned walls. In addition to the broken rafters and beams which once supported the roofs and floors of upper rooms there have fallen likewise twigs, reeds and straw with other parts of the original flooring. But in 2 or 3 rooms the floor beams and rafters still remained *in situ*, their ends projecting through holes in the side walls.

In addition to rooms enclosed by upright walls, standing on the rocky elevation there are numerous other chambers at the base of the cliff on which they stand forming a series of basal rooms partially filled with fallen debris. It is estimated that all the rooms of this section of the ruin would, when inhabited, accommodate at least 150 persons.

The rooms of the second section, *figure 10*, several of which are well preserved, are lower than those of the first section, and the detritus has covered the base so completely that the mesa is inconspicuous. Ten rooms were counted, several of which had 2 stories. There were apparently basal rooms on the eastern side. The entire section is about 60 feet long.

A chimney-like structure, *figure 14*, is one of the most conspicuous objects in this part of the ruin. It rises from the mass of debris and communicates by a well-made flue with the fire-place. This flue is not perpendicular, for a vertical line from its top would fall 7 feet 10 inches from the nearest wall of the room in which the fire-place is situated. Whether this structure is aboriginal, or whether it is a chimney at all, are open questions. Excepting its state of preservation and the fine masonry, no evidence was found that it is of more recent date than the walls of the rooms. If an aboriginal chimney, which is doubtful, the structure is unique. "It may be a ventilator, comparable with chimney-like structures described by Mindeleff in the ruins of Canyon de Chelly."*

Group C, ruin a, figure 7. This ruin, which lies 40 miles by road from Flagstaff, and 5 miles due west on the Falls, is one of the most impressive masses of aboriginal masonry in this section. It

* Pueblo Ruins near Flagstaff, Arizona.—*American Anthropologist*, N. S., Vol. II, July-Sept., 1900



X. VIEW OF RUIN A, GROUP B, OR WUKOKI, SHOWING SERIES OF CHAMBERS FILLED WITH FALLEN WALLS



XI. VIEW OF RUIN G, GROUP A; SHOWING RUIN ON THE PRECIPICE

stands high above the plain and is visible for many miles, from a distance resembling an old castle, rising from the northern end of a low isolated red-sandstone mesa, the top of which is 15 feet above the plain. The southern end of the base is higher than the northern extremity, and its rim appears to have been surrounded by a low wall enclosing a plaza. Standing walls cover about half the surface of the mesa.

At its highest point this ruin was evidently 3 stories high or had 3 rooms one above the other. This is shown by the line of holes through which beams of 2 floors formerly projected and by the notches on the highest wall for the rafters. The walls are fine examples of primitive masonry, due care having been taken to bind the corners and otherwise tie the walls together.

OBJECTS IN THE RUINS

The implements used by the people which once lived in these pueblos are either buried in the debris which fills the rooms or in the soil outside covered by the fallen walls. Many of the smaller objects were no doubt carried away by the former inhabitants when they left to seek new homes elsewhere, but the larger implements such as pottery were broken, the fragments of which can now be seen scattered over the surface of the ground. Unscientific excavations in the rooms, especially of the larger ruin, have been made in a desultory way and many of the objects owned by the ancient peoples have been brought to light.

It was the custom of the ancient peoples who inhabited the prehistoric pueblos of Arizona to deposit many of their treasures, especially ornaments, and clay vessels, vases, or dippers on the graves of their dead. This practice still survives at the Hopi pueblos where food is placed on the grave for several days. The object of the mourners is to provide nourishment for the breathbody of the deceased ere it departs to the underworld, the abode of the dead. On account of this custom the cemeteries of the old pueblos or ruins have yielded some of the most important objects illustrating ancient life, and the archæologist has eagerly sought these places for such objects. Each ruin has its own cemetery, but there is no uniformity in the situation or orientation of these burial places relating to the ruin. Sometimes the dead appeared to have been buried just outside the outer wall of the pueblo, and at other times in some sand hill, a few hundred feet away. If a priest, his body was interred in the floor of his house, and the entrances to the room closed by being sealed with clay or adobe. When the pueblo is situated on the top of a mesa the dead were often carried to the foothills, and thrust into a shallow grave among the fallen rocks. The place of burial apparently varies with each ruin, and no uniform rule can be laid down regarding its position. No superficial sign betrays it to the archæologist, for in that region drifting sand soon obliterates all evidence above ground of the graves of the dead.

XII. COMPLETE VIEW OF WUKOKI; SECTION A ON THE LEFT, AND MODERN WALL CONNECTING THE TWO SECTIONS



The former inhabitants of the Black Falls Ruins deposited their dead in enclosures made of stone slabs set on edge and covered by a flat top of the same material. These cysts are now buried with sand which has drifted over them since they received the bodies of the dead. Several of these cysts were opened, and in them I found skeletons stretched at full length with the mortuary offerings at their sides. In most instances the bones crumbled into dust when the soil was removed, but in one case the bracelets and armlets, made of shell, marked the arms of the deceased. This grave was evidently that of a woman or girl for by the side of the skull the author found the ear pendants made of small square plates of lignite or soft coal, one surface of which was covered with a turquoise and lignite mosaic, much finer, but of the same general form as like ornaments still used by modern Hopi girls.

In one of the rooms there was found the body of a baby wrapped in a coarse, white cotton blanket around which were tied other cloths. At the feet of the child had been placed a mummified bird, the bright colored feathers of which resembled those of a parrot. This bird was also wrapped in cloth, and to one leg was tied a prayer-stick as if it were regarded as a sacred animal.

Many fragments of coarse netting and painted cloth were picked out of the side of the wall of debris in the same room. A small piece of basketry dug out of another room revealed the fact that the ancients were basket makers. There were also short tubes or canes blackened by smoke at one end, wooden objects of unknown use, shells cut into various forms, and many other objects, to describe which would fill many pages. The indications are good that there is a wealth of material hidden in these ruins which pleads for the spade of the archæologist.

The cause of the abandonment of the habitations near the Black Falls is probably the same as that which led to the desertion of many other pueblos along the Little Colorado. Crops may have failed on account of drought or other reasons; hostile Apaches may have raided their farms and compelled the farmers to abandon the exposed sites of their pueblos in the valley and migrate to more isolated and inaccessible localities. They may have sought the protection which comes from numbers when combined with other pueblos.

There is no way to determine the date when the original inhabitants left their settlement near the Black Falls. No historian sheds any satisfactory light on the subject and Hopi legends have not yet revealed the time of the abandonment of Wukoki. If the Snake Clans lived in these homes before they went to Walpi, as tradition states, the abandonment was early in Tusayan history, but not necessarily very ancient.

None of the ruins near the Black Falls of the Little Colorado show evidences of great antiquity although some of them are undoubtedly prehistoric. As a rule the oldest ruins of Arizona are simple mounds, the walls of which do not rise high above the sur-



XIII. VIEW OF RUIN A, GROUP C, AS APPROACHED FROM THE SOUTH; SHOWING BASAL WALLS, TOWER AND WINDOWS.



XIV. STRUCTURE RESEMBLING A CHIMNEY ON TOP OF SECTION B OF WUKOKI.

face of the ground. All these ruins have high walls of decidedly modern appearance.

With the exception of Wukoki none of these dwellings appear to have been inhabited for any considerable length of time, as there is little debris about them or other evidences of long occupation.

The pottery found in or near the ruins is decidedly northern in character, belonging to a type which is characteristic of the cliff-houses of the San Juan, a tributary of the Colorado. It has no close resemblance to the pottery of the great ruins higher up the Little Colorado called Homolobi and Cheylon,* a fact which is of great importance to a knowledge of the ancient people who lived in these habitations. If the people who lived in the houses near the Black Hills came from the south the probabilities are that their pottery would bear close resemblances to that of the accoltents of the river valley higher up or more to the south. Such a resemblance would have been inevitable. But the pottery has a near likeness to that of the northern rivers, such as the San Juan, and we naturally conclude that in their migration the colonists who settled here came from the north. The arrival of these colonists was a late event, however, and their coming no part of an earlier drift of the pueblo culture from the southern to the northern parts of Arizona. It bears all the evidence of having been a returning wave of the survivors of the cliff house and other people from the northern limits of this culture. From these and other facts it appears that while in most ancient times there was a migration northward later there was a return towards the south and apparently the clans drifted back and forth, driven by their enemies or seeking favorable places to make their small farms and gather their meagre harvests.

Hopi traditions aid us in answering the question "What became of the people who once inhabited the cluster of pueblos at and near the Black Falls?" The traditions of the Snake Clans declare that they went, in part, to the Hopi towns where the descendants of the survivors still live; another contingent probably followed up the river and later continued on to the pueblo Cocoma. The survivors who went to Walpi belonged to the Snake Clan which ultimately became the most important family in that pueblo. But when it arrived at Walpi there were several pueblos existing in Tusayan. One of them was a pueblo called Sikyatki about 3 miles from modern Walpi, another called Lenyanabi, earlier in coming were Flute Clans mixed with the Horn Clans, had made a settlement. Probably there was also in Tusayan a flourishing pueblo called Awatobi. The subsequent history of the Snake Clans after they joined the Bear people at the East mesa of Tusayan is a chapter in the Hopi history which need not be considered here.

It is highly important, however, to bear in mind 2 facts, viz. : the modern appearance of the Black Falls Ruins and the probable kin-

* From an account of the pottery and other objects from the ruins see 22d Annual Report of the Bureau of American Ethnology.

ship of their inhabitants to the Snake Clan. Accepting these facts it is concluded that the advent of the Snake Clans at Walpi is comparatively recent, and that this addition to the pueblo is much more modern than some authorities have taught. After the Snake Clan left the Little Colorado pueblos, it went to the Walpi settlement of Bear Clans, whose ancestors came from the Rio Grande. It brought many Shoshonean customs and words which were incorporated in the existing Hopi tongue, but there is no reason to suppose that these additions were great enough to lead us to classify the Hopis as Shoshoneans. The stock is a composite one in language, customs and religions.



THE DUTY OF THE UNITED STATES GOVERNMENT TO INVESTIGATE THE ETHNOLOGY AND ARCHAEOLOGY OF THE ABORIGINAL AMERICAN RACES

NO GOVERNMENT in the world has so great an opportunity to render a lasting service to present and future generations in the domain of anthropology, ethnology and archæology as that of the United States. The obligation to render this service is equal to the opportunity.

With the advent of the white race into the Western Hemisphere began the gradual disappearance of its aboriginal inhabitants. One of the great problems the United States has to deal with is how to care for and treat the American Indians. They are now, as they have been for a long time, the wards of the Nation.

As civilization spread westward, it was found that the aborigines of North America had left behind them monuments carrying their history far back into the past.

WHAT ARE OUR NATIONAL OBLIGATIONS?

I. To study the tribal characteristics, culture, status, needs and possibilities of the American Indians for the purpose of putting them in the way of advancement toward civilization.

II. To provide in each case the instruction and the implements necessary to carry on the work for which they are best fitted by nature.

III. To study and record the tribal languages and their legendary history.

IV. To examine and, so far as possible, protect the Archæological and Monumental remains within our territorial limit.

It may be worth while, before entering upon a discussion of the nature of these obligations, to state that every civilized nation of the

world has done more or less in one or all of these directions. The great German Assyriologist, Dr. Delitzsch, closes the first of his famous lectures on *Babel and the Bible* with these words :

We too confess ourselves to be of the race which is struggling out of darkness into light, sustained, like the archæological undertakings of the other nations, by the increasing interest of our people and by the energetic support of our Government.

That our own Government has neither been energetic nor liberal in these matters is well known to all. It has even been suggested by some, that this work which is the outgrowth of the foundation laid by Smithson, whose remains have recently been brought to our shores for interment, shall be discontinued. But we do not believe that Congress will listen to such a fatal suggestion, but that with the awakened interest in all parts of our country, in the study of its aboriginal inhabitants and archæological remains, will make liberal provision for the carrying on of the work already begun and which has done so much for our Country and science. There are many men in the present Congress who are students of ethnology and archæology and who fully realize the necessity for the Government to provide men and means to carry on this great work. Especially since the field has been enlarged by our recently acquired possessions in the West Indies and the islands of the Pacific Ocean. It is but a miserable pittance that the Government has granted from year to year for this important work. But even with the small amount given, a great deal has been accomplished.

THE SMITHSONIAN INSTITUTION

The first work undertaken, that was national in its character, was by the Smithsonian Institution. The first volume of Smithsonian contributions to knowledge was devoted to the *Ancient Monuments of the Mississippi Valley*, and up to the founding of the Bureau of American Ethnology it had issued about 600 publications on anthropology, ethnology and archæology. Before the founding of the Bureau of Ethnology surveys were made for the War Department, by Whipple and Wheeler, who visited and reported on the the tribes and monuments of many parts of the West. Hayden made a survey of the Territories, and examined and described many of the Cliff and Pueblo dwellings, and published important papers on the ethnology of the Mississippi Valley. Major Powell had accomplished much among the tribes of the Colorado Valley and had commenced a series of contributions to North American Ethnology.

BUREAU OF AMERICAN ETHNOLOGY

The Bureau of American Ethnology was organized as a separate bureau in 1879, and placed by Congress under the supervision of the Smithsonian Institution.

So well directed and energetic were the efforts of Major Powell, in initiating researches among the American tribes, that he was selected by Prof. Baird, Secretary of the Smithsonian Institution, as the

person preeminently fitted to organize and conduct the Bureau. Major Powell was one of the world's most able students of the history and science of man, and his plans were laid on a broad and enlightened basis. He recognized the claims of the native tribes on the Nation and on humanity; he understood the needs of the Government in dealing with its uncivilized wards, and he appreciated the requirements of history and science.

Years of experience were necessary before the work could be fully organized; methods of research had to be developed, languages had to be learned and a large body of classified knowledge had to be accumulated before results of importance could be attained. Other important bureaus of the National Government have had a similar history, as for example, the Geological Survey, the Weather Bureau, and the Biological Survey.

The early researches had taken a wide range, but in a random way, and Major Powell began at once the work of determining the real scope of the field, the classification of the subject-matter, and the selection of those questions that required immediate attention by the Bureau. He found that there were numerous questions of a practical nature to be dealt with, and at the same time many less strictly practical, but vastly important, problems to be considered. Some of the practical questions were superficial, but in the main they were so involved with strictly scientific questions, that the two could not be considered separately.

One of the most difficult problems to be dealt with by the Government was that arising out of the presence within its domain of over 300,000 aborigines, dependent wards of the Government. In the main the difficulties encountered in the management of this element arose from the lack of a knowledge of the people, of a real appreciation of their character, culture status, needs, and possibilities. A knowledge of the elements with which a government has to deal lies, necessarily, at the basis of intelligent administration, and the chief object in organizing the Bureau of American Ethnology was to obtain necessary knowledge of the tribes and to so study them that not only would the Legislative and Administrative arms of the Government appreciate the native population and its needs, but that this knowledge should be so disseminated among the people generally that intelligent administration would have sympathetic support.

The first step in this great work, as wisely determined by Major Powell, was that of locating the tribes, and classifying them in such manner as to make it possible to assemble them in harmonious groups based on relationships by blood, language, customs, beliefs and grades of culture. To do otherwise would be to perpetuate the blunders in the management of earlier days and to contribute nothing to the material welfare and the civilization of the tribes. This work was undertaken by a few students, and with appropriations so limited as to be out of all proportion to the magnitude of the field covered.

For 20 years the work has been going on, and the corps of workers

has been distributed among the tribes studying such groups as promised to yield valuable results. Languages have been recorded and learned as the necessary basis upon which to carry forward the researches in the various branches, and today a great body of information has been gathered and published, and the methods of research, at first so imperfect, are now fully developed and intelligently applied.

The first essential step in the work was a classification of the tribes into groups allied by language. It was found that within the area with which the Nation has to deal there are spoken some 350 languages as distinct from each other as French is from Italian, and that these languages can be grouped in some 40 or 50 families. It was found, further, that in connection with the differences in language are many other distinctions requiring attention. Tribes allied in language are often allied also in capacity, habits, tastes, social organization, religion, and arts and industries; and it was plain that a satisfactory investigation of the tribes required a systematic study of all of these conditions. It was not attempted, however, to cover the whole field in detail. When sufficient progress had been made in the classification of the tribes, certain groups were selected as types, and investigations among them were so pursued as to yield results applicable in large measure to all.

Today gratifying progress has been made, and a deeper insight has been gained into the inner life and character of the people, and thus in a large sense of all primitive peoples, than has been reached before by any agency whatever. Many of the results of these researches have already been published and are in the hands of all the civilized nations of the world.

Some of the more directly practical results accomplished may be briefly mentioned: [1] The classification of the tribes on the basis of affinity in language; [2] a study of the numerous sociological, religious and industrial problems involved, and acquaintance with which is essential to the intelligent management of the tribes; [3] a history of the relations of the red and white races embodied in a volume on land cessions, allotment of land in severalty, etc.; [4] a study of the industrial and economic resources of the tribes with the view of discovering new materials for the arts, new sources of food supply, and new medicinal plants; and [5] a cyclopedia of the tribes, embodying in condensed form, the accumulated information of many years.

The Bureau deals with this great subject primarily from the practical point of view, on the theory that a well-rounded knowledge of the tribes is essential to their proper management by the Nation. It deals with the native population as the Geological Survey deals with the geology of the country and the Biological Survey deals with its animal life. The idea is that an intimate knowledge of the elements with which a nation has to deal is in each case essential to an enlightened administration. The practical results multiply as the work progresses and as the body of knowledge increases.

Many of the researches thus initiated and carried forward have a much more far reaching significance and influence than is implied in their application to the practical problems of today. A closer examination shows that they furnish the means of determining laws and principles that may be applied in the broadest sense to the affairs of nations, to a proper comprehension of the processes of human development, and the means of regulating and promoting progress. It is in what we usually regard as the less essentially practical—the scientific—results of these investigations that we find the most urgent and imperative reasons for continuing the whole group of researches, and these reasons may be briefly outlined.

The white race, of which our own people are the leading representatives in America, are rapidly completing the obliteration of the native race, which is one of the 4 great races of men. It is therefore asked if our enlightened Nation shall permit the obliteration of that race without making a vigorous effort to properly record its existence, to preserve an account of its physical and mental characters and its varied and interesting activities? Shall no attention be paid to the requirements of history and science? In these people and their culture we have the most important keys now preserved in the world, to human history, in its early stages. The urgency of this work is apparent from the fact that in a generation little will be left as a subject for scientific study.

The work of making adequate records of a vanishing people and culture was an inspiration of Major Powell, and the men he trained and who are devoting their lives to the work are in the midst of researches for which they alone are especially fitted. To close the work abruptly would be inadvisable in the extreme, and especially so when we recall the fact that in a generation nothing will be left but mongrel remnants of a once remarkable and most interesting people.

The conditions are well illustrated by one of the 7 great branches of research—language. In the area of the United States and Canada alone, approximately 350 languages are spoken. Of these languages not more than 20 are well known to our philologists, while of the rest we have nothing but brief vocabularies and unsatisfactory grammatical sketches. Inside of 10 years, one-third of the remaining 350 languages will have disappeared, in 25 years it will be impossible to obtain in these languages more than vocabularies, while the culture and native ideas will have disappeared completely. These statements apply with equal force to the native peoples of Mexico, Central and South America, whose languages and customs are akin to those of our own tribes. If this great body of the subject-matter of human history is to be saved for the future, active researches must be vigorously prosecuted.

It is asked why it is necessary to study so many of these languages or to devote so much attention to other branches of research among a multitude of tribes. It may be said that the value of such studies in ethnology, as in other sciences, is in direct ratio to the

number of observations made. The general results, the principles and laws, which we seek to determine and establish for future use and guidance, are only to be obtained from a large body of scientific observations. What we seek is not to preserve the language, or a number of languages, merely, but by a study of many related languages, to reveal the history of language, its origin and mutations, its branchings and its reunions, its principles and laws. We seek the key to the history of all language and to all the mysterious things connected with the progress of man. The same is true of every other branch of study pursued by the Bureau of Ethnology. The so-called non-utilitarian studies mean more than all others to an enlightened world, and especially to the American Nation.

The men trained by Major Powell have spent years of faithful study in acquiring proficiency in the work; they have learned the native languages and have begun a record of the tribes and their customs on a higher plane than was possible before. The researches thus founded cannot be transferred to other people and agencies and cannot be hastily stopped and curtailed without inflicting a great and irreparable injury to the work.

Some branches of the work are well advanced and approaching completion; among these are the history of land cessions by the native tribes, and a dictionary of families, tribes and villages. Other branches of equal importance are still in hand and new fields are opening from year to year. Work has now begun in Porto Rico, and should soon extend to the Philippines. These island possessions comprise primitive populations outnumbering the native tribes of the entire American continent.

Although confined to a single race, the work of the Bureau constitutes the most important study of man ever planned, and the body of facts already published exceeds in importance all that has been done by all other agencies in the world combined.

The 66 volumes already issued are a monument to Major Powell, which will stand in the future as one of the most noble achievements of American governmental science. The observations so recorded can never be duplicated or repeated, for in a generation the native population will have lost its racial characteristics and its peculiar culture will have vanished.

There is a strong feeling in this country and even in Europe that the work should be continued. This is indicated by correspondence and especially by criticism resulting from the report that the Bureau is to be discontinued.

It is regarded as most important that the Bureau should take up the physical anthropology of the native tribes. This is urged not only by our own scholars but by many of the leading anthropologists of Europe. Thus far no trustworthy records have been made of the physical characteristics of the American race. Adequate statistics are required as to bodily character, strength, endurance, viability, fecundity, liability to disease, etc. Physiometric records should be made

of the child and the manner of his development into manhood. The results of intermingling with other races as well as effects of changes of environment and manner of life should be observed by scientific methods, and the whole should be placed on record for present and future use before the typical race characteristics are lost. Along with the physical researches should go statistical studies of the native mind.

The Bureau should be permitted to continue its researches among the tribes of the country in the various fields already occupied, since its methods are now well perfected and its students well trained in their various specialties. It should also, as far as possible, extend its investigations to our newly acquired possessions—to the various races that have come recently within range of observation and control. It is most important from both the immediately practical and the more strictly scientific points of view, that expeditions should be sent to Hawaii, Samoa, the Ladrões, and if possible to the Philippines at the earliest possible dates. Other countries are rapidly collecting the ethnological and historical objects and data that should enrich our own institutions.

FIELDS OF RESEARCH FOR THE BUREAU OF AMERICAN ETHNOLOGY.

- United States . . . Three hundred thousand aborigines, with allied populations of neighboring countries amounting to 7 millions.
- Porto Rico Aborigines, indefinite numbers, with a wide historical and archæological field of research.
- Hawaii Forty thousand aborigines, with studies of allied peoples, including history and archæology.
- Tutuila (Samoa) . . . Thirty-four thousand aborigines in the whole group.
- Guam (Ladrões) . . . Ten thousand aborigines.
- Philippines Eight million native population (one and a half millions, Pagan).

The Philippine Government has a local Bureau of Ethnology which is expected to cover the ground more or less fully.

Say what we may respecting the absence of the immediate practical benefits arising from these researches, it is this group of studies that will stand out in the future as among the greatest achievements of government science, for they are researches which can never be repeated. The opportunity passes with the present generation—and forever.

PUBLICATIONS—HISTORY OF THE SERIES

When the U. S. Geographical and Geological Survey of the Rocky Mountain Region was discontinued, by Act approved March

3, 1879, it had published 2 volumes (1 and 3) of a quarto series of Contributions to North American Ethnology. The same Act made an appropriation for completing and preparing for publication other volumes of the series. The work was put in charge of Major Powell, previously Director of the Rocky Mountain Survey, and the Bureau of Ethnology was organized. The new Bureau continued the Publication of the Contributions, and in 1880 the Director began a series of annual reports of progress to the Secretary of the Smithsonian Institution, which were published, with accompanying scientific papers, in handsomely illustrated royal octavo volumes. The printing of the volumes of both series was at first specially authorized by Congressional resolutions, but on March 2, 1881, volumes 6-10 of the Contributions were provided for by a single resolution.

Under authority of a joint resolution of August , 1886, the Director of the Bureau commenced in the following year the publication of a series of bulletins, in octavo form, unbound, which was continued by authority, of the concurrent resolution of July 28, 1888.

The Public Printing Act of January 28, 1895, which superseded all previous acts and resolutions relating to public printing and binding, provided for the continuance of the series of annual reports only. At that time there had been published, or were in course of publication, 8 volumes of Contributions to North American Ethnology, numbered 1-7 and 9, 24 bulletins, and 13 annual reports. Of volume 2 of the Contributions, which was issued in 2 parts, there were printed 3,600 copies, of which 750 were distributed by the Smithsonian Institution and the Bureau. Of the other volumes of Contributions from 6,500 to 7,000 were printed, the Smithsonian Institution and the Bureau receiving 1,000 copies of volumes 4 and 5 and about 2,000 copies of volumes 6, 7, and 9. Of the first 10 annual reports there were printed from 16,000 to 17,000 copies, of the 11 to 13 about 8,600; in all cases the Bureau received 5,000. Of the bulletins, between 7,000 and 8,000 copies were printed, the Bureau receiving 3,000. The numbers given include in all cases the "usual number," from which the personal copies of the members of Congress and copies for the various governmental libraries are drawn.

From 1895 to 1900 the Bureau issued the series of annual reports only, but on April 7 of the latter year the Senate passed a House concurrent resolution authorizing the commencement of a new series of bulletins in royal octavo, uniform with the annual reports. Three numbers (25-27) of this series have been issued, and a fourth is in the hands of the printer. The edition of both annual reports and bulletins is 8,640 copies, of which the Senate receives 1,500, the House 3,000, and the Bureau 3,500 (of which 500 are distributed by the Smithsonian Institution). The remaining copies constitute the "usual number."

Besides the series mentioned there have been issued small editions of several miscellaneous publications intended chiefly or wholly for the use of collaborators and correspondents, which were

not authorized by Congress but were probably paid for from the annual appropriations for continuing research. These comprise 3 introductions to the study of aboriginal activities (one having been previously published by the Rocky Mountain Survey), a collection of Indian gesture signs, a provisional list of the principal North American tribes, with synonyms. A set of proof sheets of a bibliography of North American languages was set up as Contributions to North American Ethnology, volume 10, but only a few copies were printed.

As may be seen from the appended list of publications, there have been issued up to the present 19 Annual Reports, of which 4 are in 2 parts, 27 Bulletins, of which 24 are in octavo, unbound, and 3 are in royal octavo, bound, 8 volumes of Contributions, of which 1 is in 2 parts, 4 introductions to the study of aboriginal activities, and 6 miscellaneous pamphlets—69 volumes and pamphlets in all.

SUBJECT-MATTER OF THE PAPERS

The papers published have covered the entire range of aboriginal characters and activities, and have contained in addition much historical and general cyclopedic material. Seven deal largely (3 of them almost wholly) with the classification of the tribes; almost all contain some cyclopedic material, but only one is devoted to it chiefly, while 18 others have a large amount of such material; 3 deal chiefly and 9 largely with history and tradition, and 3 are concerned with relations with the Whites as shown through land cessions and reservations. Of those treating of aboriginal activities 3 deal chiefly and (perhaps) 12 largely with social organization; 50 are devoted to arts and industries, and 20 more contain considerable material on this subject. Forty are devoted chiefly to linguistics, and perhaps 35 to mythology and folklore, and a number of others contain material on both these topics. The whole are a record of great practical value to those dealing with the interests of the native tribes and constitute a record of the utmost importance to the science of man.

THE INVESTIGATION OF ARCHÆOLOGICAL REMAINS

Under the direction of the Bureau of Ethnology and of the Smithsonian Institution important explorations have been conducted, but scarcely a beginning has been made. One has only to visit the National Museum to see how important the field for further explorations is. It is from the ruins scattered from the Atlantic to the Pacific and from Alaska to the Gulf of Mexico that we must search for the records of the prehistoric past, left by the people who once lived within our territorial limits. Our Government is about to build a Museum worthy of the Nation, a matter that has been long neglected, and in it should be gathered the archæological remains of the aborigines of our country. It is here that coming generations should come to study the handiwork of past generations. The ruins are fast being despoiled and their contents scattered over the country and it is hoped that the present movement to secure National Legislation

for their preservation will be successful, so that the National and other Museums and Educational Institutions can carry on scientific investigations under the direction of the Government. The preceding article by Dr. Fewkes, who ranks with the most famous explorers of the Old World, will give the reader an idea of what awaits the spade of the explorer in the Southwest. The men to carry on this work must have a scientific training, for which Educational Institutions, as the result of the work of the Smithsonian Institution and the Bureau of American Ethnology, are founding Professorships in Archæology and Ethnology. But explorations cannot be made unless the Government will make liberal appropriations from year to year for that purpose.

The work that Major Powell began and prosecuted for so many years with great success and lasting benefit to our Country and to science, is now in the hands of one—Professor William Henry Holmes—who is in every way fitted for the great task before him, a man of culture, of wide learning, with a lifelong experience in this field of research, conservative and possesses the confidence and esteem of the scientific men of this Country and Europe. He has been building wisely on the foundations laid by his great predecessor, Major Powell, and today only needs the men and money to prosecute successfully the greatest work in the interest of science that has ever been undertaken by any government.



BOOK REVIEWS

THE COMING PRINCE ; OR, THE SEVENTY WEEKS OF DANIEL WITH AN ANSWER TO THE HIGHER CRITICISM. By Sir Robert Anderson, K.C.B., LL.D., London and New York, Sixth Edition—1903.

DANIEL IN THE CRITICS' DEN. By Sir Robert Anderson, K.C.B., LL.D., London and New York, Second Edition—1903.

THERE is a freshness about Sir Robert Anderson's way of presenting a subject that sustains the interest of the reader, and such a thoroughness of research, as brings one in touch with many authorities. Besides it is always interesting to view any subject from the legal standpoint and follow the workings of a mind that is accustomed to sift evidence. However, when discussing an unique experience like that of the Prophet Daniel, one could wish for more original work and less of what Sir Robert calls, "Taking history from the historian and chronology from the chronologist;" which in a sense is quite necessary, but an investigation to be thorough, should

put both the historian and the chronologist on the witness-stand, quite regardless of any reputation as specialists they may have in their own lines. The habit of accepting certain data as proven beyond a doubt, also of approaching the Book of Daniel in the light of supposed verities discovered in the Book of Revelation, has done more to keep it a sealed book than all the so-called difficulties brought forward by its opponents.

The 2 volumes of Sir Robert viewed from a friendly standpoint have one Gibraltar-like statement, that is intended to be impregnable, viz., "The great prophecy of the *Seventy Weeks*, so far as its fulfillment belongs to the past was fulfilled with such definiteness and precision as to make an "end of controversy" upon the whole question. It will be found that the interval from the issue of the decree to build Jerusalem [March 14, B. C. 445] to the public proclamation of the Messiah [April 4, A. D. 32] was *exactly and to the very day* the period foretold by Daniel" . . . An attempt to dismiss the fulfillment of the prophecy as a mere coincidence is not intelligent scepticism, but a cross misbelief which is sheer credulity."

Now I am convinced that whoever dares to inquire into the *Seasons, Times and Weeks* of Daniel should tread very carefully, for in one case he will incur the anathema of the Rabbins, which runs thus:—

May their bones be broken
May their souls go out, who
compute the periods of the Times,

while in the case of the 70 Weeks, if perchance the inquirer finds mathematical errors that warrant him in setting aside the conclusions of Sir Robert, he will become a boorish "Sceptic whose cross misbelief ranks as sheer credulity."

Turning to the date April 6, wherein it is said our Lord was proclaimed the Messiah, Sir Robert tells us the day was the 10 of the month Nisan just 4 days prior to the Paschal Supper, which according to the Julian Calendar, was eaten that year on April 15. Taking 4 from 15 leaves 11; in other words the Messiahship was announced April 11, instead of April 6 as stated by Sir Robert. Here then we find an error of 5 days, and the claim of accuracy which reads:

"*Exactly and to the very day*" goes to the winds, for in this respect alone his answer is 5 days out of truth. So much for the last date of his claim.

We turn now to the first date, viz.—March 14 given by the Astronomer Royal, Sir C. B. Airy. We admit his figures are right, for they agree with the Calendar or Rabbi Hibbel II, but it was not a question as to the *first* day of the month, it related to the *entire* month Nisan and might have been any one of the 30 days. The passage in the Bible reads:

And it came to pass *in the month Nisan* in the 20 year of Artaxerxes.

Therefore, in running the lines of his survey Sir Robert gives us no permanent land marks, for the starting point sways back and

forth over 30 days and the last stake has been moved inwards 5 days, thereby shortening the route. In no sense therefore can the total period be said to fit:

"Exactly and to the very day." But movable land-marks are not our only difficulty. Sir Robert takes the year as 360 days, instead of the measure known to Astronomy. This is a serious matter, for the difference between 360 and the true length amounts to about 7 years shrinkage for the period in question.

In calling to mind the marvelous accuracy which characterizes the movement of the planets belonging to our Solar System, and passing onward we find that the same beauty and precision prevails among the stellar worlds, our minds are prepared to accept any numerical statement brought by the Angel Gabriel as being the perfect embodiment of mathematical precision. A loose statement like "360 days make one year" would be a cause for grave doubts as to the source of the information.

In the light of the foregoing remarks it will not be necessary to review Sir Robert's terminal dates in B. C. and A. D. from their historical standpoints. Suffice it to say, that both the length of the year and selection of terminal points are faulty in the extreme.

Sir Robert's mathematics fail to throw light on the problem of the "Seventy weeks." Our Author also leaves in darkness the meaning of the 2,300 days, 1,290 days and 1,335 days of the Prophet Daniel.

W. S. AUCHINCLOSS.

IN OLD EGYPT: A STORY ABOUT THE BIBLE BUT NOT IN THE BIBLE. By H. Pereira Mendes. Illustrated by Mabel L. Humphrey, New York: Frederick A. Stokes Company—1903.

THE Author has presented the great leader of the Hebrews to the world in a new light. Beginning with the parents of Moses, he has told the story of the life of his hero until his flight from Egypt, and promises to continue it in a second volume. A most vivid and altogether probable picture is drawn of the Hebrews at the time of Moses. The story of the life of the parents of Moses is full of deeply interesting events from first to last.

Many of the characters introduced are, as we might say, from life. Their names and achievements are recorded on the monuments of Egypt. The author has produced something more than a historical novel. He has succeeded in making Moses more real and interesting as a great historical character than appears to the casual reader of the Bible. We think the book should not only be read by children, for whom it is specially written, but by many who seem to think they know a great deal more about Moses than they really do.

The book is most beautifully illustrated and its typography is perfect.

EDITORIAL NOTES

AFRICA:—TRIPOLI—M. de Mathuisieulx has recently returned to Paris from a journey of exploration in Tripoli. In 1901 the explorer obtained permission, rarely given by the Turkish authorities, to travel through that little-known country in order to collect information on its natural products and geological structure as well as upon its ancient monuments and racial types. M. de Mathuisieulx made an interesting report on the subject to the Minister of Public Instruction, and it was to complete his observations that he again visited Tripoli in the spring of the past year. He first made a careful study of the ruins at Sabratha, about 60 miles through Tripoli, and a considerable port under the Phœnicians. From Sabratha M. de Mathuisieulx traveled south to the Djebel Mountain, where he was able to establish the fact that the celebrated Roman road from Gabes to Lebda passed not by Ghadames, as has been for long supposed, but over an elevated plateau in the district. The traveler noted that in this neighborhood the ruins of various temples and mausoleums are disappearing, as the inhabitants use the stones to build their houses. At Gherza, 70 miles to the south of Misda, the mission visited other ruins belonging to the Byzantine period. Copies were taken of numerous inscriptions and bas-reliefs of considerable archæological interest. At Orfela and in the valley of Nefed mausoleums of a style of architecture peculiar to this part of Africa were discovered. They were of ancient date and displayed an unusual wealth of detail. In this case the monuments had been respected by the inhabitants, who were, indeed, of too nomadic a character to have recourse to building material of such a nature. In addition to his archæological researches, M. de Mathuisieulx made an ethnographical study of the native negro.

EGYPT—A recently discovered papyrus, according to the *London Chronicle*, was a contract between a shorthand teacher and a man who wished one of his slaves to acquire the art. The fee was 120 drachmæ, 40 to be paid on apprenticeship, 40 at the end of the year, and the balance when the slave was proficient. Shorthand writing was then presumably not so easy of attainment as it is now. Among the other documents of the Oxyrhynchus Papyri is the account of a fatal accident, and the body of the victim being examined by the

coroner of the day, in company with a public physician. That dates back to the II Century of our era, in which, judging by other discoveries, the formal invitations to dinner might be literal renderings of ours at the present time.

ASIA :—TIBET—Dr. M. A. Stein of the Indian Civil Service has been excavating sand-buried cities among the dunes of the deserts on the northwest frontier of Tibet, in the region which Sven Hedin visited several years ago. In these ruins Dr. Stein has discovered many Tibetan writings which throw much light on the former extent of Tibet and the power of the country. Colossal figures of Buddha and other figures have been found which show that this race which vanished centuries ago, was one of great culture, possibly a link between the civilization of China and the West. A thorough examination of the ruins of the Central Asian cities which lie buried beneath the desert sands will add many new chapters to our history of the world. Dr. Stein's new book, *Sand-Buried Ruins of Khotan* shows the possibilities along this line of investigation.

EUROPE :—FRANCE—Among recent communications to the Society of Anthropology of Paris are several by M. Emile Riviere, dealing with the engraved and painted walls of the cave of La Mouthe (Dordogne), discovered in August, 1902, representing animal figures and colored with peroxide of iron and manganese, with shell ornaments; with the discovery of a Gallo-Roman necropolis at Paris in February and March last, which he has also made the subject of a communication to the Academy of Inscriptions and Belles-Lettres, and of a second note recording subsequent finds, including an object of bone or ivory, which seems to have served the purpose of a tally; and with a leaden ring, ornamented with a heart, of the XIV Century, in comparison with a chatelaine, bearing a like ornament, of the XVIII Century. The last named communication is in illustration of a previous paper by Dr. Marcel Baudouin, on the subject of Vendean hearts. Emblems of this kind have at various times been circulated for political purposes, and their use on brooches and rings dates back to the Gallo-Roman period, if not earlier.

At the meeting of the Society of Anthropology of Paris on July 2, Mr. Threullen made a communication, which he has since published independently, on the discovery of relics of the mammoth and the reindeer, in the course of the same excavations which furnish the relics of a Gallo-Roman necropolis described by Mr. Riviere. At 10 m. below the vegetable soil he found a number of neolithic instruments. At the depth of 5 m. he found the lower jaw of the mammoth in perfect preservation, some meters lower the jaw of a reindeer. He also discovered many hundreds of the rudimentary instruments which appear to me to bear evidence of human workmanship. All these objects have been deposited in the galleries of Mineralogy at the Museum of Paris under the care of Prof. Stanislas Meunier.

THE NEW YORK
PUBLIC LIBRARY

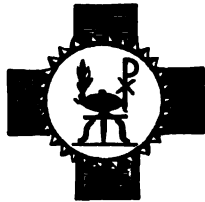
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JAMES THEODORE BENT

RECORDS ^{OF} THE PAST

VOL. III



PART II

FEBRUARY, 1904



THE MONOLITHS OF AKSUM ✓

BY MRS. MABLE V. A. BENT

IN the winter of 1892-3 my husband, Mr. Theodore Bent, and I went to Abyssinia to study the ruins of Aksum (Axum) and did so under very difficult circumstances, as war was raging and we ourselves eventually had to take flight under protection of a strong escort of the native troops, sent by the Italian governor of the Colony of Eritrea to fetch us, as there was danger of our being kept prisoners.

We should have done more but for this. Many things about Abyssinia are so strange that the first travellers, who described them, were disbelieved and lay under the stigma of telling "travellers' tales" for many a long year, waiting to have their truth established by those who came after them. In fact Abyssinia is a country which appears to have been lost and rediscovered. Aksum from very early days has been looked upon as an extremely sacred place and the Cathedral is evidently upon the site of an ancient Sabeian temple. It would well repay excavation, but of course that is out of the question.

The Emperor Justinian's ambassador, Nonossus, whom he sent to the King of Ethiopia, says that "Aksum is both the greatest city and the capital of all Ethiopia." It was also mentioned A. D. 64 by the anonymous author of the *Periplus of the Red Sea* as the capital of this land. To this day it is an astonishing looking place, with

monoliths standing in various parts and larger ones still are lying broken and prostrate. What an awful crash there must have been when they fell; huge fragments are in gardens or built into walls and forming parts of houses.

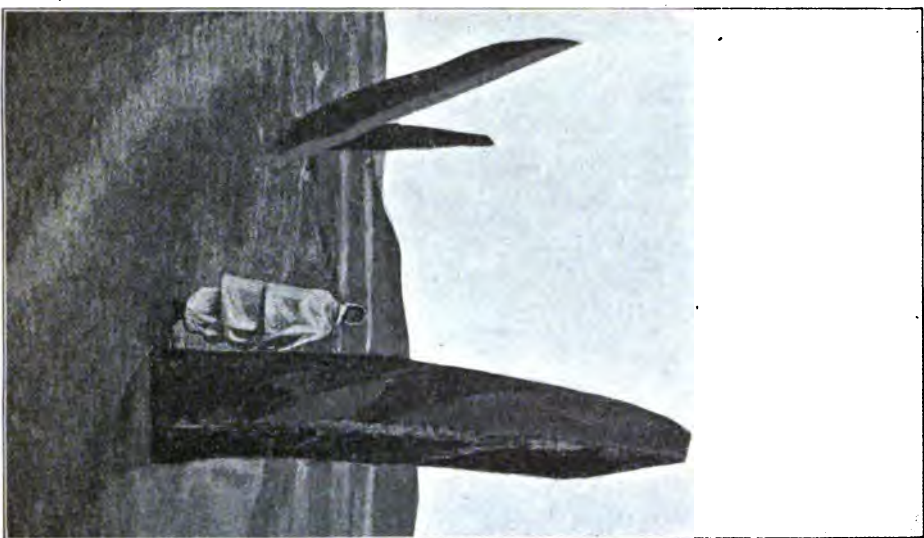
There is no record or legend to tell us when or by whom these obelisks were erected. The first one we saw was about $\frac{3}{4}$ of a mile from the town. It is about 20 ft. high, cut out of granite with a pointed head and flat sides. Several that had stood near it were lying on the ground. They did not seem to have any decoration.

The stone with the inscription in Greek and in Sabean is about 100 yards from this. The Greek is quite legible and every word could be made out. Taking a squeeze was very tiresome as the stone leans over, and we were in momentary expectation that the day of having to take flight had arrived. I will not discuss the inscriptions here, but pass on to the wonderful monuments. The greater part of the standing ones were arranged more or less in a line, and are all the more interesting as one can trace their development from a rude boulder or stock to a finished decorated obelisk. The photographs which I succeeded in taking show this very plainly. The perfect ones all represent a many storied tower. The stories are marked off by the round ends of beams, showing that the model was a wooden building such as those we saw at Myra and Patara in Asia Minor. The rock cuttings all portray wooden erections. There are the doors, some single, some double, with ring handles or bolts.

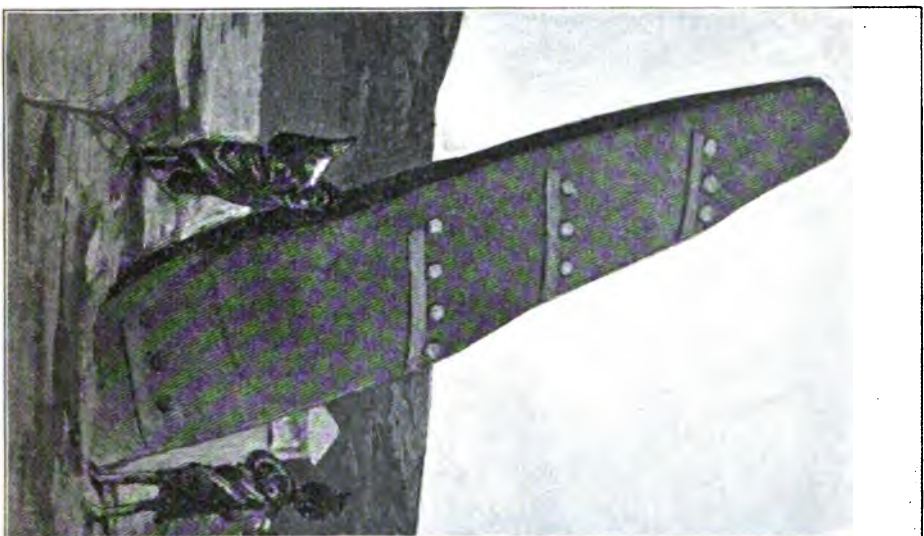
The tallest standing one is 60 ft. in height—it was by no means the largest of them and has 8 floors above the ground floor and a kind of a dwarf *entresol*, and then there is a rounded gable on the summit. On the face of this a metal disk was fastened. A representation of the Sun may be seen carved on the back, which is otherwise quite plain. The 2 next to this, that is, one on either side, are not so high and quite plain but well cut, the head of one being more pointed than the other. The next is by no means symmetrical and is adorned with 4 stories, only the floors and a row of 4 round beam ends being indicated. The rest are very rude indeed. The cutting on the granite is as sharp and fresh as possible.

The monoliths had formerly altars at their bases—that belonging to one of them stands there still, but its foundation is much denuded of earth. It is 13 ft. 10 in. in width by 11 ft. 5 in. from back to front. There are 3 deep holes, 3 across and one in front of the middle one 1 ft. 2 in. in diameter. Round the stone is a branch of vine leaves and grapes such as is seen on a Hemyaritic stone in the British Museum.

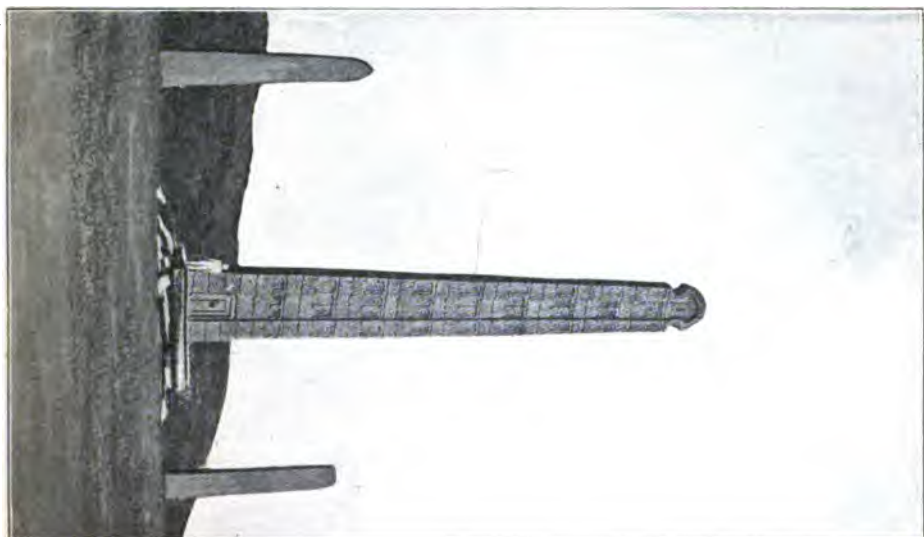
The obelisk next to it, with a rounded top, like those in Meidum in Egypt, has a perfectly plain altar. We saw fragments of one, the extreme width of whose front measured 12 ft. 8½ in. as against 8 ft. 7 in. of the standing one. This and another which lies in Ras Alulas garden must have towered above the others. These 2 were also divided into stories and in falling must have shattered their altars



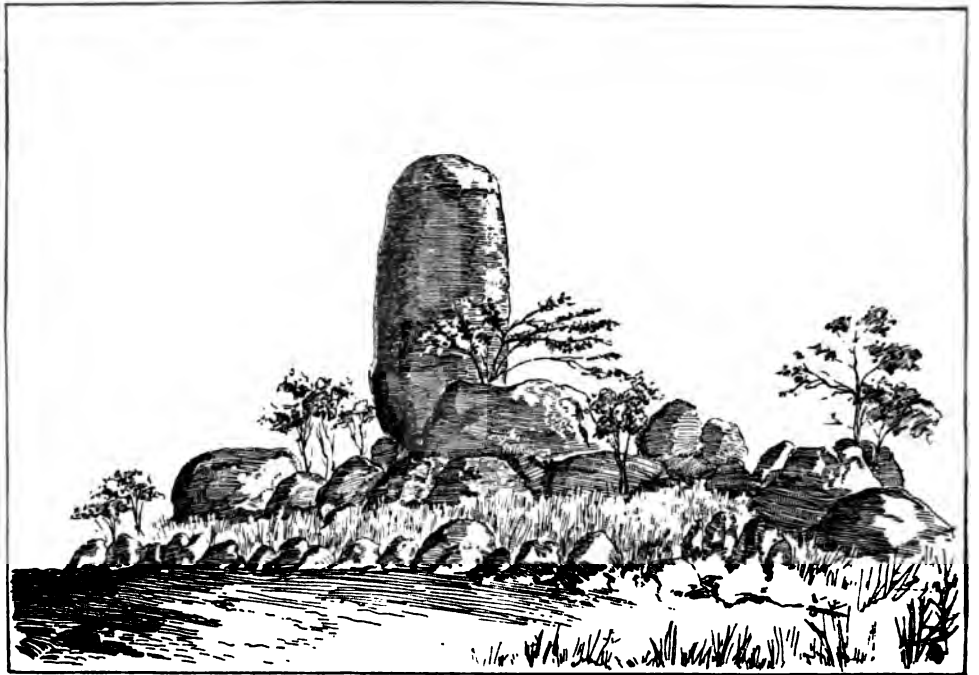
RUDDEST MONOLITHS, AKSUM



MONOLITH ADORNED WITH BANDS, AKSUM



TALL STANDING MONOLITH, AKSUM.



RUDE TYPE OF MONOLITH, AKSUM



A SABBEAN ALTAR, AKSUM

beneath them. To seek for and count all the fallen ones was a task beyond the time at our disposal and they must indeed have looked, when all standing erect, like an imposing array of Bethels—houses of God.

The religious purport of the monoliths is plainly to be seen and the altars below them form interesting examples of religious architecture. One of these 9 ft. in width by 7 ft. 10 in. has a raised platform in the middle, in which is cut a two-handled vessel resembling a Greek kefix. This would receive the blood of the slaughtered victim. Channels cut in 2 of the corners would allow the blood to flow to a lower level where there were 3 similar receptacles. There were a series of small holes, not very deep, cut round the upper platform, but below it, and continuing all round the altar, 2 more channels letting the blood flow to the ground.

There are no data, as I said before, to enable us to assign an epoch for the erection of these monuments. They were probably erected about the same time as the colossal buildings at Baalbec and the Aksumites either took the fashion of decorating the stones they set up in honor of their deity from Asia Minor or from their own way of building, which is certainly very ancient.

Alvarez only describes one decorated monolith thus "This raised stone is 64 ells in length and 6 wide. It is very straight and well worked, made with areoles below, as far as a head like a half moon, and the side which has this half moon is towards the south." As far as we could see there was no special system of alignment observed, but the altar and decorated side was always toward the rising Sun.

We could not obtain any account of what occasioned the fall of these monoliths, but most likely it was caused by the washing away of the soil by the Mai Shum Stream, in the deep bed of which some fragments lie.

On an eminence, a little way up the valley, are some ancient rock-cut tombs, called by the natives the tombs of Kaleb, the king whom legend says carried war victoriously into Arabia in the VI Century, A. D., but they bear evidence of being far older than that time. They are like Greek tombs in having a descending *dromos* as the entry. There are 3 sepulchral chambers built with such regularity as to remind one of Greek tombs of a good period. In one of the tombs close by there is a sarcophagus and the tombs in the tombs around are quite analogous to the sepulchres of Asia Minor and Syria.

The general features of the monuments of Aksum point to a Greek influence which from its style must have been brought to bear upon the Sabeans before our era. There were many traces of large buildings in all directions, and a large mound gave us longings to open it, but owing to the anxiety of our position this was impossible.

About 3 miles northwest of Aksum, on a boulder of granite called Mount Gobederah and up a steep hill there is a lioness cut in outline 10 ft. 8 in. in length in a running attitude. It has in front of



BLACK AND WHITE TOMBS OF BOGOS

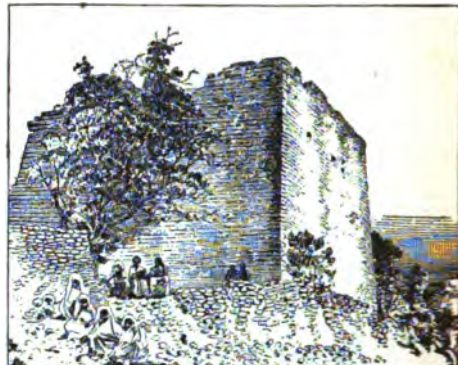
As Keren is approached there are very curious evidences of a very large population having once existed here in the shape of certain tombs all along the roadside. These tombs are certainly not made now, and probably date from the time when the merchants of Bogos were men of importance. The approach to Keren is a perfect Appian Way of these tombs; they crown every height, and form a marked and curious feature in the landscape. They are round; and are thus constructed: A wall is built of dark stone round the grave from 12 to 20 ft. in diameter; these circles are filled up with small fragments of either white quartz or dark stone until they form a mound about 6 ft. high. The tradition is, amongst the inhabitants, that the white graves are those of good men who have died a natural death, and the black graves are those of evil-doers and those have died a violent death. At any rate, the white graves are far in excess of the black ones. They are exceedingly neatly finished off, and look from a distance like large huts with whitewashed roofs. Most of them are in clusters, presumably belonging to one family. In one cluster I counted 22 graves; the center one, probably that of an important chief or head of a family, being very much larger and higher than the rest; in this cluster we found only 3 black graves. [From *The Sacred City of the Ethiopians*.]



ROCK CHURCH, DEBES SINA



MONASTERY OF BIZEN



WALL PAINTINGS AND TOWER

its mouth, a few inches off, a circular disk with rays, evidently the Sun.

I have taken this slight outline of what we saw at Aksum from my husband's book, the *Sacred City of the Ethiopians*, in which is incorporated my own notes. All is more fully set out there, as well as a detailed account of the inscriptions. We were there for too short a time when we got warning that we must depart at once, as the Bishop was going to join Ras Mangasha in the war and all good people must bear him company. None but the bad would remain behind and the town would be given up to pillage.

Forthwith my husband began trying to dry squeeze inscriptions in the condition of wet blotting paper, trying to get them in the sun and shelter them from the wind. I frizzled some negatives trying to dry them on the teapot, as I dared not go out in the sun for fear of dust, and our servant made himself wretched over some delightful and valuable dripping which would not cool. Meanwhile we packed our boxes keeping one open for these treasures, the mules being ready at the door waiting for the last possible moment.

To make a *resumé* of the information to be generally gleaned from the inscriptions we brought home would, I am sure, take up too much space, but enough has been said to point out the wonderful interest for the Archæologist of a journey in Abyssinia.



COAST SCENERY WEST OF DHOFAR

WHEN DID THE AMERICAN MAMMOTH AND MASTODON BECOME EXTINCT?

BY PROF. JOHN URI LLOYD

FOR presuming to discuss a subject that must needs be left undecided after I have stated my opinion, I may be pardoned, inasmuch as my early life was cast in a section of the country where early impressions enabled me to presume to speak. Reared close to the celebrated Kentucky Big Bone Springs Valley, familiar with all that comes from early impressions without much self-thought, subsequent matured reflection, fortified by early recollection, naturally leads to discursive questionings concerning the period in which those mighty beasts that left their relics over that famous land disappeared from life. True it is, evidences about us indicate that at one time in ages unknown, the mammoth and the mastodon roamed this whole country over. Back of the glacial period must their journey have begun, for in the Ohio Valley we find tusks and teeth and bones of mastodon and mammoth beneath and in the drift that came from out the far North. Evidences that need not be mentioned seem to prove that these animals browsed once in mighty herds over this country. It is not, however, my intention to concern myself with the subject of their distribution, or with an antiquity that rests in the myth-periods of lost geological epochs. My part is to touch upon the end reaction which, I believe, in comparatively modern times, witnessed the extinction of these monstrous American relatives of the elephant.

It is well known that the general opinion is to the effect that the mammoth and the mastodon vanished untold ages before the white man discovered America, and yet we may ask the question, does the testimony before us support that opinion?

I am in a position to speak advisedly on my own account, and need not, for evidence, refer to printed works in a statement that when Big Bone Springs was discovered the bones of the mastodon and mammoth were not only found submerged beneath that swamp muck, but were also scattered in considerable quantity over the surface of the earth in that neighborhood. It is, however, a matter of printed record, in many places, that when the early settlers of Kentucky went to Big Bone Springs to make salt they picked up the rib bones of these animals and used them for tent poles. It is also established that the first specimens collected for museums in that vicinity were such as these, and that these bones also were found upon the surface of the earth. It seems irrational to suppose that these surface bones could have been preserved intact through untold ages, hence the theory is untenable that the mammoth and mastodon bones

from Big Bone Springs were *only* those of prehistoric creatures preserved to us by the mire in which they perished, and through which they sank out of sight.

In this connection I must ask, how long will a bone remain intact, lying exposed to the air, in such a climate as Northern Kentucky, under the influence of the weather and the attacks of wild animals? When Big Bone Springs was discovered mighty buffalo roads, 50 and 100 ft. wide, beaten through the forests, led to those salt waters. In the underbrush and thickets thereabouts animals of prey lured in profusion. It was a veritable Mecca for the hunter by reason of the abundance of life, both carnivora and herbivora. Thus we are confronted with the fact that if among these animals there were bone eaters, as is true, the bones of fallen creatures would, by such attack, in addition to the action of the elements, rapidly disappear. And now a detail word concerning this phase of the subject. Near the farm of my father-in-law, Mr. Thomas Rouse [born 87 years ago near Big Bone], on the side of a hill lay the shoulder blade of a mammoth. This blade had been upended, the base upon the ground, the blade against the trunk of an oak. So large was it that when Mr. Rouse was a boy, in the beginning of the last century, he stood under it to keep out of a summer shower. The bone fell upon the earth. It was attacked by wild beasts of various kinds that consume bone materials. It was disintegrated by the action of the air and frost and water. It crumbled, and before Mr. Rouse attained middle age had entirely disappeared. This is but a single instance, and some might argue inconclusive if unsupported. But it points to the fact that this mighty bone of a mammoth did not continue to lie on the surface of the ground more than 50 years after the period named.

Said Mr. Rouse when asked concerning the probable period when the mammoth disappeared from his section, "Not more than 100 years preceding the white man's appearance, probably much less than that." Said he, "When the new Big Bone Springs Hotel was built on the side of the hill where it now stands, back of it and on the hills about that valley were great oak tree trunks 2 ft. and 2½ ft. in diameter, but they were stub trees, and had apparently been broken off at the top, and sprouting, had become topped with bristling sprouts, as do trees browsed upon from above. Such trees were not known in other parts of the country." In his opinion they had been browsed upon, when young, by mammoths that had broken off their tops and kept them down. This also may be said to be merely negative testimony, although it may be considered supporting evidence when taken in connection with the disintegration of the surface bone.

Does Indian tradition offer anything concerning the extinction of the mammoth? So far as I know but one single bit of evidence is recorded, and that I give from memory. It is claimed that about that section of Kentucky a short time before the white man entered the land a herd of those mighty beasts was to be found. This Indian tradition continues that, reduced at last to a single specimen, a great

bull, the Great Spirit attacked him by lightning and drove him across the Mississippi River, never to return. This, about as given, seems to indicate that the shadow story of the last herd of mastodons rested in this Indian tradition.

Is there any evidence to show that man ever met one of these beasts? Have we any testimony bringing their records together? So far as Big Springs is concerned none has yet been discovered, unless the scattered bones above the ground speak of Indian persecution and destruction. And yet, in the *American Journal of Science and Arts* [*Silliman's Journal*], for July, 1839, p. 199, we find the following statement* which was copied in many places after it appeared in this Journal, and, so far as I know, was neither disproved nor corroborated. It seems as though, owing to its wide distribution, had it been a misstatement, the evidence to show the same would have been quickly forthcoming.

THE MASTODON

It is with the greatest pleasure, the writer of this article can state, from personal knowledge, that one of the largest of these animals has actually been stoned and burned by Indians, as appears from implements found among the ashes, cinders and half-burned wood and bones of the animal. The circumstances are as follows :

A farmer in Gasconade county, Missouri, lat. $38^{\circ} 20' N.$, lon. $92^{\circ} W.$, wished to improve his spring, and in doing so discovered, about 5 ft. beneath the surface, a part of the back and hip bone. Of this I was informed by Mr. Wash, and not doubting but the whole or nearly the whole skeleton might be discovered, I went there and found as had been stated, also a knife made of stone. I immediately commenced opening a much larger space ; the first layer of earth was a vegetable mould, then a blue clay, then sand and blue clay. I found a large quantity of pieces of rocks weighing from 2 to 25 pounds each, evidently thrown there with the intention of hitting some object. It is necessary to remark that not the least sign of rocks or gravel is to be found nearer than from 400 to 500 yards ; and that these pieces were broken from larger rocks and consequently carried here for some express purpose. After passing through these rocks I came to a layer of vegetable mould ; on the surface of this was found the first blue bone, with this a spear and axe ; the spear corresponds precisely with our common Indian spear ; the axe is different from any one I have seen. Also on this earth were ashes nearly from 6 in. to 1 ft. in depth, intermixed with burned wood and burned bones, broken spears, axes, knives, etc. The fire appeared to have been the largest on the head and neck of the animal, as the ashes and coals were much deeper here than in the rest of the body ; the skull was quite perfect, but so much burned that it crumbled to dust on the least touch ; 2 ft. from this were found 2 teeth broken off from the jaw, but mashed entirely to pieces. By putting them together they showed the animal to have been much larger than any heretofore discovered. It appeared by the situation of the skeleton that the animal had been sunk with its hind feet in the mud and water, and, unable to extricate itself, had fallen on its right side, and in that situation was found and killed as above described, consequently the hind and fore foot on the right side were sunk deeper in the mud and thereby saved from the effects of the fire ; therefore I was able to preserve the whole of the hind foot to the very last joint, and the fore foot all but some few small bones, that were too much decayed to be worth saving. Also between the rocks that had sunk through the ashes were found large pieces of skin that appeared like fresh tanned sole leather, strongly impregnated with the lye from the ashes, and a great many of the sinews and arteries were plainly to be seen on the earth and rocks, but in such a state as

*This appeared originally in the *Philadelphia Presbyterian*, Jan. 12, 1839.

not to be moved, excepting in small pieces of the size of a hand, which are now preserved in spirits.

Should any doubts arise in the mind of the reader of the correctness of the above statement he can be referred to more than 20 witnesses who were present at the time of digging.

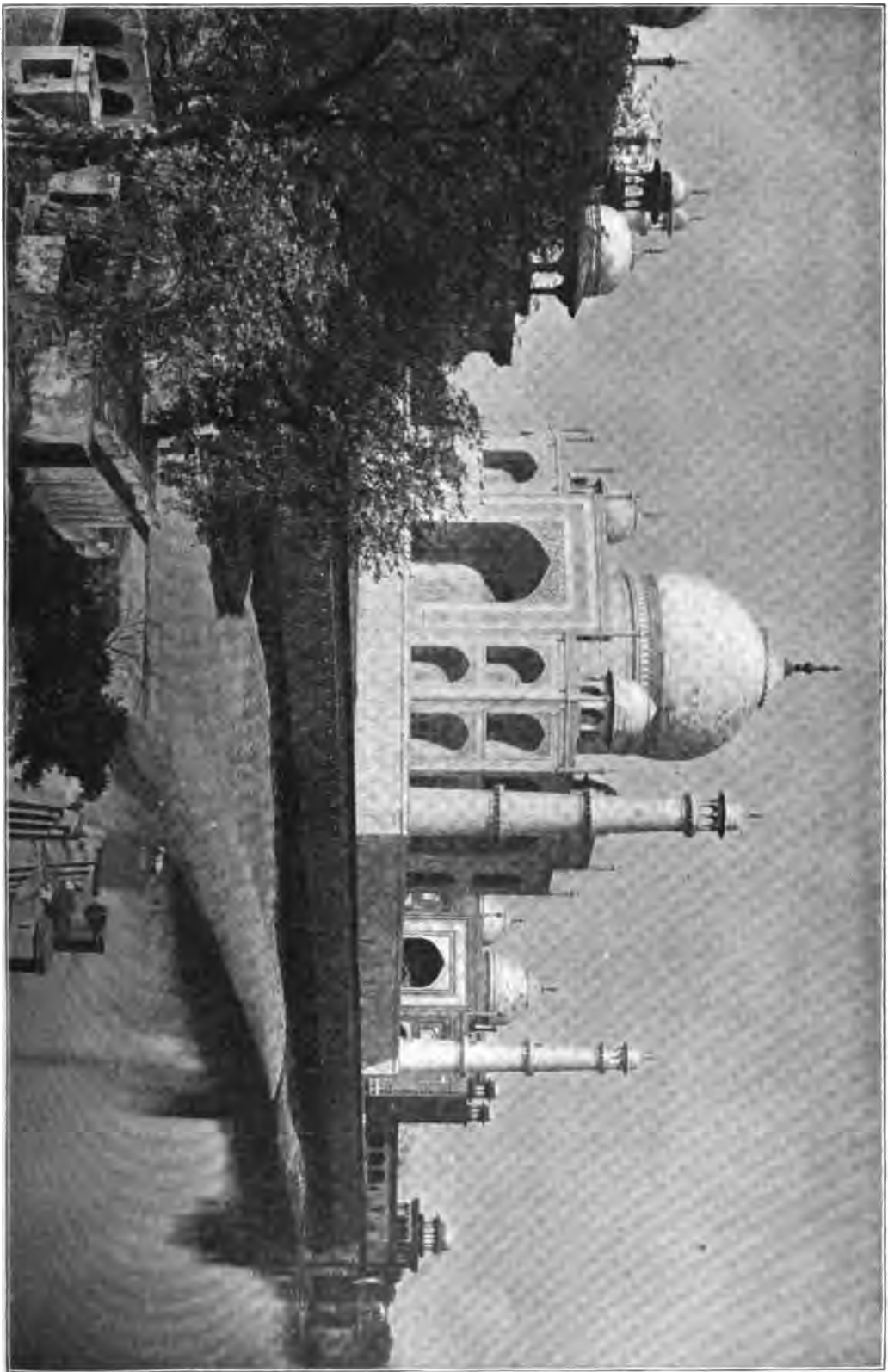
Now, with these points in mind, let us reason backward. Have we ground for belief that it could be possible for a mighty host of gigantic beasts to dwindle until finally, as Mr. Rouse believes, one lingering herd, a remnant of the extinct race, hung about a locality like Big Bone Springs? Need we go farther in support of such a conclusion than to call to memory the monstrous herds of buffalo that in recent times browsed the great plains of the West, and add thereto the innumerable number that less than 150 years ago covered the country where we now live (Ohio)? Need we do more than refer to this fact and contrast therewith the lone decimated herd that the Government is vainly attempting to preserve in the fastnesses of Yellow Stone Park? Is it at all improbable, in reflecting over this entire matter, that these gigantic, clumsy beasts, the mastodon and the mammoth, disappeared from the land that knew them, through some agency that may never be comprehended by us until at last, as a mournful relic, a few retained their place about the Big Bone Salt Springs they loved so well, and there, browsing on the abundant vegetation of those basin-like hills, decreased in number, one by one, sinking now into the mire, and now falling a prey to the aggressive foe about, until at last, as Indian mythology states, the largest and strongest, the lone representative of his species, turned from that home where all but he had perished, and disappeared in the West. Taking everything together, need we argue that because the bones of creatures such as these are found beneath the glacier drift of the Ohio Valley, and because the tracing of his past is lost in the obscurity of mythological periods, his extinction need have been a long period before the white man came into his final valley home?



THE TAJ MAHAL, INDIA

BY MRS. J. GHOSAL

THE TAJ MAHAL, the Wonder of Agra and the "Crown of the World" was erected as a Mausoleum for the remains of the fair Arjamand Banu Begam by her lord and lover, the Emperor Shah Jehan. The Mogul prince and princesses used to choose in their lifetime a piece of picturesque ground, to inclose it with high walls, embellish its precincts with flower beds and groves of shady trees and to build upon it a pleasure house where they took delight during their lifetime. After the founder died the pavilion became a Mausoleum and never again echoed with song and music. In all



the world no king or queen had ever such monument as the Taj Mahal. It is known also by the name of Mamtazie Mahal or exalted of the palaces. The Queen died in 1629 and the building was set on foot soon after her death, though not completed till 1648. The beautiful domes of the Taj, "a dream in marble," rise on the river bank. The complexity of its design and the delicate intricacy of the workmanship baffle description. The Taj is built entirely of white marble, which is inlaid with precious stones arranged in lovely patterns of flowers. A feeling of purity impresses itself on the eye and the mind from the absence of any coarser material. The lower walls and panels are covered with tulips, oleanders and full blown lilies, worked in relief on the white marble, and although the inlaid work of flowers, done in gems, is very brilliant when looked at closely, there is on the whole but little color and the all prevailing sentiment is one of whiteness, silence and calm, the sameness being relieved by the fine color of the inlaid gems, by lines in black marble and by delicately written inscriptions also in black from the Koran. As will be seen in the accompanying illustration the whole Mausoleum stands on a raised marble platform, at each of whose corners rises a tall and slender minaret of graceful proportions and exquisite beauty. In the center of the whole design the Mausoleum occupies a square of 186 ft., with the angles deeply truncated, so as to form an unequal octagon. The main feature of this central pile is the great dome, which swells upward to nearly $\frac{2}{3}$ of a sphere and tapers at its extremity into a pointed spire crowned by a crescent. Beneath it an enclosure of marble trellis work surrounds the tombs of the Empress and her husband, the Emperor. Each corner of the Mausoleum is covered by a similar though much smaller dome, erected on a pediment pierced with graceful saracenic arches. Light is admitted into the interior through a double screen of pierced marble which tempers the glare of an Indian sky, while its whiteness prevents the mellow effect from degenerating into gloom. The internal decorations consist of inlaid work in precious stones, such as agate and jasper with which every spandril or other salient point in the architecture is richly fretted. Brown and violet marble is also freely employed in wreaths, scrolls and lintels, to relieve the monotony of the white walls.

The colour and design of the interior of the Taj and the perfect symmetry of its exterior, and the aerial grace of its domes represents the most highly architectural period of India—the stage at which the architect ends and the jeweller begins. The gateway is also magnificent. The diagonal ornamentation at the corners by fine marble cables, in bold twists are strong and beautiful. The triangular insertions of white marble and large flowers have in like manner given place to fine inlaid work. Firm perpendicular lines in black marble with well-proportioned panels of the same material are effectively used in the interior of the gateway. On its top the Hindu brackets and monolithic architraves of sikandra are replaced by Moorish



GATE OF THE TAJ AGRA

cusped arches, usually single blocks of red sandstone in the kiosks and pavilions which adorn the road. From this beautiful and splendid gateway one passes up a straight alley, shaded by ever green trees and cooled by a broad shallow piece of water running along the middle of the path, to the Taj itself. The garden adds to the beauty of the buildings as the buildings to the garden. It is such an orderly wilderness of lovely vegetation as could only be had in India. Yet, says a great poet, "If the Taj rose amid the sands of a dreary desert, the lovely edifice would beautify the waste and turn it into a tender parable of the desolation of death and power of love, which is stronger than death."

BOOK REVIEWS

GREEK SCULPTURE: ITS SPIRIT AND PRINCIPLES. By Edmund von Mach, Ph.D., late Instructor in Greek Art in Harvard University. Boston, Ginn & Co., 1903.

HERE is a book which will supply a long-felt want of students of Greek sculpture and of art in general. Excellent handbooks, such as Ernest Gardner's, and discussions of many works of ancient art from the archæological as well as the artistic standpoint have not been lacking, but we now have what we call a Psychology of Greek Art. I am one of those who have been privileged to listen to Dr. von Mach's lectures on sculpture, not only most sympathetic in spirit but also most illuminating and suggestive. The reader now joins this privileged company and has in permanent form what the author's hearers have found most valuable in these lectures.

True, Dr. von Mach here discusses many of the most important works of Greek sculpture and tells of Phidias, Skopas, Praxiteles and the other most famous artists. But his purpose is not to give us a history of sculpture, primarily, but to show what the Greek sculptor tried to express in his work, the difficulties and problems he had to meet and how he solved them or failed in part to do so. Among the most interesting chapters is that on The Coloring of Greek Sculpture, a subject comparatively little known and which is treated quite fully.

The book is attractively made and well illustrated in the body of the text, while at the end are added forty plates figuring some 130 of the most important works of Greek Art. Other valuable features are a Chapter of Notes and a Selected and Graded Bibliography.

Dr. von Mach does not force his Greeks to dress in Roman togas but uses as a rule the pure Hellenic forms of their names, which to many will be refreshing. Let us hope that his example in another respect also will be followed: The list price of the book is \$4.50, but teachers and students—a class which needs most to own such books, and is often practically prohibited from doing so by the very high net prices—for classroom use receive a discount of one-half and get it for \$2.25.

ARTHUR STODDARD COOLEY.

BABEL AND BIBLE: *Two Lectures by Prof. Friedrich Delitzsch, Edited, with an Introduction, by C. H. W. Johns, M. A., New York: G. P. Putnam's Sons. London: Williams and Norgate, 1903.*

THE BIBLE AND BABYLON: *A brief study in the History of Ancient Civilization*, by Dr. Edward König, 9 Edition, translated from the German by Charles E. Hay, D. D., Burlington, Iowa: The German Literary Board, 1903.

PROFESSOR DELITZSCH started an endless chain in Biblical Archæology when he delivered his famous lecture *Babel and Bible* 2 years ago. He gave a new impetus to it when he delivered his second lecture on the same subject. The replies to them, by pamphlets and lectures, are too numerous to be mentioned here. At the outset we must credit the distinguished Assyriologist with being a spiritual-minded man, judging from his lectures and replies made to his critics. As such he is entitled to courteous treatment from those who do not agree with him.

Prof. Delitzsch's critics, almost without exception, have plainly told him that he is not a theologian and therefore was not competent to deal with his subject, and he tells his critics that they are not Assyriologists. With apparent satisfaction, he tells the story of the Monk of the Middle Ages, who in reading his Latin edition of the Psalms, crossed himself whenever he came to the word *maria* (seas). The condition of Prof. Delitzsch's mind may perhaps be best illustrated by reference to Cooper's naval Chaplain, who could always find some Office in the *Book of Common Prayer* to meet any emergency. One day a marine fell overboard and, after some difficulty, was rescued. As he was hauled on board the man-of-war, the Chaplain stood by with his Prayer Book open and read the Office for "A Safe Return from Sea." So Prof. Delitzsch finds in the literature of ancient Babylonia something to parallel everything in the Bible. Being a devoted student of Assyriology, it is but natural that he should hold to the views which he has defined and defended with great vigor. He reaches his climax when he claims that Mohammed got his idea of a sensual Paradise from the ancient Babylonians. Unfortunately for the learned Professor, all the documents and monuments which have shed so much light upon the historical records of the Bible and the life of the Babylonians, were, in Mohammed's time, buried in the mounds of the Tigro-Euphrates Valley.

The whole world is indebted to Prof. Delitzsch for the great interest he has aroused in the study of the monuments in their relation to the Bible. We believe that he has turned the attention of all thoughtful people to the marvelous discoveries that have been made illustrating ancient civilization and the relation of many of these discoveries to the Bible. If Prof. Delitzsch were not an honest man he would not unhesitatingly point out wherein many of these discoveries confirm the historical records of the Bible. This point should not be lost sight of by his critics. But Prof. Delitzsch should not overlook the all-important fact that the records now brought to light from the buried cities of ancient Babylonia, were known to the writers of the Old Testament as well as the Babylonians. It is only natural, there-

fore, that there should be many striking parallels between the Bible and the documents written by the ancient Babylonians. There are striking parallels between the Biblical account of the Creation and the Flood, and the Babylonian tablets discovered, making record of the same. And why should there not be? But the Biblical accounts bear the impress of *Divine Revelation*. The same great truths, coming down through Babylonian traditions, are enshrined in myths that grew up around them. Any man of standing in the scientific world today knows full well that the order of the Creation of the world, as given in Genesis, is the only one by which it could have been evolved by natural growth. This has been demonstrated by some of the most profound scientific men that this age has produced.

Prof. Delitzsch is in duty bound to plead guilty to the indictment that he has charged the Church with holding the theory of the verbal



HEAD OF SUMERIAN HIGH PRIEST

inspiration of the Bible, which it does not and never has. We do not believe that any profound theologian, in any period of the Christian Church, has ever held to the verbal inspiration of the Bible, as published in any language.

Of course, there are many striking resemblances between the writings of the Hebrews and those of the Babylonians, which might lead an Assyrian scholar, not a theologian, to believe that all had been drawn from Assyrian sources, but a statement of all the facts to a jury of jurists would, we think, result in a unanimous verdict against Prof. Delitzsch's claim. That among the more highly educated and deeply spiritual Babylonians there were many who held to a belief in a one Supreme God there can be no doubt. Why should there not have been? If man was created in the image of his Creator, there must have come down through the generations a belief in that Crea-

tor as the one Supreme God. If any one fact is being made clearer than another, it is that as the spade goes deeper into the ruins of ancient Babylonia, it is evident that the aborigines of Babylonia were not savages. The theory once held by many, that man was evolved out of the lower order of the animal creation, is being disproved by the spade of the excavator. The type of the earliest inhabitants of Babylonia, which Prof. Delitzsch produces, does not indicate a low order of intelligence. In all ages of the world, since man came into it and we have found any record of him, wherever we have found him advanced in civilization and culture, we have found him a religious being, and his noblest monuments have been erected for the worship and glory of a Supreme Being. As man has wandered from this belief he has degenerated. This is the history of the rise and fall of the civilizations of the past, and this is the reason why men who believe in God have nothing to fear from the spade of the excavator, and they are the men who are giving of their means to carry on the work of historical research.

Why God should have chosen the Hebrews as His special people is a question quite beyond the ability of Prof. Delitzsch to answer. The fact remains that He did, and Prof. Delitzsch quotes many sublime passages from the Bible breathing deeper spiritual sentiments than any found in the literature of the Babylonians. Among all the races, who have left behind them a literature, we find that some of their great leaders had a noble conception of a spiritual and moral life.

Moses must have been acquainted with all the literature that has come under the eye of Prof. Delitzsch, and a great deal more that the spade will bring to light as the years go on and others take the places now so honorably filled by men like Prof. Delitzsch. The laws of Hammurabi are the laws of a just and enlightened ruler. That Moses copied from them, although he undoubtedly had studied them, has not yet been proved.

Dr. König reviews Prof. Delitzsch's statements in great detail. We think he has gone deeper into the literature of the Ancient Babylonians than Prof. Delitzsch gives him credit for. He certainly is more of a theologian. We do not think it will harm any one to read the volume just published containing Prof. Delitzsch's Lectures, and the real truth will be evident to the unbiased scholar when he has read both Prof. Delitzsch's Lectures and the reply to them by Dr. König.

SMITHSONIAN MISCELLANEOUS COLLECTIONS. Published by the Smithsonian Institution, Washington, D. C. 1904.

THE annual reports, etc., of the Smithsonian Institution and some of its Bureaus have been and are greatly delayed in their publication. The most important Bureau, that of the Bureau of American Ethnology, is now between 5 and 6 years behind time. Thus many important contributions to science are a long time in reaching the pub-

lic. To remedy this evil the more important reports and monographs are to be published in a Quarterly entitled *Smithsonian Miscellaneous Collections*. The editorial announcement of these quarterly issues is as follow:

The Quarterly Issue of the *Smithsonian Miscellaneous Collections* is designed chiefly to afford a medium for the early publication of the results of researches conducted by the Smithsonian Institution and its bureaus, and especially for the publication of reports of a preliminary nature. It is not designed that the Quarterly Issue shall supersede the regular series of the *Smithsonian Miscellaneous Collections*, but, as its name implies, will form a part thereof.

We have received Parts 1 and 2 of Volume I, which contains several interesting and important articles, among which are *Seventy New Malayan Mammals*, fully illustrated, by Gerrit S. Miller, Jr.; *Recent Studies of the Solar Constant of Radiation*, by C. G. Abbot, illustrated; *A Skeleton of Hesperornis*, by Frederic A. Lucas; *A New Plesiosaur*, by the same author; *Shell Ornaments from Kentucky and Mexico*, by Prof. W. H. Holmes; *On the Glacial Pothole in the National Museum*, by George P. Merrill. The articles are all illustrated and are of present interest.

THE PREHISTORIC RACES OF AMERICA AND OTHER LANDS AS DISCLOSED THRU INDIAN TRADITIONS, COMPREHENDING ALSO THE ORIGIN OF MATTER AND THE FORMATION OF THE WORLD, THE PERIODIC CHANGES OF THE EARTH, THE GLACIAL PERIODS AND ASTRONOMY SOLVING THE CHRONOLOGICAL PROBLEMS, ETC., ETC. In 5 volumes, Fully Illustrated, By Rev. Dr. E. S. Curry. Volume I. Christy, Mo. Published by the Author, 1903.

DR. CURRY, the author of this Volume, was a Missionary for many years among the Indians of the Middle West, and devoted a great deal of his time to the study of Indian myths and traditions, and sought diligently to decipher Indian pictographs. But he has not confined himself to Indian myths and legends. He has branched out into the wider field of general archæology, anthropology and ethnology. To cover the ground mapped out he contemplates the publishing of 5 volumes, of which this is the first. Many of the theories advanced are *original*. The present volume contains a very interesting contribution to the literature of Indian myths and legends, but it does not carry us far enough in the author's work to justify comments on the theories he has advanced.

But there is another reason why a great many persons will be glad to have in their libraries this volume. Dr. Curry has been obliged to carry on his investigations in the midst of other labors and without money. Most of his life has been spent away from libraries, and we might say civilization. He doubtless was unable to find a publisher to issue his work, but he was not to be deterred from reaching the public by his failure to enlist a publishing house in his enterprise. He there-

fore conceived the idea of being his own printer and publisher. To do this it became necessary for himself and members of his family to learn the art of printing, photo-engraving and book-binding. A font of type was secured, a stereotype foundry was constructed by them, out of old iron engraving tools were made, and later a printing press built, and the work of manufacture began. Everything connected with the manufacture of a book was done by himself and family on his farm. We do not believe that in the whole history of printing and book making another such case of determination to reach the public is to be found. The volume, in appearance—typography, illustrations, press work and binding—is worthy of many publishing houses. For this reason alone we think many of our readers will be interested in securing a copy for their libraries. Besides, there is enough between the covers of value to amply repay the price of the book—\$2. We cheerfully give this notice while many volumes by distinguished authors await notice here.



EDITORIAL NOTES

ASIA:—GOBI DESERT—Sven Hedin has furnished additional evidence of the Chinese invention of paper. On his recent journeys he found Chinese paper that dates back to the second half of the III Century after Christ. This lay buried in the sand of the Gobi desert, near the former northern shore of Lop Nor, where, in the ruins of a city and in the remnants of one of the oldest houses, he discovered a goodly lot of manuscripts, many of paper, covered with Chinese script, preserved for some 1,650 years. The date is Dr. Himly's conclusion. According to Chinese sources, paper was manufactured as early as the II Millennium before the Christian era. The character of the Gobi desert find makes it probable that the making of paper out of vegetable fibres was already an old art in the III Christian Century.

Ancient Nineveh.:—The activity of the Germans in excavating in Babylonia and Assyria seems to be exerting a reflex influence on other countries. The British Museum has resumed excavations at the mound of Kuyunjik, the site of ancient Nineveh, with the especial object of finding additional remains of the famous library of Ashurbanipal. In this country, also, a new organization has been formed, the Oriental Exploration Fund of the University of Chicago, under the general directorship of President Harper, for the purpose of conducting excavations in Babylonia and Assyria, Egypt, Syria, and Palestine, the same field occupied by the German Orient-Gesellschaft. This organization has already commenced excavations at Bismya, a ruin site near Nippur in Babylonia, commonly supposed to be the remains

of the city of Isin, a place of great importance in the III Millennium B. C. The field director of these excavations is Dr. Edgar J. Banks, formerly American Consul at Bagdad.

ASIA MINOR:—*Hearion*—A report on the excavations undertaken at the instance of the Greek Archæological Society at Hearion, in Samos, has just been submitted by M. Kappadias, who personally conducted them. The Temple of Hera was the most celebrated of all the temples in Asia Minor, and was supposed to be the National Sanctuary of the Ionians. It was built long before the Artemision at Ephesus, and consisted of 2 wings. There were 24 pillars along each of the longer sides, and 8 pillars on the short ones. When compared with the temple at Ephesus, many similarities may be noted as regards the foundations and arrangement of the pillars. Two pillar capitals were discovered during the excavations which, in the opinion of M. Kappadias, were Doric, and not Ionic, ones. This is, however, not so remarkable, as the Doric style was frequently used for the most ancient buildings in Asia Minor. In the Hearion the capitals were executed in Doric, and the pedestals in Ionic, style.—*London Standard*.

Ancient Pergamos:—According to the reports published by Smyrna papers, Prof. Dörpfeld has unearthed, in the course of his archæological excavations in ancient Pergamos, a magnificent hall of columns fully 60 metres in length, which apparently was a grand portico. Among the finds made here was a life-sized woman's head in marble, also the inscribed base of a statue of a Æsculapius, a large vase with the figure of Apollo, and, more noteworthy, 4 marble slabs covered with a hieroglyphic style of script, and pictures of various theatrical scenes and actors, men, women and girls. Two other marble heads were found, one being that of Bacchus, the other probably that of the Empress Faustina, the wife of Marcus Aurelius.

EUROPE:—**GERMANY**—*Turin*—On January 26 the library of the University of Turin was destroyed by fire. This library was specially rich in old manuscripts, and about 3,700 of these, mostly of Oriental origin, were lost. There were 3,000 volumes of Greek, Latin and other codices as well as the valuable Venetian collection of books from the library of Cardinal Della Rovere which were destroyed. It has been impossible, as yet, to ascertain the full extent of the loss.

The XIV International Congress of Americanists will meet in Stuttgart next summer from August 18 to 23. The 3 topics for discussion are: "The Native Races of America," in all aspects; "The Monuments and Archæology" of this hemisphere, and "The History of the Discovery and Occupation of the New World." Communications may be in English, German, French, Italian or Spanish. The local general secretary is Prof. Dr. Kurt Lampert, Archivstrasse 3.

ITALY—Commendatore Boni has made further discoveries in the Forum at Rome, among them the site of the ancient temple of Janus, a small structure compared with later temples. In a gallery

about 20 ft. under ground he thinks he has discovered the substructure of the theater built by Julius Cæsar. Short galleries ending in a square chamber run at right angles from the long gallery, 4 on the left and 3 on the right. All these chambers are connected by a narrow terra-cotta tube. His explanation is this: The gladiators entered these chambers and at a signal given by way of the terra cotta tube they rose up through trap doors, as if out of the earth, and appeared in the arena before the public. The tubes have been cleared and are found to work perfectly, while objects discovered in the galleries give further indications of their use.

RUSSIA—*Ancient Olbia*—The excavations recently made by M. Formakovski, under the auspices of the Russian Archæological Society on the site of ancient Olbia, have led, and are daily leading, to very interesting results. The site of the old Greek city lies on the southern bank of the Boug, about midway between Otchakoff and Nicolaieff, and not far distant, on the landward side, from the estuary of the Dnieper.

M. Formakovski's researches have, during the last few weeks, laid bare part of the walls and foundations of the original city, dating back from the VII Century B. C. The masonry is of the same archaic description as that of the ruins of ancient cities uncovered in various parts of Greece. Before this depth was reached the excavators came upon 2 different strata of walls and basements, bearing inscriptions of the IV and I Centuries B. C. The stone blocks composing the ruins of houses, temples, etc., in these upper strata are of remarkably exact square proportions and excellently dressed. The more solid constructive work is, however, found in the lowest stratum—that is, in the remains of the original city. At this depth there was unearthed a short time ago a perfectly preserved wine cellar. Some 50 huge black jars, or vases, had evidently contained red wine, now turned to a light, powdery substance. A large collection of valuable antiques in gold, marble and ancient pottery is being taken from the newly uncovered ruins. These are all sent to the Hermitage at St. Petersburg, and it is stated that, as a result of the numerous and interesting discoveries expected to be made during the process of further and comprehensive excavations, a special Olbia section will be arranged in the famous museum in the Russian Capital. Under the supervision of M. Formakovski, the greatest care is taken to attest the genuine nature of the newly-found antiquities, as it was on this site, it will be remembered, that the spurious tiara of Saitapharnes was falsely alleged to have been discovered.

Olbia, Olbiopolis or Borysthenis, on the right bank of the Borysthenes, near its estuary, was a colony of Miletus, 655 B. C. It was the great station for Greek trade with the interior, and a wealthy city from a very early time. Inscriptions, published in the *Corpus Insc. Græc.*, Volume II., and especially the famous Decree in honor of Protogenes, threw much light on its internal history in the few centuries before and after the Christian era. They show it as a Greek city,

maintaining its independence with difficulty against the barbarians who continually threatened it; but the Greek life and the Greek name gradually gave place to Scythian, the city was finally merged with the surrounding tribes, and its civilization and importance disappeared. It is a commonplace among archæologists to speak of the trade route which lead across country to the Northern Sea from Olbia, and a find of Archaic Greek coins in Prussia is appealed to as proof of this contention; but it has recently been shown that this find of coins was an imposture. Though it is not improbable that such trade routes did exist at an early time, it is extremely unlikely that the Greek traders used them. The natives brought down their merchandise to the Greek colonies, and the trade was there conducted, not by money, but by barter.

The most interesting point about the religion of Olbia is the cult of Achilles Pontarches, the ruler of the sea, a deity who was extensively worshiped along the northern coast of the Black Sea. He was evidently a god of the native races, in whom some analogy of name and character caused the Greeks to recognize their hero Achilles. Hence arose the legend, known already to Pindar, that Achilles lived in the White Isle, in the Black Sea, a god surrounded by the other heroes. Olbia was destroyed by the Getæ about 70-60 B. C., but revived, and was a flourishing city when Dion Chrysostom visited it about A. D. 100.

SICILY—*Syracuse*—The history of Syracuse, and of Sicily, is nearly all written in one building still doing active service in modern Syracuse, the Cathedral. It was first a Greek temple—perhaps to Minerva. Then came Christianity in the I or II Century, and the Doric columns of the Temple, 6 ft. in diameter, were connected with walls of masonry; arches were cut through the walls of the Cella, a roof was placed in position and a fine Christian Church was provided. In the X Century the Saracens came into power, some shield-like battlements were added both to the outside walls and the projecting walls of the Cella or nave, a few internal changes were made, a minaret added and a first-class mosque was provided. Two hundred years later the Normans came into power, when the small minaret was removed, the interior slightly changed, and again it was a Christian Church. All these changes, I think, left the simple dignified outlines of the original Greek Temple, but the modern Renaissance at last got hold of it and constructed a new front totally out of character with anything that had been done before. And now one has the 5 periods beautifully mixed. The old Greek pillars were thicker than the walls and still show their outlines both inside and out. Even the triglyphs show in a few places where the old entablature has remained. The Saracen battlements, the Norman arches and the modern "gingerbread" are all preserved, and each in its turn testifies to the fact that religion in all races and ages is the most mighty of all influences in shaping the thoughts and actions of men.

THE WILD PAPYRUS

An interesting excursion from Syracuse is up the historical Anapo and its tributary, the Cyane, to the fountain of Cyane. Our special object in this trip was to visit the papyrus in the only place in Europe, if not in the world, where it grows wild. Here for fully 2 miles the banks of the stream are lined with immense masses of papyrus, most of it growing to the height of 15 or 20 ft., and measuring over 2 in. in diameter where it grows out of the water. We picked 2 beautiful specimens, hoping to get them to our hotel and save them as specimens for the botanical collection at Oberlin, but when we reached our landing place, the guardian of the law was at hand and compelled us to throw all aside except one fine top we had selected. The rule is to allow only one small specimen to each boat load. By much persuasion we induced him to permit us to also retain a piece about 1 ft. long of the stalk that grew below water. This is the part from which the papyrus paper is made. We also saved a fine stalk about 18 inches long in bud, which the faithful officers did not discern. The Government will do well to preserve this fine lot of papyrus, but they might do it with greater intelligence, for they permit the boatmen to tear and trample at will, but not to carry it away.—*Dr. Lucien C. Warner in the OBERLIN REVIEW.*

NORTH AMERICA:—UNITED STATES—The late Prof. Charles F. Olney, of Cleveland, Ohio, had made a vast collection from all parts of the world of curios, rare pictures, sculptures, bronzes, ivory carvings, etc., forming one of the most notable collections of the kind in this country, and had probably expended over \$500,000 on the collection. A few years ago he built an annex to his residence for housing it. This he freely opened to the public.

It was supposed by many that he would leave his collection to the city of Cleveland, but it was also well known that he was very much attached to Oberlin College. He died suddenly in New Haven, Conn., in July last, and among the many bequests he made was one to Oberlin College, but it provided, in case Mrs. Olney should survive him for 30 days that all the property without reserve should become hers. Both Mr. and Mrs. Olney, it seems, made wills which were substantially identical in their provisions, at the same time. Mrs. Olney survived her husband a few days over 6 months, and when her will was admitted to probate last month it was found that the vast collection was left to Oberlin College. The collection is undoubtedly one of the finest private collections ever made in this country. With the collection is left a legacy of \$10,000 to be invested in trust for the care and maintenance, repair and improvement of the collection, and as soon as sufficient funds can be secured a suitable building will be erected at Oberlin and the collection will be transferred to its new home.

Prof. Olney was a teacher and scholar of considerable prominence. He was the author of *Olney's Geography and Atlas*, the *National Preceptor* and other widely used text books.

Prof. Olney's collection is so varied and valuable that we give the following brief outline:

The pictures are almost all oil paintings and embrace some very fine old canvasses. An "Adoration of the Virgin" by an Italian artist of the XV Century, is extremely interesting in its characteristics. A Salvator Rosa, a Rembrandt, a VanDyke, a "St. Anthony and the Charity Child" by Cano the Spanish artist. Among the works of modern artists is a lovely landscape that bears the famous name of Corot, 2 beautiful children by Bouguereau, a beautiful landscape by George Inness, and others by Dupre, Rousseau, Lambinet, and a marvelously beautiful Russian scene by Vesin, Innsley, Cole, William and James Hart, Cropsey, Coleman, and many others.

The collection of jewels, cameos, ivories, bronzes and filigrees is very large. The jewels comprise opals, pearls, topazes, rubies, garnets, turquoises, chalcedony, blood-stones, moon-stones, crystals, moss-agates, etc. Among the cameos are rare examples of art seldom seen in museums. Among the ivories are many great treasures, rivaling those in the famous Green Vaults at Dresden, and other great collections of the world. One of a "Cupid and Psyche," by Canova, is extremely beautiful. The talented artist as well as actor, Mr. Joseph Jefferson, says it is the most beautiful thing he has ever seen. An antique ivory figure called "The Wandering Minstrel," is full of deep feeling. An elaborately carved tankard is of marvelous beauty among the larger pieces. The collection of ivories embraces over 100 pieces, all worthy a place in any museum in the world.

The bronzes embrace examples from Japan, China, Russia and France, and well illustrate the development of art in those countries. A fine modern bronze 7 ft. in height stands in the center of the gallery. Of this Professor Olney was very proud, and often remarked that it illustrated the triumph of the good and the beautiful over evil and ugliness: the dragon of evil is dying, and the symbol of light and beauty rises dominant. The specimens of pottery represent many countries. A set of 6 Cloissone plates, imported for Professor Olney from Japan, illustrate the processes of their manufacture from the beginning to the end. There are mosaics, Statsum, bowls, rare screens, costly and beautiful oriental rugs, inlaid and carved cabinets, and many other choice objects. There is a touch of delicacy and refinement noticeable in the whole collection.

Among his collection of ivory carvings is one of rare artistic workmanship representing the presentation of Christ in the Temple. He found it some 6 years ago in a curio shop in the City of Mexico and at once purchased it. It is about 8 by 12 in. and at the time he bought it it was in a wooden frame. When he reached Cleveland he removed the original frame and was surprised to find on the back of the carving an inscription in Chinese characters. Through the courtesy of Prof. Olney we made a photograph of the inscription and also of the carving, which we will reproduce in the near future in RECORDS OF THE PAST. The indications are that the carving was either made in China in the XIV Century, when Christianity seemed

to have gained a firm foothold, or that it was made later in Mexico by some Chinaman who had been converted to Christianity.

Council Bluffs, Iowa—Within a few miles of the city of Council Bluffs there is an ancient village site about 15 miles long and 4 miles broad along the river. On the summit of the bluffs are remains of ancient earthworks, which may have been for defensive purposes. Prof. E. A. Rinehart, of the State University of Minnesota, has been devoting considerable time to a study of the Indian mounds and burying places of Iowa. He proposes to invite archæologists, from different parts of the country in the early spring, to Council Bluffs for the purpose of investigating the antiquities of that region. Preparations have already been made for setting a large force of laborers at work to excavate on this important site. The work will be carried on under the direction of the Iowa State Archæological Society. Recently, Prof. Sneik, of the Minnesota Historical Society, while making some investigations on the site of the village, unearthed a unique iron hoe, buried 14 ft. below the surface. While an oddly-shaped instrument, it was evidently intended for digging.

Last month Mr. N. J. Miller, of Council Bluffs, in company with several gentlemen, while making a survey of this village site, and in cutting down a giant oak, near the summit of the bluff, found a peculiar copper bullet in the very heart of the tree. The bullet had evidently been buried in the oak when quite small, as no evidence of its passage through the surrounding wood could be found. The bullet is spherical and must have been fired into the tree long before firearms are supposed to have been known in the West.

Leading from the site of the ancient village, there is a well-defined route extending 20 miles into Nebraska to the old flint quarries near Nehawka. This route is marked by flint chippings, arrowheads and other stone implements, and shows plainly where the dwellers in the village secured the materials for their implements of war.

The Nehawka flint quarries have long been a theme of interest to scientists, and they are gradually yielding their secrets to the persistent efforts of archæologists, who have searched for years among the debris for their concealed mysteries.

Prof. Blackman, archæologist of the Nebraska State Historical Society, speaking of the Nehawka flint quarries, says: The vicinity is underlain with a deposit of permo-carboniferous limestone, in which are imbedded nodules of flint of fine quality. These flint nodules are found in the third stratum, at a depth of 10 ft. below the surface and 40 ft. above the creek bed. The aborigines have quarried over about 6 acres and have taken out vast quantities of flint from the old mines.

It is the belief of Prof. Blackman that these quarries were used by all the Western tribes, as flint-strewn routes lead off in all directions from the ancient workings and show the flint to have been taken in every direction by the miners.

To determine the people who inhabited the ancient villages below

Council Bluffs, it will be necessary to make a large collection of the stone implements and weapons from the graves, said Prof. Blackman. It yet remains for some one to make this collection and to give the village a systematic study. The town was not in existence when the Lewis and Clarke expedition passed up the Missouri in 1804. There have been some traces of white men's trinkets found in the graves, and from the appearance of pottery found I believe the date of its desertion could not have been later than the year 1700.

The circular earthworks found on the highest points around the old village are still plainly defined, although built perhaps as much as 2 centuries ago. One circle is 40 ft. in diameter, 4 ft. deep and the walls still stand 2 ft. higher than the surrounding level. I am credibly informed that these circles were used in the "Sun Dance," as practiced by the Indians of the prairies.

Prof. Blackman hopes that when the big gathering of archaeologists takes place, their excavations will bring to light enough relics to practically establish the history of the old village.

An Ancient Indian Jar from the Mohawk Valley.—Mr. R. Horracks, of Fonda, N. Y., while stalking deer during the last hunting season at the Little Falls of the upper waters of the Sacondaga, near Lake Piseco, caught in a heavy downpour of rain, was obliged to seek shelter from the storm under the ledges of the Little Falls. While sitting there his attention was attracted to what seemed to be a round, brown boulder, partly covered with moss. Carelessly striking it, it gave forth a hollow sound. His curiosity being excited, he dug away the earth with his hunting knife and soon laid bare a symmetrically formed earthen jar. The jar stands 10 in. high. At its largest circumference it measures 30 in. and at its smallest 20 in. The circumference of the top or mouth of the jar measures 24 in. The vessel on the inside bears signs of use, but the outside shows no trace of fire, as is usual in Indian jars. The bottom is rounded. The ornamentation around the top is of the usual style of the Mohawk pottery—that is, a series of straight and diagonal lines. The jar still bears the moss that had gathered on the rounded bottom that was exposed above the earth. The jar is a well preserved specimen of Mohawk pottery, and is rare on account of the shape of the top, which is cut in 3 curves, forming 3 points, which give it a triangular appearance. It is a singular fact that the 3 largest specimens of Indian pottery now in the valley were found in the lake region of the foothills of the Adirondacks—the Richmond jar, the Hanson jar and the Horracks jar. The Horracks jar is in the possession of W. MacReid for the present and is an interesting study. It is not as large as the Hanson jar, but to those interested in the life and affairs of the "aboriginal Americans," is of equal value.

Gradual Extinction of the Natives of Alaska.—Reports to the Interior Department and from other sources from Alaska show the lamentable condition of the native Alaskans and their gradual extinction. Special Inspector James W. Whitton, in his report to the Sec-

retary of the Interior, says that destitution is everywhere present and the total extinction of some of the tribes is threatened. He states that the Indians in Southeastern Alaska are superior in points of intelligence and civilization to those of other sections of the district, and he quotes from a letter to him by Judge Wickersham, of the United States District Court, whose jurisdiction extends over all the natives except the Southeastern Alaskans, as follows:

The Tsymsheans have their permanent home on Annette Island, which was reserved for their use by Section 15, Act of March 3, 1891. The Hidahs occupy the southern portion of Prince of Wales Island, and the Thlingets occupy the other southeastern islands and the coast as far west as Yakutat. The Tsymsheans are the most civilized of all the Alaskan Indians, and are an entirely self-supporting and well-disposed people.

The Hidahs and the Thlingets come next in point of intelligence, and are also self-supporting, although their improvident use of money sometimes leaves individual families in want at certain seasons of the year. The Southeastern Alaskan natives all live in comfortable houses, mainly of modern construction, and are usually well and comfortably dressed. They hunt, fish, chop in the woods and work about mills, mines, canneries and on steamboats. They are generally an industrious, frugal and well-to-do people.

The Aleuts do not fare so well. They learned many years ago to use the food of the white man, their section of the country having been largely occupied by the Russians at an early day. Their money supply originally came from hunting the sea otter, which of late has almost entirely disappeared from Alaskan waters. Judge Wickersham says: "The Aleutian Islands, too, have suffered greatly by reason of the laws restricting the hunting of seals and other fur-breeding animals, and they are nearly at the point of starvation for that reason. If the Government would judiciously place reindeer among these people it would help them in time and possibly save some remnant of them from destruction; but they are unable to meet the pressure of the Anglo-Saxon, and especially his game and fish laws, and are being rapidly exterminated by such legislation."

Perhaps the most destitute of the Aleuts are those who inhabit Afognak Island, about 350 in number, and their condition and the cause of their destitution is told by Howard M. Kutchin, special agent to the Treasury Department, in his report for last year, as follows:

"The particular hardship to which these people have been subjected is explained by the fact that Afognak Island was some years ago made a Government reservation, and two salmon canneries located there had to be suspended. At these the natives found work and also a market for the salmon they caught. The reservation order forbade them taking salmon except for domestic use. By a liberal construction of the law they were permitted to sell their surplus ukala (or dried salmon) to the trading companies having stores on the island.

"Latterly their case has become even more hopeless by reason of the fact that the stores have ceased to buy ukala. The people have been educated to require more than the bare necessities of life, and they now find themselves reduced to dried fish. It is true that some of them procure work at the neighboring canneries, and so earn a little money to help themselves, but their situation is a hard one, and entitles them to something more than empty commiseration."

The condition of the Eskimo is even worse than that of the Aleuts. He occupies a colder and more inhospitable climate, with no timber to furnish either employment or fuel, and with very few exceptions there are no white settlements at which he can find either assistance or employment. The condition of the Eskimo and its cause is tersely and forcibly told by Governor Brady in his annual report, in which he says: "We have invaded his country and killed and driven off the whales, walruses, seals and caribou, and in places have made fish scarce. We have gone along the

shores of Bering Sea and have burned up the trees and driftwood on the beach, set fire to the tundra, have driven off the birds, and in our mad rush for gold have burrowed under his rude bara-babara and have allowed it to tumble even when the inmates were sick and dying. This has all been so sudden that he has been fairly stunned."

Judge Wickersham says: "I see no future for the Athabaskans except extinction, and little better fate for the Eskimo. There is a strength of virility in the Eskimo, however, which the Yukon Indians do not possess, and if the Eskimo could be turned into a reindeer people, they would be an advantageous population to Alaska."

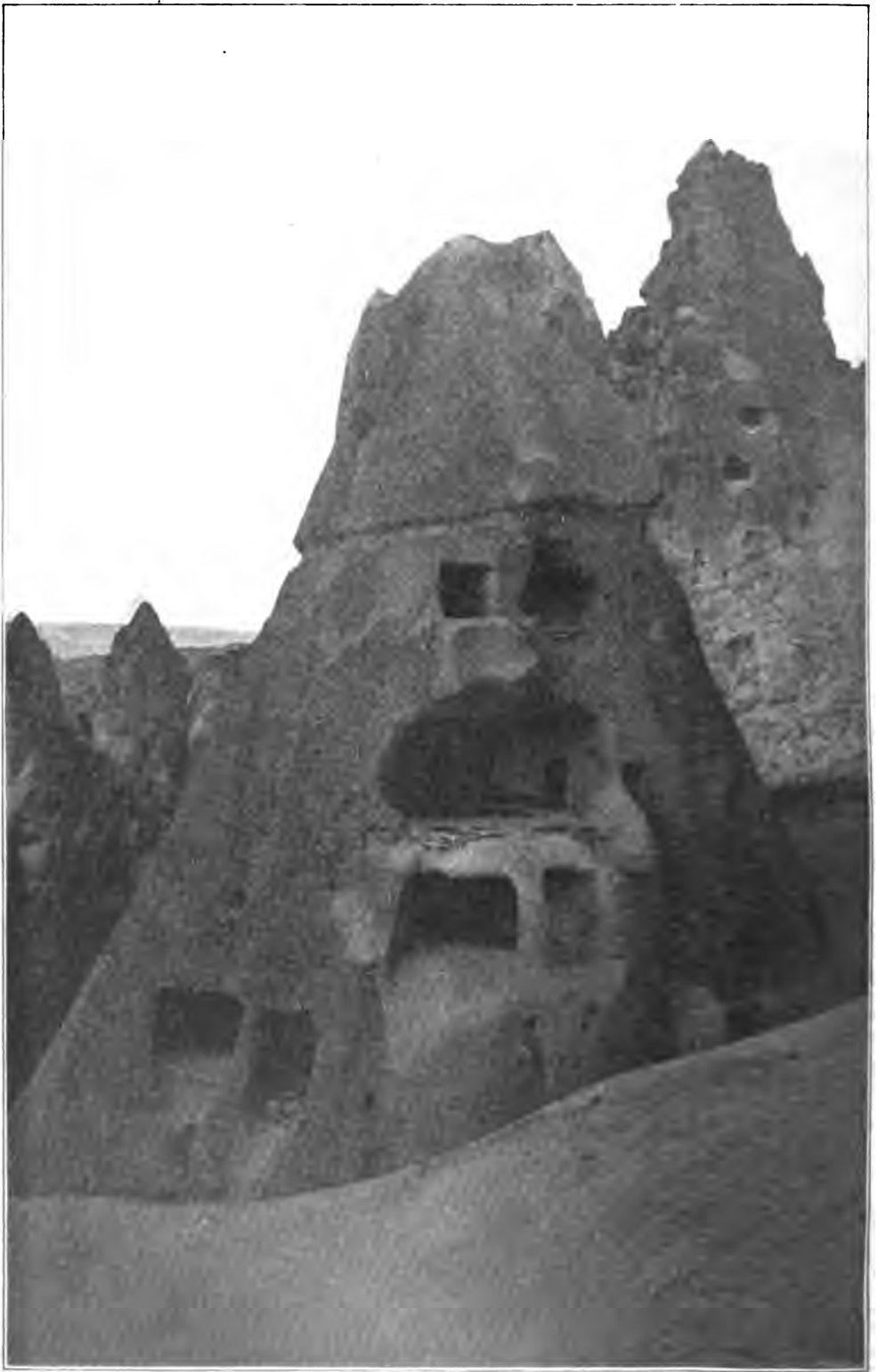
Prof. Frederick Starr, of the University of Chicago, has had a silver medal struck, which he will offer each year to the person in the United States who most distinguishes himself in research work among the American Indians. The medal is to be called the "Corn Planter Medal," in honor of Chief Corn Planter, head of the Long House, the great council of the Five Nations. Prof. Starr is having 6 of the medals made for the 6 most prominent workers in Indian research at the present time. Hereafter the medal will be awarded annually.

SOUTH AMERICA:—BOLIVIA—The Bolivian Government objects to having its antiquities taken out of the country without its consent. A recent French explorer, it seems, clandestinely smuggled out of Bolivia a large quantity of antiquities. After they were safely out of the country, the fact was reported to the Bolivian Government, which at once took stringent measures to prevent antiquities being removed from the country without its permission. The whole Pacific Coast of South America is rich in prehistoric remains, and it is most gratifying that some of the South American Republics are beginning to realize the importance of guarding their antiquities.

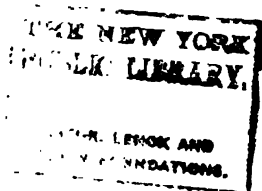
ARGENTINE—Prof. William D. Scott, of Princeton University, visited last season the great Argentine Fossil Beds. He states that, in addition to the discovery of the fossil remains, the expedition discovered that the Southern Andes are of much later geological date than has heretofore been supposed—the Pliocene; that Patagonia presents the appearance of a prehistoric Pompeii, in that it is covered with volcanic ash in the same way.

The beds are wondrous rich in fossils. Before the bridge was erected between the American continents, animal life in South America was much like that of Australia, but when Central America was formed the northern animals migrated, and some of the migrants existed much longer in their new home than in the North. Such was the sabre-toothed tiger, of which extinct specie there are 4 perfect specimens (or nearly so) in the world, one of them at the American Museum of Natural History in New York. A remarkable thing, he says, about many of these strange-looking skeletons was the fact that their tusks were formed of the incisors instead of the canine teeth. In many cases the latter are extremely small. It requires great care to get the fossils out of the surrounding bed, and generally, the material immediately investing the object is very hard, being composed of volcanic ash and 60 per cent. of carbonate of lime, probably the deposit of rain water. Another striking observation was that fossils observed in Santa Cruz beds are small, where those found in Pompeian are large.

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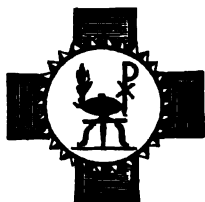


ROCK-HEWN DWELLINGS OF CAPPADOCIA, ASIA MINOR



RECORDS OF THE PAST

VOL. III



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THE CAVATE DWELLINGS OF CAPPADOCIA

BY G. E. WHITE

WHILE all of Asia Minor is rich in archæological remains, the places of greatest interest visited by me are Troy, Boghaz Keuy and the Cappadocian cavate dwellings. Troy is attractive chiefly because of Homer. As one stands on those ruins of moderate extent and views the meadow where run the tiny rivulets dignified as the Scamander and the Simois, he feels that Homer made better use of the literary materials at his disposal than any other writer that ever lived. Boghaz Keuy, the ancient Pteria, represents the Hittite civilization, old, peculiar and but partly understood. The cavate dwellings of Cappadocia represent the Christian religion, the Greek language and the Byzantine government.

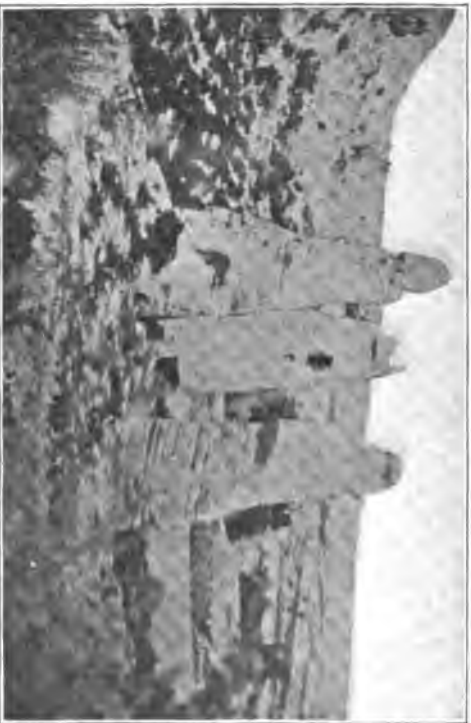
An extensive region in central Asia Minor, of which Cesarea Mazaca is at the northeastern corner, is largely volcanic in formation, the rocks being composed of soft tufa or trachyte, and the soil, one of the most favorable for the production of grapes, being formed of the same grayish material reduced to powder. This rock is so soft that it can be slowly whittled with a knife, and doors, windows, stairs, pillars, arches, and rooms greater and smaller, are easily worked in it, though it does not wear away rapidly under natural agencies, and its surface hardens on exposure to the air.

It was a fine summer morning when a party of 3 Americans, amateur archæologists bent on sightseeing, left Urgub to visit the remarkable collection of abandoned cavate dwellings in the valley of Guereme. On the way we passed many huge tufa cones 4 to 80 ft. high, the material between them having been cut away by the action of water, but the material of each cone being held by a conical flat cap of still harder stone tipsily balanced on the apex. As we ascended the last ridge beyond which lay the valley of our quest, our guide excitedly covered my eyes with his hands, and led me to the top, whence the eye takes in the whole panorama beyond and below.

It was indeed a weird picture that burst on my sight. The main valley was over half a mile long, deepening and widening toward the open plain. The sides, which were 100 to 200 ft. high, and various cones and eminences tossed up in the middle of the valleys, were honeycombed with old cavate dwellings to the number of hundreds, the work mostly of monks, and I think, in the generations soon after Constantine and Helena.

The custom of hewing out dwellings in the rocks is old. The prophet Obadiah says to Edom: "The pride of thy heart hath deceived thee, O thou that dwellest in the clefts of the rock, whose habitation is high: that saith in his heart who shall bring me down to the ground?" Edomites like Cappadocians were troglodytes. Asia Minor as well as Syria has abundant magnificent rock-hewn tombs, habitations not of the living but of the dead; for example witness the "5 Mirror Tomb" near Amasia. Rooms cut in the rock overlook the Halys River where it is crossed by the Samsoun Cesarea Road, doubtless a trade route from time immemorial. Excavations in the living rock for cisterns, granaries, snow-pits, dove-cotes, and even houses, are very common in the region over which Mt. Argæus stands sentinel. Some villages are double, consisting of a series of houses above ground habitually occupied, and another series under ground, reached by shafts and connected by tunnels, to which the inhabitants resort in time of danger. When Ibrahim Pasha invaded Turkey half a century ago with the Egyptian army, the villagers of Misli fled below ground, cutting off their rear by stone doors like mill stones, which they rolled across the passageways. The army could not force an entrance. When they lowered buckets into the wells to draw up water, the refugees below cut off the buckets, and finally the invading army swept on, leaving a village of cavate dwellers behind it unconquered. Soghanly Deresi has a wonderful collection of these excavations, but we could not visit it on this trip.

Cesarea was the home of Basil, the great organizer of monasticism in the East. Indeed in the Orient, religion has always assumed more ascetic, in the Occident more practical forms. When Constantine made Christianity the religion of the State, not only was there an impression that the monastic life was the most virtuous, but many devout men felt that the only way left to escape the temptations of the world was to withdraw from them to the practice of religion in



1. CLIFF EXCAVATIONS OVERLOOKING THE HALVER RIVER. 2. EXCAVATIONS IN ROCK-WORN FORMATIONS. 3. EXCAVATIONS AT
GRUBBER. 4. CLIFF AND OTHER EXCAVATIONS

seclusion. So when my eyes were uncovered and I looked full into the valley of Geureme I saw hundreds of excavations in the rock, the first of which may have been begun long ages ago by some primitive race of men, but most of which were certainly completed and occupied by the early monks of the Orthodox Eastern Church.

Picking our way down into the valley, we began to enter and explore the excavations. They were chiefly of two kinds, sanctuaries and habitations. My notes made on the spot first describe a chapel, such as we afterward saw duplicated with slight variations in numbers of cases. Such a chapel is from 12 to 15 ft. square, hollowed out in the living rock, and with a seat of stone left running all about the sides. The doorway is low, with an open hall before it. Within, the ceiling is in the shape of a rolling dome, or the arches rise from the 4 corners to the center. Opposite the entrance a Holy of Holies is hollowed out, connected with the main room by a door and 2 window-frames, and containing an altar in the center, of course of stone, and a seat for the priest at the right hand as one enters the door. Oftentimes the vestibule before the main entrance has several graves cut in its floor, sometimes ostentatiously arranged so as to be trodden upon by comers and goers. The grave has a horizontal ledge just below the mouth for the purpose of supporting a stone slab as a cover, and frequently a grave is seen intended for a tiny child. Among the most remarkable features of these sanctuaries were the painted decorations, usually in red color, and arranged in lines, series of dots, wheels, checkerboards, squares, diamonds, and often representing figures human or superhuman.

The rooms intended as dwellings seemed each originally to have had a shrine in one corner. They were usually 10 to 12 ft. square in size, low and bare, cold and dark. Each room had one opening cut to admit the light. Often overhead a shaft like a chimney about 18 in. square rose perpendicularly to another room above. Each of the 4 sides had hand holes or foot holes cut out of the rock for climbing, but so narrow was the shaft that one had difficulty in bending his limbs sufficiently to make the ascent. At the top a ledge was once fitted with a trap door, hinged and bolted, securing the lonely occupant from unwelcome intruders. In this way the rooms rise often to a height of 5 or 6 stories, and sometimes to 10 or 12. A shelf let into the wall, is the only existing sign of furniture in these apartments.

In different places there are refectories. Take for example one finely cut, 20 ft. by 30 ft. in area, having a table along the side with seats in front and behind, and all of stone, in excellent condition and preservation. At the head an alcove is rounded out for the abbot. Two fireplaces furnished conveniences for cooking the viands of a country whose native food products are among the best in the world, and a wine press with a vat scooped out in the floor was ready for pressing the grapes that grew to hand on the top of the cliff overhead.



ROCK-HEWN DWELLINGS OF CAPPADOCIA, ASIA MINOR



THE MIRROR TOMB, NEAR AMASIA, ASIA MINOR

Elsewhere were stables about the size of the smaller rooms with mangers in the side walls and halter handles for tying horses, asses and perhaps cattle.

Several larger churches, each with many columns and with domes up to the number of 9, were excavated partly under ground, their entrances being now much choked by debris. The largest had a transept of 18 by 36 ft., the stem of the nave 16 by 16 ft., the apse 18 by 40 feet and a side chapel with its own separate apse. In the days of its glory it could accommodate several hundred persons. The main dome at the base of its arches was 18 ft. above the floor, and its highest point not less than 25 ft. Here, as in the other churches, were seen scores and hundreds of frescoes, that in their time were finer than any decorative art found in the modern Oriental churches of the Levant, but they have been terribly defaced by Turkish and Mohammedan hostility to pictures as ministering to idolatry. A single overhead figure, life-size or larger and beautifully executed, may be injured in a hundred places by stones thrown at it with the especial aim of knocking out the eyes. The frescoes represent Scripture and other religious scenes. Christ and His apostles figure frequently, also the prophets and other Old Testament characters, Constantine and Helena, and the early fathers of the Church. The dragon is repeatedly slain by St George. In one case our Lord and His disciples appear eating fish. The Transfiguration, the Triumphal Entry, the Holy Family, the Baptism of Christ, the Three Children in the Fiery Furnace are favorites. A lifelike representation of the Baptism includes Satan blowing a horn, while an angel stands near with a towel extended on both hands, as if to receive a newly baptized Greek baby. In one instance the pillars of a dome are adorned with the figures of 8 of the Old Testament worthies, with a verse from the writings attributed to each. Once a tonsured head appears. Red, white, brown, black, yellow, green, slate and blue, in varying shades are among the colors used, and this imperfect description by no means does adequate justice to the great beauty of these frescoes, even in their neglected and damaged condition.

One of the most curious scenes represents Abraham entertaining his Three Angel Visitors. The latter sit at a table on the backs of 3 chairs with their feet in the seats. Before each are a knife and a fork with black handles, while the blades and tines are white. On a platter on the table is an ox head with its hair and horns and a pile of cakes. Two goblets stand on the table, and a third is extended by one of the visitants to Sarah, who is pouring wine into it. At the other side of the table is the figure of the patriarch, while under the table a cow suckling its calf completes the picture.

There is a peculiar variety in the pictures showing the ecclesiastic making the sign of the cross. The thumb is placed now on the third finger, now on the third and fourth, and again on the second and third. This doubtless indicates a time prior to the establishment of the present custom, whereby the thumb is placed on the third

finger and the sign is made with 3 fingers extended in honor of the Trinity. Similarly the representations of the cross show many different forms. The inscriptions are quite frequent and consist for the most part of proper names, designating the figures that they accompany. They are all in Greek, and the words usually read from top to bottom, a form adapted to writing on columns. The shapes of the letters vary, as is common in Greek, and particularly the sigma, which takes a form not familiar to me elsewhere.

[Specimens of crosses and inscriptions will be figured under Editorial Notes in the April issue.—ED.]



THE BEETLE THAT INFLUENCED A NATION

BY. C. DE W. BROWER, A. M.

AN INSECT which for over 3000 years was regarded with deepest reverence by an entire nation and helped mould its character, its figures being worn by the living and buried with its dead, is not a trivial object and may well receive even from this busy age not only attention, but a tribute of respect. The scarab, as some one has wisely said, though never mentioned in history, is yet a history in itself. It is only natural that today among the interesting forms of jewelry displayed in our own stores there can be seen occasionally a ring or pin with a setting in imitation of the beetle, ignorant as the shopper may be of its meaning. It is not strange that in any curiosity shop search will reveal a box or saucer containing a number of the small brown, gray or green objects shaped like beetles on one side and with strange inscriptions on the flat base. The dealer will be unable to read the inscriptions, but will charge a number of dollars apiece for the antiquities from Egypt.

Every traveler in the Nile Valley has offered him here and there the same curiosities at all kinds of prices, and he usually buys a number openly on donkey-back, of Arab tomb robbers, who cannot be relied on to tell the truth as to the place of finding; or of his dragoman with voluble assurances of honesty; or a dealer in some obscure shop in Cairo under circumstances made as mysterious and impressive as possible. The purchasers know them as "Scarab," is told that the inscriptions on the flat side are names of ancient kings which his dragoman will pretend to interpret, and on his return home the tourist has them set in cuff buttons or scarf pins for his friends. The visitor to the tombs and temples throughout the same land notices the figures of the beetle oft repeated and cut deep with the other hieroglyphics. It may be that he becomes deeply interested. He may inquire, study, become one of that coterie with whom collecting scarabs becomes a hobby, as another person searches for rare prints.

And as the months and years pass he comes to understand the quaint object of his quest, and to know that the distinction in the styles are as much a special subject as the differences in the manner of painters, and as unnoticed by those unfamiliar with the study. He learns also that there are scarabs and scarabs and that "made in Egypt" does not carry any guarantee as to age. The wily native recognizes the demand and is prepared to supply it even to names of particular kings, though valuable scarabs are still found and will continue to be, and any modern traveler may secure some of rare worth. But the greater number of travelers, like the public in general, know little about them, important a place as they have held in the life of a great nation. And it is because it is worth the knowing that this story of their meaning and history is written; and with the greater reason since many of even the most pretentious encyclopedias do not mention the subject at all.

In the earliest ages of historic Egypt the beetle had a mysteriously sacred character and its images were used to express certain fundamentals of the religious faith of the people. The Egyptian was deeply religious from the beginning, and one of his profoundest beliefs was in his immortality, in which both soul and body were to share. Now it was noticed that a beetle covered its egg in a bit of dirt which it rolled over and over up the bank, often above flood level where it was buried in a hole. The warmth of the Sun hatched the egg and in due time a beetle came forth from the grave. Here then was an illustration of vivifying after death; an emblem of the resurrection. The inundations covering the land from end to end seemed in general to have no effect on this little animal, for as many appeared after as there were before, and in this way the idea of perpetual life received illustration.

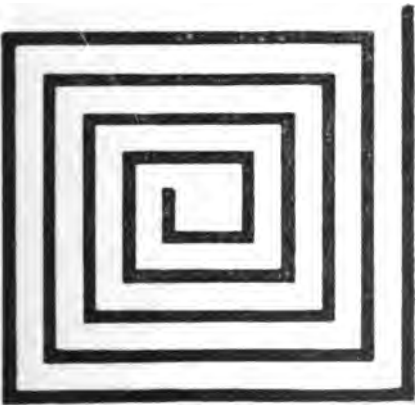
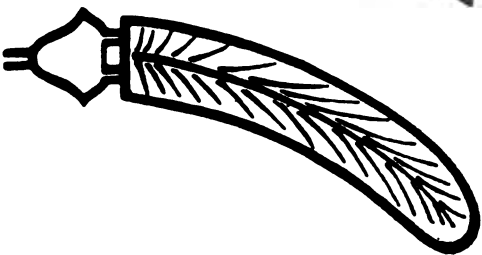
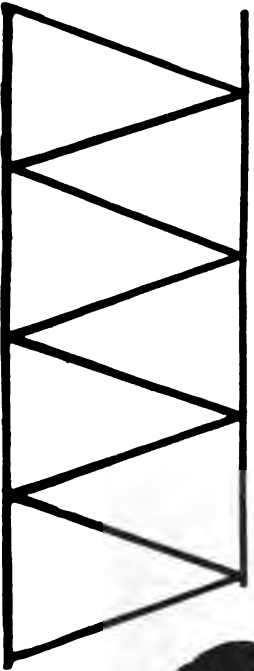
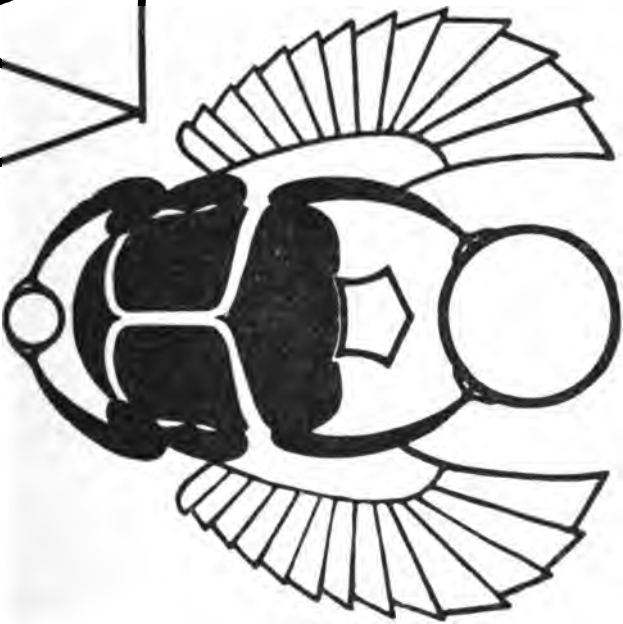
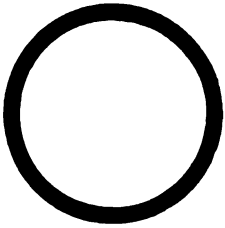
But there were other interesting and historically important reasons for the exalted place given the Scarab,—a word which is not Egyptian, but from the Greek "Skarabeius," meaning a beetle. The special type favored was the "Skarabeius Sacer." The Egyptian word for beetle was Kheper, meaning "to be," "to create," "to become." So the figure of the beetle came to convey the same idea. Further, one of the forms of the sun god was Kheper or Kephera, holding high place in the involved mythology of the people. He was the Morning Sun called "He who is." The similarity of name and the root meaning suggested that in the image of the beetle there was to be found nothing less than a representation of the god and so its fetish. The egg resembling and representing the Sun Disk. There exist decorations on the monuments depicting Khepera riding in a sacred boat, his head being a beetle with outspread wings, and certain sculptures depict priests paying divine honors to a beetle placed on an altar; and the representations of the insect often portray it holding the Sun Disk above its head, symbol of the creative power of the universe and of successive becomings. The scarab image, therefore, was thus a symbol of a god of life duration, development, and



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to wear one was not only to keep the hope in mind, as the present-day Mohammeden is reminded of death by his turban, but, more, to help insure these things for the wearer. As the sacred Sun sank at night into the darkness to rise again, bringing new life, so the egg buried disappeared to rise with new activity. Such it was believed would be the experience of men and women, though dying here and buried, to live anew and forever.

With a nation which with an all-pervading religious life used picture writing not only at the beginning of its history, but continued to use it even after sounds were expressed by signs, this symbol of resurrection, of continued indestructible life, was to the people somewhat, what the cross has been to Christendom. It was a sign of religious belief, of the accepted creed. In addition to all the rest Sir Samuel Baker has pointed out that the scarab was highly honored as the harbinger of the high Nile, because it regularly made its appearance at the season of the flood. By the living, the scarab was worn set in rings, ear-rings, necklaces, as a pendant or carried in strings as a rosary, and not only as a sign, but as has been stated, as a safeguard against danger and death. They bore frequently the owner's name and the name of the reigning king. The engraved side was used for a seal also, and so played an important part in the daily life. Some scholars have thought that scarabs were used at times for money when there was no other medium of exchange.

Scarabs were almost universally buried with the dead, being supposed to impart the quality of life to the deceased. They were folded in the mummy wrappings, hung about the neck and arms and placed over the heart. Often a large scarab was put in the heart cavity, the natural organ having been removed by the embalmer as a sign, or, possibly, as a supposed efficacious means of insuring resurrection coming through the new heart. Such funerary scarabs frequently bore inscriptions from *The Book of the Dead*.

The use of the scarab as a sacred emblem began at an early day. There is a gold-foil impression of one of King Menes of the I Dynasty [about 4777 B. C.], but this may be a forgery made from a scarab of later date. Scarabs there are, however, of Neb-ka-ra, the first king of the III Dynasty [4212 B. C.] and of Khufu (Cheops), builder of the great pyramid [3910 B. C.]. These are of fine workmanship, small and beautifully colored. The same may be said of some of Khafra [IV Dynasty 3908-3845 B. C.]. These are among the earliest known. To say that the use of these figures of the beetle was popular, quite fails to express the truth. More were worn during certain dynasties than in others, as religious life rose or waned; so, for example, when religious revival came under Thotmes III [1502-1449], several thousand varieties bearing his name were produced. He was popular with the priests, a defender of the faith. On the contrary, in the XIX Dynasty scarabs largely went out of fashion; so under Amenhotep IV, who tried to subvert the old faith. But there is reason to believe that millions upon millions were manufactured

and served their day until after the Persian period, or about 500 B. C., when they ceased to be used as sacred emblems and the manufacture came to an end, having flourished more than 3,000 years. The most recent, genuine scarab one can pick up or purchase is already more than 2,000 years old.

The early scarabs were as a rule finely glazed, and often colored like the beetle itself, of bluish-green. Later good glaze scarabs became rare. There are many changes from the original coloring due to age, and many scarabs have lost their color altogether during the lapse of the ages and are now only browns and grays. Glazes differed according to the place of manufacture. Some of the finest work belongs to the XII Dynasty [2778-2565 B. C.], the art deteriorating after the XVIII Dynasty, though occasional revivals appear.

They were made of varying materials and were of different sizes; but at the first, as often in later centuries, were cut from steatite. Those of Cheops are of limestone, stained. The middle kingdom produced some of amethyst, emerald, jasper and of garnet, and some of later days were of gold. One of carnelian, of rare beauty, was offered to me by an Arab at Old Memphis. During the XXII Dynasty pottery and pastes were used; in the XXVI Dynasty hard stones of all sizes and colors. In the ruins of Naukratis in the Delta Dr. Petrie found in a potter's workshop hundreds of finished and unfinished scarabs with clay moulds and also pigments for coloring. Naukratis first comes to light about 600 B. C. Poor amulet scarabs characterize the XXX Dynasty, made of pottery and badly glazed. Reference may well be made to the finding of the numerous rich and beautiful ornaments buried with Queen Aahotep, wife of Kames of the XVII Dynasty. Among them was a large, flexible, gold necklace with a scarab pendant which was incrustated on the shoulder and wing sheaths with blue glass paste, rayed with gold. The legs and body were of massive gold.

As to their size the majority are small, one-half to three-quarters of an inch in length, with occasional larger sizes, and all perforated lengthwise through the base. A colossal one of black granite in the possession of the British Museum, is 60 in. long and 33 in. high.

An immense variety of devices besides the names of the owners and titles of kings, were engraved on the flat under side of the scarab. There are mottoes, sacred emblems, figures of gods and kings, animals, flowers, autographs, names of deities, places, friendly wishes, pious ejaculations and magic formulas. But bearing so often the names of kings they become of genuine importance as historical documents, and so of extraordinary value as helping establish the chronological period of Egyptian history. They bring to life points concerning unknown kings, and have supplied correct readings of names. In fact many kings and their names are known to us only by their scarabs. In this way the knowledge of dynasties is made more complete. Collections of historical scarabs display chronological series of names of Egyptian kings ranging from highest antiquity.

As a means of dating excavating work, these beetle amulets have a value, since by their style and the names they bear dates can be approximated with greater accuracy. To the collector comes the gain, not only of possessing antiquities, but the increased historical knowledge and acquaintance with the language, something of which he must know to be able to select the prizes and assign them to their place. Some of the most complete and valuable collections are in the hands of private persons. Egypt has been so systematically and continuously despoiled that vast quantities of all her richest treasures are now in other countries.

To illustrate the character of some of the inscriptions the following are given, selected at random :

"Nefer-hotep, born of the royal mother," "The royal son Apeq," "Chancellor, seal-bearer, overseer of palace, Aki," "Ra-men-kheper, good god, lord of the two lands," "Rameses, beloved of Amen," "Beautiful Amen-ra, giving life," "The divine wife, Ankh-ta." This last reminds us that women were held in high honor in Egypt. Bin-othris, the third king of the II Dynasty, established by decree the lawfulness of female succession to the throne. One large scarab records the marriage of Amenhotep III, in whose honor the colossi were erected at Thebes, with the great Asiatic princess Tyi [1414-1379 B. C.]. Of these about 20 are known to exist.

Occasionally royal edicts were promulgated by means of the scarab ; at least one king so used them, this same Amenhotep III, who, besides announcing his marriage, tells the story by scarab inscription of the capture of wild cattle. Only one of these is known to have survived. Another tells a story of a lion hunt, and of these a few remain.

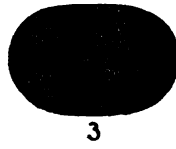
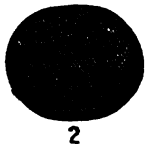
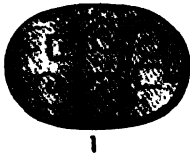
Here are a few more translations: "Truth upholds Ra (Ra-men-mat)," "The good God lives," "There is a mother whose house feareth not," "Abounding in graces," "A real doer of what is pleasing to the gods," "Truth is a good mother."

One of the interesting features connected with scarabs is that on them were traced the earliest decorative art of Egypt. According to Dr. Petrie, the zigzag line is the simplest and earliest kind of ornament, and we find it on the oldest tombs, about 4000 B. C. Then comes the spiral or scroll, one of the chief elements of Egyptian decoration, second only to the lotus in importance. Its service and meaning are alike uncertain, but the scarabs provide us with the earliest examples by far. Thus style of decoration may even have originated on scarab design. The earliest that can be determined is a scroll of Assa, about 3800 B. C. Certain Egyptologists have asserted that this is the earliest attempt at ornamental design either in Egypt or any other nation. Spirals are used to fill up the sides of the inscriptions on the scarabs of Pepy, and for over 1000 years they are to be found as an accessory on scarabs, after which they often appear elaborated as sole patterns.

There may easily be found here the proof in earliest days of the

influence of religion on art. Because there was a S. Francis at the beginning of the XIII Century, there were Dante and Giotto at its close. Because there was a faith which the scarab symbolized there followed scrolls and other expressions of decorative art. John Ward, a collector of note, is inclined to consider these scrolls a secret form of religious symbol.

Surely in the light of all the facts it can be claimed that the jeweler is justified today in using the beetle as an ornament for modern decoration; the traveler is justified in his interest in scarabs, the museums are under obligation to give them honorable place, the collector needs no apology for his hobby, and we all can look on them with a feeling akin to reverence. "Love adds a precious seeing to the eye," and a better acquaintance with the scarab may influence us to a liking, at least, which will insure that we shall never again idly and lightly class it with the "flotsam and jetsam" we count as "curiosities."



1. SCARAB WITH SPIRAL SCROLL, V DYNASTY; 2. SCROLL SCARAB, MIDDLE KINGDOM; 3. RA-MEN-MAAT, "TRUTH UPHOLDS RA"



SHELL-HEAPS OF THE LOWER FRASER RIVER BRITISH COLUMBIA *

BY HARLAN I. SMITH

THE Fraser River empties into the Gulf of Georgia, forming a delta which extends along the coast about 14 miles, from near the northern boundary of the United States, to Point Gray, about 6 miles southwest of Vancouver, B. C. The effect of the tide is felt for about 20 miles above the mouth; and for a still greater distance we find one or both shores formed of alluvial soil, which at certain seasons receives deposits from the River. The westerly winds, in ascending the slopes of the Coast Range, precipitate their moisture, and consequently there is a considerable amount of rain, principally in winter. Vegetation is dense and luxuriant. Many of the trees are of gigantic size.

* A full report on this subject is given in Harlan I. Smith's *Shell-Heaps of the Lower Fraser River, British Columbia*, which appeared as Part IV of Vol. IV of the Publications of the Jesup Expedition in the *Memoirs of the American Museum of Natural History*, March, 1903.

The Indians inhabiting this region subsist largely upon fish and shell-fish. Whales, seals, deer, bear, etc., roots and berries are also used. The people depend largely upon the wood of the cedar and other trees for the manufacture of their implements and utensils. The bark of the cedar is made into garments, bags, mats, etc. They build immense houses of cedar-planks. The arts of carving and painting, which are characteristic of the North Pacific Coast, are well developed. Most of the implements or objects of art are made of wood.

The most extensive remains of the early inhabitants of the coast are shell-heaps made up of layers of shell and other refuse from their villages. They are found on many flats along the coast, and at the mouths of most streams where the beach is smooth enough for canoe-landing. In front of many shell-heaps, where the beach is covered with bowlders, the stones have been removed to make canoe-paths up from the water; and at low tide these paths, which are at right angles to the beach, may yet be seen, clearly marked by the bowlders piled in parallel rows at their sides. These often direct attention to a shell-heap at the edge of the forest which might otherwise be passed unobserved. The streams were highways to the interior, sources of fresh water and of food. At their mouths, mud flats are formed, on which shell-fish live.

The typical shell-heap is several hundred yards in length, about 30 yards in width, and 3 or 4 ft. in height. Others are miles in length and some reach a height of over 9 ft. [See plate I].

The age of some of these heaps is considerable, as indicated by the presence of Douglas-fir stumps over 7 ft. in diameter [See plate II] standing on 9 ft. of unbroken layers, many of which are only an inch or two in thickness. One stump only 4 ft. in diameter exhibited over 400 rings of growth, but on the larger stumps such evidences were obliterated by decay. Judging from these stumps, the top layers of the shell-heaps cannot be less than 500 years old, while the lower layers must have been deposited a considerable time before, to allow for the formation of 9 ft. of strata above them.

The shell-heap at Port Hammond, in the upper part of the Fraser Delta, is over 20 miles by water from the present seashore, where the shells, of which it is largely composed, are found. By land the nearest point of the seashore is over 10 miles. Judging from the customs of the present natives, the water-route would have been used in bringing the shell-fish to the village; but the Indians prefer to live near the shell-beds. It is hard to believe that they would have carried from the present seashore the large quantity of shells which compose the shell-heap at Port Hammond. The rate of encroachment of the delta upon the sea, or of changes in the level of the land, may furnish some clue to the age of the Port Hammand shell-heaps. At present, according to information given by the late Dr. George M. Dawson, little or nothing is definitely known in regard to the geological age of the Fraser bottom-lands and the surrounding gravel-terraces.



MAIN SHELL-HEAP AT EBURNER. MAN STANDING ON NATURAL SOIL. ALL ABOVE HIS FEET ARE LAYERS OF SHELLS



MAIN SHELL-HEAP AT EBURNER, INDICATING AGE OF 500 YEARS. FIR STUMP IN WHICH WOMAN IS STANDING IS 7 FT. IN DIAMETER, STANDING ON 9 FT. UNDISTURBED LAYER OF SHELLS

The strata in the shell-heaps are often entirely composed of the remains of shell-fish, largely clams, mussels and in some cases oysters.

Vegetable mould and general refuse also make up a large part of some heaps. The shell-heaps on delta land along large rivers, as compared to those along sea-beaches, seem to contain more black vegetable mould; most of the shells seem to be broken and in a more advanced state of decomposition; skeletons are nearly as well preserved, and are much more frequently found in order; and implements of various kinds are more numerous among the layers.

In the shell-heaps of the lower Fraser River the skeletons and stray human bones found were deposited at the time of the formation of the layers, and were not intrusive burials, as was clearly shown by the numerous unbroken strata extending over them. The bodies usually lie on the side, with knees close to the chest. Unlike the skeletons found in the interior, there are but few if any objects accompanying them, except in rare instances a few shell beads, copper ornaments, and chipped and ground stone points for arrows, spears, etc. Such specimens, as well as other artifacts, were frequently found scattered in the layers, and it is likely that they were only accidentally near the skeletons. This is particularly true of the stone points.

At Eburne 2 types of skeletons are found which belonged apparently to co-existent people, as they were excavated from the same layers. If one of these types consisted of captives or slaves, there was nothing in the manner of burial to indicate it.

The shell-heaps of Vancouver Island and of the adjacent region have been known for many years, and were mentioned by Bancroft* in 1875 and by Dawson † in 1877.

The large shell-heap near Eburne has been known for some years,—ever since the piece of southeast road between the end of the road running due south from Vancouver and the bridge at Eburne was cut through the middle of it. Mr. William Oliver, who was in charge of this work, observed the occurrence of artifacts, and caused the men to save such objects of antiquity as came to their notice. His observations at this time, and the collection which was then made, drew the attention of other observers to the place. The collection was secured by me and is now in the American Museum of Natural History.

In 1884 the Rev. H. H. Gowan and Mr. James Johnson examined this shell-heap, and secured from it a human skull which was peculiarly long and had a narrow forehead. A bone spear-point was said to have been found piercing the left temporal bone of this skull. Both skull and spear-point were deposited in the Natural History Museum of New Westminster, B. C. A photograph of the skull was sent to the Smithsonian Institution, and I secured 2 negatives of it for the American Museum of Natural History. Mrs. Ellen R. C. Weber,

* *Native Races of the Pacific States*, Vol. IV, pp. 736, 739, 740.

† Note on Some of the More Recent Changes in Level, etc. [*Canadian Naturalist*, April, 1877].

now of Vancouver, while living at Port Hammond some years prior to 1897, made a collection of the specimens turned up in her garden, which was on the shell-heap.

In September and October, 1897, I conducted explorations for the Jesup North Pacific Expedition in the shell-heaps of the Lower Fraser River at Port Hammond. This work was continued in June, 1898, near Eburne; and in September of that year Port Hammond was revisited. The following descriptions are based upon these explorations.* In the field, assistance was rendered by Dr. Roland B. Dixon and Mr. Reginald C. Brooke. Thanks are due to the land-owners who allowed our explorations on their property; to Mr. R. L. Codd, who personally facilitated explorations on his land; and to Mr. James M. Dale for specimens collected by him. The accompanying illustrations are from drawings made by Mr. Rudolf Weber, and the plates are reproductions of photographs taken by the author.

The explorations along the Lower Fraser River were largely confined to the shell-heaps at Port Hammond and Eburne. At Port Hammond the main shell-heap is located on the alluvial ridge parallel to the north bank of the Fraser River, and is always within 50 ft. of the stream, which in places has cut into shell-layers. It extends along this ridge continuously for about half a mile downstream, beginning at the base of the gravel terrace through which a cut has been made for the Canadian Pacific Railway, and on which was located a burial mound.† There are some oval shell-knolls on the most westerly part of the main shell-heap where it is low. There are also some such knolls on the natural ridge beyond. They occur at intervals of from perhaps 100 to 150 ft. and probably mark spaces where refuse was thrown between the ancient houses, or in close proximity to the doorways. It is possible, however, that they mark centers of habitation. Beyond the end of the ridge where the land is low there are a few low oval shell-heaps, probably refuse from isolated houses. Back of the ridge along which the shell-heap extends, the land is low, and in some places was swampy before the making of dikes and ditches. It is said that in the rear of the shell-heap there was formerly a water-course, which extended from near its eastern end northwestward to Pitt Meadows, and farther on into Pitt River, thus affording canoe communication from the rear of the village to the north, while the Fraser River afforded connection with the east and west.

The shell-heap is, on an average, about 100 ft. wide, and reaches a maximum height of 8 ft. During unusually high floods silt is sometimes deposited on it. At least 6 gardens are located on the shell-

* Preliminary reports of this work were published as follows: *The Jesup Expedition to the North Pacific Coast, Science*, N. S., Vol. vi, No. 145, Oct. 8, 1897, pp. 535-538; Franz Boas, *Operations of the Jesup North Pacific Expedition in 1897, Memoirs, Am. Mus. Nat. Hist.*, Vol. II, June 16, 1898, pp. 7-11; Harlan I. Smith, *Archaeological Investigations on the North Pacific Coast of America, Science*, N. S., Vol. IX, No. 224, April 14, 1899, pp. 535-539; also separate; Harlan I. Smith, *Archaeological Investigations on the North Pacific Coast in 1899, American Anthropologist*, N. S., Vol. II, July-September, 1900, pp. 563-567; also separate.

† See description of this mound in *Memoirs, Am. Museum of Natural History*, Vol. iv, p. 60.

heap, but parts of it are yet protected by natural vegetation. Below the surface-soil, and down to the bottom of the shell-heap, clam and mussel shells are found mingled with charcoal, a very few oyster-shells, and the bones of animals. Usually the purest shell-layers are found within 3 ft. of the surface, the lower layers being largely of black vegetable mould, refuse, charcoal and ashes. The general characteristics of the specimens found in the lower layers are the same as those found in the highest strata and on the surface. The fir-trees growing upon this shell-heap suggest that it is of considerable age, but there is no evidence of any very great antiquity.

A Shell-heap on the oval knoll farthest downstream beyond the main site, was entirely excavated by our party. On the northwestern edge of this heap stood the stump of a Douglas-fir tree. The fallen tree belonging to this stump measured over 4 ft. in diameter at a point over 10 ft. above its base. A second stump stood to the north-northwest of the heap. Its roots extended over some of the lower shell-layers. The stump, reduced in thickness by fire, still measured 13 ft. in circumference at a point 8 ft. above the ground, where the trunk was smooth. It was 29 ft. in circumference at a point 3 ft. above the ground, but below the point where the trunk begins to expand into buttresses.

The main shell-heap near Eburne is north of the north arm of Fraser River, and parallel to its bank. It is opposite the eastern end of Sea Island, and is located along the edge of the gravel terrace which here drops abruptly to the alluvial bottom-land, that is perhaps $\frac{1}{8}$ of a mile wide and subject to occasional inundation.

The heap is at least several hundred feet long, and is from 50 to over 200 ft. wide, covering several acres. The extreme limits have not been determined because covered with forest growth. In some places it rises to form knolls similar to those at Port Hammond, but larger. Its maximum depth is about 9 ft., and it is made up of layers composed of shells of clams, cockles, mussels, barnacles, of ashes and other refuse, somewhat similar to that in the heap at Port Hammond. Here, however, the lower strata are composed largely of whitish shell material similar to the material of the shell-heaps along the sea-beaches, except that it is broken into small pieces, and few large shells are entire. While at Port Hammond the lower layers overlie black earthy matter, they seem to rest here on the natural yellow gravel, with little or no signs of any old surface-soil intervening. Back of the heap the surface of this gravel is higher than the bottom-land, but it is slightly lower than that under the shell-heap. Except in places protected from erosion, it has little or no covering of surface mould.

On this heap stood a Douglas-fir stump 29 ft. in circumference at a point 5 ft. above the ground, and another $29\frac{1}{2}$ ft. 3 ft. above the ground [see cut]. The hollow log fallen from this stump was 6 ft. 7 in. in diameter at the butt, and 6 ft. 3 in. at the upper end of the first section, 5 ft. higher. Many unbroken strata under this stump extended to the eastern limit of the trench, as far as 30 ft., showing



IMPLEMENTS FROM PORT HAMMOND AND EBURNE, FRASER RIVER, BRITISH COLUMBIA: 1, WEDGE MADE OF ANTLER; 2, CELTS OF STONE; 3-4, CELTS OF STONE; 5-6, CELTS OF STONE AND HAFTS OF ANTLER; 7, NEPHRITE BOWLDER, PARTLY CUT BY A GROOVE; 8, PART OF GRITSTONE WITH GROOVE; 9-10, BONE OBJECTS, POSSIBLY MESH-MEASURES; 11-12, BONES CUT LONGITUDINALLY; 13-17, BONE AWLS; 15, BONE AWL; 18-22, NEEDLES OF BONE; 23-24, ANTLER-TIPS WITH CARVED KNOBS; 25, DAGGER OF BONE; 26, WAR OR CEREMONIAL CLUB OF STONE; 27, BONE BUTTON; 28, COMB-LIKE OBJECT OF ANTLER; 29, STONE LABRET, SIDE AND BOTTOM VIEWS; 30, PENDANT MADE OF IVORY; 31, STONE OBJECT, POSSIBLY A FRAGMENT OF AN EARRING; 32, FRAGMENT OF STONE OBJECT, PROBABLY WHISTLET; 33-34, TUBULAR PIPES OF STEATITE; 35-36, BONE OBJECTS BEARING INCISED GEOMETRIC DESIGNS; 37-38, HARPOONS BEARING INCISED GEOMETRIC DESIGNS; 39-41, FRAGMENTS OF HARPOON POINTS OF BONE OR ANTLER; 42-43, FRAGMENTS OF BONE OBJECTS, PROBABLY WHISTLETS; 44, BONE OBJECT BEARING INCISED GEOMETRIC DESIGN; 45, SCULPTURE IN STONE; 46, FRAGMENT OF STONE PIPE; 47, ORNAMENTED STONE MORTAR; 48, SCULPTURE IN STONE MORTAR; 49, MORTAR FROM THE NORTH ARM OF THE FRASER RIVER; 50, SCULPTURE OF STONE; 51, SCULPTURE IN HYDRO-CARBON, PROBABLY USED AS A PENDANT; 52, A SCULPTURED MORTAR; 53, CARVED PIECE OF ANTLER.

that all objects found below them, even if not directly below the stump, were older than the strata under the tree.

Implements made of stone, bone, and antler, were numerous down to the depth of 6 ft. In the deeper layers, which consist of white shell material, implements made of bone were more plentiful than stone objects.

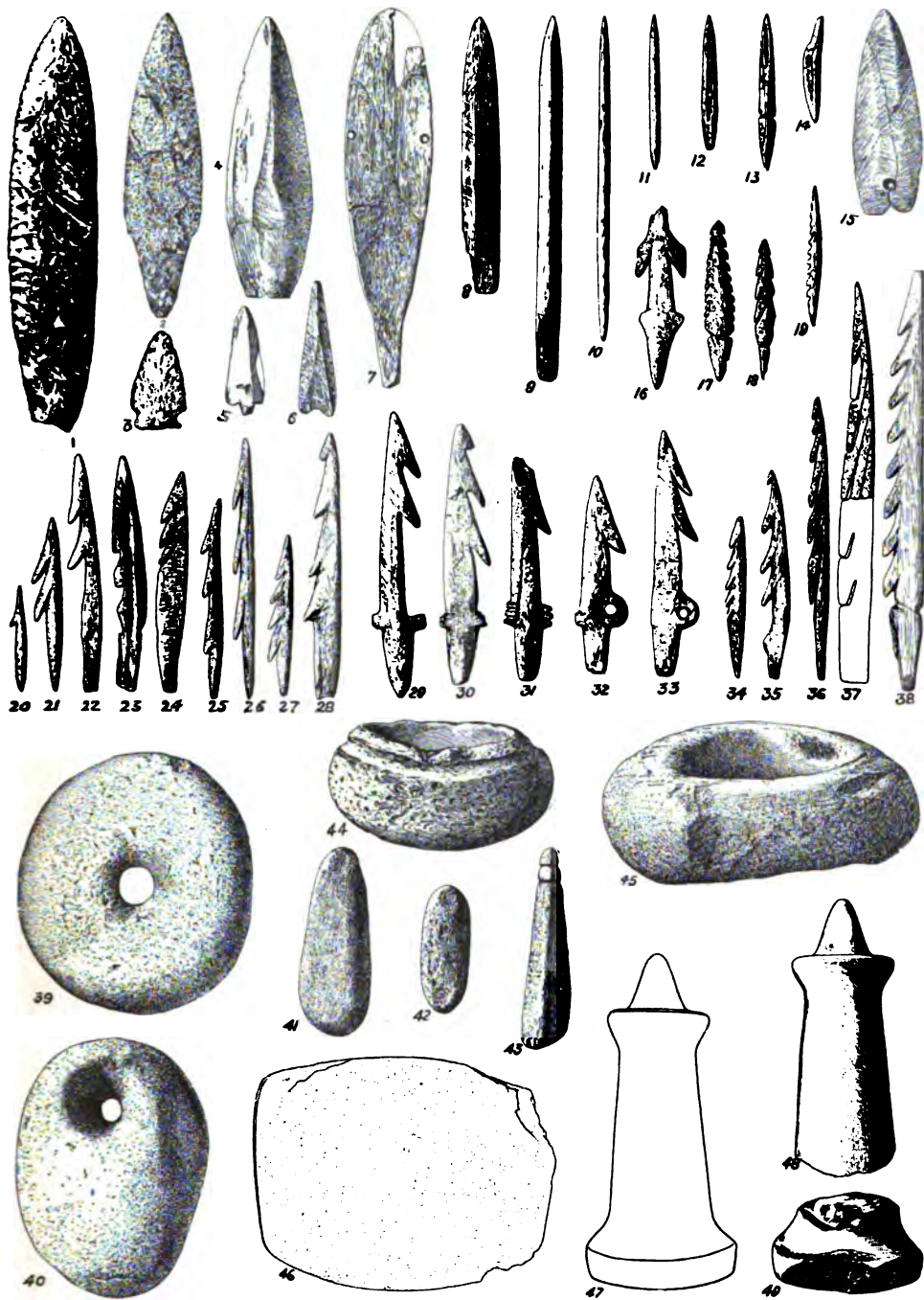
Two distinct types of human skeletons were found above a depth of 6 ft., and most frequently in the northern inland slope of the heap. The first type, of which the greater number were secured, had a skull resembling in shape those found at Port Hammond. The other type, with very narrow forehead, seems to be artificially deformed by lateral pressure.

The shell-heaps of the Lower Fraser River seem to have certain peculiarities of their own, and vary in detail not only from most of the shell-heaps of the coast region, but also from those of the delta areas of the Stillaguamish and Skagit Rivers. The objects secured from the former are more numerous and of a higher artistic value than those found in the coast shell-heaps, or even in those of the other deltas. Human skeletons are frequently found in the shell-heaps of the Lower Fraser. They are rarely met with in the coast shell-heaps, and are only occasionally found in the shell-heaps of the Skagit and Stillaguamish deltas.

On the whole, the difference in character between the delta shell-heaps and those of the coast seems to be due to the blackness of the surrounding soil, poor drainage and the dissimilarity between the mode of life of a delta and that of a seacoast people. The more frequent occurrence of skeletons is an unsolved problem, since the scarcity of cairn-burials is common to the immediate neighborhood of both the Lower Fraser River, where skeletons are found in the shell-heaps, and to the northern part of Vancouver Island, where they are absent from the shell-heaps. The difference between the various delta shell-heaps seems to be due to the fact that the culture of the inhabitants of the Lower Fraser River was more highly developed than that of the inhabitants of other parts of the coast, probably on account of a more favorable environment and a location where intercourse between the tribes of different cultures was greater than in neighboring regions.

There is no apparent difference in the character of the specimens found in the upper and in the lower layers. The general style of the objects is similar to those made by the present tribes of the coast. Several exquisite specimens of stone and bone carvings were discovered which rival in artistic merit the best sculptures of the existing natives.

The implements most commonly found are points chipped from stone or ground from slate or bone and used for arrows, knives, harpoons, or spears; stone pestles or hammers; mortars of stone; fish-knives rubbed out of slate; wedges made of antler; celts of stone; celt-handles made of antler; whetstones or grinding stones; awls



IMPLEMENTS FROM PORT HAMMOND AND EBURNE, FRASER RIVER, BRITISH COLUMBIA: 1-3, CHIPPED POINTS FROM MAIN SHELL-HEAP AT EBURNE—(1) WHITISH CHERT, (2) BLACK TRAP, (3) CRYSTALLINE QUARTZ; 4-6, GROUND POINTS—(4) OF SLATE FROM SURFACE NEAR MAIN SHELL-HEAP, (5) MICA SCHIST, (6) SLATE FROM MAIN SHELL-HEAP; 7, BONE OBJECT MAIN SHELL-HEAP; 8-9, BONE POINT FROM MAIN SHELL-HEAP; 10-14, BONE BARB POINTS, OR AWLS; 15-18, BONE POINTS; 19-20, BONE HARPOON POINTS; 21-22, BONE POINTS; 23, BONE HARPOON POINT; 24-28, BONE HARPOON POINTS; 29-33, BONE HARPOON POINTS WITH GUARDS; 34-38, BONE HARPOON POINTS; 39-40, PERFORATED STONES; 41-42, STONES SHOWING PECKED PITS; 43, STONE SINKER (?); 44, MORTAR MADE OF LAVA; 45, MORTAR MADE OF SANDSTONE; 46, FISH KNIFE MADE OF SLATE; 47, A RECONSTRUCTED PESTLE OF THE LOWER FRASER VALLEY; 48-49, PARTS OF PESTLES.

and needles of bone ; and engraved and carved objects made of bone and stone.

The finds indicate that the prehistoric people whose remains are found in these shell-heaps had a culture resembling in most of its features that of the present natives of the Fraser Delta. They subsisted to a great extent on fish, which were caught by means of hooks and harpoons resembling in form the corresponding modern devices of the region. Large sea-mammals were hunted with retrieving-harpoons, upon whose manufacture much care was bestowed, some of them exhibiting highly artistic designs. Shell-fish constituted an important part of the diet of the people. They hunted on the mountains and probably utilized the meat and horn of the mountain goat. Deer and elk were eaten, and their bones and antlers used for many purposes. Dogs were probably used in hunting. Skins of animals were prepared and served as garments. There is no evidence that the hair of goats or dogs was spun and used for weaving, as has been done in modern times. The people were workers in wood. They used wedges and chisels for splitting and hewing planks. The frequency of these implements indicates that woodworking was no less important in their economy than it is among the modern Indians. No indication as to the character of their habitations has been found. Possibly some of the small knolls may be the piles of refuse thrown near houses. The presumption seems justifiable that they lived in houses made of cedar-planks. They must have had canoes. Shredded cedar-bark was used for a variety of purposes, among others probably for clothing. It was shredded with the same kind of implements as are used at the present time. Possibly mats like those used by the present natives of the region were made by sewing together cat-tail stalks. This is suggested by the flat needles made of bone.

There are, however, some points of difference between the people of the past and those of the present. First of all, the physical type of part of these people differed very much from that of the modern Indians, while another part seems to have been of the same type. Professor Franz Boas describes these two types as follows:—

“The one type is characterized by a narrow head, the narrowness of which was emphasized by lateral pressure, with a marked median ridge on the forehead, narrow and high nose, and rather narrow face, the other, by a wide head (produced partly by anteroposterior pressure) and a wide face.”

Differences in culture may also be noticed. Among the natives of the coast of British Columbia the art of chipping points was not practiced. Isolated specimens of chipped stones are found along the coast, but they are frequent only on the Fraser River and at Saanich on Vancouver Island, where many of them resemble both in shape and material those of the Thompson River region. The chipped points of Puget Sound and of the west coast of Washington are, on the whole, more similar to the chipped points of Columbia River.

These chipped points, the peculiar pipe, which occurs also at Saanich, and the geometrical designs before described,—all point to a close affiliation of the early culture of this region with that of the interior of British Columbia. Some classes of objects that are frequent in the archæological finds of the interior do not occur in the shell-mounds of Fraser River. No drills chipped from stone were found, unless some of the narrower specimens described as arrow-points served that purpose. Some of the more irregular chipped points may have been used as carving-knives, but no other such knives were seen. Pairs of half-cylinders of sandstone for smoothing and straightening arrow-shafts were not found. Beaver-teeth or woodchuck-teeth made into dice, which are now used both in the interior and on the coast, were not found. No objects were found buried with the skeletons, as is the case in the Thompson River region and in modern burials in the Fraser River Delta.

The coincidence of the similarity of culture of the prehistoric people of the Fraser Delta and of Saanich with the distribution of languages at the present time is quite striking. The Salish languages reach the coast on the Gulf of Georgia and southward as far as Shoalwater Bay. Their dialects are distributed in such a way that in the same latitude the same dialect is spoken east and west of the Gulf of Georgia. Vancouver Island and the parts of the mainland just opposite must therefore have had a common history, and this is also borne out by the finds at Saanich and on the Lower Fraser River.

It would seem, therefore, that we have here very good evidence of a close connection between the interior and the coast in prehistoric times, much closer than in later periods. It is probable that at an early time a migration took place from the interior to the coast and Vancouver Island. This migration carried the art of stone-chipping, pipes and decorative art, to the coast.

It should be mentioned in this connection that the most highly developed type of Northwest-coast art never extended south of Comox, and never reached the west coast of Vancouver Island. Although more realistic than the decorative art of the interior, the modern art of the region south of Comox and along the west coast of Vancouver Island is crude, as compared with that of the more northern regions.

A few specimens point at similarities between the prehistoric people of the Fraser Delta and those of the north. The most striking is the occurrence of the labret, which in historic times was not found south of Milbank Sound.

The migration referred to before may account for certain changes in ethnological customs, such as the rapid modification of the method of burial on the southeastern part of Vancouver Island. The earliest known kind of burial, and the one that is known to have antedated contact with the whites by a considerable period, was in stone cairns.*

*Smith and Fowle, *Cairns, Memoirs of the Am. Mus. Nat. Hist.*, Vol. IV, Part II.

Later, and even since contact with the whites, the bodies were placed in wooden chests, which were deposited on the ground, in the branches of trees, in caves, or on little islands. A canoe was sometimes used instead of a box.

The fact that skeletons were found in shell-heaps indicates that the customs of this people must have differed from those of the people who made the shell-heaps on northern Vancouver Island in which skeletons have not been found.

We may sum up the results of our inquiries by saying that the culture of the ancient people who discarded the shells forming these heaps was in all essential particulars similar to that of the tribes at present inhabiting the same area, but that it was under a much stronger influence from the interior than is found at the present time.

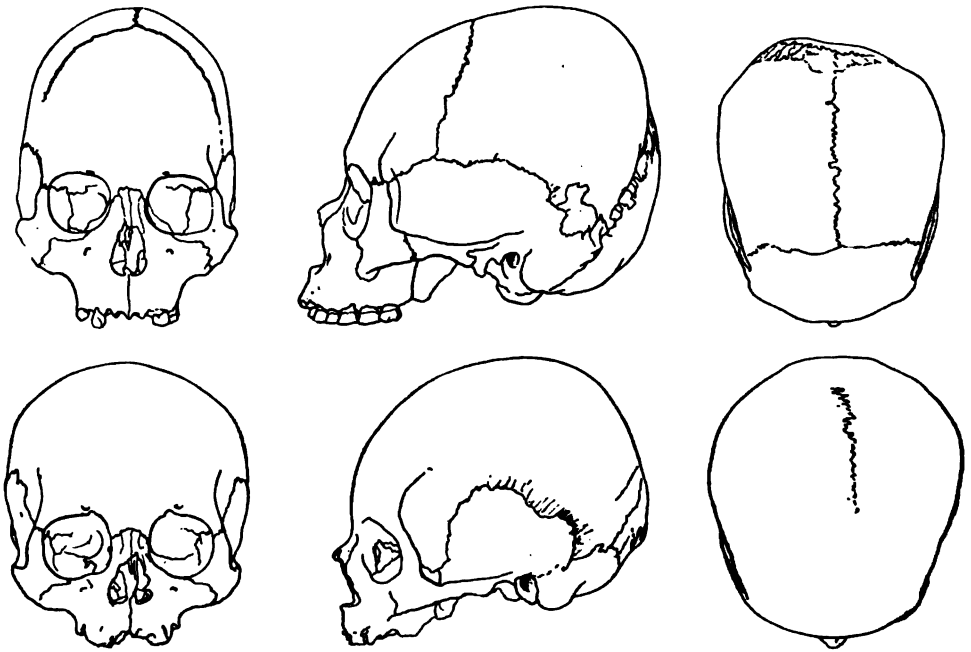


FIG. 60 (15114 1775). TYPES OF SKULLS FROM SHELL-MOUNDS AT EBURNE :
 ABOVE, THREE VIEWS OF NARROW TYPE OF SKULL ;
 BELOW, THREE VIEWS OF BROAD TYPE.

EDITORIAL NOTES

EGYPT:—A recently discovered papyrus, according to the *London Chronicle*, was a contract between a shorthand teacher and a man who wished one of his slaves to acquire the art. The fee was 120 drachmæ, 40 to be paid on apprenticeship, 40 at the end of the year, and the balance when the slave was proficient. Shorthand writing was then presumably not so easy of attainment as it is now. Among the other documents of the Oxyrhynchus Papyri is the account of a fatal accident, and the body of the victim being examined by the coroner of the day, in company with a public physician. This dates back to the II Century of our era, in which, judging by other discoveries, the formal invitations to dinner might be literal renderings of ours at the present time.

Among the old manuscripts and documents which have been brought to light recently are the following: Remnants of a drama of Sophocles, hitherto entirely unknown, named *Achaliou Syllogoi*, have been found in a papyrus collection brought to the British Museum. Arrangements for its early publication have been made. The extracts are not large, but enough to show the character of the book. Considerably more extensive are the portions found of the *Protrepdikon* of Aristotle, which also had hitherto been known only by its title, these remains having been discovered in the papyrus storehouse unearthed by Grenfell and Hunt in Oxyrhynchus in Lower Egypt. Ninety lines have been found of 2 odes, one a Partheneion, by Pindar, and the other the argument of a drama named *Dionysalexandros*, by Cratinus, on the subject of Paris of the Trojan War. A very important Latin manuscript from the same collection is an epitome of Livy, Books 37-40 and 48-55. Such Latin papyri are very rare, and this covers 8 books that were lost. The period covered is from 150 to 137 B. C. There has also been found a part of the *Medea* of Neophon, which is of historical importance because it was originally written for the contest that won the prize for the drama of the same title by Euripides.

A whole collection of Egyptian peasants' letters, written in Greek and ascribed to the III Century, were recently brought from Egypt to Florence. They are of special importance for the study of the agricultural conditions in the Nile Valley, and supplement in a most satisfactory manner the letters discovered some months ago and published in England, being the work of the Roman Planter, Lucius Bellenus Gemellus, about 100 A. D. These are of value in explaining the Alexandrian Greek of the New Testament. Thus in

the last find the word *kamelikos*, meaning *carried by a camel*, explains the meaning of *onikos*, *drawn by an ass*, in Mark 12 : 42.

AFRICA:—TRIPOLI—M. de Mathuisieulx has recently returned to Paris from a journey of exploration in Tripoli. In 1901 the explorer obtained permission, rarely given by the Turkish authorities, to travel through that little-known country in order to collect information on its natural products and geological structure as well as upon its ancient monuments and racial types. M. de Mathuisieulx made an interesting report on the subject to the Minister of Public Instruction, and it was to complete his observations that he again visited Tripoli in the spring of 1903. He first made a careful study of the ruins at Sabratha, about 60 miles through Tripoli, and a considerable port under the Phœnicians. From Sabratha M. de Mathuisieulx traveled south to the Djebel Mountain, where he was able to establish the fact that the celebrated Roman road from Gabes to Lebda passed not by Ghadames, as has been for so long supposed, but over an elevated plateau in the district. The traveler noted that in this neighborhood the ruins of various temples and mausoleums are disappearing, as the inhabitants use the stones to build their houses. At Gherza, 70 miles to the south of Misda, the mission visited other ruins belonging to the Byzantine period. Copies were taken of numerous inscriptions and bas-reliefs of considerable archæological interest. At Orfela and in the valley of Nefed mausoleums of a style of architecture peculiar to this part of Africa were discovered. They were of ancient date and displayed an unusual wealth of detail. In this case the monuments had been respected by the inhabitants, who were, indeed, of too nomadic a character to have recourse to building material of such a nature. In addition to his archæological researches, M. de Mathuisieulx made an ethnographical study of the native negro.

EUROPE:—CRETE—Miss Harriet Boyd, the most celebrated woman who has undertaken field explorations, in a recent letter gives an account of the excavations she carried on in Crete during 1903.

The Bronze Age was the Golden Age of Cretan history, the age which Homer described in the *Odyssey*. And the Gournia that Miss Boyd has caused to be added to one of the new maps of Crete was probably the 90 cities to which he referred.

The archæological value of Miss Boyd's work in Crete can therefore scarcely be overestimated. When, on May 22, 1901, she sent to the American Exploration Society, which is supporting her expedition, a telegram saying: "Discovered Gournia, Mycenæan site, streets, houses, pottery, bronzes, stone jars," scholars recognized the fact that a city of which absolutely no record anywhere exists had come to light.

The discovery of which this telegram gave news to the world came almost at the end of the 1901 expedition. It was not until her return to Crete last spring that Miss Boyd was able fully to realize the wonders of the work she had found to do. Then, in company

with Miss Moffat, she settled down again to investigate her Bronze Age city. The story of this past year's labor, as she herself tells it, is full of color and interest. The following is from her letter:

We found the excavations in excellent order, after 2 years under the watchful guardianship of an old peasant employed by the Cretan Government. Nature had, in fact, clothed the dump heaps with such myriads of flowers during our absence and so filled the crannies of the old walls with bright poppies and daisies that our little town on the hill had a far more cheerful look than when we left it.

We began work on March 30, at the south end of the imposing building that I have called the palace, cleared an outer and an inner court, a well preserved hall and 2 stairways, making the plan of the ground floor complete and finding it to resemble in many ways the contemporary palaces at Knossos and Phæstos.

This building has absolutely nothing in common with the classical Greek house. The plan is roughly a square, measuring 130 by 130 ft.

The land slopes down toward the west, where there is a set of storerooms below the level of the central hall. On the east side only the bare rock remains between the hall and the outer wall, showing that all the rooms in this part of the palace were on a second floor level and have been completely destroyed by wind and rain.

The entrance to the palace is from the south, and there are broad steps on which the people could sit, warming themselves in the sun and watching what went on before them in the open court, which may have served the town as a market place. Ascending the steps, which are arranged at right angles to each other, as in other palaces of the time, we enter over a large threshold, follow a corridor paved with flagstones, cross the central court and reach the main hall through a portico composed of square and round columns alternating.

The hall is square. In one corner is a recess, having a column in front and seats on the other 3 sides, reserved, I fancy, for the lord of the manor. A private stairway led to the more important rooms, on the second floor of which, alas, nothing remains save the debris of stone flooring and burned beams that choked the hall below.

On the eastern slope of the low acropolis we uncovered a new quarter of the town, a block of houses bounded by paved streets. A new street which connects the valley road with the top of the hill here rises by 20 steps, like the streets of Naples.

The houses are built flush with the road and close together. They are of about equal size, and although small are well built, on quite the modern plan of cellar, ground floor and upper floor.

To be sure, these 3 stories are not there today, but there is ample evidence of their former existence. My theory of the town, which is really quite modern in its aspect, is that it was probably attacked by an enemy, pillaged, burned and deserted.

Besides, the small palace already described, made in part of well

trimmed blocks of stone, beautifully fitted together, and the 40 or so houses, we have excavated a shrine with idols.

Last season was not without its very important new discoveries ; for we then found our first tablet, inscribed with the prehistoric characters made familiar to archæologists in the last 4 years by the excavations at Knossos and Aghia Tridha. These characters are still illegible, but we may at any time find a bi-lingual with Egyptian hieroglyphs as the counterscript, and if that happens a wholly new and very important chapter of European history will be read. At present our single tablet establishes the fact that the provincials of Gournia were not all illiterates, and it is an important clue for dating.

Other evidence for dating is given by the pottery, and in this class of finds we were especially lucky last year. A stirrup-cup decorated with 2 sprawling cuttlefish, and a set of 8 drinking horns bearing plant and semi-conventional designs, take high rank among the prehistoric pottery thus far discovered in the Ægean.

This pottery, by the way, is very poorly represented in the museums of western Europe and America, because the excavations yielding it have almost all been made during the period when the export of antiquities was forbidden. Within the last month, however, a law has been passed permitting duplicates of important finds to be carried out of the country.

By this permission the University of Pennsylvania will ere long receive, as a result of our excavations, a very valuable and absolutely unique set of vases and tools of the Bronze Age. The Boston Art Museum has not a single example of Minoan pottery—the ware of the time of King Minos of labyrinth fame. Persons seeing this pottery for the first time are often struck by its resemblance to the Japanese, but it is absolutely unlike classical Greek pottery.

When exhumed it's almost always, of course, very far from perfect. The stirrup-jug was put together by Aristides out of 86 fragments, a task requiring delicacy of hand, precision and very great patience.

About a dozen girls are employed all the time by us, washing the fragments of pottery, which often have dirt half an inch thick on them when they are turned up in the digging. Sixty of our men do nothing but carry earth and stone, and 14 more skillful ones use the pickax and knife in getting out the vases.

The money for the excavations carried on in 1901 was furnished by Mrs. Cornelius Stevenson, Mr. Charles Cramp and Mr. Calvin Wells, of Philadelphia. The funds for the excavations she is now carrying on were given by Mrs. Samuel Houston and Mr. Calvin Wells, of Philadelphia.

Miss Boyd has just returned to Crete where she will continue, as formerly, overseeing the excavations from 6 o'clock in the morning until nearly 6 in the evening, encouraging and directing the workmen. Although the expense of the undertaking is about \$250 a week, the results have fully justified the expenditure.



MOUND IN THE PARK, KALAMAZOO, MICHIGAN

NORTH AMERICA:—UNITED STATES—*Prehistoric Remains in Michigan*—It is well known to many interested in the preservation of prehistoric remains in the United States, that Michigan possesses many mounds and earth-works of unique interest. Mr. Harlan I. Smith, of the American Museum of Natural History, has been a most devoted champion of the movement to preserve from further despoliation some of the more notable of Michigan's historic monuments. In this he is ably seconded by George M. Bates, Esq., of Detroit, the President of the Detroit Branch of the Archæological Society of America.

Several attempts have been made to secure such State legislation as will enable these prehistoric monuments to be preserved through the creation of parks. In the above illustration we have an example of the preservation of one, which will be for all time a reminder to students of history of the work of the aborigines of that locality.

The State of Ohio was the pioneer in the movement to preserve the monuments of the aborigines of the United States. The Great Serpent Mound, which is one of the most notable of the earth-works of the Mississippi Valley and its tributaries, and Fort Ancient are notable examples of what can be done by State Archæological Societies. The same good results could be accomplished in several of the

other States. Mr. Harlan I. Smith is of the opinion, and many citizens of Michigan agree with him, that a prehistoric earth-work in Ogemaw County, Michigan, is in danger of being destroyed, and that in order to preserve it, the land on which it is located should be purchased and made into a public park, either under the auspices of the State or of some society. A special act could then be passed by the State Legislature exempting it and all similar parks enclosing prehistoric works, which are not held for profit, from taxation.

This earth-work encloses a nearly circular area about 200 ft. in diameter. The embankment is over 2 ft. in height. Outside of it is a ditch over 2 ft. deep, from which the earth may have been taken to form the wall. There are 3 openings in the embankment with corresponding interruptions in the ditch. These were probably entrances into the Fort. It is located in a lumbered tract of wild land within 4 miles, south and west of West Branch, in Ogemaw County, Michigan.

A loggers' road about 6 ft. wide, winding through the country, crosses the embankment and reduces it somewhat. The ditch has been filled with logs where the road crosses. The road being narrow has only damaged a slight part of the entire work.

Mr. Smith says that when he visited the earth-work in 1901 men were engaged in cutting a roadway, which would replace the loggers' road. He also states that there are at least 4 similar earth-works along the Rifle River and that it would be most desirable to secure the most perfect one of these that can be purchased for a reasonable sum and not wait until danger threatens it.

It seems very strange that wealthy men should not be willing to purchase such sites and hold them until either the State or some society could make provision for their permanent preservation. We believe that there are many men in Michigan who, if appealed to, would be willing to do this. Of course it requires time to bring these matters to the attention of those who are able to respond. But each monument thus preserved for the future becomes a monument to its protectors.

Another example of the despoliation of such mounds is reported from Racine, Wisconsin. The Teegarden Indian Mounds, which are among the finest in the State, have been destroyed by the farmers, who took the earth of which the mounds were built to grade a road near by. The Wisconsin Archæological Society is accomplishing much in their efforts to preserve the mounds and antiquities of the State, but they must have the support of the people in general to be successful in this work.

The mounds and other earth-works in Michigan and Wisconsin indicate a considerable prehistoric population known as the Mound Builders. Their monuments are found from Georgia to the Mississippi Valley and from the Gulf of Mexico to the Great Lakes. Michigan is to be congratulated on having one of her sons, Mr. Smith, now a distinguished archæologist, devote so much of his busy life to the preservation of her prehistoric monuments.

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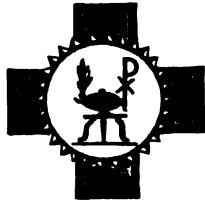


PANORAMIC VIEW SHOWING THE RUINS OF PUEBLO BONITO FROM THE NORTHWEST. IT IS ESTIMATED THAT THERE WERE 2200 ROOMS IN THIS PUEBLO. THE HYDE EXPEDITION OF THE AMERICAN MUSEUM OF NATURAL HISTORY OF NEW YORK, CONDUCTED EXPLORATIONS HERE FOR SEVERAL YEARS. PHOTO BY DR. BAUM



RECORDS ^{OF} THE PAST

VOL. III



PART IV

APRIL, 1904



PENDING LEGISLATION FOR THE PROTECTION OF ANTIQUITIES ON THE PUBLIC DOMAIN

BY REV. HENRY MASON BAUM, D. C. L.

NATIONAL legislation for the protection of antiquities within the territorial limits of the United States, is a matter that has been under consideration for many years by all who have been engaged in the work of historical research and exploration. Resolutions have been passed from time to time by several of the scientific societies of the United States in favor of National preservation of aboriginal monuments, ruins and remains on the Public Domain. Several bills have been introduced in Congress providing for such preservation, but have failed of securing consideration outside of the committees to which they were referred. Doubtless this has been largely due to a want of concerted action on the part of those responsible for placing before Congress the reasons and necessity for such legislation. The matter is one in which our educational institutions are chiefly concerned.

The Archæological Institute of America, maintained largely by contributions raised by the universities and colleges of the United States, has from the beginning naturally been interested in the study

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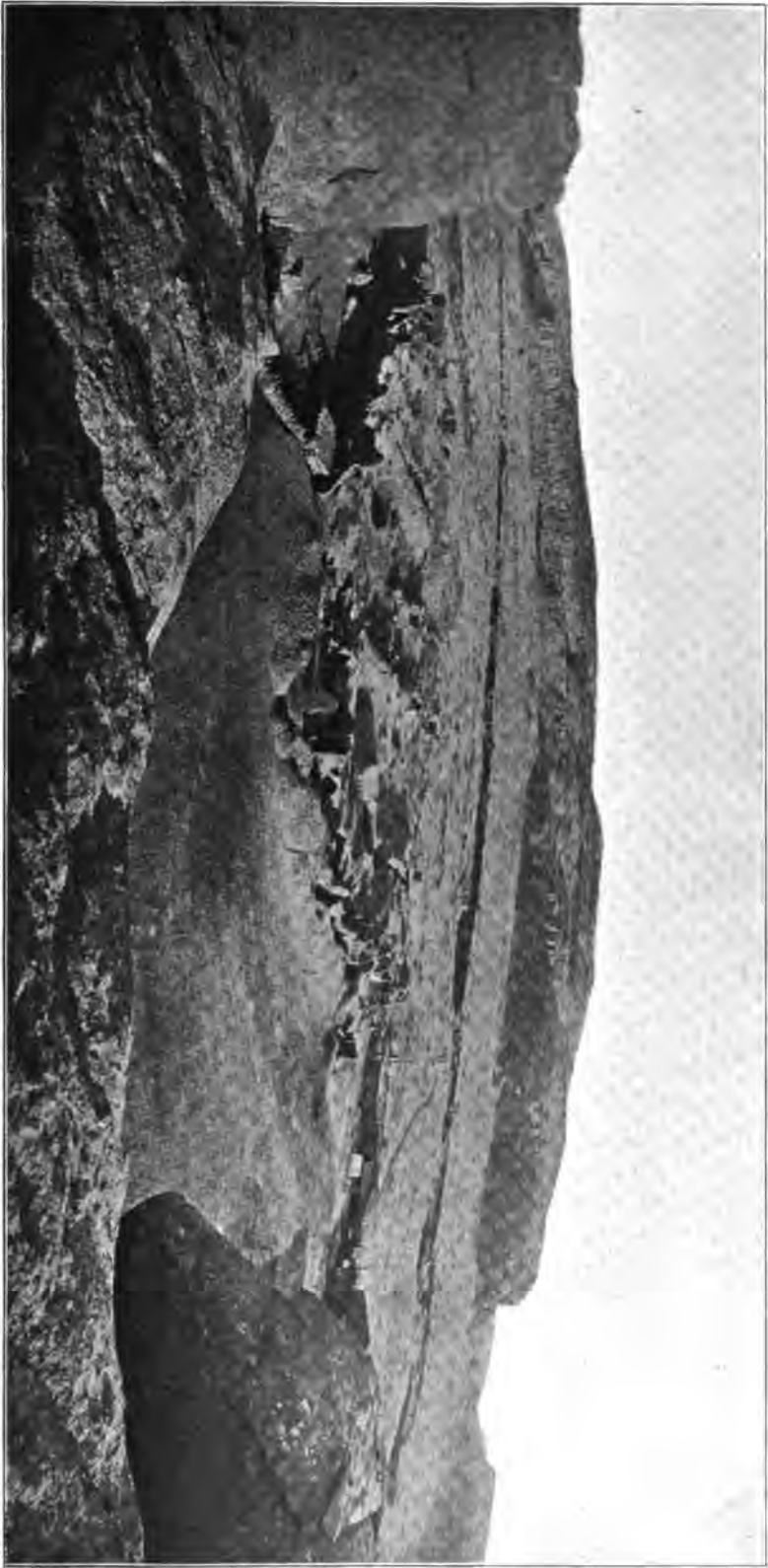
of classical archæology in Greece and Italy, and the work of the Institute, until recently, has been largely done in those classic lands. Now, however, branch societies of the Institute have been organized in different parts of the country, particularly in the West, which are looking after the antiquities in their respective localities.

American travelers in Egypt and Palestine; the visit of the accomplished Egyptologist to this country, the late Miss Edwards, and the establishment of the American branch of the Egypt Exploration Fund, secured the support of Americans for the work of historical research in Egypt. Later the startling discoveries made at Nippur, in Babylonia, by the Babylonian Expedition of the University of Pennsylvania, carrying back civilization to at least 7,000 years B. C., making it necessary to rewrite the early history of the empires of the East, created world-wide interest in the work of historical research. Now we are familiar with the literature and the domestic, commercial and political life of the empires that existed thousands of years before the Christian Era. Consequently we are more familiar with the antiquities of the Eastern than of the Western Hemisphere. Americans of wealth and leisure have, until recently, spent their vacations abroad, and comparatively few of them are acquainted with the scenic beauty of our own country and its remains of prehistoric man.

The work of Professor F. W. Putnam, the Nestor of American archæology, of Squier, Davis, Lapham and many others has proved that the so-called "New World" is not after all so new; that the Western Hemisphere possesses prehistoric monuments and ruins that rival those of the Orient; and that the historian, in writing the story of the life of man, must search the ruins of the West before the continuity of his record will be complete. In fact, more complex conditions of prehistoric life confront the historical student in the West than in the East.

As the spade of the excavator uncovered the ancient landmarks of Italy, Greece, Egypt, Palestine and ancient Babylonia, European governments saw the value of their prehistoric monuments and ruins, and enacted stringent laws for their protection and scientific investigation. The American Republics south of us followed their example, and made provision for the protection of their antiquities. *To-day, our own Country stands alone among the civilized nations of the world, without legislation for the protection of its priceless monuments.* Foreign institutions have sent their representatives here to excavate and carry away our historic treasures. Of course, we should welcome the scientific men of foreign countries to investigate our prehistoric monuments and ruins and permit them to retain some of the archæological treasures recovered, but it should be done under government permits and supervision, and a record should be left of their work and of whatever they are permitted to take back with them. This, and much more, they exact from us.

But this is the least of our misfortunes. Years ago a spirit of vandalism seized the tourist and he began digging for pottery and



PANORAMIC VIEW OF PUEBLO BONITO ABOUT 600 FT. ABOVE THE RUINS. THE PHOTOGRAPH MADE AT THIS ELEVATION SHOWS A CURVATURE IN THE FLOOR OF THE CANYON, WHICH IS ABOUT A MILE WIDE. ABOUT 500 YARDS TO THE RIGHT OF THIS RUIN IS ANOTHER EXTENSIVE RUIN. PHOTO BY DR. BAUM

implements to decorate his home. This led to excavating for commercial purposes. Now, even the Indians are digging for pottery, etc., in ruins, which a few years ago they avoided on account of their superstitions. Many of the most promising ruins have been invaded and hundreds of them have been despoiled by the commercial excavator and tourist. It must be remembered that every ruin thus disturbed has had the continuity of prehistoric life lived in it broken, and thus rendered useless for scientific investigation.

The tourists and commercial vandals are not alone guilty of partially excavating ruins for their most valuable treasures. The Smithsonian and other institutions have opened ruins and taken what they wanted and then deserted them. A complete scientific investigation and exploration of any one ruin or group of ruins is the exception. It is for this reason that the Interior Department must take absolute control of all antiquities and authorize excavations only by special permits, and require the complete exploration and examination of each ruin or site. Then, and not until then, will we have records that will be of value to present and future students of prehistoric life in the Western Hemisphere. The Smithsonian and other institutions and the great museums of our country have now thoroughly trained archæologists and excavators, who are able to conduct excavations and explorations as they should be, and thus make collections with a record of the conditions under which they were recovered that will be of inestimable value for present and future use.

One of the most interesting and valuable exhibits at the recent Pan-American Exposition was that of the remains of a village site excavated in Ohio by that skillful archæologist, Professor Mills, the Curator of the Museum of the Ohio State Archæological and Historical Society. The story of the community life in this ancient village site could be read at a glance by the layman, while the material was at hand for the scientific student to study in greater detail.

The demand for immediate legislation is very great. Unless some bill is passed for the protection of the ruins of the Southwest during the present session, the coming summer will witness the despoliation of many ruins, the scientific value of which will be lost forever. There is no reason why Congress should not take action at once. The bill introduced by Mr. Rodenberg and endorsed by the great Educational Institutions, Museums, Archæological and Historical Societies of our country does not involve any expense to the Government.

In order to expedite and secure data for such legislation it became necessary for RECORDS OF THE PAST EXPLORATION SOCIETY to investigate the mounds of the Mississippi Valley and the Pueblo and Cliff Ruins of the Southwest, which was done during the summer of 1902. In the Southwest the more important localities of Southern Colorado, Utah, Arizona and New Mexico were visited. I found hundreds of ruins in which desultory excavations had been made; in some cases homestead pre-emptions had been made, embracing extensive ruins

evidently to excavate for commercial purposes. In April of last year I learned from private sources that several parties had planned to visit, during the summer, the Canyons del Muerto and de Chelly and their tributaries in Southeastern Arizona for the purpose of excavating for private and commercial purposes. I called at once on Mr. Hitchcock, the Secretary of the Interior, and laid the facts before him, and within a month a custodian was placed in charge of the antiquities of these Canyons, which contain over 300 Pueblo and Cliff ruins of great interest and value to science. Considerable injury had already been done by excavating in some of the ruins. These Canyons of unrivaled scenic beauty and grandeur should certainly be made a National Park. There are not 500 acres of arable land in the Canyons, so that from an agricultural point of view there would be no loss to the Government.

Last winter this Society determined to secure the passage of a bill which would protect the ruins on the Government Domain from further despoliation and regulate excavations in them. For that purpose a bill was drafted with a view of its being fair to all the educational interests of the United States. The Hon. William A. Rodenberg, of Illinois, who is deeply interested in the subject, and lives within four miles of the largest prehistoric monument in the Western Hemisphere—the Great Cahokia Mound—was appropriately asked to introduce the bill in the House of Representatives, which he cheerfully did. In order that Congress might have an expression of opinion regarding the necessity for legislation and the merits of the bill introduced by him, copies of it with a letter, which we print below, in connection with the text of the bill, was sent to every University, College, Museum, Archæological and Historical Society in the United States.

We are only able to give here a few of the replies. Nothing could be fairer than the course pursued by Mr. Rodenberg in this matter. In addition, a petition was circulated by this Society among the prominent citizens of the United States, which has been filed with the Committee on Public Lands. *The question is now whether Congress will afford the relief asked for.*

It contains all that the various institutions of this country, concerned in the protection and investigation of our antiquities, ask for, until Congress is ready to make an appropriation for an archæological survey of antiquities on the Public Domain for the purpose of determining what ruins or groups of ruins should be made Reservations or National Parks.

58TH CONGRESS, 2D SESSION. H. R. 13349.

IN THE HOUSE OF REPRESENTATIVES.

MARCH 2, 1904.

Mr. RODENBERG introduced the following bill; which was referred to the Committee on the Public Lands and ordered to be printed:

A BILL

For the preservation of historic and prehistoric ruins, monuments,

archæological objects, and their antiquities, and to prevent their counterfeiting.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of preserving and protecting from wanton despoliation the historic and prehistoric ruins, monuments, archæological objects and other antiquities, and the work of the American aborigines on the public lands of the United States, all said historic and prehistoric ruins, monuments, archæological objects, and other antiquities are hereby placed in the care and custody of the Secretary of the Interior with authority to grant permits to persons, whom he may deem properly qualified, to examine, excavate, and collect antiquities in the same: *Provided, however,* That the work of such persons to whom permits may be granted by the Secretary of the Interior is undertaken for the benefit of some incorporated public museum, university, college, scientific society, or educational institution, either foreign or domestic, for the purpose of increasing and advancing the knowledge of historical, archæological, anthropological, or ethnological science.

SEC. 2. That it shall be the duty of the Secretary of the Interior to recommend to Congress from time to time such ruins or groups of ruins as in his judgment should be made national reservations. The Secretary of the Interior shall appoint custodians, and provide for their compensation, of such ruins or groups of ruins, with the view to their protection and preservation, and it shall be the duty of such custodians to prohibit and prevent unauthorized and unlawful excavations thereof or the removing therefrom of antiquities until such time as Congress shall provide for their reservation.

SEC. 3. That isolated ruins shall be withheld from homestead pre-emption until they have been excavated by some institution named in section one of this Act in accordance with the rules promulgated by the Secretary of the Interior hereinafter provided for.

SEC. 4. That it shall be the duty of the Secretary of the Interior to grant to any State or Territorial museum or university having connected therewith a public museum permits to excavate and explore any ruin or site located within its territorial limits on the public lands upon application for such permit being indorsed by the governor of the State or Territory wherein the applicant is domiciled.

SEC. 5. That the Secretary of the Interior is hereby authorized to grant permits for the purposes set forth in the foregoing sections to foreign national museums, universities, or scientific societies engaged in advancing the knowledge of historical, archæological, anthropological, or ethnological science under such regulations as he may deem advisable, and shall make such division of the antiquities recovered as in his judgment seems equitable, and the antiquities retained in this country shall be deposited in the United States National Museum, in the first instance, or in some public museum in the State or Territory within which explorations are made.



PANORAMIC VIEW OF A LARGE PUEBLO RUIN 2 MILES ABOVE PUEBLO BONITO. SIMILAR RUINS ARE ON BOTH SIDES OF THE CANYON FOR A DISTANCE OF 12 MILES. PHOTO BY DR. BAUM

SEC. 6. That permits granted to any institution or society shall state the site or locality in which excavations or investigations are to be conducted, and shall require that the work begin within a reasonable time after the permit has been granted, and that the work shall be continuous until such excavations have been satisfactorily completed in the judgment of the Secretary of the Interior. And that any failure to comply with such requirements shall be deemed a forfeiture of the permit, and all antiquities gathered from such ruin or site shall revert to the United States National Museum, or to such State or Territorial institution as the Secretary of the Interior shall designate.

SEC. 7. That of all excavations and explorations made under a permit granted by the Secretary of the Interior a complete photographic record shall be made of the progress of the said excavations and of all objects of archæological or historical value found therein, and duplicate photographs, together with a full report on the excavations thereof, shall be deposited in the United States National Museum.

SEC. 8. That the forgery or counterfeiting of any archæological object which derives value from its antiquity, or making of any such object, whether copied from an original or not, representing the same to be original and genuine with intent to deceive, or uttering of any such objects by sale or exchange or otherwise, or having possession of any such objects with intent to utter the same as original and genuine is hereby declared to be a misdemeanor.

SEC. 9. That it shall be the duty of the Secretary of the Interior to make and publish from time to time such rules and regulations as he shall deem expedient and necessary for the purpose of carrying out the provisions of this Act.

SEC. 10. That any person who shall excavate, disturb, willfully destroy, alter, deface, mutilate, injure, or carry away, without authority from the Secretary of the Interior as aforesaid, any aboriginal antiquity on the public lands of the United States, or who knowingly and intentionally conducts, enters into, aids, abets, or participates in any manner whatever, in any excavations or gatherings or archæological objects or other antiquities on the public lands of the United States, or shall violate any of the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by fine not exceeding one thousand dollars or by imprisonment not exceeding one year, or both.

HOUSE OF REPRESENTATIVES.

WASHINGTON, D. C., March 5, 1904.

DEAR SIR:—Enclosed herewith is a copy of the bill introduced by me on the 2d inst. for the preservation of antiquities, etc., on Government Lands, to which I wish you would give your careful consideration. I introduced the bill at the request of RECORDS OF THE PAST EXPLORATION SOCIETY, of this City. If the bill meets with your approval I will be glad to have you write at once to the Committee having the bill in charge, addressing your letter to the Committee on Public Lands,

House of Representatives, Washington, D. C. The following are the members of the Committee: Hon. John F. Lacey, Chairman; Hon. Frank W. Mondell; Hon. James M. Miller; Hon. James C. Needham; Hon. Eben W. Martin; Hon. Joseph W. Fordney; Hon. Andrew J. Volstead; Hon. Joseph M. Dixon; Hon. Philip Knopf; Hon. George Shiras, 3d; Hon. John J. McCarthy; Hon. Francis M. Griffith; Hon. John L. Burnett; Hon. George P. Foster; Hon. William W. Rucker; Hon. Carter Glass; Hon. Bernard S. Rodey and John Lind.

I shall also be glad to receive any suggestions you care to make by way of amendment to the bill to render it more effective. The bill has been drawn with the view of being absolutely fair to the various Museums, Educational Institutions and Scientific Societies of this country, all of which are equally interested in preserving the antiquities and having the opportunity, when they desire, to make investigations and excavations in behalf of scientific research and for collections in their museums. The Secretary of the Interior is made the custodian of the antiquities because they are on Government Lands, and there can be no doubt but that any reputable institution or society in the United States, upon application to him, will be afforded every opportunity to carry on investigations and excavations. Unless action is taken at once to prevent the despoliation of the remains of the American aborigines by unauthorized persons, in a few years there will be very little left for legitimate exploration and investigation.

Hoping that you will give this matter early consideration, I am,

Very truly yours,

WILLIAM A. RODENBERG.

The following letters were addressed to the Chairman of the House Committee on Public Lands and to Mr. Rodenberg. They have been selected with a view to representing the various institutions concerned in different sections of the country.

From President Wheeler, of the University of California, and Prof. F. W. Putnam, of Harvard University, Curator of the Peabody Museum, Cambridge, and of the Department of Archaeology and Anthropology of the American Museum of Natural History, New York.

UNIVERSITY OF CALIFORNIA, Office of the President, Berkeley,
March 18, 1904.

MY DEAR SIR:—The bill which you have introduced for the preservation of ancient monuments on the public lands of the United States, together with your circular letter relating thereto, has been examined with much interest by the members of the Department of Anthropology of the University of California.

As this department of the University is carrying on archæological and ethnological explorations in various parts of this continent and also in several foreign lands, its officers are necessarily interested in all laws, both domestic and foreign, which relate to the preservation and exploration of ancient monuments and prehistoric sites. It is essential that the United States should have a law, which while protecting its ancient monuments should at the same time permit scientific exploration under proper direction. The bill which you

have introduced is conceived in the proper spirit and to a great extent covers the ground. Of the several bills now before the Senate and the House of Representatives, yours is surely the most satisfactory.

We would, however, suggest that your bill be so amended as to provide for a Commission of at least five persons, to be appointed by the President. This Commission should be made up from among the most competent archæologists of this country, and should have control of the ancient monuments and remains on public lands.

It should be the duty of such a Commission to report to the Honorable Secretary of the Interior in relation to the preservation of certain monuments and ancient sites on the public lands, and the Secretary of the Interior should have the authority and power to reserve such monuments and sites from settlement, and to have them protected.

It should also be in the power of such a Commission to control the explorations of such ancient sites by responsible institutions of learning, under the consent of the Secretary of the Interior. This provision should apply as well to foreign institutions of a similar character.

We would suggest also that the condition in Section 6 concerning "continuous excavations" might in some instances be very hard to satisfy. Also, the complete photographic record required by Section 7, though desirable, would not be possible in every case where satisfactory work is nevertheless accomplished. Very sincerely yours, BENJ. I. WHEELER, President of the University. F. W. PUTNAM, Professor of Anthropology and Director of the Museum of Anthropology.

From Prof. H. V. Hilprecht, Ph. D., LL. D., Director of the Babylonian Expedition at Nippur.

UNIVERSITY OF PENNSYLVANIA, DEPARTMENT OF ARCHAEOLOGY, FREE MUSEUM OF SCIENCE AND ART. Babylonian and General Semitic Section. H. V. Hilprecht, Curator; A. T. Clay, Assistant. Philadelphia, March 28, 1904.

HON. AND DEAR SIR:—Having just heard of the Bill introduced by Hon. William A. Rodenberg for the preservation of antiquities, etc., on Government lands and having been informed of the fact that a Committee having that Bill in charge has been appointed, of which you are the Chairman, I beg leave to express to you my great satisfaction as to this first energetic measure proposed to secure the preservation of antiquities, which are of inestimable value for the final solution of great historical and ethnological problems.

I call it the first step because the Bill refers only to the preservation of antiquities on Government lands. In Turkey, Egypt, Greece and Italy, the law provides for the Government permit for all excavations having in view the examination of ancient sites by pick and shovel in the whole empire. I am particularly glad to see that while the national cause has been fully upheld, foreign scientific institutions are encouraged to do similar work with a prospect of obtaining representative collections from their excavations in this great country.

The generous treatment of the Babylonian Expedition of the University of Pennsylvania, with which I have been connected for 16 years, by the Ottoman Government, which not only granted us the necessary permit for excavations on Turkish territory, but to encourage American scientific institutions in their archæological work, presented us with the remarkable collection of

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ancient Babylonian antiquities at the end of each campaign, illustrates how scientific research is best promoted by strict laws interpreted in a generous spirit after these laws have been obeyed in every way by the excavators first. I therefore endorse the Bill heartily and hope to see the day when California's ancient trees—the only living witnesses of a hoary past—will be protected by the same law. The Bill, if carried, will form a sound basis for a new development of American Archæology in this country, and will benefit science in general in no small degree. Very respectfully, H. V. HILPRECHT.

From Prof. Thomas J. Seymour, President of the Archaeological Institute of America.

ARCHAEOLOGICAL INSTITUTE OF AMERICA, Yale College,
March 26, 1904.

MY DEAR SIR:—The Archæological Institute of America feels very strongly the importance—almost the necessity—of speedy action for the preservation of prehistoric and early historic antiquities in our country. That the people who dwell in regions where most of them are found, should care little for them is not strange. The next generation will wonder at the neglect. The Bill H. R. 13349, introduced by Mr. Rodenberg, seems to me very judicious, and as President of the American Institute of Archæology, I express my strong hope that this Bill may pass. I am very truly yours, THOMAS J. SEYMOUR.

From Hon. Stephen Salisbury, President of the American Antiquarian Society.

AMERICAN ANTIQUARIAN SOCIETY, Worcester, Mass., April
2, 1904.

DEAR SIR:—I write in behalf of the Council of the American Antiquarian Society to inform you that at a meeting held in the rooms of the American Antiquarian Society in Worcester, Mass., April 1, 1904, the Council voted that in their opinion the Bill H. R. 13349, introduced by Hon. William A. Rodenberg, entitled "A Bill for the Preservation of Historic and Prehistoric Ruins, Monuments, Archæological Objects, and other Antiquities, and to Prevent their Counterfeiting," meets with their approval; that it is a measure for the protection of historic and archæological objects belonging to the Government, which is in accord with the purposes for which this Society was created; and the Council of said Society would urge upon the Committee on Public Lands, to whom we understand it has been referred, that the Bill be reported for enactment. Very respectfully yours, STEPHEN SALSBURY, President.

From the Governor of Utah.

STATE OF UTAH, EXECUTIVE OFFICE, SALT LAKE CITY,
12 April, 1904. Dr. Henry Mason Baum, 215 Third Street, S. E., Wash-
ington, D. C.

DEAR SIR:—I have the honor to acknowledge receipt of your letter of the 2nd ultimo, with enclosure as stated, and to inform you that the Bill introduced by Mr. Rodenberg in the House of Representatives, "for the preservation of historic and prehistoric ruins, monuments, archæological objects, and other antiquities, and to prevent their counterfeiting" meets with my cordial approval. I have also communicated with the President of the University of Utah, and am pleased to transmit to you his endorsement of the Bill also.

Trusting that your Society will be successful in procuring the passage of this law, I am very truly yours, HEBER M. WELLS, Governor.

From the President of the University of Utah.

President's Office, UNIVERSITY OF UTAH, Salt Lake City, March 9, 1904. Governor Heber M. Wills, Salt Lake City, Utah.

MY DEAR GOVERNOR WELLS:—I have examined the Bill 13349 of the House of Representatives, providing for the protection of antiquities within the domains of the United States. This Bill is a step in the right direction, and many regret that such a step was not taken long ago. Every person interested in scientific research, sociology and race development will no doubt heartily approve a measure such as contemplated in this Bill. My colleagues mostly interested in Archæological studies and myself heartily recommend that the bill be passed without delay and that the law then be strictly enforced. Yours truly, J. T. KINGSBURY.

From the President of the Buffalo Historical Society.

BUFFALO HISTORICAL SOCIETY. Andrew Langdon, President; George A. Stringer, Vice President; Frank A. Severance, Secretary; Charles J. North, Treasurer. March 21, 1904.

GENTLEMEN:—I desire personally and in behalf of the Buffalo Historical Society to express my unqualified approval of Mr. Rodenberg's Bill for the preservation of historic ruins and antiquities. Students of our history and archæology have long felt the need of some such protective measure as is here proposed. The proper care and regulation of the matter must rest in the Federal Government. So far as I am aware, the Bill now before you is adequate and judiciously drawn. Yours truly, ANDREW LANGDON, President; FRANK H. SEVERANCE, Secretary.

From the Curator of the Ohio State Archaeological Society.

OHIO STATE ARCHAEOLOGICAL SOCIETY, William C. Mills, Curator. Columbus, Ohio, March 8, 1904.

MY DEAR SIR:—I wish to call your attention to the House Bill 13349, introduced by Mr. Rodenberg. This Bill provides "for the preservation of historic and prehistoric ruins, monuments and archæological objects and other antiquities, and to prevent their counterfeiting." I wish to say on behalf of the Society that the Bill meets with our approval, and I hope you will urge upon the Committee the advisability of this Bill becoming a law. Very truly yours, WILLIAM C. MILLS.

From the President of the Southern California Historical Society.

WALTER R. BACON, Attorney at Law, Los Angeles, Cal., April 11, 1904.

DEAR SIR:—I have been requested, as President of the Southern California Historical Society, to examine the Bill introduced by Mr. Rodenberg on March 2, 1904, and referred to your Committee, being H. R. 13349.

I have made a careful examination of the provisions of this Bill. In view of the necessities of the case which it attempts to remedy, such legislation as is here proposed is very necessary and should be enacted as soon as possible if the end in view is to be subserved. I have had considerable experience with the subject treated in this Bill and say advisedly that if the objects sought to be preserved by this Bill are to be saved at all, immediate action must be taken. It would seem to me that there could be no objection whatever to the enactment of the legislation here proposed. I have discussed the matter with numerous persons competent to judge thereof in this vicinity and Arizona, all of whom are of the opinion that the Bill should be passed. I desire to express

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in this manner my hearty commendation of the Bill, and earnest wish that it be passed as soon as possible if compatible with the public policy of the Congress. Yours respectfully, W. R. BACON, President Southern California Historical Society.

From Prof. G. Frederick Wright, D.D., LL.D.

OBERLIN COLLEGE, April 16, 1904.

DEAR SIR:—My long interest in the preservation and exploration of the Mounds of Ohio in connection with the State Historical and Archæological Society has greatly deepened in my mind the impression of the necessity for immediate and energetic action throughout the country in order to preserve our many relics of antiquity and secure their investigation through the most appropriate and promising agencies. The importance of this was greatly enhanced in my recent extended journey through Siberia and Turkestan by observing the great interest in such things manifested by the Russian settlers as well as by government authorities. It will be a great pity if, with our superior intelligence and opportunities, we fail to secure like results. The proper understanding of such antiquities is an important element in the education of our people, and a rich contribution to their mental development. I trust therefore that the Bill H. R. 13349 will be favorably received by Congress and its important object accomplished. Very respectfully yours, G. FREDERICK WRIGHT.

From the Editor of the American Archaeologist.

THE AMERICAN ARCHAEOLOGIST, Dr. J. F. Snyder, Editor, Virginia, Ill.; Prof. A. F. Berlin, Assoc. Editor, Allentown, Pa. Virginia, Ill., 18 March, 1904.

SIR:—House Bill No. 13349 introduced by Hon. Wm. A. Rodenberg of this state, for preservation of aboriginal antiquities of our country, and suppress counterfeiting of the same, should have been made a law by Congress 30 years ago and should by all means be adopted now.

The only amendment I would suggest is to make the penalty for counterfeiting prehistoric relics more explicit by adding to line 15, page 4, of the Bill as printed the same penalty prescribed in lines 4, 5, and 6 of page 5, to-wit: "and upon conviction thereof shall be punished by fine not exceeding one thousand dollars or by imprisonment not exceeding one year or both." Urge your Committee to recommend passage of this Bill and you will discharge a duty that will meet the approval of every intelligent person in our country. With respect I am yours, &c., J. F. SNYDER.

From the President of Union College.

UNION COLLEGE, Schenectady, N. Y., Office of the President. 11 March, 1904.

GENTLEMEN:—I am in favor of Bill No. 13349 for the preservation of historic and prehistoric ruins, etc. It seems to me of great importance that Congress should take some action at once in this direction. This is not a matter that appeals very strongly to the general public, but that does not affect its real importance, which is evident to all who are interested in ethnological studies and archæological investigation. Yours very truly, ANDREW V. V. RAYMOND.

From the Curator of the Museum of the Leland Stanford University, California.

LELAND STANFORD JUNIOR MUSEUM. Stanford University, California. 5 April, 1904.

GENTLEMEN:—My attention has been called to the Bill (H. R. 13349) introduced by Congressman Wm. A. Rodenberg.

As a citizen and as an executive officer of a public museum I am very much interested in the successful passage of this Bill and my reasons for same are based on several facts.

The Bill is perfectly just to all concerned.

Each and every society or museum has the same privileges.

It causes no hardship to any person. It preserves what is left on the public domain for the use of such institutions as shall be of greatest benefit to future generations.

It puts a check upon the promiscuous issuance of spurious "relics" by which the traveling public is continually deceived. It is a safeguard thrown around the public, it will inspire more people to take an interest in these matters if they know there is some protection against fraud. More assistance will be given scientific bodies by men of means when they know that the money spent will bring returns in genuine material.

The passage of this Bill means but little, if any, extra expense to the Government, and is a protection against theft and destruction by the curiosity vandal.

I have submitted the Bill to many prominent men in this part of the State and without exception all endorse it.

Hoping that your Committee will report favorably on the matter, I am, Very sincerely yours, H. C. PETERSON, Curator.

STATE HISTORICAL AND NATURAL HISTORY SOCIETY.
Denver, Colo., March 30, 1904.

GENTLEMEN:—Our society has read with much interest the House Bill 13349, introduced by Mr. Rodenberg, for the purpose of preserving historic and prehistoric ruins, monuments, archæological objects and other antiquities, and desire to convey to you its hearty and enthusiastic approval of the Bill. Our society is a State Institution, supported by the State, and composed of a large number of such representative citizens as are interested in historical and scientific matters. Among its collections which are installed in the State Capitol Building in this city, is a very fine one of the Cliff Dwellers and other prehistoric ruins in the Southern part of the State. We have for many years viewed with regret and alarm, the despoliation of many of these antiquities, not only in Colorado, but in New Mexico and Arizona. Vandals are not alone responsible for this destruction, but scientists working in the interest of collections and museums, not only in the United States, but in several foreign countries, have in the past carried away without order or restraint, hundreds of car loads of objects which should have been preserved, as far as possible, in the condition in which they are found, or which at least have been retained in this country. We have always urged the necessity of some government control such as is now proposed in Mr. Rodenberg's very excellent Bill, and hail with great satisfaction, the prospect of having preserved what little is left of what to scientists, are among the most interesting archæological remains in this continent. Respectfully submitted, The Colorado State Historical and Natural History Society. E. B. MORGAN, President.

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From the President of Vanderbilt University.

Chancellor's Office, VANDERBILT UNIVERSITY, NASHVILLE, TENN., March 8, 1904.

DEAR SIR:—I am pleased to see a copy of the Bill which has been recently introduced by you looking to the preservation of American antiquities, etc. I beg to express my approval of this Bill and trust you may have no difficulty in securing favorable action. I am not able to suggest any amendments. It seems to meet the case very fully. Yours very truly, J. H. KIRKLAND.

From the President of Adelphi College.

ADLEPHI COLLEGE, President's Room, Brooklyn, N. Y., 7 March, 1904.

DEAR SIR:—I write to express the hope that your committee will take favorable action upon H. B. 13349, "For the preservation of historic and prehistoric ruins, monuments, etc."

In expressing this opinion I represent the unanimous feeling of the Trustees and Faculty of this Institution.

We believe that Congressional action of this kind is absolutely necessary in order to preserve from destruction the prehistoric remains in this country, especially the mounds and the relics of the cliff dwellers and early Pueblos.

The Bill as now drawn meets with our unqualified approval, excepting perhaps in Section 5, in which it seems to me that it would be better merely to authorize, if necessary, the Secretary of the Interior to permit exchanges of antiquities between the United States National Museum or the Smithsonian Institution and foreign museums and universities or scientific societies. I remain, yours very truly, C. H. LEVERMORE.

From the President of the Western Reserve University.

President's Room, WESTERN RESERVE UNIVERSITY, ADELBERT COLLEGE, Cleveland, 7 March, 1904.

MY DEAR SIR:—I beg to say to you that the Bill 13349, introduced by Mr. Rodenberg for the preservation of historic memorials, seems to me thoroughly worthy. Its passage would represent a distinct enlargement of the higher relations of American life. Very truly yours, CHARLES F. THWING.

From the President of the St. Louis University.

ST. LOUIS UNIVERSITY, 19 March, 1904.

GENTLEMEN:—The St. Louis University is much interested from scientific and patriotic motives in the passage of the Bill H. R. 13349, introduced by Mr. Rodenberg, "For the preservation of Historic and Prehistoric Ruins," etc.

May I ask in the name of our Faculty for the passage of this Bill. Very respectfully, W. B. ROGERS, S. J., President.

From the Secretary of the Milwaukee Public Museum.

MILWAUKEE PUBLIC MUSEUM, Milwaukee, Wis., 21 March, 1904.

GENTLEMEN:—I have received copy of "A Bill for the preservation of historic and prehistoric ruins, monuments, archæological objects and other antiquities, and to prevent their counterfeiting," No. H. R. 13349. I have looked this over carefully, and upon due consideration can suggest no way in which it could be improved.

On the face of it some of the provisions appear rather stringent, but I believe in the long run they will all be found advisable. I therefore am in hearty sympathy with this Bill as printed, and hope that it will be enacted as a law. Respectfully, HENRY L. WARD, Custodian and Secretary.

From the President of the Detroit Society of the Society of the Archaeological Institute of America.

THE DETROIT SOCIETY, 21 March, 1904.

DEAR SIR:—The Bill introduced at the request of RECORDS OF THE PAST EXPLORATION SOCIETY of Washington, D. C., being H. R. 13349, meets with my fullest approval. As President of the Detroit Archæological Society, I have had some experience in getting our Legislature to pass measures for the protection of the antiquities of Michigan. I deem it a matter of the greatest importance that when Congress passes the necessary legislation, all the Museums and Institutions of the country should be treated fairly and placed on the same basis in reference to making excavations for the antiquities on Government lands. I believe this Bill answers that purpose, and think that it should be passed, in preference to any other Bill.

Trusting that it may receive your favorable consideration, I am yours very truly, GEORGE W. BATES.

THE STATE UNIVERSITY OF NORTH DAKOTA, President's Office, University, N. D., March 9, 1904.

GENTLEMEN:—I most respectfully urge your hearty support of H. R. 13349 introduced by Representative William A. Rodenberg. I have made several visits to European countries and know from observation what attention is paid in almost all the countries of Europe to the collection and preservation of all antiquities such as prehistoric ruins, monuments, and other archæological objects, bearing upon the early historic and prehistoric records of the past of those countries. Indeed, it is largely such collections as this Bill contemplates that have made Europe so interesting to the American traveller. It seems to me that not only is the time amply ripe for such a movement in this country, but that we have been grossly derelict in not before starting such a movement as this Bill provides for.

Trusting your honorable Committee will see its way clear to give the Bill, with such modifications, as may seem desirable, its hearty support, I am very respectfully, WEBSTER MERRIFIELD, President.

From the President of Lafayette College.

LAFAYETTE COLLEGE. Easton, Pa., 18 March, 1904.

MY DEAR SIR:—Permit me on behalf of Lafayette College to express the very strong hope that the Committee on Public Lands may find it possible to report favorably on House Bill 13349 for the preservation of historic ruins etc. I have had considerable experience in this matter and I note how many of the historic monuments of this country have already been destroyed by reckless vandalism.

It seems very important that all such memorials of the past should be carefully preserved. Very truly yours, E. D. WARFIELD.

From the President of the University of Oregon.

UNIVERSITY OF OREGON. Office of the President, Eugene, 16 March, 1904.

DEAR SIR:—I am recently in receipt of a copy of a Bill introduced by Hon. William A. Rodenberg, providing for the preservation of historic and prehistoric ruins and other antiquities. I understand that the Bill has been referred to the Committee on Public Lands, of which you are chairman. Permit me to say that we in the West, who are in a position more to appreciate the need of such protection of prehistoric ruins as this Bill provides, are all

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greatly interested in its passage. The preservation of these ruins is a matter of great importance to educational institutions, and especially to those institutions which are adjacent to the territory in which these ruins are found. I sincerely hope that the Bill may be favorably considered by your Committee. Very truly yours, P. L. CAMPBELL, President.

From the Director of the Detroit Museum of Art.

DETROIT MUSEUM OF ART, A. H. Griffith, Director. Detroit, Mich., April 13, 1904.

DEAR SIR:—Having my attention called to Bill 13349, now in the House for the preservation of historic and prehistoric ruins of America, I beg to say that speaking as Director of the Detroit Museum of Art, that this institution in common with every other of a similar character, together with every student of Archæology and the American people, are in the most hearty sympathy with this movement. It should be carried forward now at the earliest possible moment, before the destruction by vandals has been carried so far as to utterly obliterate that vast amount of valuable material which can never be restored. I hope the Bill and your efforts will receive every possible support.

With best wishes to you for success in this commendable movement. I beg to remain, yours very truly, A. H. GRIFFITH, Director.

From the President of Lawrence University.

Lawrence University, President's Office, Appleton, Wis., March 14, 1904.

DEAR SIR:—I notice a Bill has been introduced into the House concerning the preservation of historic and prehistoric ruins, etc., H. B. 13349.

I am much interested in the passage of the Bill. In Wisconsin we have recently organized an Archæological Society for the purpose of preserving historic monuments in various parts of the State. These remains of a prehistoric race are rapidly being obliterated, and if the government can take any steps to preserve in a measure our antiquities, it will be a matter of increasing historical interest. Very truly, SAMUEL PLANTZ, President.

From the President of West Virginia University.

WEST VIRGINIA UNIVERSITY, Morgantown. Office of the President, March 7, 1904.

GENTLEMEN:—For myself and on behalf of the West Virginia University, I would respectfully urge the passage of H. R. Bill 13349, introduced by Mr. Rodenberg, for the preservation of historic and prehistoric ruins, monuments, archæological objects and other antiquities and to prevent their counterfeiting.

The interests of science require that something be done to prevent the destruction and misuse of these antiquities, and this Bill seems to offer the protection needed.

Hoping that you will be able to report favorably on the Bill, I am, very respectfully, R. B. REYNOLDS, President.

The Presidents and Executive Officers of the following institutions, together with many prominent men, not officially connected with public institutions, have endorsed Mr. Rodenberg's Bill, and letters are almost daily being received by the Committee on Public Lands, endorsing it:

WILLIAMS COLLEGE, MASSACHUSETTS.
KENTUCKY UNIVERSITY.

TUFTS COLLEGE, MASSACHUSETTS.
 BRIGHAM YOUNG COLLEGE, UTAH.
 OBERLIN COLLEGE, OHIO.
 UNIVERSITY OF MISSOURI.
 HARDIN COLLEGE AND CONSERVATORY FOR LADIES, MEXICO, MO.
 SCIO COLLEGE, OHIO.
 IOWA COLLEGE.
 SHAW UNIVERSITY, RALEIGH, N. C.
 THE UNIVERSITY OF NORTH CAROLINA.
 PARKER COLLEGE, WINNEBAĞO CITY, MINN.
 UNIVERSITY OF MISSISSIPPI.
 HILLSDALE COLLEGE, MICHIGAN.
 EARLHAM COLLEGE, RICHMOND, IND.
 CAPITAL UNIVERSITY OF HARRIMAN, TENNESSEE.
 SMITH COLLEGE, NORTHAMPTON, MASS.
 THE COLLEGE, CEDAR RAPIDS, IOWA.
 KENTUCKY STATE HISTORICAL SOCIETY.
 ST. AUGUSTINE HISTORICAL SOCIETY, FLORIDA.
 NORTH CAROLINA HISTORICAL SOCIETY.



A RECENT DISCOVERY IN EGYPT AND THE CARE OF ANTIQUITIES

BY DR. LUCIEN C. WARNER

IN re-visiting Egypt after an absence of 10 years, I was impressed with the extent of the new discoveries that have been made, as well as delighted with the care everywhere now being taken to protect and preserve the priceless antiquities. Arriving at Cairo I found that the Egyptian Museum had been removed from the Ghizeh Palace, where it was in constant danger of destruction by fire, to a new fire-proof building, which for adaptation to its purpose is not excelled by any museum in the world. The collections have also been greatly enriched, especially in statues, steles and fine gold work from the ancient and middle empires.

Ascending the Nile I found that all the choicest temples and tombs have been closed with secure gates and placed in charge of custodians, so that further vandalism has been stopped. Much work has also been done on the temples in strengthening foundations and restoring walls and columns, so that we may hope that these treasures will be preserved for many centuries for the instruction of future generations. Especially is this true of the magnificent temples at Karnak, the site of ancient Thebes. Several of the small side temples have been carefully excavated and repaired, and the avenue of ram-headed sphinxes leading to the main entrance from the Nile has been re-erected and restored, so as to give a good idea of their original appearance. More important than all, the Egyptian government has taken in hand the work of rebuilding and restoring the pillars of the great Hypostyle



SUPPOSED STATUES OF SEN-NOFER, WIFE AND CHILD

Hall, which has justly been called the grandest hall in the world. It will be remembered that 11 of its 134 columns suddenly fell one morning about 3 years ago, and the lovers of art throughout the world were alarmed lest this magnificent hall was to be left to destruction. The fallen columns are now being re-erected on secure foundations and the remaining columns so strengthened that further injury is not likely to occur.

In connection with these changes large piles of dirt, which have surrounded the temple, are being removed, and several valuable statues have been found. The most important of these was discovered a few days before I visited the temple, and I was fortunate in securing the first photograph of it as it stood on the grounds near the temples. It is of black granite, about $4\frac{1}{2}$ feet high, and represents the seated figures of a man and a woman with a third small figure standing between them, probably their daughter. The back and sides of the statue contain inscriptions, but they have not been fully deciphered, or, if so, the results have not been made known. It was reported to be the statue of Sen-nofer and his wife and daughter. He was a prince of the southern capital of Thebes under Amenophis II, which would make the statue about 3,400 years old. The work is of marked artistic value, and it will take its place among the treasures of the museum at Cairo, where it will soon find a resting place.

CHICKASAWABA MOUND, MISSISSIPPI VALLEY

BY CURTIS J. LITTLE, ESQ.

THE Chickasawaba Mound is situated in the central part of Mississippi County, Arkansas, 10 miles back from the Mississippi River. Probably the first white men to enter this country were the Spaniards under De Soto. In a passage from his diary he describes finding huge mounds covered with large forest trees in a locality about this distance from the point where crossed the Mississippi River. In 1798 white inhabitants began to settle in this region having floated down the Ohio River in house-boats. They settled along the banks of the river and built rude shanties and cleared some land, but for the most part they depended upon hunting and trapping, rather than agriculture, for a livelihood.

In 1811 there occurred what is still known as the "Great Shakes of 1811." The disturbances continued for 2 days and nights and were accompanied by rumbling sounds like distant thunder. The ground rose and sank, leaving fissures from a few feet to 50 ft. in width and affected the bed of the Mississippi River so as to cause the current to flow up stream for 10 hours as far as Cairo, Ill. The disturbance was so violent that in many places the land sank 40 and 50 ft. The settlers left in droves abandoning all their possessions. Only one man, Mr. Hardiman Walker who lived 26 miles northeast of here, remained to see what happened.

The area which sank extends from the mouth of the St. Francis River on the south to New Madrid on the north, from the Mississippi River on the east to Crowley's Ridge on the west. This depression filled with water which is now called the St. Francis basin. The fissures which were formed became bayous the most notable of which is Pemiscot Bayou which has Tanners Lake for its source and Little River its mouth. As the crow flies, Pemiscot Bayou is 37 miles long but with its meanderings it is 147 miles. Where this Bayou is now was the highest land in the country before the disturbance. Proof of this is furnished by the fact that for the last 10 years great quantities of walnut timber have been dug from the bed of the Bayou during the dry summer months. This timber is much larger than any walnut now standing and brings enormous prices in market owing to the peculiar dark stain given it by the many years it has lain beneath the earth and water. Several manufacturing companies have bought many thousand feet, coming out of Tanners Lake and Pemiscot Bayou. Mulberry and sassafras, neither of which grown on low land, are found in the bed of this Bayou.



THE CHICKASAWABA MOUND



BURIAL GROUND, CHICKASAWABA MOUND

The Chickasawaba Mound lies one-fourth of a mile back from this bayou, the old burial ground lies to the west of the mound and is three-quarters of a mile wide by 1 mile long. Many acres of this old burial ground, as well as hundreds of the old graves are now covered by the Pemiscot Bayou. Since 1811 the deposits of sediment made by the annual flow of the Mississippi River have buried these graves to an unknown depth. Also the washing of the banks has added to the deposits covering them. Graves however, have been found at depths ranging from 10 in. on the high ground to 4 ft. at the waters edge, a distant of 100 ft. The bayou at this point is 700 ft. wide. This great variation in the depth is easily accounted for. During the annual overflows of the river a strong current always cuts across from a bend in the bayou above joining the bayou again some distance below the mound. The current washes off the surface on the high ground and fills up the bottom of the bayou.

The first settler in this country after the "Shakes of 1811" was an old Indian Chief, Chickawaba, who later transferred his land to the white men and moved westward. Captain Charles Bowen of Osceola, Arkansas, who remembers this chief very well says that these graves, the pottery and the mound were as much of a mystery to the Indians as they are to us. He says, "when they were asked if they did not believe that Indians before them built the mound they would say 'No, Indian no work so much.'" A fact which our history of the American Indians bears out. "At that time," say Captain Bowen, "there was hardly a tree missing." To-day the whole country is cleared except on the mound and along the bayou. The mound is inclosed in one of the most beautiful plantations to be found anywhere in the Mississippi Valley.

The mound covers $1\frac{1}{2}$ acres of ground and is now 38 ft. high although it has been cut down greatly. Tunnels have been dug through it so that it has caved in on the top but in all this digging in the mound nothing has been found except a large quantity of burnt clay. Pottery is always found in the graves and only in graves.

I commenced work on my collection 3 years ago and although there are only 3 months in a year that one can dig to any advantage, on account of the ground being too hard the rest of the time I have secured a very creditable collection. I have employed the following method to locate graves: I have a steel probe 3 ft. long made of a 3-16 in. rod pointed at one end and with a cross bar at the other. I lay off a piece of ground about 50 ft. square and then start and probe every square foot of the ground. If any hard substance is struck an investigation is started by probing until I am satisfied that it is a grave. The next thing is to find the way the skeleton lies, as from this you can determine where to look for vessels.

Some of the graves contain many vessels and it seems to be a rule that the more large vessels found in a grave the better the bones are preserved as if the vessels might have held, at one time, fluid that would



FRONT AND SIDE VIEW OF SKULL FOUND IN THE CHICKASAWABA MOUND



IMAGES AND POTTERY FOUND IN THE CHICKASAWABA MOUND

preserve bone. I have in my collection 1 skull which I uncovered that is as perfect as if it had been buried for only 10 or 15 years. The total capacity of the vessels found around this skull would be as much as 5 gallons. Another skull which I found was surrounded with vessels, the total capacity of which would be 3 galons. This skull was perfect with the exception of the lower jaw which I was unable to save.

Bowls are usually found by the chest or forehead, and vary in size, some being as much as 30 in. in circumference. Some are very beautiful and well polished while others are as rudely made as if they had been the work of a child. I have a dozen of these bowls in my collection. Large water jars holding from a pint to a gallon are found around the skull while cooking vessels are found along the side of the skeleton. Images, pipes, etc. are found at the feet.

The graves have no order of arrangement, some having been found lying crosswise of each other and others in a circle. Some skeletons are in sitting and some in a standing posture.

The skeletons are very large and tall. One femur bone was unearthed that measured 29 in. in length. The skulls are extremely large, the jaw of one is of such size that it would slip over my own and have considerable space to spare, being able to insert my first 3 fingers under the cheek bones. The skulls slope back considerably and the frontal bones are very flat.

It is a remarkable fact that I have not yet discovered any implements of war except 2 spear points which were found in a vessel in one of the graves. These were made from buck horn with the butt hollowed out so as to admit of an arrow or staff.

Some of the objects excavated are well marked with pictographs. The best specimen so marked is a smoking pipe, which is covered with outlines of birds feet and irregular lines which are hard to describe. On one of the specimens representing the Mexican llima are a number of pictographs which show plainly in the accompanying illustration.

My collection which will be placed in the Arkansas exhibit at the World's Fair in St. Louis, includes the folowing specimens: Image of a human being, image of a Mexican llima, image of a sun perch fish, image of a goggle-eye fish, image of a toad frog, image of a bull frog, image of a duck, image of an otter, twin pigmet pot, three-fourths of a pound of red pigment, large smoking pipe, 2 pieces—either of money or buttons, made of mussel shells, 1 dozen bowls ranging in size from 3 to 10 inches in diameter, 16 water vases, holding from a pint to 1 gallon, 19 cooking vessels ranging in size from a pint to half gallon and showing fire marrks, and 2 dozen small vessels resembling desert dishes.

EDITORIAL NOTES

ASIA:—BABYLONIA: In view of all the recent discoveries which have been made in Babylonia it is interesting to note the description which Sir Henry C. Rawlinson gave of the discovery of the first clay cylinder bearing the inscription of Nebuchadrezzar. During August and September of 1854 he worked in Babylonia on the mound of Birs Nimroud, and later in the year renewed his work on this mound. He uncovered the corner of one of the buildings, which had been discovered by his assistant, Joseph Tonetti, in the hope of discovering some inscriptions imbedded in the chambers in the wall. He had the bricks removed down to the 10 layer above the plinth at the base. The following is his description of the discovery:

On reaching the spot, I was first occupied for a few minutes in adjusting a prismatic compass on the lowest brick now remaining of the original angle, which fortunately projected a little, so as to afford a good point for obtaining the exact magnetic bearing of the two sides, and I then ordered the work to be resumed. No sooner had the next layer of bricks been removed than the workmen called out there was a Khazeneh, or treasure hole—that is, in the corner at the distance of two bricks from the exterior surface there was a vacant space filled up with loose reddish sand. Clear away the sand, I said, and bring out the cylinder. And as I spoke the words the Arab, groping with his hands among the *debris* in the hole, seized and held up in triumph a fine cylinder of baked clay, in as perfect a condition as when it was deposited in the artificial cavity above 24 centuries ago. The workmen were perfectly bewildered. They could be heard whispering to each other that it was a *sahr*, or “magic,” while the graybeard of the party significantly observed to his companion that the *compass* which, as I have mentioned, I had just before been using, and had accidentally placed immediately above the cylinder, was certainly “a wonderful instrument.”

JAPAN:—Mr. Kakasu Okakura, in his recent book on *The Ideals of the East, with Special Reference to the Art of Japan*, expresses the belief that India at one time led the whole of Asia in both religion and art. He points out that the actual affinities of Indian art are largely Chinese. He believes in an early Asiatic art, which has left its marks not only on China, India, Egypt and Phœnicia, but also in Greece, Etruria and even Ireland.

EGYPT:—The Egyptian monument of Tell-esh-Shihab is described by Prof. W. Max Muller in the January issue of the *Palestine Exploration Fund* as follows:

The Egyptian granite stele of Pharaoh Sethos (Egyptian Setoy) I,

which Prof. G. A. Smith discovered at Tell-esh-Shihab, in the Hauran region (cf *Quarterly Statement*, October, 1901, p. 348), is a find of great importance. First, it confirms the fact attested to by the so-called stone of Job at Sheikh Sa'd that the Egyptian kings of Dynasty XIX (and XVIII, of course) held Palestine east of the Jordan subject as far as the ground was cultivable. Until a few years ago we all doubted if the Egyptian dominion really extended across the Jordan valley. It is, however, perfectly in agreement with the ancient conditions of Palestine that the above prejudice against the Pharaonic power now proves to be erroneous. And if cultivation extended farther east and the Bedouin element had less sway than at present, the chances for subjugating the inhabitants were better for every conqueror, and the wealth of the country made the temptation for conquest stronger.

While Prof. G. A. Smith's discovery thus corrects a gap in my book, *Asien und Europa*, p. 198 (233 note 1,273), the passage, p. 199, has not been interpreted quite correctly. In stating that Sethos I waged war and extended his territory on the northern frontier of Palestine only, I meant that everything south of that field of conquest was in his undisputed possession. The point which has been specially emphasized throughout that book is: Palestine was not only occasionally raided and forced to pay occasional tribute to the Egyptians, as scholars believed formerly, but remained in the possession of a part of the Egyptian Empire from 1700 to 1200 B. C. Consequently, the new monument of Tell-esh-Shihab is hardly to be explained as a commemoration of conquest. It may, perhaps, have mentioned the victory over some rebels in the part which is now broken off, and what remains of the stele, viz., the peaceful representation of the king, does not favor this interpretation. Much more probable is it that the stone did not commemorate any victory over the Asiatics, but merely exposed the loyalty of the dedicator to his king. It does not bear the local religious character of the inscription at Sheikh Sa'd, containing the name of Rameses II, but corresponds with this monument as a sign of the continuous possession of Palestine.

There remains, however, one important conclusion yet to be drawn from the new stele. It is no graffito character, but is a carefully and expensively executed monument, which shows that once a considerable settlement must have been at or near Tell-esh-Shihab. Furthermore, it is of the purest Egyptian workmanship, and not an imitation by an Asiatic sculptor. Now, the man who expressed his loyalty by the erection of such a stately monument and had good Egyptian artists at hand, can only have been an Egyptian official of some rank, stationed at that place. If we remember the great strategic importance of Tell-esh-Shihab (as described so vividly by Prof. G. A. Smith, p. 345), the conclusion is necessary that, Sethos I, the Egyptian, must have maintained a garrison on the spot to guard the Hauran. Possibly, even a "royal city" or "station" stood there, with magazines for receiving the yearly tribute of grain from the surrounding region. Excavations would certainly furnish some traces of the Egyptian soldiers and officials!

The "stone of Job" is, evidently, too far remote from the settlement just described to be connected with it. As has been said above, this Egyptian representation indicates only the religious importance of the locality, nothing else.

EUROPE:—ITALY: One of the most important discoveries recently reported in the Roman Forum is that of an altar dedicated to Marcus Curtius, a patriotic Roman youth, who, in 362 B. C., to placate

the gods, jumped in full armour and on horseback, into a chasm which had opened in the Forum and which it was believed could not be filled except by the sacrifice of the chief wealth or strength of the Roman people. According to tradition, this chasm closed immediately after Curtius made his sacrifice. This altar is formed by 12 large roughly sculptured stones. Near it is a hole, which contained the remains of later sacrifices made in honor of Marcus Curtius on his altar.

At the meeting of the Society of Anthropology of Paris July 2, 1903, Mr. Threullen made a communication, which he has since published independently, on the discovery of relics of the mammoth and the reindeer, in the course of the same excavations which furnish the relics of a Gallo-Roman necropolis described by Mr. Riviere. At 10 mm below the vegetable soil he found a number of neolithic instruments. At the depth of 5 m he found a lower jaw of the mammoth in perfect preservation, some meters lower the jaw of a reindeer. He also discovered many hundreds of the rudimentary instruments which appear to me to bear evidence of human workmanship. All these objects have been deposited in the galleries of Mineralogy at the Museum of Paris under the care of Prof. Stanislas Meunier.

In a recent book by Sir Charles Warren on the *Ancient Cubit and Our Weights and Measures*, he brings evidence to show that all the weights and measures except those of the metrical system are derived from one source—the double-cubit cubed of Babylonia.

NORTH AMERICA :—UNITED STATES: Among the mounds described in the October issue of the *Wisconsin Archaeologist* is the Larson Mound. It is conical in shape, located about 20 ft. above Minister Lake, about 100 ft. west of the highway and about 300 ft. from the bank of the Lake. This mound measured 30 ft. in diameter and 3 ft. high. It has been under cultivation for over 20 years, and it must have been originally at least 4 ft. high. Mr. Larson opened this mound in October, 1902, and found in it 21 skeletons, a few of which were those of children. The skeletons were so far decayed that they crumbled when touched. These remains were found 14 in. below the surrounding surface on the blue clay subsoil. The color of the soil showed plainly that the tomb was 14 ft. long and 12 ft. wide, with rounded corners. The skeletons were in a double row, all being laid with their heads to the east. The 6 longest skeletons had their leg bones, up to their bodies, covered with cobble stones, evidently taken from the lake. In the southwest corner of the grave was found at least half a bushel of burnt rocks, so badly fused that they crumbled under slight pressure. The skeletons were covered with about 8 in. of rather hard clay or cement; above this was about 8 in. of almost pure ashes and charcoal. From this strata of ashes, to the top of the mound, charcoal and ashes were mixed with the black loam. No implements or ornaments were found in the mound, but an abundance of arrow points and chips have been found in the vicinity. Many fragments of bone

were found on the surface, which had probably been left there when the mound was opened.

The department of Anthropology of the University of California has undertaken an exhaustive "Ethnological and Archæological Survey" of California. During the past year they have been carrying on a systematic exploration of the mounds and shell-heaps of California in an attempt to determine the approximate time at which man first came into the region. The language, mythology and physical characteristics of the present Indians of the State have been studied, also the skeletons of extinct races, in order to gain all the light possible on the relationship between the Indians along the Pacific Coast and those of other parts of North America, and to see if there is any relationship traceable to certain of the tribes of Asia. The University is also making a special effort to enlist the aid of the people of California in this work and urging them to label all Indian relics found, so that they will be of permanent value. This last point is one which cannot be too strongly urged, as more than half the value of a specimen is its label.

A life-size reproduction of a mammoth Saurian, the Stegosaurus, is being constructed at Milwaukee, under the direction of Mr. Frederick A. Lucas, curator of the division of Comparative anatomy of the United States National Museum at Washington. This restoration, which is life-size, is to be exhibited at the St. Louis Exposition. The back of this huge animal rises 14 ft. above the ground. The tail is 10 ft. long and bears projecting spines 2 ft. long and 6 in. in circumference at the base, tapering to a point. The teeth are very small and were only used for masticating the vegetable food on which he evidently subsisted.

The recent discovery of some large mastodon bones in Rockingham County, Va., indicates the possibility of securing some valuable specimens from this place. The bones already found are those of the leg and were discovered in a marl bed. Prof. W. M. Fontaine thinks that there was some special attraction for different animals to this spot. Probably it was a salt lick. If so, this section will be a very profitable one for excavating.

Remains of mastodons are reported from Wyandot, Ill., and from New Britain, Conn. At Wyandot a mastodon tooth was discovered in excellent preservation, which weighed 4½ lbs. In New Britain part of the skeleton of a mastodon was uncovered while digging a cellar in the city. Careful search will be made to discover the other parts of the skeleton, which probably lie in the immediate vicinity.

The effectiveness of the bow and arrow as used by the aboriginal inhabitants of this country is shown by different discoveries, which have been made in widely separated parts of the country. One example found in Missouri shows a skeleton, in which one of the cervical vertebræ is pierced by an arrow point, which penetrated half way through the bone. In Indiana the skull of a bison was found, several

feet below the surface of the ground, with an arrow point still in place, which had penetrated more than half its length through the bone just above the animal's eye. Mr. Pepper, of the American Museum of Natural History, describes the skeletons of several Indian warriors, whose bones show the effectiveness of the aboriginal weapons of war, and the skillful use of such weapons. One warrior he describes, had been pierced by more than 20 arrow points, which had penetrated and fractured his bones. In another warrior an arrow tip was found which had plowed "through one side of the body of the Indian and fully a third of its length through one of the ribs. * * * The hole made by the point is as perfect as though drilled with a lathe." At the base of one of the skulls found, there was an arrow point made of antler, which had been broken by the force of its impact against the cranium.

Concerning early means of transportation, Mr. John T. Holdsworth in an article in the *Journal of Geography* says:

The early pages of history reveal that the commerce and civilization of Asia and Europe advanced commensurately with the development of roads and canals. According to the testimony of the Vedas, the religious books of the ancient Hindus, highways were built by the state connecting the interior with the coast and with adjoining countries. The ancient peoples of Mesopotamia, the first to use domestic animals as beasts of burden, built canals for irrigation purposes and constructed roads leading to their dependencies. The Babylonians not only built highways, canals and great irrigation works—they even constructed breakwaters and quays along the Persian Gulf for the encouragement of commerce.

The earliest of the great maritime nations of antiquity, Phœnicia, though depending chiefly upon the sea as a highway, built roads connecting the 2 great cities, Tyre and Sidon, and constructed caravan routes south to Arabia and east to India and China, which countries sent their products to Tyre to be exchanged for the produce brought by Phœnician vessels from the west. So, too, Egypt and Carthage, each of which attained commercial eminence in this early time, maintained highways leading in all directions.

The great Roman Empire, which embraced every civilized nation then known, and which counted some 20,000,000 people, was covered with a network of roads, many of which remain to this day the admiration and wonder of the world. It is estimated that 50,000 miles of these highways, built mainly for military purposes, connected the various parts of the Empire. Over many of them the government maintained an efficient postal service, using fast couriers.

PALESTINE:—The first example, at Gezer, of a human foundation sacrifice was found last year in the second stratum, where excavations were being carried on. Here the skeleton of a woman of advanced age had been deposited in the hollow under the corner of a house. The body was lying on its back, the legs being bent up (but not doubled); at the head was a small bowl, and between the femora and Tibiæ a large two-handled jar—no doubt food-vessel. Pathologically the skeleton has considerable interest, the right arm and shoulder having been distorted by some rheumatic affection.

In the March issue of RECORDS OF THE PAST we omitted from the article on *The Cavate Dwellings of Cappadocia* the following inscriptions and forms of the Cross at Geureme:


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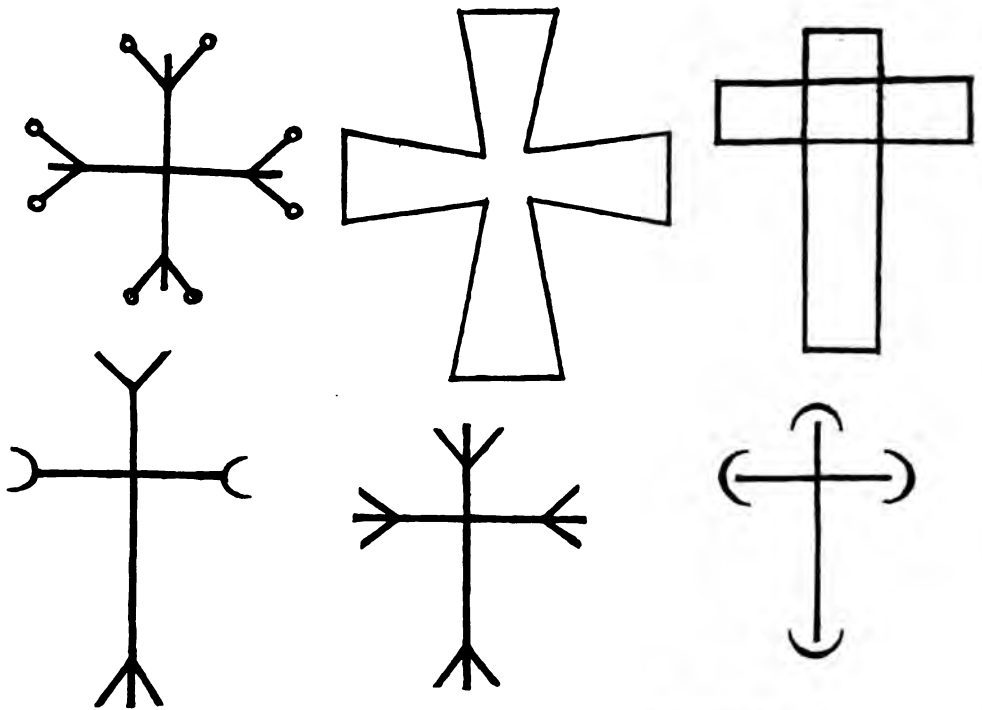
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ΠΡΟΦΗΤΗΣ

INSCRIPTIONS FROM GEUREME, ASIA MINOR



FORMS OF THE CROSS AT GEUREME, ASIA MINOR

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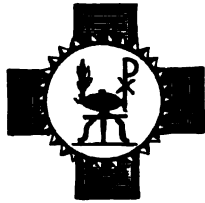
CHAIRONEIA AND THE BURIAL PLACE OF THE THEBANS; FRAGMENTS OF THE LION



TOMB OF THE MACEDONIANS

RECORDS ^{OF} THE PAST

VOL. III



PART V

MAY, 1904



THE MACEDONIAN TOMB AND THE BATTLEFIELD OF CHAIRONEIA

BY ARTHUR STODDARD COOLEY, PH. D.

NO town, for a place of its size, in Greece is more noted than Chaironeia; for beside being the birthplace of Plutarch, near it, as at Thermopylæ, were fought 3 battles of importance. In 447 B. C., the Bœotians defeated here the Athenians; on the 7 of Metageitnion (August 1?), 338 B. C., Philip II of Macedon and the young Alexander defeated the allied Greeks; and in 86 B. C. Sulla and his Roman army conquered the generals of Mithradates. Here again, as at Thermopylæ, we distinguish one battle *par excellence* by the name of the place; Thermopylæ brings to our mind Leonidas and his Spartans against the myriads of Xerxes in 480; when we speak of the Battle of Chaironeia, we mean that of 338 B. C. In both of these battles an invader finally overcame the Greeks; in both a devoted band died to a man—at Chaironeia it was the "Sacred Band" of the Thebans, who for once fought on the side of their fellow Greeks; on both fields a stone lion was erected as a monument to the heroes who thus sacrificed their lives.

Visitors to the place have noticed a short distance to the east of Kapraina, the modern village on the site of Chaironeia, near the highway, the fragments of the colossal stone lion erected after this battle over the grave of the Theban Sacred Band. Intact until the last century, it was blown up with gunpowder by Odysseus Androutsos, the

hero of Gravia, and one of the chiefs in the Greek Revolution, on the supposition that it contained treasure. For years the Greek Archæological Society has been planning to restore it, and in 1879 excavated the *polyandron* (common tomb) of the Thebans near by, on which it had stood. At last the work is being accomplished; the base has been restored, the fragments of the lion are being put together by Mr. Sochos, a native of Tenos, working as a sculptor at Paris, and the lion itself will soon be set up again.

The preliminary work was entrusted to Dr. Georgios Soteriades, one of the ephors of antiquities, who has made important discoveries in Aetolia, especially, at Thermos. [See his account in RECORDS OF THE PAST, June, 1902, pp. 172-181.] I will let him tell his own story, quoting from a personal letter, dated at Chaironeia, November 19, December 2, 1902:

I was sent by the Ministry (of Education) and the (Archæological) Society here to Chaironeia. A double work was assigned me: First, to oversee the rebuilding of the base of the Lion. . . . and second, to carry on excavations to seek for the polyandron of the Macedonians mentioned by Plutarch in the *Life of Alexander*, ch. IX. So then, from about the end of August (early September of our calendar) I have been here, and after working for 5 or 6 weeks in the scorching heat of the Greek sun I am now enduring all the discomforts of a winter very rainy and quite cold, in the house of a peasant of Kapraina, with privations not a few. . . . I am waiting for good weather, but will it ever come? All Parnassos and the lower mountains are covered with snow; here rain, much mud, and cold hold sway.

After describing the restoration of the base of the lion, he turns to the second and more important object of his mission.

My excavations are going quite well. First I excavated a mound near the Kephisos, where under walls, cisterns, and graves of Roman times and Christian graves I found skeletons, from which I supposed at first that I had most probably discovered the graves of the Macedonians. But immediately again I recognized that I had been deceived, for on digging into the soil which was free from Roman buildings and graves I found fragments of vases at the latest of the geometric type. In any case the skeletons are panarchaic. Accordingly, after I had examined minutely the portion excavated, I collected carefully all the finds and with the aid of the surveyor prepared the plan of this trial excavation. Then I left this mound to be examined later and sent ashes from the stratum of the bodies (to a chemist) to assure myself whether this contains elements of bones and so to know whether the dead in these panarchaic graves were cremated or simply buried. I believe they were only buried and that the ashes come from the sacrifices of animals and the funeral feasts.

This opinion seems to have been confirmed by the chemical analysis. Not only the vase-fragments discovered in the sub-Roman strata of this mound, which rises to a height of less than 12 ft. above the plain, but also some stone tools and idols of clay and stone indicate that it is prehistoric. Moreover, Dr. Soteriades sought in vain in its vicinity for remains of classical time, even for graves from the period of the battle of 338.

Satisfied that this mound was not the polyandrion of the Macedonians he proceeded to investigate another also near the Kephisos, but about $2\frac{1}{2}$ kilometers to the east and much nearer the village of Bramagas than Chaironeia. The following account of what he found there and its important bearing on our understanding of the battle, of which we have no wholly satisfactory historical narrative, is made up from sources contributed to the writer by Dr. Soteriades himself—the letter referred to, an article in French in *La Reforme* of Smyrna (April 16, 1903), and his full discussion of the history of the battle under the title *Das Schlachtfeld von Chaeronea*, in the last number of the *Athenische Mittheilungen* [Band XXVIII, 1903, 3, pp. 301-330].

The second mound is much larger than the other and a conspicuous feature of the plain, rising to a height of 7 m. (about 23 ft.) above the plain, and having a diameter of about 70 m. It has the form of a cone, whose summit has been leveled off. Before commencing work Soteriades had believed this mound to belong to the time of Sulla's campaign against the troops of Mithradates, but his finds soon convinced him that it goes back not to the I but to the IV Century B. C.

I first opened a trench 25 m. long (he writes), and in the center of the mound I broadened this trench to an excavation 5 m. wide, which reached even to the natural soil. Everywhere in all this tomb I found fragments of vases of the IV Century B. C., as I was assured also by Messrs. von Prott and Thiersch, who compared them with those found in the Kabeirion.

Suddenly, at a depth of 7 m., the very hard earth of the mound came to an end and underneath began very loose earth with coals, ashes, bones of animals, vases of the IV Century, belonging for the most part to the epoch of the Boeotian, and above all many weapons of iron—ends of lances, knives, and swords. I should remark that the heads of these lances are extraordinarily long and by their length agree with the Macedonian *sarissas*.

Work was stopped temporarily by the rains and bad weather mentioned in the letter quoted above, and it was not until January, 1903, that he was able to widen the excavation so as to lay bare completely the stratum of ashes, etc., over a surface of 100 square m. and to examine it accurately.

Then the matter was quite clear. On the level of the plain a great funeral pyre had been erected; completely charred or half burnt heavy logs could still be distinguished in the moist, caked mass of ashes and bones. The heap of ashes formed a cone, whose diameter was 10 m. and whose greatest height in the center was about 75 cm. The fire must have been a very fierce one, for only the thicker bones of the cremated bodies, principally vertebrae and arm and leg bones, were to any degree preserved.

The moisture of 2,000 years, also, has done its part to hasten the work of destruction, so that weapons and other objects of iron and bronze are covered with rust or practically destroyed. Some of the lance-heads mentioned above have a length of 38 cm. (nearly 15 in.), including the small part of the socket preserved. A few two-edged swords, long curved knives, and daggers are partially preserved, while among the smaller finds are human teeth, a perfectly preserved arrow-

head, and 2 bronze coins, declared by a numismatologist to be Macedonian.

These facts leave no doubt as to the significance of the funeral mound. The supposition that we may possibly have here a monument from the time of Sulla's campaigns against Archelaos needs no special refutation, for the entire find of vases points not to the I but to the IV Century.

Furthermore, it is to be noted that Plutarch, while he speaks of the victory of Sulla and the trophy he erected in the plain, knows in the region only the tomb of the Macedonians. We know that as a special mark of favor Philip had the Athenian dead burned and their ashes sent to Athens; the 254 heroes of the Theban Sacred Band were buried together by the public highway, where the lion was set up as their appropriate monument; it is utterly improbable that any of the vanquished Greeks could have erected this huge mound over the remains of their dead.

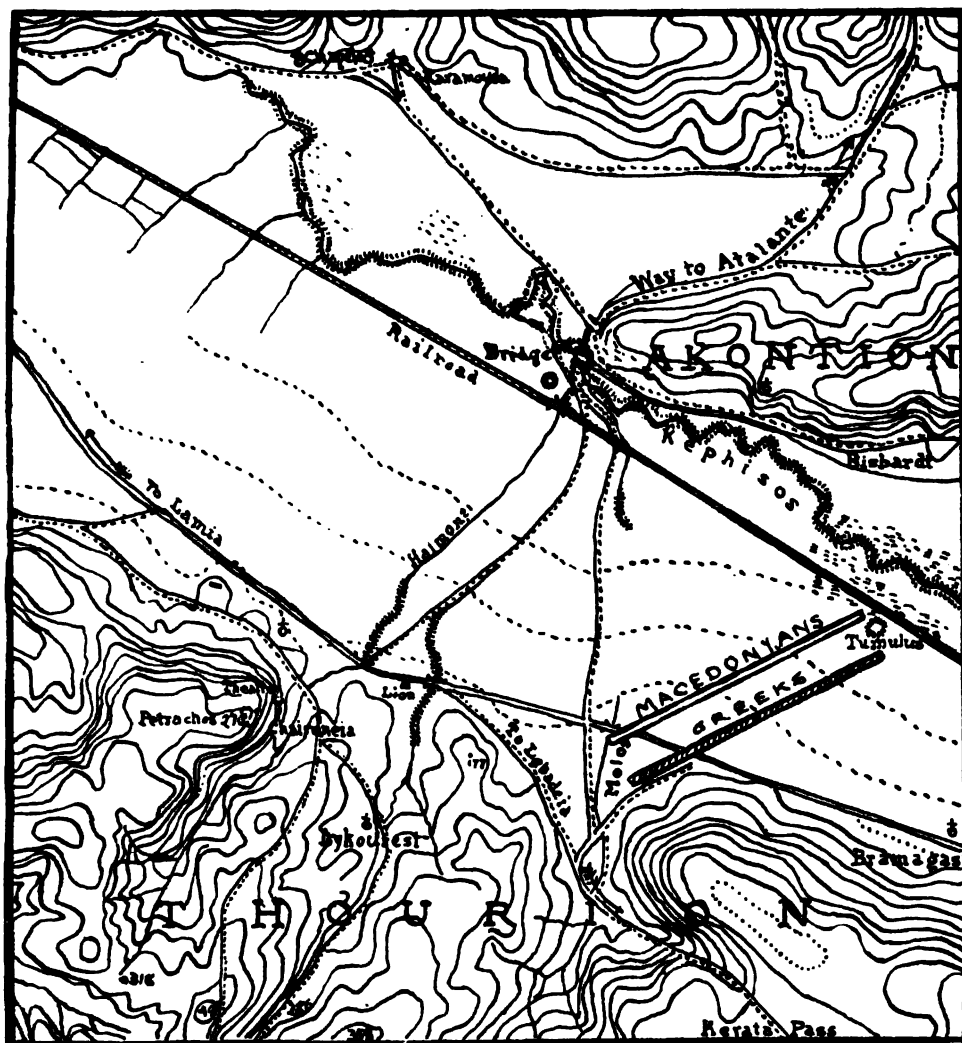
The almost certain identification of this great funeral-mound with the tomb of the Macedonians mentioned by Plutarch reopens for us the question of the positions and movements of both the Macedonians and the allied Greeks on that memorable summer day in 338 B. C. Already in October, 1902, Dr. Soteriades had remarked that the contemporary historians had made a mistake in their topography of the battle. He says:

Whoever has once visited this field of battle cannot share the opinion of Curtius, according to which the allied Greek troops had their rear turned toward the hills of Chaironeia and their front toward the river Kephisos, in which way we should have a sort of battle on the Granikos, because neither does the Kephisos flow near Chaironeia, but at a distance of 2 kilometers, nor had Philip with his Macedonians encamped on the left bank of the river. But what is natural is that the allied Greek troops should in some way have closed like an iron chain the plain between Chaironeia and the commencement of Mt. Akontion. According to this supposition the Athenians (who formed the Greek left) were at Chaironeia and the Thebans on the Kephisos at a point near the bridge over the river, which runs quite near the mountain.

From our accounts of the battle we know that Philip with the right wing of the Macedonians was arrayed against the Athenians, who lost the day by their rash advance, and so his losses must have been comparatively slight. On the other hand the Thebans on the Greek right offered the bravest and most stubborn resistance to Alexander and the Macedonian left and the heaviest loss for the invaders must have been here, where the conflict was hardest and longest.

From both points, however, which have been assumed for the position of the Greek right the burial-mound of the Macedonians lies equally distant. The Macedonians must have carried their dead 10 to 15 stadia from the place where they had fallen to give them worthy burial. This would not be unthinkable in itself, if only the reason for so doing could be seen.

If the Greek right wing stood somewhere near the Kerata pass by the rocky projection of Mt. Thourion we must imagine the Thebans posted at about this distance from Chaironeia, since the front of the Greeks cannot have



THE BATTLEFIELD OF CHAIRONEIA.

From the *Athenische Mittheilungen*, 1903, p. 305.

been less than 2 kilometers long. Neither Curtius nor Wilamowitz determine this place more exactly. Wilamowitz has not noticed that he has left the right wing stretching out into the plain without support. What could the Greek generals have purposed in this? and if the Macedonians fell in this part of the plain, we can think of no occasion for their transporting the dead for burial as far as the Kephisos into a marshy region through which leads no road, no path, in which no traces of an old settlement are to be found. The way from Lebadeia goes to-day and certainly at all times has gone over the low ridge of Thourion through the Kerata pass; at the point where it reaches the plain,

along the base of the rocky Thourion, leads to-day and surely has always led the great highway which stretches from Thebas past Onchestos, Haliartos, Koroneia, Lebadeia, and Chaironeia toward the north. In the whole plain there is no more suitable spot for the erection of a grave-monument than some point in the vicinity of this highway, on which (according to this theory) the battle was decided.

The transportation of the dead to the spot where the Macedonian burial-mound lies would be just as inexplicable, if we should think of the position of the Greek right wing as being on the Kephisos in the vicinity of the west end of Akontion. At this point, as a glance at the map (p.) will show, a number of roads meet and probably have always met, for here is the only place where the left bank of the Kephisos near Akontion offers firm ground for the construction of a bridge. At no other spot in this neighborhood is the river crossable, even in summer; elsewhere along its course the ground is swampy and the very region of the Macedonian mound is often under water.

To such a region, moreover $2\frac{1}{2}$ kilometers from the battlefield, the Macedonians would certainly have had reason for carrying their dead for burial. If the battle really took place between Chaironeia and the west end of Akontion, one could almost point out with the finger the place where the Macedonians attacked the Thebans. Just here lies the prehistoric mound; and this spot, on the battlefield itself, opposite Chaironeia and at the junction of so many ways, would have been the only one suitable for an imposing grave-monument. When, however, we find the burial-mound so far from the spot designated, the question forces itself upon us, whether possibly the battle did not take place in its immediate neighborhood.

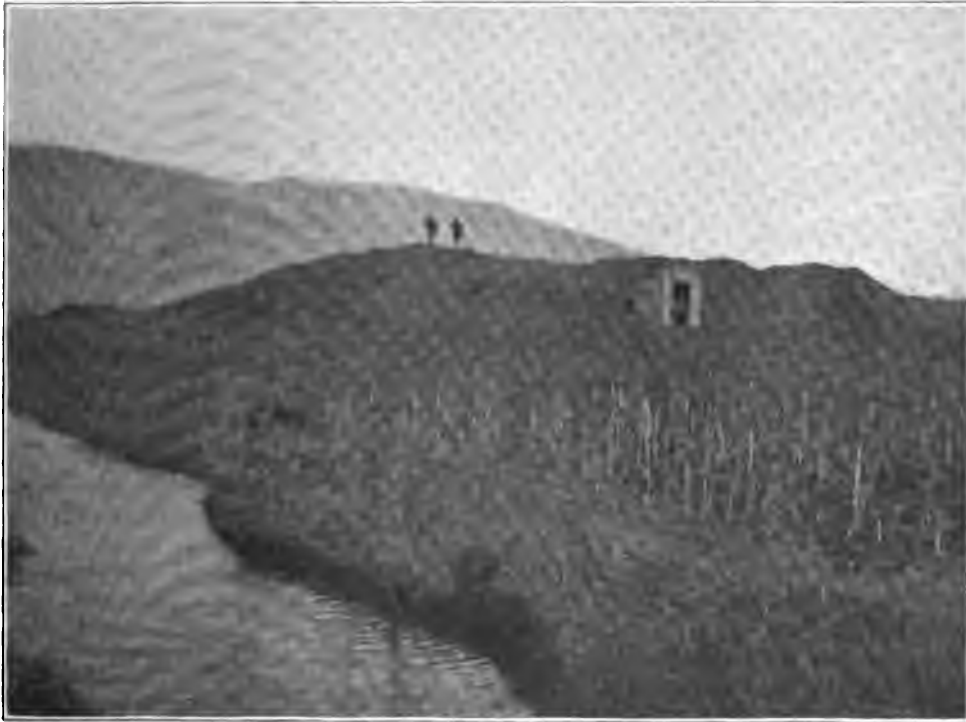
This question can be answered in the affirmative only if nothing else compels us to follow the views hitherto held as to the positions of the hostile armies. How is it now with the assumption that the battle was fought almost under the walls of Chaironeia; that the Greek right wing stood either eastward of this town, not far from the Lion monument, or to the north on the Kephisos, exactly at the west end of Akontion, and there withstood the charge of the Macedonian left wing? Leaving undecided now whether the Greek left wing, which the Athenians formed, was protected by the town of Chaironeia, we must regard as impossible the assumption that the Greeks had taken position with the front toward the north along the Chaironeian hills in the direction of the Kerata pass.

A very slight advance from the hills would have exposed their flanks, while these hills themselves were not high enough to guard them from being encircled from the rear. Curtius's strange error in thinking that the Kephisos at the distance of over a mile could protect the front of the Greeks in this position has been referred to above.

If the Greeks on their retreat from Parapotamioi had intended to make a stand in this narrow plain and here to attempt to block the progress of Philip into Bœotia, no better place could have been found than that suggested, between Chaironeia and the bridge over the Kephisos. It is natural to assume that the Greeks halted at Chaironeia, a fortified town, to assemble and to make preparations for the battle. But it may be questioned, whether on the day of the battle they actually occupied this line. The common expression "Battle of Chaironeia" seems to involve the assumption that the battle took place before the



BATTLEFIELD OF CHAIRONEIA, ACCORDING TO DR. SOTERIADES; BETWEEN MT. THOURION AND THE KEPHISOS; PARNASSOS COVERED WITH SNOW IN DISTANCE



TOMB OF THE MACEDONIANS

walls of the town, but the curious fact is that in the ancient accounts of the event we do not find Chaironeia mentioned as figuring either during or after the battle. Only in Plutarch [*Demosthenes*, ch. XIX] we read that the Greeks pitched their camp at the Herakleion (probably not far from the town), and that the bloodiest fight took place on the brook Haimon near it. "Now the Thermodon," he says (where an old oracle localized the defeat of the Greeks), "*they say* is at our home in Chaironeia, a small rivulet emptying into the Kephisos. But we *know now* none of the streams called by such a name; however, we *guess* that the one called Haimon is what was then called Thermodon * * * and we *infer* that, when the battle took place, being filled with blood and corpses the river gained this name in exchange." In *Theseus*, ch. XXVII, also, Plutarch identifies the Thermodon with the Haimon. The historian here probably refers to a local tradition that the Greeks camped at the Herakleion, but that does not prove that the battle was fought there. It is immaterial whether we identify with the Haimon the brook issuing below the theater of Chaironeia or the winter torrent which flows through the valley to the east of the citadel. The expressions, "we guess," "we infer," leave no doubt that the assumption of the battle on the Haimon brook near Chaironeia rests only on the quite hypothetical identification of this with the Thermodon and the very questionable popular etymology of Haimon as "Bloody Brook" (Aiuwv from aiua, *blood*). So Plutarch's statement has no historical worth beside the fact that the town of Chaironeia is absolutely unmentioned in the real accounts of the battle, the extended one of Diodoros and the fragmentary notices of Polyænus and Frontinus, and that in the catastrophe of the Athenians and after the defeat of the Greek army it plays no part, just at a moment when we should most naturally expect it. We may explain as an accident its not being mentioned in the accounts of the battle, but it can be no accident that it plays no part in the catastrophe of the Athenians. This point is so important that I give Dr. Soteriades' argument in full.

It is generally assumed, and one can not imagine it otherwise, that the Athenians, after they had given up their secure position by the walls of Chaironeia in their too hasty advance, withdrew a considerable distance from the town toward the northwest in the direction of the present highway. Some 500—600 m. from the village of to-day they reached the point which from the lay of the land can be exactly indicated (marked on the map by a black oblong), where they met Philip, who had enticed them thus far by his feigned retreat. Here from high land [*Polyænus*, IV, 2, 2] the Macedonians threw themselves upon them with sudden fury, and they, wearied as they were, gave way before the charge of the Macedonian phalanx. The butchery began at once, a thousand Athenians fell, 2,000 were taken prisoners, the rest scattered in wild flight. But whither? In their rear lay the town; passing close to it led the way by which the fleeing must seek to save themselves, toward the Kerata pass, the gentle slopes of the Chaironeian hills, and the side valleys. But did not the town itself with its mighty citadel first open its gates to receive at least a part of the fleeing Athenians? And—what is more important—did

the town at so slight a distance from the battle offer the Athenians absolutely no secure halting place to make less painful to them the results of the shattering charge of the Macedonians? The protection of their flank, which they gave up at the first moment, they could quickly have regained; for, if not the town in the plain by the highway, at least the akropolis with its rocky slope stretched on the left of the Athenians almost to the point where both armies met. So on this left side they could not be surrounded and it would have been sufficient for the Athenians to withdraw a little toward the side of the mountain to gain the support of the citadel and town and in this way to avoid every greater disaster. The lay of the land here was most favorable for them. Under the akropolis, somewhat west of the modern village, rises a low and very broad ridge; if the Athenians had fled thither, they would have gained at once a very advantageous position. Behind them would have lain town and citadel, and their safety for the moment would have been assured; from the high ground they could have offered successful resistance to Philip and after their first losses have brought the rest of their force into safety.

Of all this not a word is found in our sources. Even in the modern descriptions—Kromayer comes here especially into consideration—no respect has been paid to these facts, which would of themselves impress the observer on the supposed battlefield of the Athenians. Wilhelm Vischer alone [*Erinnerungen und Eindrücke aus Griechenland*, p. 591, f.] has noticed the silence of the ancient accounts in regard to the part which Chaironeia must have played in the battle; he seems therefore not to have thought it absolutely necessary to regard the town as having a close relation to the battle, as he is the first who has not drawn the conclusion from the position of the Lion monument that the annihilation of the Sacred Band took place on that spot.

Moreover, apart from these difficulties, when we consider the lay of the land, we can scarcely think that the battle between the Athenians and Philip, about which we know exactly from Polyænus, was fought under the walls of Chaironeia.

The citadel of Chaironeia occupies the entire summit of the akropolis from the valley to the east, where a part of the present village lies, to a cleft in the rock above the point to which Philip is supposed to have enticed the Athenians. We must here remark, since this circumstance seems to have been noticed by no one else, that only the easterly part of this akropolis above the present village is fortified with walls of classical times, while the western shows only cyclopean walls, with the exception of some places on the south side where in classical times either repairs have been made on the old wall or an inner line of wall has been constructed parallel to the outer one of cyclopean style, which perhaps had fallen into ruins. To this Mycenæan citadel probably refers the passage of Plutarch where he says: Just as my own native town which had sloped toward the west wind and used to receive the rays of the Sun as it rested on Parnassos they say was turned toward the east by Chairon. Kromayer, who does not mention the Mycenæan citadel of Chaironeia,* wishes to explain this passage as if the change of situation of the town pointed to its extension to the opposite side of the valley east of the akropolis . . . he believes he can recognize in some traces the line of the citadel wall. It is the region shown in the view of the restored base of the Lion and the akropolis, the steep eastern slope of the akropolis and the hill lying opposite. Kromayer's assumption cannot be correct. The low hill to the east shows absolutely no trace of old walls; everywhere where one might assume these, the

soft rock is quite intact; the slope is not terraced and nowhere are traces of old buildings to be found except below on the brook by the church, and these come from Roman times. An extension of the well-preserved southern wall of the akropolis in an easterly direction to the hill mentioned would also have been an unpardonable blunder in fortification, for the wall here would have been easy to attack from the high ground and especially down in the deep, narrow valley would have given an exceedingly weak point for defence. The south wall of the citadel plainly bent at the southeast angle on the edge of the rocky slope in a northerly direction and reached the northeast edge of the rock; there are even some traces of it preserved. Then it descended into the plain to the left bank of the brook, almost reached the highway, and then extended westward to the point where it was joined by a second wall descending steeply from a northwest corner of the citadel. This second wall is well preserved on the rocks of the akropolis and on its north slope. Since ancient graves everywhere mark exactly the limits of the town that lay in the plain north of the akropolis, we can easily picture to ourselves its size. It lay on the higher ground, which is full of ancient remains, stretching from the left bank of the brook westward to a distance of about 400 m. ($\frac{1}{4}$ mile) and having the highway as a northern boundary. It was a small town; Panopeus near by was no larger. The citadel of Chaironeia was considerably larger than the town. The Herakleion must have lain outside the wall of the brook, which probably is the Haimon of Plutarch.

Now if the Athenians had taken position close to the town, they must have had in their hands the rectangular recess formed between it and the Mycenæan citadel. Now then must one picture to oneself the course of events at the first encounter? Suppose Philip had in his possession the small projection of the citadel hill which runs out to the north as far as the highway some 1,000 paces distant; that is the point to which the Athenians advanced (supposedly), when they started off to attack him. Now if Philip and his troops were drawn up there before the battle began, he had no need to draw back, to entice the Athenians farther into the plain, for so he would have given up unnecessarily his strong position; the Athenians would then have gotten possession of this and attacked the Macedonians from an elevated place. If he stood in front of this rocky spur, and thus quite near the Athenian battle-line, the distance between the two armies was very slight and the consequences of the precipitate attack of the Athenians could not have taken place, aside from the fact that in any event the Athenians had a secure protection for their extreme left flank in the steep slopes under the cyclopean citadel and the heights below it.

So many considerations against the correctness of the assumption that the Athenians made their attack on Philip from under the walls of the town must lead us to think that the battle was not fought in its immediate neighborhood. If we locate the battle-field somewhat to the east, on a line between the western rocky spur of Thourion, past which flows the brook Molos, and the grave-mound of the Macedonians, all conditions of a good protection for both wings of the Greek army are fulfilled, while all difficulties in reference to the events on the left wing vanish. Here alone can it be easily explained how Philip enticed the Athenians into the plain, where actually in the charge, in which their ranks were somewhat broken, they lost every protection, while Philip, who retired step by step and held his phalanx close together, by a slight movement to the right could quickly gain the elevated ground in the



KAPRAINA (CHAIRONEIA) AND PARNASSOS



WORK AT A DEPTH OF SEVEN METERS IN THE CENTER OF THE TOMB OF THE MACEDONIANS, WHERE THE ASHES, CINDERS, ARMS, ETC., WERE FOUND

gentle slopes of the hills east of the Lion monument. Since in the meantime the right wing of the Greeks was torn to pieces and the Macedonians poured over the plain, the Athenians could seek refuge only toward the rear, toward Lebadeia. Forced into the angle of the hills here all had to surrender who could not reach the pass in time. Also the fugitives of the Greek center and right wing, as far as they were not caught in the plain by the Macedonian cavalry, could seek refuge by the path near Bramagas or somewhat farther to the southeast, where the mountain passes over into gentler slopes, upon Thourion itself or beyond in the direction of Lebadeia. The shortest line between the steep wall of Thourion and the grave-mound of the Macedonians is only 1,120 m. (7-10 of a mile), but the Kephisos is still some 100 m. distant from the grave-mound, and between the Kerata pass, which the Greeks must naturally have held open for themselves by a skillful arrangement of their troops, and the Kephisos, whose bed may have been farther from the mound than it is to-day, the Greeks might have extended their line of battle to 2,000 m. (1¼ miles). They needed no more space for drawing up their troops, and on the hypothesis of this arrangement the course of the battle can be quite sufficiently explained according to the short though clear accounts of Diodoros, Polyænus, and Frontinus. Our sources are not mediocre; they had no need to say more than they tell us, and the original accounts, which Diodoros and Polyænus copied, were doubtless correct. The events were as simple as possible . . . and were calculated with superior strategic skill beforehand by the Macedonians. While Philip manoeuvred against the Athenians and weakened their strength by tactical movements in order so much the more easily to overpower them with his stouter and better trained soldiers, he gave time to his son Alexander to conquer the brave Thebans with his left wing, where the best Macedonian force was concentrated. That was all, and Diodoros has plainly followed his source faithfully in his narrative: 'Since Alexander wished to show his father his bravery and to let no one outdo him, and since at the same time many brave were with him, he first broke through the enemy's battle-line, overthrew many opponents, and conquered whatever stood over against him. As now the divisions near him did the same, the whole line of battle was gradually rolled back, many dead were heaped up, and so Alexander's wing first put the enemy to flight.'

The Macedonian army intoxicated with victory, whose work on this great day outshone the most famous deeds of the Greeks, according to old national custom erected on the field of battle no perishable trophy; they only instituted a splendid festival at the burial of their dead and erected for them an imperishable monument (on the spot where they had fallen). Several days later the proud victor granted also to the unfortunate vanquished the consolation of hiding their dead in the earth. For the Athenian dead he cared himself in a magnanimous manner, for political reasons; where the other Greeks buried those who belonged to them we do not know; only the Thebans brought the dead of their Sacred Band, whose name was extinguished on that day, to that spot for burial where the colossal Lion erected over their grave should forever proclaim their heroic deed: near the town, beside the highway on which people have passed for centuries and will pass forever.

Since the above was written I have received from Dr. Soteriades a copy of *La Reforme* of Smyrna, dated March 9, 1904, with the following statement in regard to the lion: "The work of restoring the lion of Chaironeia continues; the new base has been completed. Up to

this time the Greek Archæological Society has spent 42,000 drachmas (\$5,250); the cost of the restoration will amount to some 100,000 drachmas. All the fragments of the lion fit together wonderfully. A plaster cast has been placed on the base. The work is majestic; the head is wonderfully preserved, while only some small portions of the back and belly are lacking. These will be replaced in the same marble: the ancient quarry is situated quite near Lebadeia. The lion rests on his front paws, while sitting on his haunches; its gaze is turned slightly toward the tomb of the Macedonians. Its height measured from the base to the forehead is 5 m. (16 ft.); from this one can imagine the size of the tomb. Naturally the work is not of a fine art, yet the image is expressive and lifelike."



PENDING LEGISLATION FOR THE PROTECTION OF ANTIQUITIES OF THE PUBLIC DOMAIN

BY REV. HENRY MASON BAUM, D. C. L.

IN THE last issue (April) of RECORDS OF THE PAST I gave an account of the efforts to secure national legislation for the protection of antiquities on the Public Domain. This article brought the matter down to the introduction of the Bill by Mr. Rodenberg, and its submission to the Educational Institutions, Museums, Archæological and Historical Societies of the United States for approval and any suggestions they might offer in order to make it more effective. The article closed with many of the replies from different parts of the country.

The Committee on Public Lands of the House of Representatives granted a hearing on the Bill and I presented the matter, somewhat at length, to the Committee. The 4 Bills introduced in the House were then referred to a sub-committee consisting of the Hon. John F. Lacey, Chairman; Hon. John Lind, and the Hon. George Shiras, 3d. I asked Senator Lodge to introduce the Bill in the Senate, which he did on April 20. It was referred to the Senate Committee on Public Lands, which in turn referred it and other pending Bills on the same subject to a sub-committee consisting of Senator Fulton, Chairman; and Senators Newlands and Bard. April 22 this Committee gave a hearing on this and the other Bills, at which were present Prof. Francis W. Kelsey, of the University of Michigan, and Secretary of the Archæological Institute of America; Hon. William A. Jones, Commissioner of Indian Affairs; Mgr. Dennis J. O'Connell, Rector of the Catholic University of America; Dr. Charles W. Needham, President of the Columbian University; Prof. Mitchell Carroll, of the Columbian University, Associate Secretary of the Archæological Institute of America, Mr. Fred. B. Wright, Secretary of *Records of the Past Exploration Society*, and myself. Prof. William Henry Holmes, Chief of the Bureau of Ethnology, was invited to be present but declined to come.

The Committee gave the gentlemen present a very courteous hearing, a printed report of which can be obtained upon application to any of the United States Senators.

The Committee considered not only the Lodge-Rodenberg Bill but the one introduced by Senator Cullom in the Senate and known as the "Langley Bill," and 2 introduced in the House by Major Lacey, the Chairman of the Committee on Public Lands H. R. and by Mr. Rodey, the Delegate from New Mexico. Addresses were made by all present and the Committee finally selected the Lodge-Rodenberg Bill, and with a few verbal amendments it was reported to the full Committee, and on the 25 was reported to the Senate. The following from the *Congressional Record* embraces Senator Fulton's presentation of the Bill to the Senate.

PRESERVATION OF HISTORIC AND PREHISTORIC RUINS, ETC.

Mr. FULTON. I am directed by the Committee on Public Lands, to whom was referred the Bill (S. 5603) for the preservation of historic and prehistoric ruins, monuments, archæological objects, and other antiquities, and to prevent their counterfeiting, to report favorably with amendments, and I submit a report thereon. I ask for the immediate consideration of the Bill.

The PRESIDENT pro tempore. The Bill will be read.

The Secretary proceeded to read the Bill.

Mr. TELLER. Mr. President, no one knows what the Bill is, owing to the confusion in the Chamber. From what Committee did it come?

The PRESIDENT pro tempore. From the Committee on Public Lands.

Mr. TELLER. It was reported this morning, I understand.

Mr. FULTON. Yes, sir.

Mr. TELLER. I wish to object to its consideration, and to have it printed.

The PRESIDENT pro tempore. Objection is made, and the Bill goes to the Calendar.

Mr. FULTON. I should like to explain in just a few words what the character of the bill is, and then I think the Senator from Colorado will not object to it.

Mr. TELLER. I can tell very much better what it is when I read it.

Mr. FULTON. I wish to make the explanation anyway.

Mr. TELLER. I know that some of these ruins are not on public land, and the Government has no control of those.

Mr. FULTON. No; and the Bill does not pretend to give Government control over them. It could not if it desired.

Mr. TELLER. There is no indication that the attempt will not be made.

Mr. FULTON. We are not trying to do it.

The PRESIDENT pro tempore. The bill has gone to the Calendar under the objection.

Mr. FULTON. The bill was introduced by the Senator from Massachusetts (Mr. Lodge). It was considered by the Committee on Public Lands and referred to a sub-committee consisting of the Senator from Nevada (Mr. Newlands), the Senator from California (Mr. Bard), and myself. All it proposes to do is to provide for the preservation of the prehistoric ruins and monuments found principally in the southwestern part of the United States.

Mr. STEWART. I should like to ask the Senator from Oregon if it

does not suggest more reservations, and if pretty much everything in our country is not to be reserved?

Mr. FULTON. It makes no reservations except such portions as contain these ruins.

Mr. TELLER. The Bill has gone to the Calendar, has it not?

The PRESIDENT pro tempore. The Bill has gone to the Calendar.

Mr. FULTON. It has gone to the Calendar, I understand, but I promised to make an explanation and, with the permission of the Chair, I should like to make it.

There are a great many people interested in this measure all over the country. All the scientific societies have taken an interest in it. They have been trying for years to secure legislation of this character. It seems to me very fitting and proper that some such legislation should be had.

I feel that I have done my duty when I have reported the Bill and tried to secure its immediate consideration. I understand that going to the Calendar kills it for the present session and makes it impossible for it to become a law at this time.

The nature of the Bill was made clear to Senator Teller later in the day by myself and he generously agreed to ask for unanimous consent the following day for its immediate consideration. He suggested several amendments, which I accepted in behalf of the gentlemen who were before the Senate Committee. He did not have the opportunity to present the matter to the Senate on the following day, but Wednesday morning he obtained unanimous consent and presented the Bill with his amendments. The following extract from the *Congressional Record* gives the final action on the Bill in the Senate:

PRESERVATION OF HISTORIC AND PREHISTORIC RUINS, ETC.

Mr. TELLER. Day before yesterday I objected to the passage of a Bill in which the scientists of this country are greatly interested. There were some objections that I had to the Bill. After consulting with them I prepared yesterday, with their approval, an amendment which I ask to substitute for the Bill, and that the Bill be put on its passage.

Mr. BLACKBURN. What is the Bill?

Mr. TELLER. It is a Bill for the preservation of the antiquities in the West. I desire to call up the Bill this morning, for there has been a great deal of interest taken in it by the scientific people of the country, and inasmuch as I objected to the Bill I feel that I ought to do so. I offer an amendment which is agreeable to the parties interested in securing a measure for this purpose.

The PRESIDENT pro tempore. The Senator from Colorado asks for the present consideration of the Bill (S. 5603) for the preservation of historic and prehistoric ruins, monuments, archæological objects, and other antiquities, and to prevent their counterfeiting. The Bill has been read in the Senate.

There being no objection, the Senate, as in Committee of the Whole, proceeded to consider the Bill.

Mr. TELLER. I move an amendment as a substitute to the Bill reported by the Committee on Public Lands. It is substantially the same measure, but with some things left out of the bill as reported.

The PRESIDENT pro tempore. The amendment proposed by the Senator from Colorado will be read.

The Secretary. Strike out all after the enacting clause and insert:
58TH CONGRESS, 2D SESSION. S. 5603.

IN THE SENATE OF THE UNITED STATES.

APRIL 26, 1904.

Ordered to be printed.

AMENDMENT.

Intended to be proposed by Mr. Teller to the Bill (S. 5603) for the preservation of historic and prehistoric ruins, monuments, archæological objects, and other antiquities, and to prevent their counterfeiting, viz: Insert the following:

That for the purpose of preserving and protecting from despoliation the historic and prehistoric ruins, monuments, archæological objects, and other antiquities, and the work of the American aborigines on the public lands of the United States, all said historic and prehistoric ruins, monuments, archæological objects, and other antiquities are hereby placed in the care and custody of the Secretary of the Interior, with authority to grant permits to persons whom he may deem properly qualified to examine, excavate, and collect antiquities in the same: *Provided, however,* That the work of such persons to whom permits may be granted by the Secretary of the Interior is undertaken for the benefit of some incorporated public museum, university, college, scientific society, or educational institution, either foreign or domestic, for the purpose of increasing and advancing the knowledge of historical archæological, anthropological, or ethnological science.

SEC. 2. That the Secretary of the Interior may make temporary withdrawals of the land on which such prehistoric ruins, monuments, archæological objects, and other antiquities are located, including only the land necessary for such preservation and not exceeding in one place one section of land. The Secretary of the Interior may detail custodians of such ruins or groups of ruins, with the view to their protection and preservation; and it shall be the duty of such custodians to prohibit and prevent unauthorized and unlawful excavations thereof, or the removing therefrom of antiquities.

SEC. 3. That it shall be the duty of the Secretary of the Interior to grant to any State or Territorial museum or university, having connected therewith a public museum, permits to excavate and explore any ruin or site located within its Territorial limits on the public lands, upon application for such permit being indorsed by the governor of the State or Territory wherein the ruins are situated.

SEC. 4. That the Secretary of the Interior is hereby authorized to grant permits for the purposes set forth in the foregoing sections to foreign national museums, universities, or scientific societies engaged in advancing the knowledge of historical, archæological, anthropological, or ethnological science under such regulations as he may deem advisable, and to make such division of the antiquities recovered as in his judgment seems equitable, and the antiquities retained in this country shall be deposited in the United States National Museum or in some public museum in the State or Territory within which explorations are made.

SEC. 5. That permits granted to any institution or society shall state the site or locality in which excavations or investigations are to be conducted, and shall require that the work begin within a stated time, and that the work

shall be continuous until such excavations have been satisfactorily completed, in the judgment of the Secretary of the Interior; and that any failure to comply with such requirements shall be deemed a forfeiture of the permit, and in case of such forfeiture all antiquities gathered from such ruin or site shall revert to the United States National Museum or to such State or Territorial institution as the Secretary of the Interior shall designate.

SEC. 6. That of all excavations and explorations made under a permit granted by the Secretary of the Interior a complete photographic record shall be made showing the progress of the said excavations, and of all objects of archæological or historical value found therein, and duplicate photographs thereof, together with a full report of the excavations, shall be deposited in the United States National Museum.

SEC. 7. That it shall be the duty of the Secretary of the Interior to make and publish from time to time such rules and regulations as he shall deem expedient and necessary for the purpose of carrying out the provisions of this Act.

SEC. 8. That any person who shall excavate, disturb, willfully destroy, alter, deface, mutilate, or injure, without authority from the Secretary of the Interior as aforesaid, any prehistoric aboriginal structure or grave on the public lands of the United States, or who knowingly and intentionally conducts, enters into, aids, abets, or participates in any manner whatever in any excavations or gatherings of archæological objects or the destruction or injury to any grave or prehistoric structure on the public lands of the United States, or shall violate any of the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by fine not exceeding five hundred dollars, or by imprisonment not exceeding one year, or both.

The amendment was agreed to.

The Bill was reported to the Senate as amended, and the amendment was concurred in.

The Bill was ordered to be engrossed for a third reading, read the third time, and passed.

The Bill was immediately engrossed and sent over to the House of Representatives. Preparations were made to ask unanimous consent for its passage, as Congress was to adjourn the next day. The members of the Sub-committee of the House agreed to do all they could to secure unanimous consent, but it was found that Mr. Rathbun, Assistant Secretary of the Smithsonian Institution, and Mr. J. D. McGuire, who drew up the "Langley Bill," were present trying to get some member of the House to object to its immediate consideration. They went first to the Hon. Robert R. Hitt, one of the Regents of the Smithsonian Institution, but he absolutely refused to interpose any objection to the passage of the Bill. Other members were seen and finally Mr. Alexander, the member from Buffalo, agreed to make objection. Several members of the House, as well as myself, explained to Mr. Alexander the animus of the Smithsonian Institution and he also refused to interpose any objection. It was then near the close of the night session. The following morning these gentlemen were again present and they succeeded in getting Mr. Adams, the member from Philadelphia, to object, but as it was near the hour of adjournment we decided to abandon the attempt to have the Bill passed by unanimous consent and it will

therefore come up on the reassembling of Congress next December. Several members of the House said that over 90 per cent of the members were ready to pass the Bill if unanimous consent could be secured. Of course, the Bill will be passed in regular order in December.

The action of the Smithsonian Institution was severely condemned by members of Congress and many prominent citizens. *The Smithsonian Institution will be responsible for all injury done to antiquities on the Public Domain until the final passage of the Bill.*

During the interim the Officials of the Interior Department have promised to do all they can to prevent excavations and the destruction of the ruins. They have long been desirous of the enactment of a National law to aid them in saving what is left of our prehistoric remains, and have done all in their power to help secure such legislation. The aid given by the Hon. William A. Jones, Commissioner of Indian Affairs, will be gratefully remembered by thousands of the American people.

It is with a great deal of regret that I state why the Smithsonian Institution, by its official representative, objected to the immediate passage of the Bill, but my duty to the public requires me to do so. It seems that the Smithsonian people employed, last year, Mr. J. D. McGuire to draft a bill dealing with antiquities on the Public Domain. We have the statement of Prof. William Henry Holmes, Chief of the Bureau of Ethnology, made in a meeting of the Anthropological Society of Washington, that Mr. McGuire was employed by the Smithsonian Institution to draft this bill. It remains to be seen whether the Institution had the right to use its funds for such a purpose. The Bill was introduced on February 5 by Senator Cullom, one of the Regents, by request. This Bill only dealt with such antiquities as might be found on reservations which the President would be authorized to create. It is well known to all who are acquainted with the antiquities of the Southwest that 19-20 of the ruins are isolated and that not more than half a dozen localities should be made National Parks, and Congress is very adverse to the creation of National Parks. But the "Langley Bill," as it is called, took from the Secretary of the Interior the right to grant permits to museums and other institutions to excavate in this country without the consent of the Secretary of the Smithsonian Institution. This was so unjust that it was at once condemned. Also the great institutions of this country, that have been foremost in the work of exploration and whose field workers are among the most competent in the world, would have to submit to an examination by the Secretary of the Smithsonian Institution, which of course no self-respecting archæologist sent out by a great University or Museum, would be willing to do. The Bill contained many other obnoxious provisions. Its only friends were its authors.

In the Senate hearing, while considering the section dealing with permits and the necessity for having ruins scientifically excavated, I stated:—[See Senate Report].

In regard to these two suggestions I wish to say that there is hardly an

institution in this country that has not been guilty of the charge of going to the Southwest and excavating the most promising part of a ruin and taking what they wanted to fill up their museums and then leaving it and going to another.

SENATOR BARD. The Smithsonian Institution itself has been doing that?

REV. DR. BAUM. The Smithsonian has done that. It is not the least among the guilty parties.

It is not because they have not competent men to excavate. All their men have been able to conduct scientific explorations. But the great desire to go into a ruin and get the best there has led to an utter neglect of the scientific excavation of our ruins, which would not be tolerated for one moment, as Prof. Kelsey knows, in Italy or Greece.

So in drawing up this Bill I had in mind hundreds of ruins that I saw in the Southwest that had been rendered useless by desultory excavations for scientific investigation, and I thought that the Smithsonian and all the other institutions when they began work ought to be made to keep at it until there could be placed in some museum the continuity of life that was lived there. There is nothing unfair in that. If we want to have our antiquities preserved for scientific exploration, then, as the writer of one of these letters says, let us hold them strictly to scientific work.

Now, an eminent archæologist made the following statement in a letter to me:—"Langley's Bill is the most outrageous that could be presented. He might just as well have said, no explorations except by the Smithsonian, for that is what the Bill means." This statement was borne out by the action of the Assistant Secretary of the Smithsonian at the close of the session in his efforts to obstruct the passage of the Bill. If everything could not be made subservient to it, i. e., the Smithsonian Institution, even the Interior Department itself, they would prefer to turn our antiquities over to the hand of the despoiler.

On Wednesday, April 28, I addressed the following letter to Mr. Rathbun, to which no reply has been received.

RECORDS OF THE PAST EXPLORATION SOCIETY.

INCORPORATED APRIL 1, 1901, UNDER THE UNITED STATES STATUTES FOR THE DISTRICT OF COLUMBIA. REV. HENRY MASON BAUM, D. C. L., PRESIDENT.. FREDERICK B. WRIGHT, SECRETARY AND TREASURER.

Offices, 215 Third Street S. E., Washington, D. C.

April 26, 1904.

MR. RICHARD RATHBUN,

Ass't. Secretary of the Smithsonian Institution, Washington, D. C.

SIR:—I learned that you were at the Capitol yesterday in company with Mr. J. D. McGuire for the purpose of interposing objections to the passage of the Bill for the protection of antiquities on the Public Domain. You may not be aware that this Bill has been submitted to the leading Universities, Colleges, Public Museums, Archæological and Historical Societies in the United States, and has been endorsed by them all so far as heard from. This Bill also voices the wishes of the people of the United States, who have been trying for several years to secure National Legislation for the protection of our antiquities. The Bill was introduced in the House of Representatives by Mr. Rodenburg on March 2 of the present year and in the Senate on the 20 inst., by Senator Lodge. Hearings have been given by the Committee on Public Lands of the

House of Representatives and also of the Senate. A hearing was given before the Sub-committee of the Committee on Public Lands of the Senate on Friday the 22 inst., at which were present Prof. Francis W. Kelsey, representing the Archæological Institute of America, the largest society in this country dealing with the matter of antiquities; the Hon. William A. Jones, Commissioner of Indian Affairs; Mgr. O'Connell, Rector of the Catholic University of America; President Needham, of the Columbian University; Prof. Carroll, of the Columbian University; Mr. Wright, the Secretary of this Society, and myself. Prof. Holmes, the Chief of the Bureau of Ethnology was invited to be present but declined. The object was to secure immediate legislation in some form to stop the wanton despoliation of our priceless antiquities. The Senate Committee adopted the Lodge Bill with some few amendments as the one, of the several Bills introduced in the House of Representatives and the Senate, meeting the present necessities of the case. The Bill as amended was reported by the Senate Committee on Public Lands to the Senate, and was unanimously adopted with a few minor amendments by Senator Teller.

On the same day the hearing was given by the Senate Committee, several persons who appeared before that Committee also appeared before the Sub-committee on Public Lands of the House of Representatives, and after an extended hearing by that Committee the Rodenburg Bill was adopted with a few verbal changes, which the Senate Committee accepted.

The Smithsonian Institution has had every opportunity to be heard on the Bills dealing with this matter. After the respective Committees of the Senate and House of Representatives have generously offered to grant the protection asked for by the Educational and Scientific Institutions of this country, you appear as a lobbyist to delay the passage of the Bill passed by the Senate. The objections offered yesterday by yourself are trivial in the extreme. A notable example of your acquaintance with the ruins of the Southwest is found in your statement that a section of land (640 acres) will not in all cases protect some of the ruins in the Southwest. If you were at all acquainted with the extent of these ruins you would know that 20 acres would much more than cover any one ruin. I need not speak of the other objections, which are on a par with this one. As the matter stands to-day, the Smithsonian Institution by you, as its Assistant Secretary, is opposing a Bill for the protection of our priceless antiquities. You have gone to several members of the House of Representatives and asked them to oppose unanimous consideration of the Bill. The Hon. Robert R. Hitt, a Regent of the Smithsonian Institution, I learned from members of the House of Representatives, has refused to accede to your wishes, as I believe every other member of the House will do on knowing the motives that actuate your opposition to the Bill. I am assured by a member of the Public Lands Committee of the House of Representatives that at least 90 per cent. of the members of the House of Representatives would vote for the passage of this Bill if the opportunity was given them to do so.

I write therefore, to ask if you are willing to put yourself before the country in this unenviable light. Some one in the Smithsonian Institution is responsible for having paid, out of its funds, this Mr. McGuire for drawing up a bill, which was at once condemned by everyone interested in this great movement, except the Smithsonian Institution. Whether the officials of the Smithsonian Institution have the right to use its funds for such a purpose remains for future investigation.

Very respectfully,
HENRY MASON BAUM.



THE STONE LIONS OF COCHITI

BY HON. L. BRADFORD PRINCE, LL. D.

THE "Stone Lions of Cochiti" have long been recognized as the most important specimen of aboriginal sculpture in the United States, and as such have naturally attracted the attention both of tourists and of scientists seriously interested in the archæology and ethnology of America.

I had long desired to visit these monuments of ancient art, and the ruins of the city of which they were at once the ornaments and the sacred guardians, before an opportunity was presented; but at length good fortune permitted me to attend the annual festival of the Pueblo of Cochiti, the nearest existing Indian town, and I arranged to stay a week if necessary in order to pay my respects to the Lions, which are less than 12 miles away.

So, as soon as the great ceremonial dance was over, I endeavored to engage the services of a bright, active and intelligent Pueblo Indian, whom I knew well, to guide me through the trip. But here an unexpected obstacle arose. The government of a Pueblo town is the best example in the world of the communal system. The governor has the power to call on every man and woman to aid in any work for the public weal, and on this occasion he had ordered a levy *en masse* of the adult males of the town, to work on the main acequia for 2 days, in order to repair some breaches which were causing the loss of all the water needed for irrigation. The Fiscal had just given the required notice in a loud voice from the house tops, and to a mandate of this kind there was no answer but obedience. So my Indian friend sorrowfully told me that it was impossible for him to leave; he did not dare to be absent when the roll should be called. This seemed an end to the proposed expedition; but fortunately the Governor of the Pueblo was a man whom I had known in a friendly way for years; so I boldly approached and stated the case. I told him of the long distance we had come simply to visit the ruins, and that without a guide we must return with the work undone. He had plenty of men for the acequia; could he not spare one? "For how long?" said he. "Two or three days," I answered. "No," that was impossible; but if I would solemnly promise that he should be back the next evening, he would excuse him for the one day.

There being no alternative, the assurance was given; and soon after the desired guide was surprised by receiving formal official notification that he was free to go.

This important preliminary being settled, we started next morning, mounted on good horses, on our expedition. The road, from beginning to end, is a succession of ascents and descents, sometimes rocky and precipitous, sometimes gradual and grass clad. As one follows the broken and often rugged and dangerous trail, the horizon on the west is bounded by a series of peaks, each of which has its expressive Indian name—too sacred for mention to the Mexican or the Gringo,

for whom the Spanish names are supposed to be good enough. By favor they were told to me and I inscribe them here, as at least a pleasant exercise in pronunciation.

They are in their order from the South: Hah-chah-mone-ye-tah, La-a-ke-ah, How-wy-yah-He-che-an-yeet-sah.

To the north of the broad Canada de Cochiti deep canyons run from the mountains on the west to the Rio Grande, which is here itself bordered by massive rocky walls, almost perpendicular and of great height, forming what the Spaniards call the Caja del Rio, an expression anglicized into the equally expressive "Box Canyon." These gorges, which are sometimes quite narrow and at others widen into green valleys, are named from old residents or natural objects, and coming from the South are known as the Canyons de Jose Sanchez, del Medio, del Capulin, de las Vacas and de los Alamos; the next valley above being more extensive and called the Canyon del Rio de los Frijoles. On our hot summer trip we found the Canyon del Capulin to be appropriately named, as it was filled with trees of the Capulin or Bird Cherry, covered fortunately for us with the ripe berries, whose very astringency made them most refreshing, and which, with the smaller or more aromatic fruit of the Lemita, furnished the most grateful food of the journey.

Between these canyons are high, broken *mesas*, irregular in outline and rough in surface, and on the summit of one of these, called the Potrero de las Vacas, midway between the steep sides that lead down hundreds of feet to the depths below, are the ruins of the Pueblo Quemado, the Burnt Pueblo, which, to distinguish it from other Pueblos similarly destroyed and consequently similarly named, is sometimes called the Pueblo del Potrero de las Vacas.

It has still another Indian name, which might be adopted but for its length, as its meaning is quite descriptive and certainly poetical: "The ruined Pueblo to the north, where the Mountain Lions are resting."

Long before we reach the place, we see evidences of ancient habitation in the ruins of isolated houses, or little groups of dwellings, all once built of stone; and the only remains of which now are the lines of fallen walls and a few broken pieces of antique pottery.

In the soft limestone which constitutes one stratum of the cliffs, are myriads of nests of birds, excavated in the rock, so large and deep and regular in form, that they seem like the work of human beings, and are apt to deceive the enthusiastic tourist from the East, into the belief that they are veritable cliff dwellings of which he has read so much, and regarding the exact appearance of which his ideas are a little indistinct.

As we approach nearer to the once populous city, we see evidences of the great numbers of its inhabitants, and of the length of time during which it must have been occupied; for in the solid rock which in many places constitutes the surface of the ground, are worn deeply grooved paths, by the constant passing of the people. When we re-



STONE LIONS OF COCHITI

member that they were made by bare feet, or soft moccasins; that no iron shoe of horse, or hard soled boot of the white man had taken part in their formation, we can imagine what multitudes of feet must have trodden those rugged paths, in order to wear into the hard and solid stone, grooves fully 6 in. deep. They are not "footprints on the sands of time," but in the rocks of eternity, and they tell more vividly and more lastingly of the long occupation and vast numbers of the people of those ancient ruins than could the most enduring monument.

The country in the vicinity abounds in the ruins of ancient towns,

more or less extensive, from the cave dwellings opposite San Ildefonso to the present Pueblo of Cochiti; one of the most interesting, called the Pueblo Colorado, being but a short distance below, between the Canyon del Capulin and the Canada de las Vacas; but whether these were contemporaneous, or were successive places of residence, is a point not easy to determine. The frequent changes made in the location of many Pueblo towns, would make the latter idea probable; yet there are reasons to suppose that the people were sufficiently numerous at one time to require several cities for their accommodation. One theory is that this particular Pueblo was the central point in government and religion—the capital we might say—of a considerable number of neighboring towns, and that this accounts for the large number of *estufas* which existed here, both within and without the walls.

However this may be, the present ruins are sufficient to give evidence of a large and industrious population. The general plan was that usual in all Pueblo towns of that day; the houses being arranged in long lines, three stories in height, and built somewhat irregularly around an open square or plaza. On the west side, the line of houses was nearly straight, and about 525 ft. in length. On the south this line was more irregular, on account of the "lay of the land," extending with a series of jogs, towards the north, the total distance from east to west being nearly 400 ft. From the southeast corner a straight line of buildings extended northerly 120 ft. and from the northwest corner a line ran easterly 180 ft., leaving an open entrance into the central square 150 ft. in width, at the northeast. The buildings on all sides were continuous, with no break of any kind for an entrance; so that in case of attack the only point to be defended was this one northeastern opening. It will be remembered that in all Pueblo towns of that period, the houses were built in terrace form, facing inwards, so that the outside wall, which usually had but few if any openings for light, and those very small in size, was three stories in height, thus presenting a perpendicular line of defense, too strong to be broken through, too high to scale, and in those days, before artillery was known, perfectly impregnable against the attacks by the spears, the arrows or the clubs of a hostile force, no matter how large or powerful.

This particular Pueblo was built of stone, hewn into blocks about the size of a large adobe, 2 ft. in length, 8 in. wide, and 4 in. thick; and all so uniform as to be used in building with the regularity of bricks. The walls, many of which are still standing to the height of 5 or 6 ft., are but the width of one stone—8 in.—in thickness; but the rooms being small, so that 4 lines of walls stand close together, and the whole structure being in one mass, this was amply sufficient to give the necessary strength. The stones are well laid, any little irregularities being filled with small pieces, driven in; and the whole united with a clayey mortar, most of which has disappeared. The stones are so flat and regular, however, that the walls would stand ordinary wear and tear without any mortar whatever. The rooms are generally 12 ft. in length by 7 or 8 in width, between the walls; the total breadth of the

line of houses, consisting of 3 rooms across, being, with its 4 walls, not far from 25 ft.

In the ruins of this Pueblo every room can be distinctly traced; in many the walls are still quite high, and while the falling of the upper stories has caused them to be somewhat filled with debris, still the position of the fireplaces can generally be seen, and a little excavation brings us to the original earthen floor.

Everything around points to the destruction of the Pueblo by fire. Half burned pieces of wood show how the wooden *vigas* were consumed and the upper stories destroyed. Charred corn tells of the stores of provisions that were lost in the rapid conflagration, while the quantities of broken pottery of all descriptions, show how well the houses were supplied with domestic articles both for use and ornament, before the fall of walls and timbers crushed them into fragments. This pottery is of all the varieties usually found in the old Pueblo ruins, corrugated both in straight and waved lines, variously indented, and painted in red, white and black, with pigments and glazing, which have preserved the brilliancy of the original tints and shades, wonderfully, through the ages. All around are broken fragments of the precious stones prized by the old inhabitants, both for use as arrow heads and for ornamental purposes, all known now under the one general name of *Pedernal*, but including an infinite variety of the flint, the agate, onyx, chalcedony, carnelian and the sardine stone. *Metates*, broken and entire, with the *mano* or hand stone that accompanies them, show that the same system of grinding still in vogue in Pueblo towns, and which was general in oriental lands in the early days when we read that "two women shall be grinding at the mill, the one shall be taken and the other left," existed among the industrious inhabitants of these once populous towns; while stone axes and hammers, *macanas* and arrow heads, prove that both in peace and war, at home and in the chase, they used the same implements as their descendants.

Within the plaza around which the town was built were 4 *estufas*, all perfectly recognizable from their circular depressions and walls, today. The *estufa* seems to be universal in every Pueblo, ancient and modern. Whatever else may change, this idea of a circular, underground council chamber for official meetings, ceremonials and religious rites, seems to be an inherent and necessary part of the Pueblo character and system. Perhaps they had a more general use, as many archæologists believe that they were the dwelling places of the men, while the small roomed houses were the homes of the women of the Pueblos prior to the Spanish conquest. And it will be remembered that the historian of Coronado's expedition, Castaneda, in the earliest authentic description which we have of the towns and the customs of this interesting people, speaks of this matter in a way which will bear quotation here as illustrating the point in question. He says: "The houses belong to the women, and the *estufas* to the men." "The young men live in the *estufas*, which are underground in the plazas of the villages. The women are forbidden to sleep in them, or even to enter, except to bring food to their husbands and sons."

Three of the *estufas* at this Pueblo Quemado are uniform in size, being 30 ft. in diameter, and are placed in the 3 enclosed corners of the plaza, omitting the corner where the open entrance is. Exactly in the center is a still larger *estufa* 40 ft. in diameter. Outside the walls are the ruins of several others, and the large number of them, in the aggregate, is one reason for the belief that this Pueblo was the center of a system of towns, the capital, in fact, where special ceremonials were performed, and mystic rites celebrated, and to which "the tribes went up," as in an earlier day to Jerusalem, "for to worship."

Certain it is that most modern Pueblos have but 2 *estufas*, called after the Turquoise and the Gourd, the *estufa* of "Chalchiguite" and of "Calabosas," but the changed circumstances at the time of the Spanish occupation may have modified the customs of the people, so that a dozen *estufas* in an ancient Pueblo may represent no greater population than the ordinary number in our own days.

But one other matter calls for separate mention or tells anything special of the life of the people who once filled this plaza and sat on its house tops and terraces in the cool of a New Mexican summer evening. Just beyond the broad entrance to the town is a large artificial pond, carefully constructed with banks of stone and earth, and capable of containing a supply sufficient for a long period of drought or siege. The walls of this are now broken and worn down, but enough remains to show how extensive was the provision of water; and a very small amount of labor would restore it to its former usefulness.

The extent of the ruins of this Pueblo, and the existence of the Sacred Stone Lions as a part of them, have given to this particular spot an interest to the Pueblo Indian himself far beyond that of the other deserted cities which are scattered in the vicinity, and have made it the center of considerable legendary lore. All the localities around are the scenes of events commemorated in mythical story. Directly across the arroyo to the north, in the mountain side, with a ribbon of green grass in front, which tells of the flowing water, is a deep cave, known to the Mexicans as the *Cueva Vieja*, and to the Indians as "c'ar-te-tyam," which is the center of a long and touching legend of an aged man and his beautiful daughter who once dwelt there; the 3 window-like holes near the roof of the cave, and its natural chimney, still dark with smoke, each having its appropriate part in the story. We cannot stop to tell all the alternations of love and hatred, of joy and sorrow, in the Indian tale, but pass on to the legend of the Pueblo Quemado itself, which throws the date of its days of glory far back into the dim past, and is certainly of sufficient interest to warrant its perpetuation. And so I tell the tale as it was told to me, sitting under a thickly leaved pinon tree at a corner of the ruined walls of the old Pueblo, on that summer afternoon.

Long years ago, not only centuries before any white man had set foot in the land, but far back of that, before the coming of the first Pueblo Indian and the dawn of the Montezuman civilization, a people lived here, numerous and powerful. This was in the early days of the world, when all was new.

Men had not yet learned the use of meal or flour nor even knew of corn or wheat as articles of food. In place of modern grain, they lived on the seeds of the *Anil del Campo*, the largest of the native sunflowers. The plains and valleys were covered in the summer with the yellow blossoms, which ever turned with respect and admiration toward the great central orb, the Lord of the Heavens, and seemed like literal fields of cloth of gold. When the seed was ripe, the stalks were cut as fields of wheat are mown to-day, and carried on great blankets to the houses, where they remained until entirely dry, and then the flowers were winnowed in the open air, the winds of heaven blowing away the chaff, and the pure seed, ground up, was used as meal.

The people, as the years rolled by, built strong and mighty cities. All were of stone, carefully hewn, and laid together, and each city had its *estufas* for the councils and ceremonies of the people. They were a nation skilled in many things, and lived in peace and happiness, under the wise government of the elders of the people for many years. This great city was the largest of their towns, and full of the gathered trophies of the chase, of rare skins and great antlers, and of their accumulated wealth in ornamented pottery and precious stones.

Suddenly one night rang out the cry of fire. Though still early in the evening, all were serenely sleeping, feeling no fear of harm. The flames had gathered force before they were discovered, and the lack of water made it impossible to withstand or restrain them. The air was filled with the cries of those who sought to alarm the slumbering inmates, and by the shrieks of those who awoke only to find escape no longer possible. The roofs, heavy with earth, fell with a crash as the *vigas* which supported them gave way, and multitudes of children were buried in the ruins. "*Muchos se quemaron aqui, ninos.*" said the narrator, sorrowfully, as he pointed to the fallen ruins. Those who escaped, unwilling longer to live amid the scenes of such calamity, deserted the place and settled in the fertile fields of Cile, on the banks of the Rio Grande, where they built the city of Chah-pah-she, and where the ruins of their habitations are to be seen even unto this day.

But a relentless fate pursued them even to their newly adopted home. An invading host of strange beings appeared from the far southeast. These were the Pee-nee-nees, a nation of dwarfs whose hair was milky white, and whose home was in the famed valley of the Rio Bonito. A war ensued, so terrible and relentless, that at its end not a single one of the people of Chah-pah-she survived. All were destroyed, men, women children, and their nation was extinct. Nothing remains to tell of their greatness and sad fate, but the ruins of their cities and the remnants of their sculptured monuments.

Their evil fortune descended to their conquerors, the Pee-nee-nees, for after possessing themselves of all that was to be found at Cile, they started homeward, and on their way attempted to capture the town then existing where the Pueblo of Santo Domingo now stands. But they found here a valiant and martial people, ready to protect and defend their families and fire-sides to the last extent. A great battle followed, and at its close more than half of the white-haired dwarfs lay dead upon the field. The rest slowly and sadly continued their homeward march, weighed down with the thoughts of the sorrowful tidings they were to carry to the homes of their comrades. But on the road sickness assailed them, and one by one fell by the way side, until all had perished, save one single survivor,—"*uno, no mas, no dos,*" emphatically said the narrator,—who carried the disastrous news to the chiefs of his people.

And to this day, no man can live amid the ruins of the city of Chah-pah-

she, for the spirits of the ancient people keep watch over the deserted firesides. One man more venturesome and foolhardy than his fellows, dared to build there, and spent his time and substance in the erection of a house so strong and solid that he believed it would be a sure protection against all enemies of earth or air, but the guardian spirits of the old inhabitants came at night to wreak a merited vengeance on the profaner of their hallowed spot, and with loud noises and strange blood curdling sights drove him away.

Such was the legend told to me on that July day, beneath a noon-day sun. The scene, the subject, the earnestness of the Indian story teller, all gave to it a kind of weird reality, and carried one back far into the past. But the day was waning and the return must be made before darkness obscured the dangerous places in the rugged road. So practical thoughts returned. "We must see the stone lions. Where are the lions?" said I. "Over there, not far," was the response.

About a third of a mile west of the Pueblo a tall pine was pointed out as being the landmark by which to find the ancient sculptures; and shaking off the slumberous effects of the legend we started in that direction, full of eagerness and expectation. When almost there, we found a singular relic of the ancient occupation, which illustrates how wonderfully expert the inhabitants must have been in the use of the few implements which they possessed. This is a perfectly rectangular hole cut in the solid rock, 12 in. by 8 on the surface, and 8 in. deep; the peculiarity being that the corners are as sharply cut and the angles as perfect as if done by the most approved steel instruments; and yet these people never possessed metallic tools of any kind. The object of this could not well be determined. At first sight it appeared as if intended to hold water, but its small size made it practically useless for any purpose of that kind. The hole had been extended by building up from the surface of the rock with squared stones around an open center of exactly the size of the hewn cavity below. Most of the stones that were built up in this manner have now fallen, but several remain in place to show the original form. Scattered around were a number of pieces of pure white quartz, unlike any in the immediate vicinity.

Passing this, and but a short distance beyond, we came upon the object of our search, the first thing visible being a circular stone wall, partly overthrown but still of considerable height. This wall, which constitutes a complete circle with the exception of a narrow entrance way, is built of great blocks of stone, hewn into parallelograms, some of which are as much as 5 ft. in length, and all of large size. Many of these have now fallen, but the wall is still from 3 to 4 ft. in height and originally must have been at least 6. The circle is 18 ft. in diameter on the inside, and the wall was about 3 ft. in thickness. The entrance, which is on the southeast, is through a passage way 20 ft. in length between walls similar to those of the circle. The internal width of this long entrance way is but 3 ft., so that a single brave and determined guard could easily have "held the fort" against any number of intruders.

Entering the enclosure we immediately see the objects which were the occasion of this extreme care and protection. The easterly half of

the circle is vacant, but in the other, facing directly toward the rising sun, and with their heads just reaching the center line, are the Two Great Stone Lions. Originally there must have been a huge rock here, but this was in the first place divided by a deep groove extending below the surface of the ground, and so making of it apparently 2 entirely distinct pieces of material, and each of these was then shaped and carved into the semblance of the mountain lion.

The first idea conveyed is one of solidity and massiveness. Here are pieces of sculpture, not of stone brought from some distant quarry, and set, even with greatest skill, in a new home—these are not the product of any foreign studio, liable again to be removed to grace the hall or grounds of some grandee, or to interest the curious visitor at some museum; but they are cut from the solid rock of the earth itself, as firmly set as the foundations of the globe. The sculptor who carved these figures meant them to endure for all time, as memorials of the people among whom he wrought. Changes might come over the face of the land, new forests might arise where then were cultivated fields; generations might pass, the nations and even the races of men who would live on the Great River might change, succeeding each other in the grand panorama of history; his own people might so entirely pass away that not even the memory of their name should be found among men; but these lions would remain as memorials of their ancient greatness, and to tell of the days that were past. And chained to the earth as they were with links of adamant rock, they could not be made to grace the triumph of any conqueror, or to become the spoil of an unknown future race, but must remain in their original seat, unmoved, unchanged, through the ages to come. Time and the elements might efface the sharp lines of the sculpture, the wanton strokes of ignorance or enmity might destroy their symmetry and beauty; but no power on earth could lead them captive.

The body of each lion is 38 in. in length, and the broad flat tails, which stretch straight back, reach 32 in. more, making almost 6 ft. in all. Each is about 2½ ft. wide, with tails 8 in. wide; and the distance between them is about 1 ft. They face directly towards the East, a fact no doubt having symbolic significance. Until a few years since, these images were in perfect preservation. My guide said that he remembered them as they were 14 or 15 years before, and they were then entirely uninjured. But since that time, ignorant herdsmen, tending flocks in the vicinity, have often made this enclosure a resting place at night; and have requited the hospitality thus extended to them by the ancient people of the land, by wanton attempts to destroy these wonderful relics of the older civilization. With rude blows they have assailed the heads of the lions, until they are much battered, and the finer lines all destroyed. The remainder of the bodies, however, have thus far escaped attack and injury.

Hunters among the ancient Pueblos; and even to this day the hunts-

Little as we know of their origin, there can be no doubt that they were great fetiches connected with the chase, and the sacred Order of

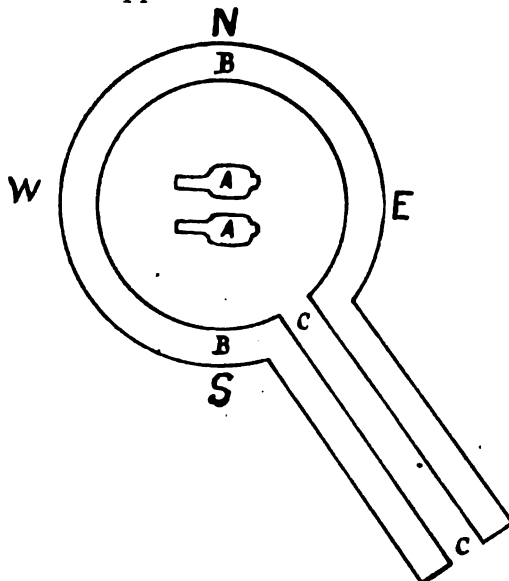
men of Cochiti make pilgrimages to the shrine, although the way is long and difficult, before starting on important expeditions in search of deer and other game, in order to insure success in the chase.

An old pinon tree fully 20 ft. high grows out from the ruins of the sacred circle of stones, bestowing a grateful shade upon the traveler who wishes to sit down and hold communion with these grim and silent representatives of a by-gone age; and at the same time, to those acquainted with the slowness of its upward growth, attests the long time that has elapsed since these walls fell into ruins.

Taken altogether, we may say without exaggeration, that these lions constitute the most important and interesting relic of antiquity within the whole of New Mexico, and perhaps the United States. No other specimens of sculpture of like size are to be found.

One other figure, somewhat similar in form and general character, exists at a short distance in the direction of Cochiti, on a height to which it has given a name as the *Perero de los Idolos*; but it has no features of interest different from these. The rock of which it originally formed a part, has been blasted asunder, perhaps in an attempt to carry off the lion as a trophy, perhaps with the pious design of destroying what was considered a heathen idol; more likely than either perhaps in the hope of finding a buried treasure over which the monarch of the forest had been placed as a perpetual guard.

No similar circular enclosures of stones are anywhere found among the ruins of our American antiquities, and no one can view this without being reminded of the weird druidical remains of ancient Britain, at Stonehenge, Callernish and Stennis, where the circle of stone was symbolical of the eternity of the Deity whom they worshiped, and the altar of solid rock was placed in the center, as the heads of the Great Stone Lions are situated in this Western shrine, ever watching for the sun-god, and his appearance in the east at the dawn of day.



A. A. STONE LIONS; B. B. CIRCULAR WALL; C. C. THE ENTRANCE

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OLD CHINAMAN AT A WELL ON THE CARAVAN ROUTE, BELOW KALGAN, DRAWING WATER FOR THE CAMEL DRIVERS

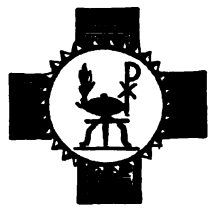


PASS ABOVE KALGAN BY WHICH THE CARAVAN ROUTE CROSSES THE MOUNTAINS TO THE PLAINS OF MONGOLIA AND THE DESERT OF GOBI

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RECORDS OF THE PAST

VOL. III



PART VI

JUNE, 1904



ANCIENT CARAVAN ROUTES OF CHINA

BY FREDERICK BENNETT WRIGHT

THE construction of railroads in Asia is gradually reducing the importance of the caravan routes which have been used from the earliest times. The Desert of Gobi is crossed by 2 such trunk lines of communication between China and Western Asia. The southern route starts at Nankin, runs northwest to the Yellow River at Kaifung, follows up that stream until the river turns off to the north at a right angle. From there it runs in a direction about west-northwest across the western lobe of the Desert of Gobi to Turfan, where it branches into 2 main lines, 1 passing into Turkestan by way of Aksu and Kashgar, the other passing north into the Lake Balkash region by way of Kuldja.

The other great caravan route extends from Peking to Southern Siberia. This has 2 branches, 1 going to Lake Baikal by way of Urga and Kiakhta, the other to the Province of Semipalatinsk in Southern Siberia.

These 2 routes have been the principal lines of communication between China and Western Asia, from which place many routes lead into Europe. Long trains of camels, especially at dusk and the earlier part of the night, are still to be seen plodding along the dusty paths.

Although the amount of traffic is rapidly decreasing, yet between 6 and 9 o'clock one evening we met 700 camels near Chau Tau, loaded with hides from Siberia, which were billed through to Peking.

The general course of these routes has remained constant, but in the level plains they branch off into diverging paths, to be reunited at some important point. Between Peking and Kalgan the age of some of the paths is indicated by the enormous depth to which the tramp of countless caravans has worn them.

The valleys in much of the region crossed are filled with deep deposits of a very fine dusty, yellowish-brown loam, called loess, which is characterized by its remarkable tenacity. This is so marked that cliffs of this formation will stand for centuries with perpendicular sides. In fact, not only houses, but whole villages are built in the hills of this deposit.

In places where the caravan route goes over small hills of loess the path, just wide enough for 2 camels to pass, is often worn down 10, and in some cases 15 ft. A small part of this is doubtless due to water erosion, but the greater part is the effect of the constant passing of camels, whose feet loosen the dust, which the strong winds of this region blow off to the surrounding plains. That water has done little to deepen these paths is shown in sections where 2 or more such paths run parallel, are only separated by a few feet, and have practically no drainage basin, and also by the fact that the depth on the brow of the hill is often nearly as deep as at the foot.

At Chau Tau the route passes through the inner section of the great Chinese wall. The gate and wall here have been restored at various times, the last restoration being made with large bricks, between 3 and 4 times the size of our bricks. At Kalgan the route passes through the outer and oldest section of the Chinese wall. With the exception of the gate opening into the narrow pass northwest of Kalgan little has been done, since the building of the inner wall, to keep the outer wall in repair.

Originally the gate of Kalgan was so narrow that animals could only pass through it in single file. Yet in spite of the trying congestion of horses, camels, mules, donkeys, oxen, and Chinese, which this caused, it was not till a few years ago that the gate was widened so as to give free passage.

The old wall from Kalgan, following along the edge of the Mongolian plains, which skirt the Desert of Gobi, is more interesting than the wall at Chau Tau and other localities more often visited. The greater part of the wall here is built of local stone, but the gateway and outstanding towers are of brick. Besides the towers on the wall at more or less irregular intervals there are other towers entirely separated from the wall.

Of still older date than this wall are the mounds which are found along the caravan route on the Mongolian border. (See RECORDS OF THE PAST, Vol. I, 6.)



ISOLATED TOWERS NEAR THE CHINESE WALL, VIEW FROM THE CARAVAN ROUTE BETWEEN KALGAN AND HAN-OOR ON THE MONGOLIAN BORDER



GREAT CHINESE WALL, AS SEEN FROM THE CARAVAN ROUTE NEAR KALGAN

The outer wall of China was built in the III Century A. D., but the caravan route must have been in use for centuries earlier. The old Chinese coins found in the fertile plains of the upper Yenisei River, now collected and preserved in the museum at Minusinsk, show that the commercial intercourse with China is not of recent origin. In fact, the probabilities are that early in the Christian Era it was much larger than now, for evidence is continually coming in to show that not many centuries ago the whole Desert of Gobi was less arid than it is now, and supported a considerable population. In the western lobe of the Desert of Gobi the sand-buried cities testify to a climatic change in that region and one which evidently was not local.

The geography of the country has determined these great caravan routes, and although the camel and the mule will eventually be replaced by the locomotive, engineers will have difficulty in finding more favorable routes than those determined by centuries of natural selection by the camel drivers.



CHINESE INN, SHOWING THE CHARACTER
OF CARTS USED ON THE MONGOLIAN PLAINS



GERMAN EXCAVATIONS IN BABYLON, 1901 AND 1902

Translated from German official reports by Prof. Karl Hau

THE excavations on the south side of the Kasr mound during March, 1901, brought to light a great many beautifully glazed tiles, ornamented with flowers and twigs. The composition of the drawing is far from simple. The ornaments are not in relief, but look very similar to, and show the same technique as the relief-tiles. One of them shows the trunk of a human figure about 40 cm. in height. Besides these tiles many carved stones were found containing similar, but more delicately executed designs. Only the former

bear the stamp of Nebuchadrezzar, but Dr. Koldewey is not certain that the latter belong to a subsequent period of restoration. In these ruins were found many later graves, glazed and unglazed sarcophagi.

While the tiles found on the western side bear the ordinary stamp of Nebuchadrezzar those on the eastern side show a lion with an Aramaic inscription. But there is no doubt that this part also was built by Nebuchadrezzar, since several wall-tiles have on their narrow side the palace-inscription of the King. In the great wall that incloses the building on the east, no tiles with stamps or inscriptions were found, and according to the general plans of the palace this wall is much older than the rest. It contains the massive arched gate shown in the accompanying illustration, which is one of the most imposing ruins yet discovered and of the utmost importance for the history of architecture.

In the western court of the palace, 2 fragments of a clay-prism were found and a fragment of a small cylinder; the latter, according to the opinion of Dr. Wissenbach, dates from the time of Sardanapallus and treats of the construction of Imgur-Bel and Nimitti-Bel.

The brick pavement of the courts is generally well preserved, but the walls are almost totally destroyed; this, however, has not yet proven an obstacle to our drawings, and when the excavation is completed this will certainly be the most perfectly preserved Babylonian palace ground plan yet recovered.

Of the Processional Street of Marduk, that part in the plain, which immediately adjoins the "Kasr" in the south, is missing. The street began at a distance of about 150 m. to the south, while the formation of the rubbish in this intermediate space, as was found out by some tentative excavations, seems to show that originally there had been water there. This view was supported through a canal sewer discovered in the neighborhood. I therefore searched this intermediate space by means of a very deep ditch and expected to find the remnants of a bridge, but this search was without result. The passage therefore must have been established either by means of a pontoon-bridge or a wooden construction, which has completely disappeared, unless "the procession of the great Lord Marduk" crossed the water south of the "Kasr" in the "ship of the procession on New Year's Day, the festival of Shuana," which is mentioned in K. B. III, 2 S. 17.

The excavations during the last of April, 1901, established a connection between the younger eastern and the older western palace. The latter contains in its upper stories stamps of Nebuchadrezzar, below no stamps have been discovered up to the present time.

Our excavations in the southwestern part of the "Kasr" have resulted negatively; some Parthian ruins and an unimportant fragment of a Babylon boundary-stone have been found after digging about 7 m. deep.

Early in June a number of glazed tiles containing very delicately executed ornaments, probably belonging to the time of a Persian restoration, were found. One of these enameled-partition-tiles (*Email-*

cloisonne-Ziegeln) bears the design of a human figure in a rich garment, holding a spear (?) in his right hand. The tassel on the left probably belongs to a preceding figure.

The cross-cut through the southwestern castle is now completed from the summit of the small hill down to the underground water. The hill is of Parthian origin; about 2 m. above the underground water we found about 80 small bronze coins of the Seleucidian period.

The great palace-court of the "Kasr" is now entirely cleared; on the south side there is a vast chamber, on the entrance of which were the above mentioned ornamented tiles.

During August, 1901, excavations were carried on in the hills southeast of Amran. These hills are known in European literature as *Dschumdschuma* from a neighboring village, but are called by the Arabs *Nishan el-aswad*—The Black Hills. A little to the south of our excavation is the place where the famous tablets were found. Several holes and rubbish heaps show that even in this same place excavations have been carried on at some earlier date, but these must have been quite insignificant. Four ditches about 7 m. deep, which go down to the underground water and are 20 m. removed from each other, have been opened. As was expected, a great many private antiquities were found here. The tablets are badly preserved and can be conserved only with great difficulty. Some, however, are very interesting with old Babylonian inscriptions very delicately executed. Dr. Weissenbach is of the opinion that they contain hymns, exorcisms, "omina," letters, contracts and vocabularies.

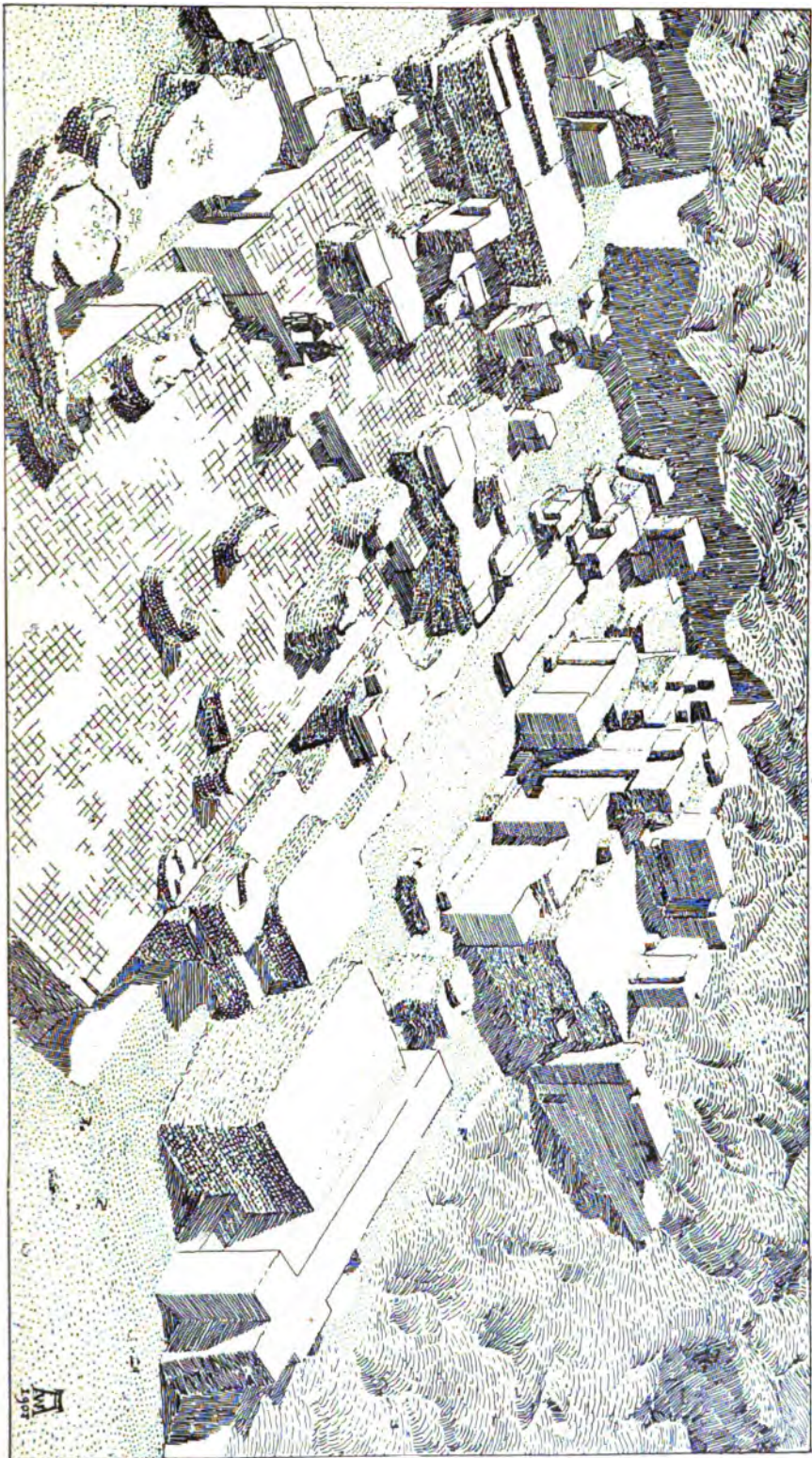
In one of the ditches several very finely modeled clay sculptures were found. These probably belonged to the Assyrian period, as nothing belonging to a later period and no coins have yet been discovered.

An important addition to the Assyrian Syllabar and to the Assyrian and Sumerian vocabulary in new Babylonian characters has been found. It is composed of 84 lines and contains a hymn to Marduk in the form of a litany.

In the temple of the god Adar a cylinder of Nabopolassar—the father of Nebuchadrezzar—was discovered during the latter part of October. During the same month in the northern ditch the ruins of a temple were discovered, at least it is supposed to be a temple, because a small fragment of a cylinder was discovered containing the words, "e-nu-ma bitu"—in those times "the temple"—(had gone to ruins). This phrase usually begins recitals of the restoration of a temple. About 100 fragments of tablets were also found here.

On October 28, 1901, Dr. Koldewey wrote that the building in *Nishan el-aswad*, the western chambers and part of the court had been excavated. In the rubbish of the latter, a second cylinder-fragment was found and another one quite complete was found day before yesterday in a northwestern chamber under the door. The former has a height of 13 and a circumference of 24 cm., 41 lines of legible new Babylonian characters; the beginning and the end are broken off.

THE EXCAVATIONS OF THE PRINCIPAL MOUND FROM THE NORTHWEST, SHOWING THE WALL 17 M. THICK



Of the first line the following can be deciphered: The "Na-bi-um-aplu," suggesting that it is an inscription of Nabopolassar. The temple is dedicated to the god Ninib and has a very interesting ground plan. The tiles in the upper stories bear the stamp of Nebuchadrezzar, who must have restored and reconstructed this temple. Tablets found in the rubbish bear the dates of the successors of Nebuchadrezzar down to Cyrus. We intend to completely excavate the temple. Between July 25 and August 17, 400 tablets were found in *Nishan el-aswad*, and 200 of these during the week August 12 to 17.

In the rubbish of the court of the Nibi Temple, the head of a "nail-cylinder" (Nagel-cylinder) was found early in November. It bears an inscription referring to a King Sin-ma-as-ha (Simmashihu?). A fragment of the lower part of another cylinder was found, but does not belong to this head, although showing the same characters.

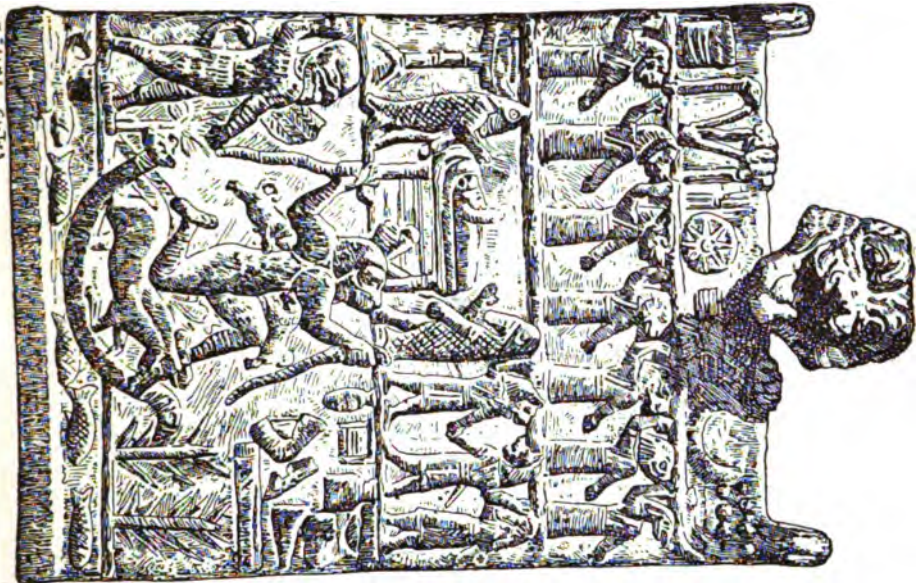
In the Adar (Ninib) temple 2 other building cylinders (?) were found of the same kind and with the same inscription as the one about which I reported on October 27. The one lay under the threshold of the southern, the other under that of the northern cella. The texts complete each other very well, as will appear in Dr. Weissenbach's report.

The temple is now almost completely excavated; we are still working at the southern and eastern front, because it was here that we found the 2 very valuable tablets. The main cella is emptied to the underground water. On the bottom a capsule composed of bricks was found, containing a human figure in unbaked clay. It represents a bearded man about 15 cm. high, with a sort of Phrygian cap, whose left arm hangs down, while the protruding right holds something that looks like a staff. Since the little fellow has leaned on the wet wall for over 2,500 years, just that part of his shoulder has disappeared, which contained a small inscription, so that only a few characters are still visible. Similar capsules were found elsewhere, one before the threshold of each of the 3 vestibules on both sides of the entrance and a bigger one about 50 cm. high, in the midst of the northern and southern vestibule. They contained partly remnants of statuettes of some perishable material, of which only the metallic parts are preserved. These consisted of copper shoulder-belts with sword sheath, comparatively long swords, clubs with agate points. In some of them the hand, too, is still preserved, and Mr. Andræ tried to preserve them with fluid wax.

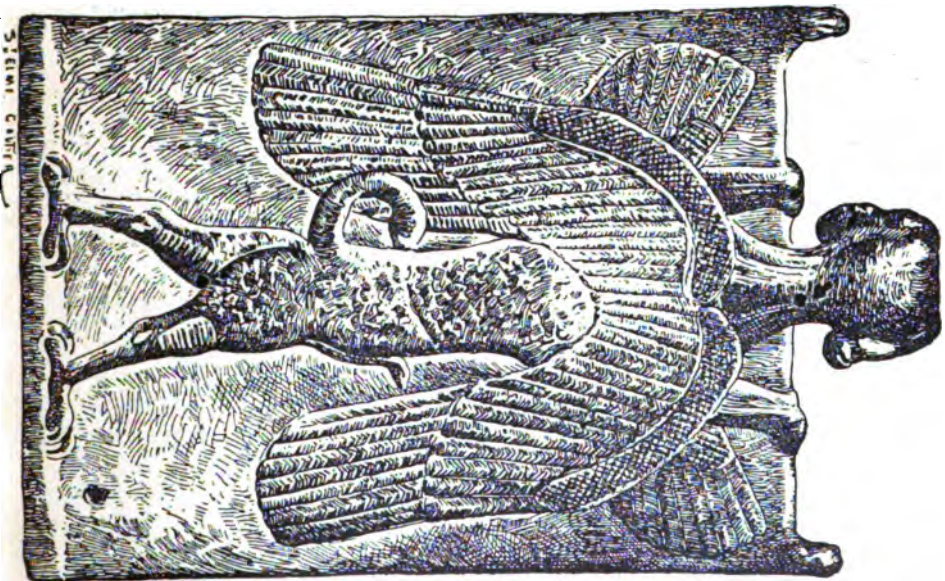
On the southern portal a brick of secondary use was found. It contains on the flat side an inscription of Assarhaddon (11 lines), dealing with the construction of Etemenauki. The inscription was of interest to me because it gives in new Babylonian characters the old Babylonian text of the brick. [See Hilprecht, *Bab. Exp. A. I*, II No. 151.]

Later in December a building-cylinder was found, the interior part of red clay. It was not found *in situ*, but in a small house of a

OVERSE VIEW OF "HADES-RELIEF"



REVERSE VIEW OF "HADES-RELIEF"



later period on the eastern slope of the Amran in the rubbish; the left part is broken off, the surface washed away and shows the traces of having been used as a pestle. The remnant of the last and of the last but one column are preserved; on the whole, there were perhaps only these 2. The greatest circumference is 32 cm. The inscription contains a report of the buildings of Nebuchadrezzar in general and of the "Kasr" in particular. The introduction to the second part begins with "Theu," which is the case with all of these cylinders. This word characterizes the special reference to the building to which the cylinder refers and separates it from the other general observations. So on the Sardanapal cylinder of Emach [Z 13] and on the E-patu-tila cylinder of Nabopolassar, which were found *in situ*. The value of this clue is sometimes very great.

The translation of the text is as follows:

21 Then the castle of Babylon . . . 22 In order to fortify 360 yards of Nimitti-Bel, 23 The Schalchu (outworks) of Babylon, 24 I have from the border of the stream to (a certain point) of the Ishtar gate 25 two strong walls of brick and mortar 26 like a fortress mountain-high erected.

[These 2 walls are probably the western, inner wall and the north wall.]

27 Therein I erected a terrace of brickstones; 28 upon which I built a mighty castle, 29 as the seat of my realm 30 with mortar and brickstone, 31 established a connection with the (former?) palace 32 and created the seat of dominion.

[The former palace with which this new one was connected lies in the south castle. In the analogous place of the "great stone-plate inscription" [viii, 58] it is called the "palace of my father."]

33 I doubled from the (upper?) corner near the Ishtar gate 34 down to the (lower?) corner of the eastern Nimitti-Bel 35 for purposes of fortification 360 yards of the front side of Nimitti-Bel.

This is an exceedingly important passage, since for the first time in all the inscriptions of Nebuchadrezzar he mentions the double wall on the eastern side of the main-castle himself and states that it was erected for the purpose of fortifying some part of Nimitti-Bel. Tuigur-Bel is not mentioned at all. The double wall forms the eastern front of Nimitti-Bel only. The bricks in this neighborhood very frequently bear the Aramaic Stamp, N(imitti) B(el). This conclusively disproves Delitzsch's idea of the situation of Nimitti-Bel. Tuigur-Bel must have been the fortress-wall of the south-castle and the gate that is reproduced in No. VIII, page 5, is a gate of Tuigur-Bel. Several other conclusions may be drawn from this passage, but I reserve them for a later report.

The end of the inscription is as follows:

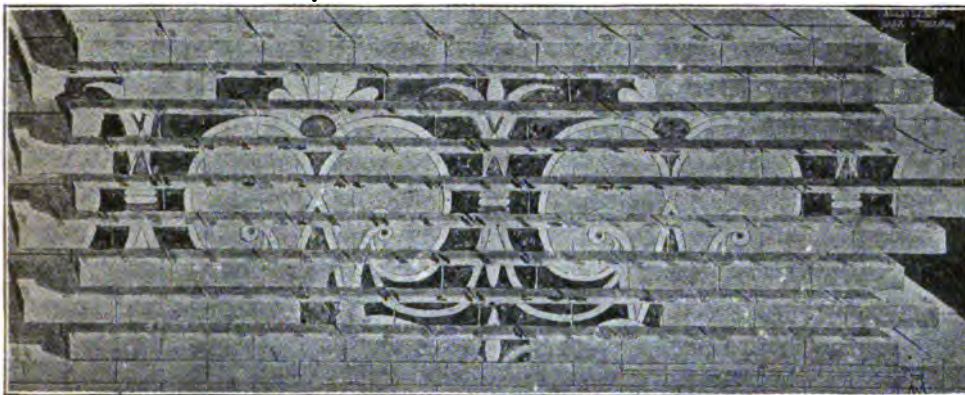
36 A strong fortress of brick and mortar I have (mountain-high erected)
37 The castle scientifically fortified 38 The city of Babylon made a stronghold.

With "Babylon" Nebuchadrezzar always primarily means the fortress, but he uses the word sometimes as extended to the city as well.

The final prayer follows, Line 39-46. In a note Dr. Friedrich Delitzsch raises some philological objections to Dr. Koldewey's transla-



COLORED ENAMELED TILE FROM THE SOUTHERN HILL OF THE "KASR"



ORNAMENTAL TILE WORK

tion of this important inscription, in defense of his views on the plan of the side of Babylon.

The excavations in the building a-d, 35 (Amran-plan) are almost completed [January, 1902]; it is a temple. A naked standing female figure with a child on the breast is found so frequently that I suppose the temple was dedicated to a goddess. In a building cylinder-fragments found in rubbish, the first and the last line of the first column are readable. "Nebuchadrezzar. 2. King of Babylon. 3. A just ruler. 4. Renovator of Esagila and Ezida. 5. Firstborn son of Nabopolassar. 6. King of Babylon I am. 7. From the upper sea. 8. To the lower sea. * * *"

The investigation of the Processional Street of Marduk has proceeded so far, that the last part of the well preserved street pavement was found in Q, 12 (Amran-plan). The street coming from the east enters here a spur of the hill Amran, which covers it about 12 m. high. The question is, where the street entered Esagila, and in order to find this out we have begun in the western part a new ditch, which must reach a considerable depth.

Mr. Andræ's colored reproductions of the ornaments found in the south-castle have recently been sent with the English mail. I enclose

to-day [January 28, 1902] 2 reports of Dr. Weissenbach, discussing No. 3,627, Dolerit-block, found in the Kasr [r, 9], on the 17 of the following inscriptions:

October, 1899.

No. 6,378, club point of quartz, found near the Amran [t, 13] on April 17, 1900.

No. 6,405, club point of diorit, found near the Amran [q, 13] on April 18, 1900.

In the temple a-c, 35 (Amran-plan), the cella has been emptied to the underground water. As expected, we found in the lower stratum the little clay fellow, our friend from the Adar-temple, this time very well preserved, having a golden staff in his hand and an inscription of 4 lines on his back. Also before the northern temple door we found 2 capsules, one of which contained a dove (?) of clay, similar to the one found formerly in the Ninmach-temple, also with an inscription of 4 lines.

From Dr. Weissenbach's 2 reports: The fragment of the dolerite block, B. E. 3,627, with 2 columns of new Babylonian cuneiform characters, is a duplicate of the famous inscription of King Darius on the rock of Bisutum [lines 55, 58, 69, 72]. All who know the tremendous historical importance of this inscription will welcome the additions, supplemented by this duplicate (new words are italicised):

Col. I.

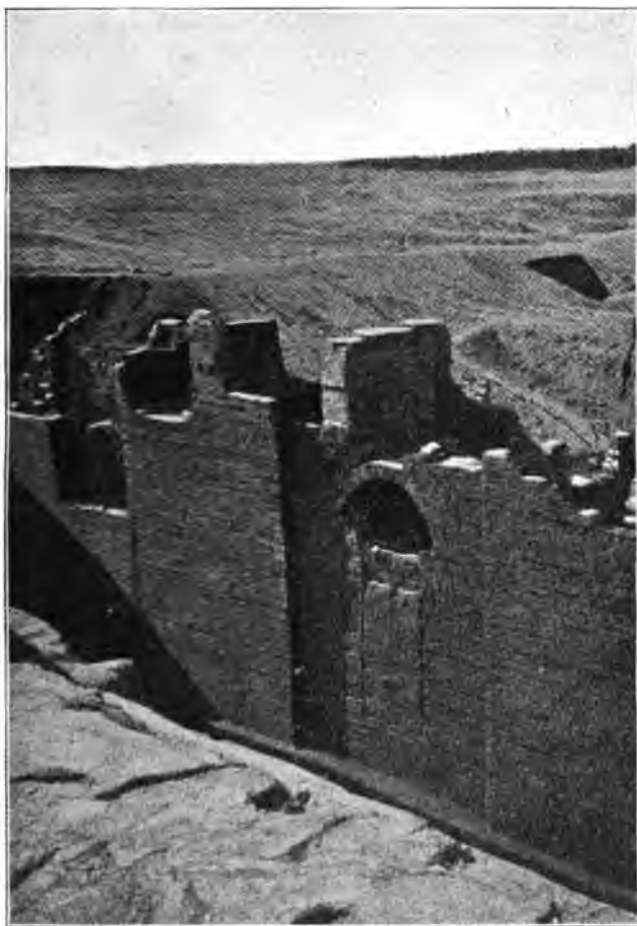
[For the second time] [the rebels] assembled and marched against Vaumisa, to offer 2 battle. Then they fought in a *country named Utiari in Armenia*. 3 Protected by Ahuramazda *my* army 4 defeated the rebels. We fought on the 30 Aiaru. We killed 5 from among them 2045 and caught alive 14 (?) 59. 6 Thereupon Vaumisa *did* nothing, (but) *waited for me*, until 7 I *came* to Media. Darius, the King, 8 speaks as follows: Then I left *Babylon* and went to Media. Arriving in Media, in a city, named Kundur, 10 in Media, against which *my enemy Fravartis*, the same who had declared: '*I am the King of Media*' had marched with 12 an army, to offer *battle*. Thereupon we fought. 13 protected by Ahuramazda, I defeated the army of Travartis, etc.

Col. II.

1 They fought with the men from Margiana, 2 Protected by Ahuramazda, my army defeated 3 those rebels. They fought on the 23 Kislisma. They killed 4 from among them 420 (?) 3 and caught alive 5, 69(?) 70. Darius, the King, speaks as follows: Thereupon the country 6 *was mine*; that I did in Bactria. 7 *Darius, the King*, speaks as follows: A person, Vahyazdata 8 *by name in a city, called Tarava* in a country called Jutia, in Persia, 9 rose up in Persia; he spoke to the people: I am 10 Bardija, son of Kurus. Thereupon the people of Persia as many as were *in the palace (?) of the city* of Jutia (?) rebelled against me, 12 *went over to him*, he was King in Persia. 13 Darius, the King, speaks as follows, etc., etc.

B. E. 6,378, a club point of a reddish stone, is the gift of a King, probably belonging to the III Dynasty of Babylon, by the name of [Me-]li-si-hu-mar Ku-ri-gal-zu "Melisihu, son of Kurigalzu," to a

diety whose name is not preserved. Therefore in the document IV R. 38, which speaks of "Marduk-apluiddina, King over all, King of Sumer and Akkad, Son of Melisihu, King of Babylon, grandson (?) of Kurigalzu, the King without equal," the still questioned word SA. BAL. BAL. really means "grandson," and we have in the list of "Babylonian Kings besides the King of the III Dynasty Melisihu, Son of Adadnadin-ahi, another Melisihu, Son of Kurigalzu, and also besides Marduk-aplu-iddina, Son of Melisihu (the Son of Adad-nadin-



SOUTH HILL OF THE "KASR," SHOWING ARCHED GATE IN THE FORTRESS WALL

ahi), another Marduk-aplu-iddina, Son of Melisihu (the Son of Kurigalzu) and besides the already known 2 Kings Kurigalzu a third one of the same name.

B. E. 6,405 finally, a club point of a black-green stone bears an inscription of 10 lines divided into 2 columns of old Babylonian characters:

'Club point (hi-in-gi) of Diorit (Koldewey's translation of Aban su-u)

belonging to the U-lam (?) -bu-ra-ri-ia-as, Son of King Bur-na-bu-ra-ri-ia-as, the King of the sea-country. He who extinguishes (ipassitu) this name and writes his own in its place may his name be extinguished by Ninib, Nebo, Ea, Marduk and Belit.'

DOCUMENTS FOUND IN BABYLONIAN COFFINS

BY DR. FREDRICH DELITZSCH

Since Thureau-Daugin, a French Assyriologist, published the inscription of a clay-cone, found in a Babylonian coffin [see *Orientalistische Litteratur-Leitung* of January 15, 1901], the Asiatic department of the Royal Museums in Berlin has acquired 2 similar documents.

The inscriptions on these clay-cones in old Babylonian characters, although varying in unimportant details, are essentially the same.

Ana matima, etc. Translation:

For all times, forever, for eternity, for all future! Do not keep (?) this coffin if you find it, but bring it back to its old place! He who reads this and does not slight it, but speaks: I will bring this coffin back to its old place—may he be rewarded (?) for his good deed! Above his name be blessed, below may his Manes drink clear water!

This last blessing, promising as a reward for pious deeds clear water in the Hdesa, the "country without return," is of importance for the history of religion. It draws a distinction in the life after death, the continuance of the soul in Sheol, justifying a conclusion drawn by me in "Babel und Bibel," between a hot hell on one side and a garden richly blessed with water on the other.

A NEW TEXT OF THE KING NABOPOLASSAR

The inscription, 41 lines in new Babylonian characters, is much damaged in all 4 copies, but can be reconstrued through a comparison of them as follows:

Nabopolassar, the King of Justice, the shepherd whom Marduk has called, the offspring of the goddess 'Lady of the Heavenly Crown' (*belit ilani*) of the sublime, high queen of queens, whom Nabu and Tasmetum guided, the sublime favorite of the god Ea ('lord of the Shining Eye'). When I, in my youth, was the son of nobody, but constantly worshiped the shrine of Nabu and Marduk, my lords, and my mind was directed to a continuance of their laws and obedience to their orders and to the maintainance of law and justice, then the god Marduk, who knows the hearts of gods and men, who continuously watches the paths of nations, saw my heart and placed me, the insignificant one, who was not considered among the nations, at the head of the country in which I was born and called me to the dominion over country and people. He ordered a tutelar genius to stand at my side and make me successful in all that I undertook. Nergal, the all powerful among gods, he asked to assist me, subduing my opponents, slaying my enemies. I, the weak and lowly worshiper of the Lord of lords, with the mighty assistance of Nabu and Marduk, my lords, repelled from the country Akkad the Assyrians, who from time immemorial ruled over all nations and had forced under their yoke all the inhabitants of the country; I threw off their yoke. Then E-PA-TU-

TI-LA, the Temple of Ninib's, which lies in Susana, which had been built by a prior king, but not completed. I undertook the renovation of this Temple. I called together the men of the gods Bel, Samas and Marduk, ordered them to carry the mason's bucket (?) and the brick basket (?). I finished the Temple without slackening. I supported the roof with strong beams and put high doors into the gates. The Temple I made shine like the Sun and radiate for Ninib, my lord, like the day. Whoever shall become king in the future, be it my son or my grandson, who follow me, whose name Marduk shall call to the dominion of the country, do not seek alone power and strength. Worship the Temples of Nabu and Marduk so that they may subdue your enemies. The lord Marduk looks through the mouth and sees the heart. Whoever piously worships Bel, shall rest secure in his position, whoever worships the son of Bel, will live eternally. If this Temple should decay and you should renovate it, read this document and place it beside your own. At the command of Marduk, the great lord, whose commands are unchangeable, may your name continue to the days of eternity!

THE EXCAVATIONS OF THE KASR-MOUND IN 1901

BY DR. KALDEWEY

Since the publication of the Kasr-plan of January, 1900, the Minmach temple has been further excavated; the continuation of the fortification wall bounding the main city on the north, as well as of the adjacent canal farther westward, has been proven by means of a deep trench; a part of the palace of the main city has been uncovered and also a part of the palace of the southern city from the southeast corner of the latter along the southern edge and extending to its northern boundary.

The following observations may serve as a basis for a correct understanding of the character and the succession of the various structures.

Only the fortification walls were carried down below the underground water, and only down here do the bricks lie surrounded by asphalt, so that they are hard to separate. In the upper parts, however, the asphalt which covers the lower layer of bricks is separated from those resting upon it by a layer of reeds or clay. The stamped side always lies downward and therefore usually does not come in contact with the asphalt.

The walls of the palaces, on the contrary, are carried down only near to the underground water. The spaces between the various walls were in earlier times filled up with sand and earth, and in more recent times with a packing of broken brick. A remarkable exception to this rule is furnished by the palace of the main city, in which the whole building area is uniformly covered by a compact masonry-work made of broken brick, while the real building walls rest on this terrace at a height of 8 meters above the ground. Older building walls are treated similarly to the upper parts of the fortification walls, viz. with asphalt in the joints, and an intervening layer of reeds or clay, preventing the layers from adhering to each other. In later ones lime mortar takes

the place of asphalt. At an interesting transitional period a favorite method was to build one-half of a wall in lime and the other in asphalt. I believe that it is especially in this transitional form that we may recognize distinctly that the introduction here of the lime mortar in wall construction is an invention of Nebuchadrezzar. In his inscriptions mention is never made of "lime mortar," but only of *Kupru*, which is translated as asphalt; I would therefore rather render this word by the general expression "mortar." Late walls, as for instance, Sassanidic, have for the most part simply clay in their joints.

Nebuchadrezzar used bricks in the beginning of his architectural career, of which only about every hundredth one received a stamp, this being that of a lion with an Aramaic inscription over it. This inscription . . . contains, I believe, the name of the "Nitocris," which has been handed down in a Greek form, and concerning whose architectural work in Babylon the Greeks have reported so voluminously. The palace walls in the southeastern part of the southern city are built with bricks of this stamp, and the palatial inscription of Nebuchadrezzar has been found incorporated in the same walls.

The oldest Babylonian stamps of Nebuchadrezzar are of 6 lines, end in *a-na-ku*, and add the name of the father with a simple *tur*; they are frequent in the southern city. The later ones, of 7, 4, and 3 lines, omit the *a-na-ku* at the end and introduce the father's name, with *aplu asaridu sa* instead of the simple *tur*. Exceptions to this are very rare. The manner of writing varies. The latest stamps are the three-line ones; they seldom occur in the southern city (for instance, in the pavement of the large court), but are frequent in the main city. The stamps of Neriglissar and of Nabonid are also three-lined.

Walls in which no stamps occur, especially when the bricks also have a smaller dimension (30 or 31 cm. as against the normal dimension of 33 cm. usually found in Nebuchadrezzar's walls), can either be ascribed to Nebuchadrezzar's first period, or they are, as generally speaking in most cases, will seem the more probable, older and belong to Nabopolassar and the Assyrians. The lower parts especially, of the fortification walls of the southern city, consist of stampless bricks, as: the arched gate and the deep-lying old palace to the westward. Stamps of Assyrian kings are not found on the "Kasr." Only the floor bricks of Esagila bear such stamps.

The oldest section of a palace which we have thus far found lies in the southern city. Its floor lies very deep; 780 m. above the ground level. The bricks have no stamp; the spaces between the walls are, as is nowhere else the case, filled up with masonry of clay-bricks. From this I believe I may conclude that this is Nabopolassar's palace, which Nebuchadrezzar found upon entering on his reign, and in which he dwelt during the work of enlargement undertaken by him. This old palace of Nabopolassar was comparatively small (possibly 70 m. by 90 m.). It stood, however, within a rather large area, which was inclosed by an old fortification wall (approximately 340 m. by 200 m.).

The fortification wall which encloses this area is *Imgur-Bel*,¹ as I believe I have shown to be probable in a previous article. Nebuchadrezzar found this wall in a state of decay. He took away the southeast corner and rebuilt it, re-enforced the eastern stretch by an inner *Kisu*² and most of the southern stretch by an inner and outer *Kisu*, and evened off and heightened places in the southern part which had settled outwards. The total amount of work which he put on this great work can only be thoroughly appreciated after the excavation has been completed. In the southern city are found 2 sections of inscribed bricks of Nebuchadrezzar, which refer to the construction of *Imgur-Bel*, and two sections of building cylinders of Sardanapallus, which treat of the construction of *Imgur-Bel* and *Nimitti-Bel*. These furnish special documents for determining the situation of these "great walls of Babylon" on the *Kasr*. Therefore the question only remains whether the southern city is *Imgur-Bel* and the main city *Nimitti-Bel*, or whether the southern city is not perhaps *Nimitti-Bel* and the main city *Imgur-Bel*. This question has been decided in favor of the former assumption, as far as I can see, by the inscription on cylinder No. 15,397 (of which I have treated previously³), because the duplication of *Nimitti-Bel* in the east is there described in connection with the palace of the main city and this is true only with regard to the main city.

Nebuchadrezzar's general plan for the completion of the city of "Babylon" was to raise the whole level to the elevation of the Procession Street in the east. The masses of earth which were necessary for this filling-in were taken from the immediate vicinity and in this manner the city was made higher and the surrounding water area deepened at the same time—a sensible idea from the standpoint of fortification.

Of Nebuchadrezzar's palace, which was to cover the entire area of the southern city, including the antiquated palace of Nabopolassar, the part situated east of the latter was first constructed and made ready for habitation. The construction began in the southeastern corner of the city. When this eastern part, with its elevated floor (10 by 12 m. above the level of the ground), was complete and ready for habitation, the main access to it lay through the gate in the narrow street which still led along the east front of the old palace. This street lay considerably lower (in round numbers 7 m. above the level of the ground) than the new palace. As a consequence thereof 2 steep stairways led up to the large court of the new palace. A retaining wall of clay bricks, represented by hatching in the plan, bounded the court terrace provisionally during this time in the west. The retaining wall and the stairways were, however, no longer necessary, and were covered over by a new leveling with the more elevated pavement, as soon as the western part of the new palace, which had now completely covered over and buried the old Nabopolassar palace, was also complete up to the new universal elevation. This palace, which covers the whole southern

¹ See *Mitteilungen der Deutschen Orient-Gesellschaft*, No. 4, p. 13.

² See *Mitteilungen der Deutschen Orient-Gesellschaft*, No. 4, p. 4.

³ See *Mitteilungen der Deutschen Orient-Gesellschaft*, No. 11 p. 7 et seq.

city and far exceeds the limits of the Nabopolassar palace, is spoken of by Nebuchadrezzar in the stone slab inscription Col. VII, 61—VIII, 26.

The palace contained a great number of compartments, which consisted of small square central courts with the rooms surrounding them. These are connected with each other and with the larger courts by corridors with many doors. To the compartment at A, a direct entrance led through the fortification wall, this entrance having been constructed over the spot where the old large arched gate had been situated and abolished when the reconstruction took place. On the level of the old street a canal ran, which carried off the surface water from the palace. This was originally done through a small arched gate in the old southern wall, situated a little farther westward, but later through a new breach through this same old wall.

On the southern side of the large court lay the vast main hall with its specially thick walls, a niche in its southern wall, and 3 gates in the northern front. On the latter was situated the tile ornament which Mr. Andræ has represented. These ornaments, produced in colored tile enamel, are thus far unique. No where else have we become acquainted with anything similar. Especially impressive is the idea of the ornamental reproduction of a set of columns with mighty voluted capitals, when it is considered that there is no place for the columns themselves in these palaces; in every place where they might be expected, especially on the front of the "throne hall" itself, simple doors are found in their stead. There were indeed 2 supports in one small court. They each consisted of 2 unhewn palm trunks which, being let into the ground, were surrounded at their base by a round walling of bricks and asphalt coated with lime. This is, however, a subordinate, secondary arrangement which, if possible, belongs to a later, Persian period. No one will imagine that Nebuchadrezzar was entirely unacquainted with columns. The opposite is shown by their representation on the afore-mentioned ornaments. But the column really has absolutely no place in Babylonian architectural customs, and in the Babylonian ground plans which we know from Sippar, Borsippa, and Telloh, there is not a single place appropriate for a set of columns, just as there had been none hitherto in Babylon. Thus, the idea of the ancient origin of the column in Babylon often advanced in the history of art seems to me to be due to a confusion of the idea of the column with that of the semi-circular moldings of the vertical wall ornaments so numerous on Babylonian buildings.

The "outer work" of Babylon, Nimitti-Bel, touched to the north the fortification of the southern city, Imgur-Bel. The manner in which it joined it, is unknown to us. At first Nebuchadrezzar constructed this fortress by erecting a simple but very strong wall 17 m. thick, the massive remains of which we have found. But the district enclosed by this vast wall did not satisfy the desire of the king for expansion. He abolished the mighty work, advanced the northern wall to "8," and

prolonged to that point the old eastern stretch toward the north. We have found a cylinder [No. 7,327], which treats of the construction of both these walls of Nimitti-Bel, and gives the thickness of one as 23 brick-widths (which corresponds exactly to the wall as found) and of the other as 32 brick-widths. In the space enclosed by these 2 walls (the 2 other boundaries being formed by the Euphrates and the southern city) Nebuchadrezzar erected a continuous terrace of broken brick work [*bi-ti-ik a-gur-ri*, E. I. H. VIII, 53] to a height of 8 m. above the level of the ground. Upon its upper surface he built the walls of the new palace, which was to outshine everything which had hitherto existed. The bricks in these castle walls are accordingly the best in the whole "Kasr." They are made with great care out of bright yellow clay as hard as glass, while previous ones were of a more or less plain red-brown color and full of flaws, and the asphalt mortar in use up to that time is replaced by pure white lime mortar. The spaces between building walls standing on the terrace were filled in with brick packing and lime mortar down to the floor, which once rested upon it. The surface of the brick terrace lies 8 m. above the ground level. The floor of the palace itself cannot have lain less than 15 m. above ground level. This gives a solid mass of walls of 648,000 cubic meters up to the floor level alone, not counting the palace walls towering above it. If these were to be completed, according to E. I. H. VIII, 64, in 15 days, not less than 43,200 men must have been kept busy daily, as one man and an assistant together could not produce more than one cubic meter per day. In this swarm of 2 men to each square meter the men must doubtless have trampled one another to death. I believe therefore that by the *si-bi-ir* of the palace, which Nebuchadrezzar says was completed in 15 days, probably the whole palace is not meant, but merely a particular part of the construction, the meaning of which we are not yet able to recognize.

The plan of the building was several times changed during the execution; even the materials, the kind of bricks and of lime mortar vary within these construction periods, which not only clearly indicate that the time occupied in construction was rather long, instead of being unusually short, but also that the royal architects took a continually active part in the work. Moreover, as much of these walls have been stolen away by Arabian brick thieves of past ages, the exploration of this part of the ruins is attended by greater difficulties than in the southern city. The lower parts of the ruins possessed attractive qualities for the brick thieves; the mortar is not so firm there and the stones therefore separate better from one another. As a consequence the whole ruin is undermined by deep-lying tunnels, which latter partly collapsed, the result being that the upper walls burst, sank, and fell. This also renders the examination very difficult, for when the rubbish is thoroughly cleared out the upper walls are often found to be standing on hopelessly weak foundations, which leads to the fear that they will entirely collapse. In the north lay the terminus of the entire struc-

tural system. Here the outer edge of the terrace is more regular and constructed with the character of an ordinary wall, but blends, so to speak, with the packing of the adjoining terrace. To the west of the wall lay a court, whose walls were decorated with gay-colored lions in relief and with glazed ornaments.

This is therefore the extension (in the construction of the city) of which Nebuchadrezzar speaks in the stone slab inscription [VIII, 42 *et seq.*]. In its plan the king saved the canal, the street and the Temple of "Babylon." In other words, he did not make the extension toward the east, where the Ninmach temple and the Procession Street lay, but toward the north.

The fortification work which encloses this part of the palace is "Nimitti-Bel." In order to further strengthen the east front of this work of fortification the king doubled here the fortification wall. Between these 2 walls of Nimitti-Bel ran the Procession Street *Aiber-shabu* of Marduk. On each side of them stood the lion frieze on the lower parts of the fortification walls. *Ai-i-bur-sa-bu-u* is an abbreviation. The full name of this stretch of street is handed down in the inscription of Wadi Brissa.¹ Here, in Col. VII of the ancient Babylonian inscription, Nebuchadrezzar speaks, in lines 43 to 50, of the Marduk street and the Nabu street in Babylon, which he says he provided with a high embankment and constructed of asphalt and bricks. The Marduk street extended from *Istar-sa-ki-pat-te-e-bi-su* to the *El-lu* gate. As the limits of the street here given are exactly identical with those given in E. I. H., Col. V, 45 to 48, it must be assumed that the third and fourth signs in Pognon were wrongly read, and that in reality *A'-bur* stands there. The full name would then read here "*Istar-A'-bur sabe-su.*"

The mentioning of the Nabo street by the name of *Nabu-di-tar ni-si-su*, which follows, will probably be of importance in our excavation; this street led from *Ig-kip-su-na-ka-ar*, if Pognon read this right, to the "entrance of Nabu into Esagila." In the remaining inscriptions the name of the Nabo street has not been known hitherto. In our brick inscription also the names of the 2 streets are not given, and only a Marduk and a Nabo street are distinguished. There is, moreover, mentioned in the Wadi-Brissa inscription [at the top of Col. III, 24] *a ma-as-d[a-ha]* of Marduk, which is said to extend from the landing place of the procession bark "Kura" to Esigisi. It is to be hoped that further excavations will furnish us instruction relative to these data also. A new copy of the Wadi-Brissa inscription is much needed!

Nebuchadrezzar sums up, according to his custom [E. I. H. IX, 19 *et seq.*], the results of the work discussed immediately before, in the following words: "I ERECTED A MIGHTY FORTRESS OUT OF MORTAR AND BURNT BRICKS, MOUNTAIN HIGH AROUND IT. BESIDE THE BRICK

¹ *Bibliothèque de l'école des hautes études. Les inscriptions de Wadi Brissa*, by Pognon, Paris, 1887.

FORTRESS I BUILT A FORTRESS OF MIGHTY BLOCKS OF STONE,"—*si-ti-ik sadi rabuti*. In my opinion both these works are probably the eastern and northern fortification walls of the main city. For at the northern wall, and there only (nowhere else on the Kasr), are found mighty building blocks of limestone—the same material that is designated as *sadu* stone on the pavement blocks.

The most important place on the "Kasr" just now is obviously the one where Imgur-Bel and Nimitti-Bel come in close contact with each other on the east front, and here we shall, I think, have to resume the excavations next.

The success of our labors on the "Kasr" consist especially, according to what has been said, in the clearing up of the magnificent picture which we must gain of Babylon and the Palaces of Nebuchadrezzar.

The topography of Babylon has hitherto suffered under an erroneous fundamental conception, viz.: The setting down of the 2 city walls of Herodotus as identical with Imgur-Bel and Nimitti-Bel. Up to the most recent times even Dr. Delitzsch has maintained that Imgur-Bel must have at least included Esagila in its enclosure. This is an assumption for which no proofs can be adduced either from the inscriptions or from the locality. Imgur-Bel and Nimitti-Bel are, as far as our knowledge—even philological—extends up to the present, nothing but the 2 fortifications on the Kasr. The idea that these 2 walls lay, so to speak, concentrically in one another, is based on a foundationless supposition. In Khorsabad there is, as is known, also a *Duru* and a *Shalchu*, but no trace of concentric walls. *Salhu* means, according to Delitzsch, a fishing net. I therefore believe that if one wished to render the word in German the sense would most nearly be approached by the expression *Reuse* [bow-net]. . . . The designation "outer wall" is certainly correct, only the expression must not be understood as meaning that it extended clear around the *Duru*.

We began our excavations at Fara, July 10, 1902, with a long ditch from north to south, through the northern part of the ruin. Our results up to the present time are as follows:

The ruin is very old, even the upper stratum. This is proven by numerous knives and saws of flint and obsidian, stone hatchets, tools made of stone and bone and the utter absence of any remnants of a later period. Ill-shaped bronze coins and small copper or bronze utensils are found here and there. The pottery of simple design resembles that of Surgal; flat vases, chalice goblets, and oval pots. A bigger vessel with a socket and without a handle, as they are painted on the old seal-cylinders, is found more frequently—all without any decoration. Aside from these we find fragments showing attempts of a phantastique ornamentation and simple cups of beautiful white stone (marble, etc.).

We also found in the ditch about 400 stamps of seal cylinders. They are round pieces of clay and show almost all the same impression. Most frequent is the struggle between the man-headed bull and the

lion killing an antelope. The movements are exceedingly full of life and the heads with the strong nose and the single round eye look like bird heads. The weapon is peculiar—a long staff, at the end of which a half-moon is attached and which is held in the middle and used like a poniard. The technique shows no trace of the polishing-wheel.

In the same stratum lay several clay tablets, with a simple design scratched on them—bulls, man-headed bulls, tools, etc., and finally a few tablets with very old cuneiform characters.

The buildings are composed of baked and unbaked bricks of the old rectangular form. On the covered surface lines and impressions are made with the finger; only few of the walls are straight-lined. But there are a great many rotundas on the hill; they have a diameter of 2-5 m. The walling consists of 2 or more concentrically placed vessels. This is the typical construction of the walls here. The rotundas are surrounded by a vault very similar to the burial vault in Mugheir or the *Tholeu of Mycenae*. One of these rotundas we have cleared down to the very bottom; it was filled with old rubbish, bricks, broken pottery, fish-bones, etc. In the upper part of another one we found 4 human skulls. The modus of interment I have not yet been able to comprehend. The skeletons lie coffinless and in a disorderly arrangement, together with many ornaments; necklaces of agate and lapis-lazuli, pearls of shells, corals, mother of pearl, amethyst, also a silver earring (?) of a peculiar form.



MOHAWK POTTERY

BY W. MAX REID

THE XX Report of the *Bureau of American Ethnology* for 1898-99 by the late J. W. Powell, is exceedingly full of valuable information concerning the Aboriginal pottery of the eastern United States, but I have looked in vain for information regarding that section of the State of New York that is abounding with more interesting history (both Aboriginal and post-Columbian) to the square inch than any other section of the United States. I refer to the Mohawk Valley and the lake region, the home of the Iroquois Confederacy.

He devotes 2 pages to Iroquoian pottey, but his knowledge seems to have been obtained almost entirely from the Cherokees, while he dismisses the Mohawk Valley with 1 line and 2 inferior illustrations. It is true, in a general way, that the method of making pottery was practically the same in all of the eastern section of the country, while in the South and Southwest the earthenware bears evidence of contact with the more experienced potters of Mexico and South America in the methods of decoration, but in no part of North America do we find evidence of the wheel, lathe, or furnace having been in use.

It has been noted that in every country, basketry and the art of weaving from rushes and similar material, preceded the making of pot-

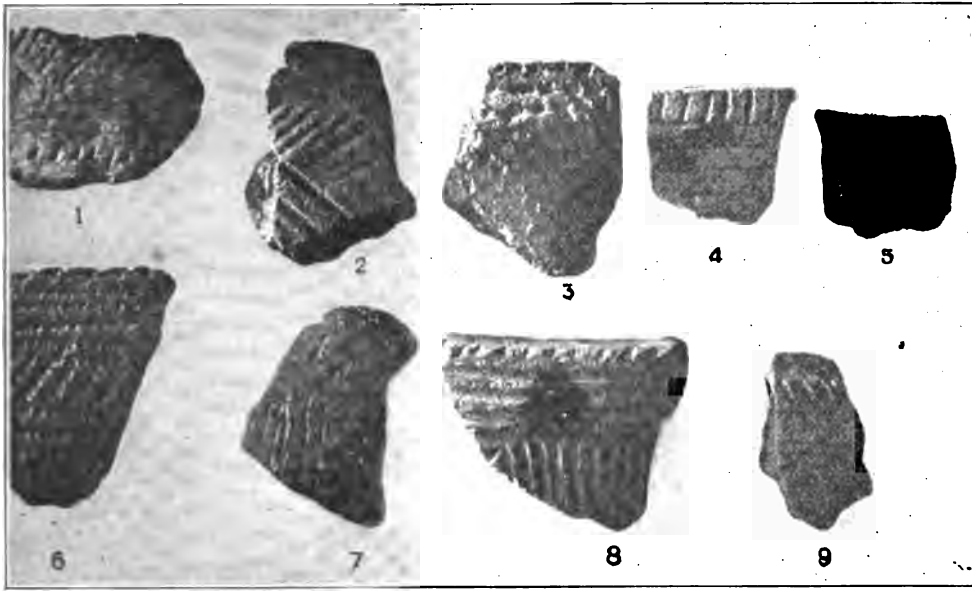


PLATE II.

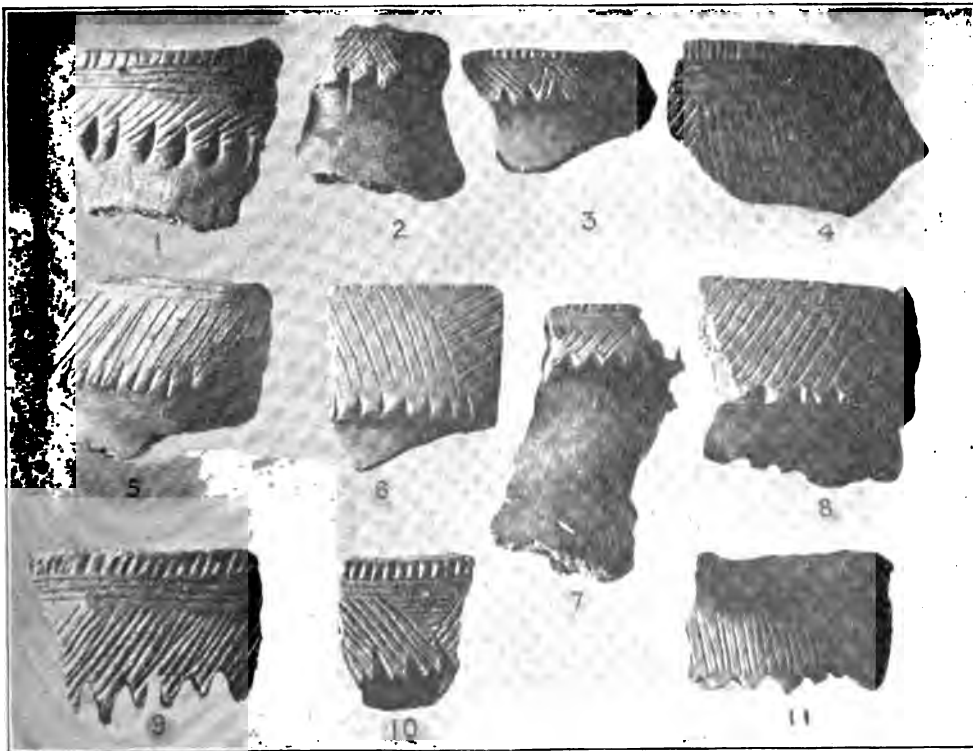


PLATE I.

tery, and that the Amerind* probably used pitch or clay to make their primitive receptacles water tight, and it is suggested by Dellenbaugh that this fact, in a measure, accounts for the fabric marks found on many sherds or fragments of earthenware found in various parts of the United States.

In the Mohawk Valley fragments bearing these marks are seldom if ever found. Indeed, we do not expect to find them on pre-historic sites of Mohawk castles, owing to the comparatively recent occupation of this beautiful valley by the Mohawks.

The traditions of the Mohawks, or as they like to be called, Cahan-iagas, and information gathered from the relations of the Jesuits tells us that they were driven out of the Island of Montreal or Hochelaga subsequent to 1535, when Jacques Cartier met them at Hochelaga, and previous to 1609, when they were defeated in battle by Champlain on the shore of the lake which now bears his name. Probably between 1580 and 1600, tradition also tells us that they were driven from their island home by their kindred, the Hurons, and some of the Algonquin tribes.

They brought the art of pottery with them, and many fragments are found on their pre-historic sites, 2 of which are located about 4 miles north of the Mohawk River, whose age is determined approximately by the entire absence of any European articles. One of these, the Cayadutta site, near Johnstown, N. Y., has yielded up numerous sherds, bearing the distinctive marks of Mohawk handicraft, but no whole vessels.

I have in my collection 65 decorated fragments, which represent as many different vessels, no two being exactly alike, and all bearing the distinctive conventional arrangement of straight and diagonal lines and notches around the top band. See plate I. Some of the lines are wavering, as though made by an unsteady or inexperienced hand; others show straight lines regularly distanced as though executed by a rude though experienced artist.

No. 1, Plate I, is a fragment of pottery found on the Cayadutta site near Sammonsville, N. Y., and judging from the thickness of the sherd and the segment of its circle it is probably a part of a vessel 12 or 13 in. high and $9\frac{1}{2}$ in. in diameter at the mouth. The pointed top would indicate a triangular jar similar to the top of the Horrachs jar [Plate IV]. Nos. 4, 5, 6, 7, 8, 9, 11, of Plate I, also are sherds from large jars, the thickness of the top edge of the fragments being $\frac{3}{8}$ of an inch.

Plate II represents sherds from small pots. Figures 3 and 6 are interesting as having lately been found in a grave near Fort Hunter, N. Y., the markings being of a different character from others represented. Plate III represents a Mohawk pot that was recently found on the shore of Lake Pleasant buried in the sand. When it was found it

*This name is a substitute for the misnomer "Indian." Its use avoids confusion. See *Romance of the Colorado*, by F. S. Dallenbaugh.



PLATE IV. THE NORRACKS JAR



PLATE III. THE HANSON POT

was whole, with the exception of the fractures that are seen in the photograph.

This specimen is interesting not only on account of its size, but of the region where it was found, because 3 of the largest pots of Mohawk manufacture that have ever been found entire were discovered in the Adirondack region.

They have been named the Richmond, Hanson and Horracks jars. The "Richmond" pot is thus described by Dr. W. M. Beauchamp: "It was found by an Adirondack guide some years since, in a cave in Otter Creek Valley. The contraction is quite near the rim, and there is simply notched ornamentation around the narrow part. The greatest diameter is below the center and is 13 in., being 3 more than across the top. The height is 14 in." The "Hanson" jar is now in my possession. The size of the Hanson pot is 10 in. at its narrowest diameter, and 10½ in. across the top, 13½ in. at its greatest diameter, and 13½ in. high. As will be noticed, the top is scalloped in broad segments of a circle, the inside ornamented with shallow indentations.

The band at the top is 2½ in. wide, the lower edge being garnished by notches broader and deeper than around the top edge. Around this band is a series of straight and diagonal lines in the irregular regularity which is a marked characteristic of the fragments of pottery found on pre-historic sites of Indian castles in the Mohawk Valley. The material is of blue clay, the jar being baked in the sun after receiving a thin coat of dull pink silt. The implements of manufacture were evidently of the most primitive character, the wheel and the furnace being unknown to the Mohawks.

Within a few months another interesting "find" has been made in the Adirondack region between Lake Pleasant and Lake Piseco, by a man named Horracks, who while hunting was caught in a sudden down-pour of rain and obliged to seek shelter under a ledge of rocks near a small cataract called by the natives, "The Little Falls." While waiting for the rain to cease he noticed what seemed to be a reddish-brown boulder near at hand. Carelessly striking it, it gave forth a hollow sound. Somewhat curious he dug away the earth with his hunting knife and soon laid bare a symmetrically formed earthen pot.

This pot stands 10 in. high. At its greatest circumference it measures 30 in., and at its smallest 20 in. The circumference of the top or mouth of the pot is 24 in. The inside of the pot bears signs of use, but the outside, as in most specimens found, shows no trace of fire. The bottom is rounded, as is seen in the accompanying illustration [Plate IV], and the ornamentation is distinctly Mohawk.

This is a well preserved specimen and is rare on account of the shape of the top, which is cut in 3 curves, forming 3 points, which give it a triangular appearance. It is a singular fact that the 3 largest jars of Mohawk pottery now in the valley were found in the lake region of the foothills of the Adirondacks—the Richmond, the Hanson and the Horracks jars. The present owner of the last-named jar is D. F. Thompson, of Troy, N. Y.

EDITORIAL NOTES

PRE-HISTORIC PILE-STRUCTURES IN PITS: Mr. L. M. Mann has been excavating the ancient inhabited sites at Stoneykirk, in Wigtownshire, Scotland. Attention was first called to these by M. A. Beckett, who noted a row of depressions in the land on the edge of a plateau, which proved to be "silted-up pits;" 7 ft. below the surface of one of them decayed logs were found of "round timber, more or less vertically placed." In the silt, chips, cores, flint and stone implements, charcoal and fragments of pottery were found. Also "twigs and branches belonging to supposed wattle-work." The timber had the appearance of having been shaped with stone axes. The lowest stratum is a bluish clay and "suggests that a structure of wooden piling was erected in order to provide a dry floor. The ornamentation on the pottery and other evidence point to the Neolithic age as the period during which the sites were used."

EXCAVATIONS AT ARBOR LOW, ENGLAND.—The second part of the 58 volume of *Archaeologia*, just issued to Fellows of the Society of Antiquaries, contains a report by Mr. H. St. George Gray on his excavations at Arbor Low, organized by a Committee of the Anthropological Section of the British Association. Arbor Low lies 5 miles to the southwest of Bakewell, in Derbyshire. It consists of a circle of stones with inner stones in the direction of radii of the circle, now numbering altogether 46, surrounded by a fosse and vallum, and adjoining a tumulus on the southeast. The diameter measuring from the crest of the rampart is 250 ft. On the southwest a ditch can be traced for some distance in a southerly direction. The tumulus, when explored by Mr. Bateman in 1845 contained 2 small urns and other objects of the Bronze Age. Mr. Gray's excavations were begun on August 8, 1901, and continued in 1902. He found many flint flakes and flint and chert implements, portions of a deer's horn pick, a human skeleton and other objects, but none of metal and no primitive fictilia. He concludes that the circle belongs to the late neolithic period, to which Prof. Gowland attributes the erection of Stonehenge.—London *Athenaeum*, April 2, 1904.

PORTUGUESE TO THE CLYDESIDE DISCOVERIES: The Rev. H. J. Dunkinfield Astley read a paper he prepared on this subject, in which he dealt at considerable length with the very curious and puzzling discoveries made during the past year by Father Jose Brenha and Father Rodriguez, among the groups of dolmens situated at Pouca d' Aguiar, Traz os Montes, Portugal. In 1894 the attention

of Father Brenha was first directed to the examination of these dolmens, and he has, in company with Father Rodriguez, since systematically explored them. The whole province of Traz os Montes abounds in dolmens, situated for the most part high up in the mountains, the great number of them in a relatively small district, testifying, in Father Brenha's opinion, to the density of the population and its long persistence in Neolithic times. These strange discoveries consist of amulets of stone, pierced for suspension, bearing cup and ring marks and ducts, which were found in a chamber which presented the appearance of having been the secret treasure chamber of the tribe, and with them were found 4 figurines representing females, one of which was egg-shaped, the lower part of the egg terminating in the male face. Besides these curious objects there were stones with rude drawings of animals, such as horned rhinoceros, and reindeer, etc., and more remarkable still, several stones were found with inscribed letters in a script bearing a close likeness to the script discovered at Knossos by Mr. Arthur Evans. It is, however, the finding of the amulets and figurines so closely resembling those discovered by Mr. Donnelly on Clydeside, in the crannog, and at the hill fort of Dumbuir, that makes this Portuguese discovery so important in its relation to the evidence afforded by the Scotch examples of what would seem to have been a particular phase in the development of peoples in the Neolithic stage of culture in Europe.

ROPE MAKING BY THE ANCIENTS.—The art of rope making by the ancients is well known, and ropes of leather and of various kinds of fiber have been found in the earliest centers of civilization. Ropes made of palm have been found in the Tombs of Beni-Hassan, Egypt, and on the walls of the Tombs is shown the process of preparing hemp. In some of the oldest Pueblo and Cliff Ruins of the Southwest have been found ropes twisted in 3 strands, showing very expert workmanship. But it was supposed that wire rope was a comparatively modern invention until excavations at Pompeii brought to light a piece of bronze wire rope nearly 15 ft. long and 1 in. in circumference. It consists of 3 strands laid spirally together, each strand being made up of 15 wiles, twisted together. Its construction does not differ greatly from that of the wire ropes of to-day. This must date back at least to the dawn of the Christian Era, as Pompeii was destroyed A. D. 79.

HISTORY OF THE ANCIENT PEOPLE OF THE ORIENT:—A new edition, the sixth, of Maspero's *Histoire Ancienne des Peuples de l'Orient* has just appeared. The alterations of the old editions are mostly to be found in those parts dealing with Egypt.

ORIGIN OF JEWELRY:—Prof. W. Ridgeway in a recent lecture before the British Anthropological Institute on *The Origin of Jewelry*, propounded the theory that jewelry did not have its origin in æsthetic, as commonly supposed, but in magic, and that ornaments were originally worn not as ornaments, but as amulets to ward off evil. The æsthetic consideration, however, entered in at an early stage.

The natives think that if they wear some part of a brave animal, some of that animal's bravery will enter into them; for example, in India tigers' whiskers are eagerly sought after by the natives. He considers that the Babylonian cylinders, Mycenaean gems, and Egyptian Scarabs had their origin in "sympathetic magic" and that their use as signets was purely secondary.

Dr. Soteriades has discovered recently quite near Chaironeia a group of very important prehistoric houses, doubtless of the neolithic age; the vases found here resemble very closely those of the prehistoric houses discovered 2 years ago by Tsountas.

Last spring, after completing his work on the tomb of the Macedonians, he investigated a tomb near Orchomenos, in plain not far from the road to Lebadeia. In the vertical shaft sunk from the summit of the cone to a depth of 5 m. he found only a few prehistoric vase-fragments, but it cannot yet be stated whether the mound itself dates from prehistoric times, as these few vase-fragments might have been in the earth used to build the mound. Work was stopped by heavy rains and surface water from springs.

DISCOVERY OF A ROMAN BAKER'S SHOVEL:—A baker's shovel, such as is still in use for putting bread into the oven, was discovered at the bottom of a recently excavated Roman well in the Saalburg. Similar instruments are represented on Roman frescoes, but this is the first one that has been found. It is of beechwood and is made in one piece. A silver coin of Antoninus Pius, a bronz coin of the Empress Faustina and a well preserved leather shoe were among the further contents of the well.

NOTE ON STONE IMPLEMENTS FROM PAHANG.—MALAY PENINSULA.—(1) 13 well-shaped stone implements and fragments of implements.

They were found on or near the surface of the ground or in the possession of natives in Pahang in the Malay Peninsula. The native Malays know nothing of their origin, but suppose them to be supernatural and seem to associate them with thunderbolts.

Most of the implements are of the same sort of stone. This is found in several parts of the State. Some of the implements are decomposed on the surface, while others have not suffered decomposition or have had the decomposed matter rubbed off. Similar stone implements are found in the neighboring States.

(2) A rude implement was found about 2 ft. below the surface in stiff clay.

(3) The rudest implement was found by myself at the bottom of an alluvial gold mine in the Tui Valley of Pahang, and it had not been disturbed in its position when I found it. It lay in a deposit of gravel on crystalline limestone rock, and over it had been a deposit of gravel or clay 43 ft. thick. This clay undoubtedly had been derived from the decomposition of some green-stone hills and ridges which form the

sides of the valley. It is known that these hills had originally been overlaid by the limestone on which the implement rested, and it was only when sufficient of the limestone had been dissolved away to allow the green-stone to emerge that this latter rock began to yield the clay, which was derived from its decomposition. The amount of denudation or dissolution of the limestone since this emergence has been at least 300 ft. The gravel in which the implement was found had been laid down by river action when the surface of the limestone was at least 300 ft. higher than it is at present, and it would seem that at this period or earlier the implement had been fashioned and then lost in the gravel.

It might be contended that the green-stone hills may not have decomposed and yielded their clay immediately on their emergence from the limestone, but it is improbable that there would be any great interval of time between those 2 occurrences because the green-stone would be decomposed by the action of the surface waters, which would reach it through fissures in the limestone while it was still covered by a great thickness of that rock and it would thus, on its emergence, be in a condition very favorable to rapid denudation. I have examined fissures which go down several hundreds of feet in the limestone at the Tui, and the green-stone is completely decomposed to great depths.

It would seem that we might take the denudation of 300 ft. of limestone as an approximate measure of the antiquity of the implement. The rate of the denudation of the limestone is not known, but it is comparatively rapid under the conditions of climate and vegetation prevailing in Pahang. The temperature is high and the waters are heavily charged with carbonic acid and products of vegetable decomposition. In any case, it would seem that the implement must be of very great antiquity.

(4) The 2 fragments of a stone ring were found about a foot deep in the surface soil at the Tui. They are similar to, but are better formed than some other rings which were found near the Tanom River at a place 15 miles further north. One of these latter is, I believe, in Lancing College at Brighton, and several are in the Museum at Taiping in Perak. The Tui ring has been very carefully framed and made very accurately circular. This latter can be most readily shown by placing the ring on a sheet of paper, tracing round it with a pencil, and testing a circular arc formed by a pair of compasses.

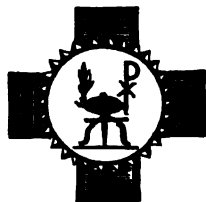
Neither Malays nor Chinese in Pahang have any reasonable theory of the origin or possible use of these things, and it seems very improbable that the rings can have been made by either of these peoples. Assuming that the rings would be made on some system of measurement I tested the dimensions of the Tui one, but could get no clue to any known system. The use of the rings is also a mystery. These cannot have been worn on the person as ornaments and they are too light and fragile to have been used as cutting tools. The only supposition that suggests itself is that they may have been religious symbols.—By R. M. W. SWAN in *Man*, London.



A FAMILY GROUP FROM ABUSIR

RECORDS ^{OF} THE PAST

VOL. III



PART VII

JULY, 1904



EXCAVATIONS OF THE GERMAN ORIENTAL SOCIETY NEAR ABUSIR

BY LUDWIG BORCHARD

[*Translated from the German by Prof. Karl Hau*]

EXCAVATIONS DURING THE WINTER OF 1901-02

IN discussing our excavations in the ruins of Abusir, I shall proceed chronologically and begin with the temple of King Ne-woser-re.

This temple, it seems to me, was not quite completed; the inscriptions on each column give nothing but the name and title of the King, Ne-woser-re, with the addition, "beloved by the goddess of Lower Egypt," or "beloved by the goddess of Upper Egypt," according as to whether the column stands in the southern or in the northern half of the temple. This Egyptian habit of dividing each temple into a northern and a southern half and choosing the ornaments from the 2 parts of the empire accordingly, greatly facilitates reconstruction, inasmuch as each fragment found indicates by its inscription to which part it belongs.

Around the portico of the temple we have on 3 sides small corridors. One of the walls has a very deep niche, the object of which we are still in doubt. Perhaps it was the receptacle for a very interesting monument, the fragments of which were discovered in the western part of the portico; namely, the enormous statue of a walking lion.

Parts of the back and hindquarters, the forelegs and the remarkably beautiful head are preserved. The sculptor must have been one of the masters of his time.

From the southern corner of the niche a very narrow passage leads behind the main gate; if it belongs to the original plan of the temple and is not a later addition it must have been a secret access to the door-bars, which opened from the interior. An identical passage was discovered by Schweinfurth in the temple Qasr-es-Sara in the desert west of the Fayum.

The main gate, to which this passage leads probably opened into the "holy of holies," a comparatively narrow chamber, having a niche in the back wall. The decoration of the interior of this chamber corresponds to that commonly found in kingly temples of the Old Empire; namely, an imitation of the facade of the King's palace, as the old Egyptians used to produce them in the tombs of the King and other high dignitaries.

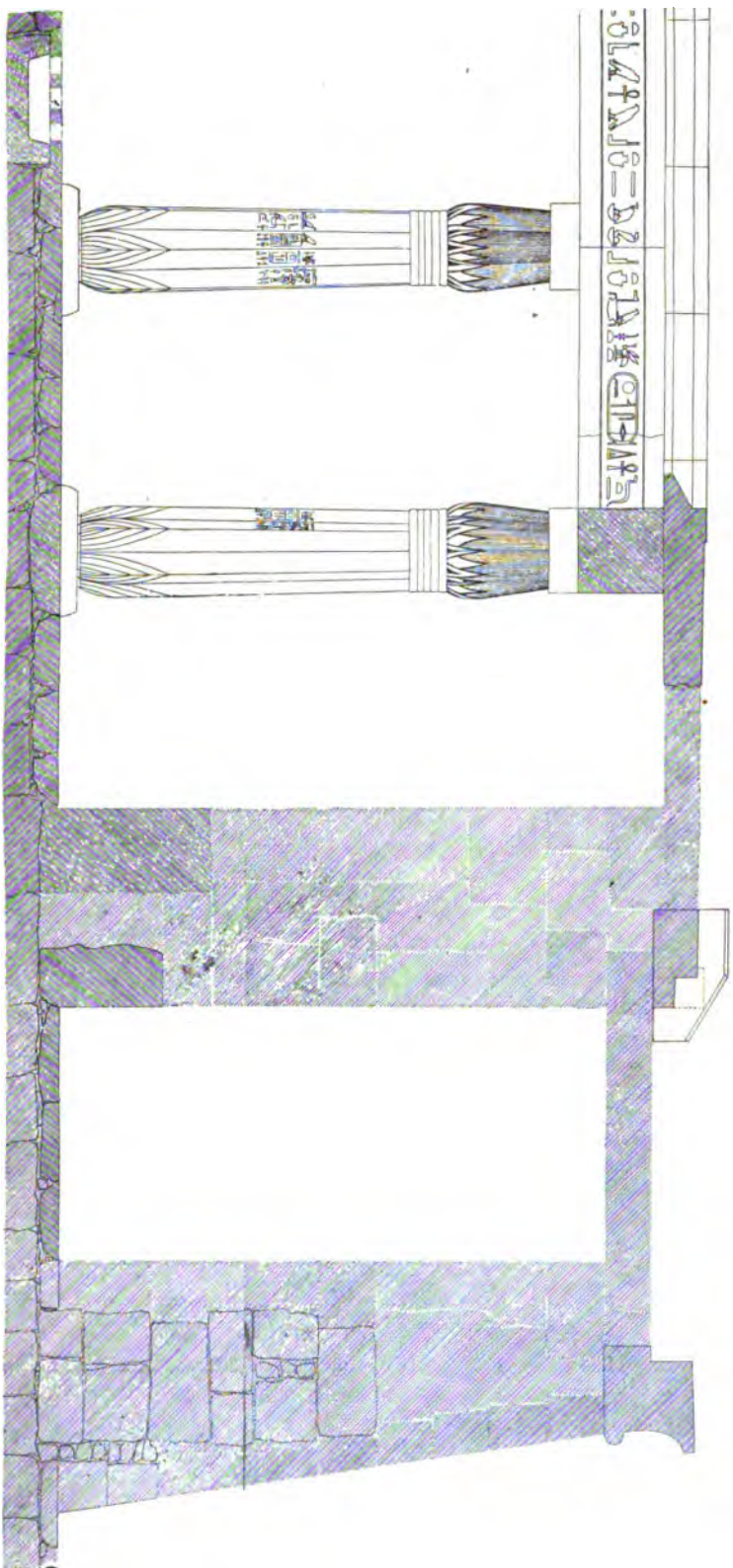
In spite of this similarity we have interrogated "holy of holies" in our ground plan, for it is not unlikely that during further excavations we shall discover the real 'holy of holies' in the middle of the pyramid on the east side, where it ought to be expected. But this irregularity may have been caused by conditions which we cannot now guess. It certainly seems prudent to be satisfied at present with a *non liquet*.

The temple has several outlets. One, in the western corner leads into a narrow, open passage between temple and pyramid. Two other ones lead to the north into still unexplored territory.

The walls of the temple show very artistic ornaments, mostly representing sacrifices for the dead King. The persons represented are not ordinary servants, as in private tombs, but dignitaries of the empire, occupying certain honorary offices in the temple. Their full names and titles are given, some of them already known to us through the tombs excavated by Mariette near Saqqara.

Besides these reliefs, others were found showing the King in intercourse with gods. In many works on old Egyptian civilization we still read that the Egyptians of the Old Empire did not picture their gods. Here we have a great many representations of nearly all the gods of the Old Empire: Horus with the head of the sparrow-hawk, Sechemet with the lion-head, Anubis with the head of the jackal, and many gods and goddesses in human figure.

Most beautiful is a relief found in the portico between the lion-niche and the gate of the "holy of holies." It represents the King with apron and lion-tail, the insignia of his dignity, and with a head-gear of horns and feathers, sitting on a portable throne. On the socle 2 Nile-gods unite the coats of arms of Upper Egypt and Lower Egypt around the hieroglyph "Union," in order to designate that the King united both countries under his sceptre. The jackal-headed god Anubis marches toward the King offering him the sign of life in several copies.



Schnitt durch die Papyruskolumnade



Schnitt durch Pflanze



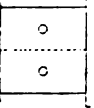
Schnitt durch den Stab



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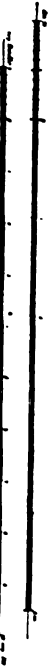


Schnitt durch den Stab



Schnitt durch den Stab

Maßstab



**AUSGRABUNGEN DER DEUTSCHEN ORIENTGESELLSCHAFT
BEI ABUSIR 1902**

Totentempel des Königs Ne-woser-re

38 Schnitt durch die Nordhalle des Südtempels und durch den nord. Umgang

Originalgröße

TEMPLE OF KING NE-WOSER-RE

Behind the King stands the goddess of Lower Egypt, embracing him, the relief having been found in the northern part of the temple. Below this 2 smaller columns of servants are represented forming a lane and bearing staffs.

Another relief was found near by, commonly appearing only in temples of the New Empire; it represents the King slaying with a club a number of his enemies, whom he has laid hold of by the hair. His head is surrounded by his tutelar deities. Numerous fragments of beautiful alabaster reliefs were lying about in the rubbish, which probably belonged to a magnificent sacrificial altar.

The following may be said about the history of the temple:

It was built, as all Egyptian buildings of that period, with the customary "perrons" of air-dry bricks, which took the place of our wooden scaffold; a small fragment of such a perron was found. The temple does not seem to have been quite completed. The columns, the lion, and several other things were not yet finished when the King died. How long the temple was in use and the King's worship continued cannot be exactly determined. During the first period of the Middle Empire (about 2100 B. C.) the temple still had priests, whose tombs were found intact. But they were comparatively poor, so that Professor Ermann quite happily could compare them with the poor Shejchs, who are in charge of the decayed tombs of the Caliph, near Cairo. Also the temple itself must have been somewhat decayed at that time. At the time of the New Empire (about 1300 B. C.) there was hardly anything left of it. The wall stones were used in other buildings and on the ruins stood a few huts, in the rubbish of one of which we found a letter of that time written on papyrus. In several places we found graves of poor people, whose bodies had been buried in a heterogeneous mass. Of the subsequent Greek and Arabic civilization there is no trace whatever in the temple area.

But the territory surrounding the temple intended as a cemetery for the high dignitaries of the empire offers traces of all periods of Egyptian civilization. Let us consider first the tombs of the Old Empire. Some of them we could only partly excavate this year on account of lack of time. These tombs are gigantic limestone mastabas arranged in rows along the street. In the middle of the street there lay one brick mastaba; this one, belonging, according to a long inscription, to an Onch-Weser-Kef, we have not yet investigated at all, except that we looked after the arrangement of the burial chambers. They were oval and rectangular, going from north to south. In one of the chambers the coffin was still intact; it contained nothing but the skeleton of the deceased and some remnants of linen. It cannot even be said with certainty that the deceased was embalmed. One important finding was made near the mastaba; namely, a family group in red granite, representing the owner of the mastaba with his wife. The husband stands looking straight ahead, his wife, a little smaller, embracing him tenderly. It is not one of the best works of that time. The sculptor was



MODEL OF A BOAT FROM THE GRAVE OF HERISHEF-HETEP



APPURTENANCES IN THE GRAVE OF HERISHEF-HETEP AFTER THE COVER WAS REMOVED

inferior to those who created the reliefs and the lion in the temple; but that is quite natural. The best talent was, of course, engaged by the King.

One mastaba we investigated thoroughly, that of Dyedy-em-onch; it contains in smaller proportions everything that is found in the pyramid of the King. To the plan of a pyramid belong: The tomb of the King, *i. e.*, the pyramid itself, rooms for worship, the temple with the statues of the deceased and supplemental pyramids for the members of the King's family. The mastaba contains burial chambers for the owner and his family underground—above ground the chambers for worship, and connected with these, the statue rooms.

In one mastaba the rooms are rather small—3 for worship and 2 for the statues, rather rudely built of limestone blocks. Judging from the relief fragments the former were the most elaborately ornamented. The western side of these rooms contains sham doors, before which the sacrifices were placed on an offering table.

The underground burial rooms are accessible from the worship-chambers through small, covered passages. That of the husband has been completely destroyed by grave robbers hunting for gold and valuables; only the vessels in which the intestines were kept are preserved in fragments that are rather valuable as the oldest yet discovered. In the wife's room the coffin is better preserved.

Now we come to the tombs of the Middle Empire, some of which were excellently preserved and yielded valuable findings. First, we opened the family tomb of Jen-em-Jechwet, the governor of the temple. Through a small opening we saw 4 coffins in exactly the same position as they were put 4,000 years ago. Upon the coffins, boat models were placed, so that the deceased might have an easy journey into heaven; below, cups that once had contained water, vessels with sacrifices, small wooden statues of servants, etc. With the greatest expectation we pulled one coffin out and lifted the cover. There lay Jen-em-Jechwet in a more perfect state of preservation than we had even hoped. The mummy was wrapped in a long brown linen with a colored head mask. According to the fashion of the time the mask had small whiskers and a long imperial; the eyes were prolonged with paint. The wig has a blue coloring in imitation of lapislazuli, the Egyptian gods having lapislazuli hair. The mummy lies a little bit on the left side, just as the Egyptians sleep, with a pillow of the same kind as is today used in the Soudan. The eyes are directed to the East, toward the rising sun, and on that side of the coffin 2 big eyes are painted. Near the deceased lay 2 staffs and a little wooden figure representing himself.

The 3 other mummies had suffered much from dampness, the construction of the coffins being very inferior. Jen-em-Jechwet's coffin was transported without accident to Berlin.

Near this family tomb we found a great many single ones, the best preserved of which belonged to the priest Herischef-hetep ("the god is happy on his lake").

A beautiful, large coffin, about 18 cm. thick, filled the whole vault. After we had pulled out and opened it, it appeared that it contained a second and thinner one inside, in which lay the mummy admirably preserved. The deceased must have been rather wealthy, judging from the appurtenances found in the tomb. Around the collar of his mask a necklace of faïence pearls had been placed, while all the other mummies were content with a painted ornament. Both coffins, the inner and the outer one, were painted all over and covered with inscriptions in black italic types on a white background. A detailed discussion of all of them would be tantamount to a complete history of the civilization of the Middle Empire. On the headpiece we see above, under the inscription, ointment vessels in a frame tied up with leather; below, a bed with lion-heads and lion-feet, upon it a pillow and a fly-trap, under it a handbasin and 2 bags, probably containing paint. Then comes a row of other bags with divers contents, a lamp, staffs and a hatchet. The footpiece shows, above, hand and foot ribbons, ties and cups; below lie 2 pairs of sandals, then a collection of carpenter tools—saws, drills, hatchets, chisels, adzes, and polishing-stones. After pulling the coffin out we were greatly surprised to find behind it all of the appurtenances that had been put in the grave of the deceased. First, a collection of ship models, as they are even now used on the Nile. Then a kitchen; one butcher is pictured cutting the throat of a calf, while another catches the blood in a vessel; the aprons of both are red. Nearby another one roasts a duck. Below the kitchen is the granary. Besides there are numerous statues of servants and vessels, and, strange enough, the same small models of carpenter tools.

Another tomb I will just mention out of the many others belonging to the Middle Empire. It is that of Sat-Nofer, who bears the title "Mistress of the King." But her tomb is extremely poor. There is nothing in it beside the coffin but a pillow, a bronze mirror without a handle, and a little stone, used for the purpose of rubbing the paint.

During the New Empire the ruins of Abusir were used as mass-graves for poor people and these yielded no findings worth mentioning. Very near the surface a well preserved wooden coffin in mummy form was found, which, according to the inscription, belonged to a certain Asiatic, called Abhem, the Son of Quert, who, in Egypt, had taken the name Hophra, from the well-known King of that name (about 580 B. C.). But when we tried to excavate the coffin, we found that under it lay a very poor mummy of a much later period. Probably a poor inhabitant of Busiris, who could not afford to buy a new coffin, had acquired this one second hand. We subsequently encountered the same phenomenon quite frequently. Some, who apparently were too poor to afford even this had themselves buried in clay pipes, and some corpses of children were simply placed in wine jars.

One part of the cemetery, however, seems to have been reserved for the well-to-do people of Busiris; namely, the neighborhood of the tomb of Dyedy-em-onch. These well-to-do people were Greeks, and

this is quite natural. Already, prior to Alexander's time, under the Persian rule, several Greek families had probably settled at Busiris, carrying on a small trade in very much the same way as the Greek Bakals (grocers) that to-day are found in almost every large Egyptian village. Like the latter, they soon accumulated comparative wealth and without absolutely forgetting their native customs, adopted many of the Egyptians, among these mummifying of the dead. Aside from the mummy itself, the coffins and the appurtenances are Greek. The latter probably even imported elegant attic vases, Greek leather sandals with ornaments that are absolutely un-Egyptian. The fact that similar coffins were found in Piræus perhaps justifies the inference that even the coffins were imported. They are wooden and span-roofed, ornamented with pearl chains or painted in Greek designs. That these coffins were not intended for use in the desert sand may be inferred from the fact that the bottom has ventilation-holes and that the poor legs which supported them are always found sawed off. The mummies were placed on shavings—which is never the case with Egyptian mummies—and the appurtenances are distinctly Greek.

In the midst of these Greek coffins lay a gigantic Egyptian mummy coffin, near which the most important find of this year was made. At the head of the coffin we found a small leather purse, some pieces of iron, and a papyrus roll, several cm. thick and 18, 5 cm. high. When opened it was 1, 11 m. long and showed 5 columns of Greek verse in antiquated characters. [We reproduce one column of this papyrus—that one in which the poet mentions his name—and leave the discussion of the papyrus to that eminent authority, Priory Counsellor Dr. V. Wilamowitz-Mollendorff.*]

Among the single finds may be mentioned several faience-chains with the names of Thutmosis III and Amenophis III, a colored glass bottle of the New Empire, a seal-cylinder of the Old Empire, fragment of ebony sculpture, the basis of a small statue of white faience with blue characters, etc.

We began work on January 3 and on May 1 we returned to Cairo. In conclusion, I feel bound to express our thanks to the generous benefactor of the German Oriental Society, who enabled us to carry on these excavations, and utter the hope that the same may be continued next year.

EXCAVATIONS NEAR ABUSIR DURING WINTER OF 1902-03

During the first year of our excavations near Abusir we had investigated the temple of King Ne-woser-re (V Dynasty—about 2500 B. C.) on the eastern side of his pyramid, the tombs of the dignitaries of his Empire, tombs of priests of the Middle Empire (about 2000 B. C.) some later graves, and finally a part of a Greek cemetery of the second half of the IV Century B. C. Since none of these investiga-

*The poem was written by Timotheos of Milet at the end of the IV Century B. C. and celebrates a Greek naval victory over the Persians.

tions had been completed during the first year, our work in the second year consisted first in the completion of these investigations and then in the opening of the pyramid itself, in which we could expect to find the tomb of King Ne-woser-re himself.

The ground plan of the temple has been very exactly determined, and only very few points need now be accompanied by an interrogation.

The two principal questions that had to be solved were, first, where the "holy of holies" lay, and second, what was the continuation of the temple to the north. Our expectations that the "holy of holies" must lie at the middle of the pyramid proved well founded. At that point we found the enormous foundation of a magnificent door and fragments of the same, with the name of the King in beautifully executed green hieroglyphs. In the space between the pyramid and this door, behind which the deceased was thought to be, the sacrifices were offered. What the purpose of the chamber, which we first designated as "holy of holies," has been, we do not know. From this room a passage to the north leads to a room with a column in the center; opposite to the entrance stood a statue or an offering altar, of which only the foundation still exists. From this room one comes through a vestibule to the "holy of holies," behind which there lies another room with the base of a statue and a larger one looking like a magazine. The temple only touches the pyramid with the "holy of holies;" the rest is separated from it by a narrow paved court, in which several small rooms seem to have lain, concerning the purpose of which we are absolutely ignorant.

Generally, although we know the ground plan of the temple fairly well, the purpose of the different chambers is more or less of a mystery to us, for our information concerning this period is extremely vague.

The temple was surrounded by a wall, which also included the pyramid and probably several other buildings, which we have not yet discovered. This wall is very well preserved on the eastern side and at the point where the eastern and the northern wall met, stood an imposing building, which, I trust, will be more fully investigated next year. Our most valuable finding at this place was a magnificent gargoyle—a lion head. The lion seems to become the heraldic figure of the German Oriental Society. The lion of Babylon was followed by the granite-lion of Abusir last year, and now comes this basalt-lion. The execution is very fine in all details. A fragment of the left ear is missing, but, I trust, from the fragments found 3 years ago in Abugurab in the Sun-temple of King Ne-woser-re and from the gargoyles of the Ptomemær and imperial times, our piece may be perfectly mended.

On the south side of the upper part of the perron leading to the temple a tremendous terrace was discovered, which, with its white limestone, must have offered an imposing aspect from the Nile. That this terrace was built contemporaneously with the temple is proven by

the red stamps of the stones, which are the same as those of the latter. These stamps are just as important for fixing the date of Egyptian buildings as the stonemason's marks on medieval churches. Every King of the pyramid-period has his peculiar stamp; King Ne-woser-re has a circle surrounding a cross; his predecessor, King Nefer-er-ke-re, a quadrangle.

In the temple itself several new reliefs were found, the prettiest of which is a representation of the crocodile-hearted god Sobk of Crocodilopolis, Medinet el Fayum, the capital of the most fertile province of Egypt.

The pyramid of the King had been opened in 1838 by 2 Englishmen, Perring and Vyse, but no thorough investigation had been made. After 41 days' work they had abandoned the attempt to get in through the supposed entrance, but had discovered a hole, which had been made in former times by grave robbers. They advanced to the burial chamber, photographed it, but left without taking anything.

We intended to proceed more systematically, although expecting to encounter great difficulties. We began our work in the center of the north side of the pyramid, where commonly the entrance is to be found, and first removed the rubbish, which was over 8 m. high. Then we reached the wall, which surrounded both temple and pyramid, after this the pavement before the pyramid, and finally the entrance—as far as it still existed. It was closed by a gigantic red granite block. The walls of the pyramid being in a very decayed condition, our work now became dangerous, and advanced slowly. Five expert stonemasons worked assiduously, and it is truly remarkable that no accident occurred. But the construction of the pyramid became clearer to us every day, and if there is any Egyptologist who still opposes Lepsius' original idea of the construction of the pyramids, as Perrot-Chapiez and Flinders Petrie have done, he will be converted by our excavations at the pyramid of King Ne-woser-re.

Slowly we reached the point, which is marked "forced passage" in Perring's report, and here the inburst took place on May 2. The whole part north of the "forced passage" came down and almost buried our head stonemason. The rest of this season was fully occupied by the work of removing the ruins, and at the end of the season we had arrived at the same point as at the beginning of May. "*Senne gaje, inschallah!*" "Next year, if God wills it!" remarked Abd'el Muchdi Qazim, our head stonemason.

Quite a number of large tombs of the Old Empire, the so-called mastabas, had not been investigated last year, and 2 of them we excavated completely, one only partly. To the most important one we gave the name "Mastaba of the Princesses," because it was intended for the daughters of the King. The rooms for worship lay in one row behind the east front of the tomb and the west wall of these rooms showed 4 false doors, so that we could expect to find 4 mummies. The first northern door, of which only the lower part was still preserved,



AN OPENED GREEK COFFIN, ABUSIR



RICH GILDED MASK; SOLES, AMULETS, ETC., FROM A MUMMY OF LATER DATE; AND A WOODEN STATUE FROM A TOMB OF THE MIDDLE KINGDOM

belonged to the princess of the blood, Nebti-cha-merer. It shows 4 pictures of the princess with all her titles. She was "Priestess of Hathor in all her temples, etc." The limestone coffin looked as white and new as if it had just come out of the workshop, the contents, "mafisch"—nothing. She had never been buried here. The explanation came a few days afterward. Dr. Moeller noticed that in the tomb of Shepses-ptah, which we used as dark-room, name and title of the owner coincided with that of our princess. Mrs. Shepses-ptah, nee Princess Bebti-cha-merer, had been buried in her husband's tomb, and had never occupied the burial chamber intended for Miss Nebti-cha-merer.

The same was the case with 2 of the other chambers in the mastaba of the Princesses. The second door bears the name and picture of

Princess Merit-jots, "her father's favorite daughter," but there is nothing behind it. The third one, also empty, does not even have a name on the door.

On the fourth door, strange enough, we read, "The only friend, Kehotep." The name "only friend" is a court title and corresponds to our "gentleman of the bed-chamber." No one knows how this "gentleman of the bed-chamber" came into the Mastaba of the Princesses; he must have been very close to the royal family. It is also very strange that in his burial chamber several stones bear the name of Shepses-ptah, the son-in-law of the King. We have to wait for later finds to get an explanation of this puzzle.

The chamber had been ransacked by grave robbers, who had taken out the mummy and deprived it of the jewelry, but what they had left was quite sufficient for us. There were several small wooden offering tables with all the necessary vessels and cups of alabaster in all possible forms, small salve boxes for the 7 holy salves with the name of each, the 4 pitchers for the intestines, remnants of the victims, magic tools for all kinds of ceremonies and finally, just as in the tombs of the Middle Empire, the models of numerous carpenter tools—saws, drills, chisels, adzes, etc. It may be that Kehotep, having had the same bad experiences with Egyptian carpenters, had, like ourselves, taken his own tools with him.

In this place we made a rare and inexplicable find in the rubbish; namely, the head of a limestone statue smoothly worked off and not broken off. An analogous piece was found by de Morgan in 1894, in one of the tombs near Dashur, about an hour and a half south of Abusir. Perhaps there is some connection between this and the belief of the old Egyptians, so frequently encountered in their burial-chants, that the head of the deceased is cut off in Hades.

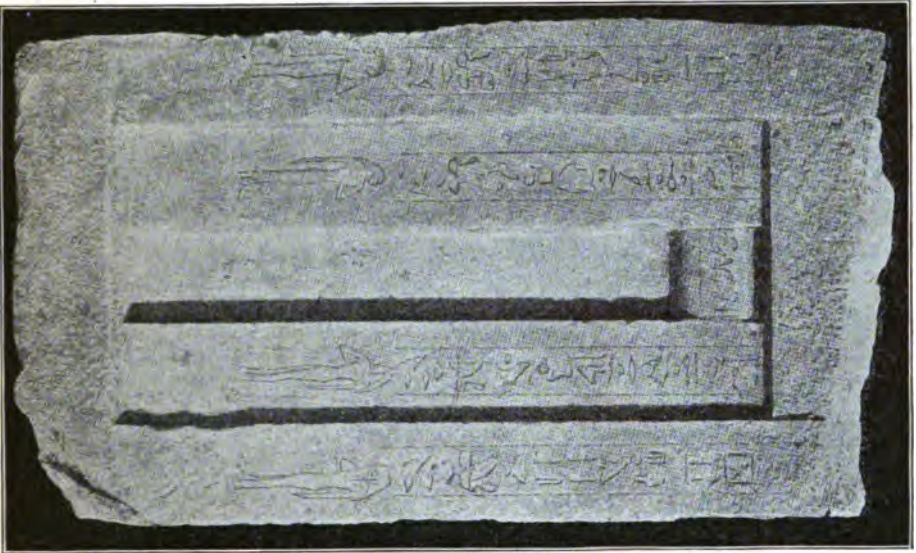
So much on the Mastaba of the Princesses. The other tomb of the Old Empire, which we investigated, is situated in the corner of the temple; we have unfortunately not yet succeeded in discovering the name of the occupant, because the sham door, where we naturally looked for it, was too badly preserved. The mastaba contained a simple room for worship, the emptied statue-room, and a large burial chamber, with 2 columns.

Until now we have found the following types of mastabas:

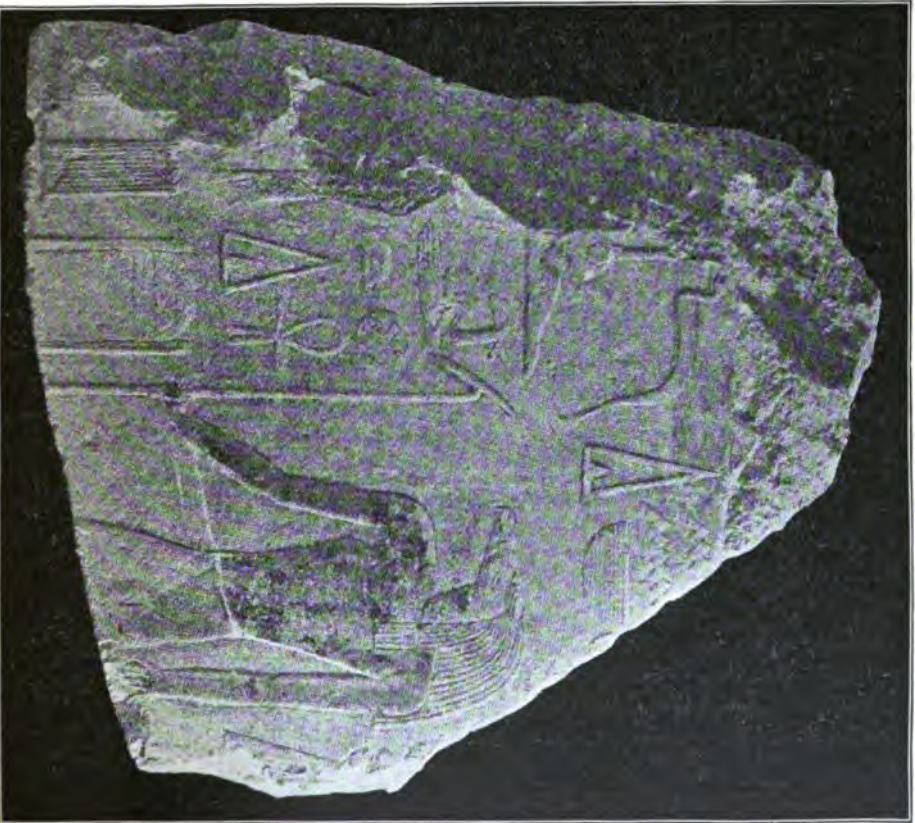
- (1) The Mastaba of Dyedy-em-onch, with burial-chambers accessible from the rooms for worship through oblique passages.
- (2) The Mastaba, "without name," with oblique entrance from outside, and
- (3) The Mastaba of the Princesses, with vertical passages from the roof of the tomb.

The mastaba "without name" has also a second burial-chamber—that of the wife—accessible through a vertical passage from the roof. There is, therefore, no difference in point of time between these types.

The contents of the mastaba "without name" were almost the



STONE DOOR OF PRINCESS NEBTI-CHA-MERER



PART OF A TEMPLE RELIEF FROM ABUSIR, SHOWING THE
CROCODILE-HEADED GOD, SOBK

same as those of the Mastaba of Kehotep. I might mention a white face-mask of linen, probably the oldest of its kind.

The third mastaba lies north of that "without name," but since the investigation of that one is not yet completed I defer the discussion until next year.

The excavation of the tombs of the Middle Empire was continued this year, and yielded similar results as last year. In one of them we found a fragment of the reliefs of the mastaba, which Dyedy-em-onch used, which gives us some clue as to the age of the former. The Mastaba of Dyedy-em-onch, which belongs to the V Dynasty (about 2500 B. C.), must have been already in decay when these tombs were built. Everything found in the tombs of the Middle Empire is more or less badly preserved. A well-preserved piece was found in one of the coffins, viz., a small wooden statue of a walking man similar to the one found last year in the tomb of Jen-em-Jechwet. Face and breast of the figure are well executed; in the same coffin we found very interesting large faïence pearls and a scarab, typical of the Middle Empire.

Of the other tombs of this time we completely excavated one that was favorably situated in order to determine exactly the construction of that type. It has some resemblance to a modern Arabian grave, a similarity that explains itself by the same formation of the soil. It consists of an entrance-shaft with an adjoining chamber covered with a cylindrical vault of bricks. Those parts of the tomb that were situated above the ground corresponding to the rooms for worship of the Old Empire were also constructed of brick, and, of course, disappeared long ago.

These tombs of the Middle Empire also yielded some findings of interest for the medical profession. We found the skeleton of a dwarf, or at least what we thought was the skeleton of a dwarf, several more or less healed broken bones, etc.

On the last day of our excavations last year we discovered under the decayed northern wall of the "janitor's room" of the temple, a spacious room, covered with planks, which seemed to contain old corn. This year we investigated this "granary," emptied it and poured the contents into bags. At the bottom we found the decayed wooden coffin of "the Keeper of the King's seal," "only friend," and "head of a college of priests," by the name of Merri, and another similarly poor coffin. We had not found granaries, as we expected, but tombs of the Middle Empire, where the appurtenances consisted in great quantities of grain. In Merri's tomb a wooden grubbing axe had also been placed. The whole contents were transmitted to Prof. Schweinfurth, who will solve the question as to what sort of grain the old Egyptians used.

During the New Empire (about 120 B. C.), as I have stated in my report of last year, the inhabitants of Abusir, who were buried in the ruins, were very poor. This year again we found a great number

of graves where the bodies were thrown in together, near the entrance of the pyramid and several scattered coffins of a later period (about 600 B. C.). One wooden coffin of a certain Chet-hapi had been placed in a hole of the west wall of the Mastaba of the Princesses. The broad face was covered with thin leaf-gold, the hair painted blue, and over the breast a hieroglyphic inscription of 3 lines. The mummy itself showed the following colors: Dark blue and gold mixed with red; the head and face were covered with a finely modeled mask, which, unfortunately, was slightly damaged when the coffin was opened. The amulets were arranged on the corpse as they appear in the accompanying figure. All are executed in compressed linen stucco. Under the mask on the breast lies the necklace, below it the breast-plate—the goddess Nut, extending her wings to protect the deceased. Below Nut was a long inscription on gold. On the right and left sides the smaller amulets, the 4 sons of Osiris with their characteristic monkey, jackal, sparrow-hawk and human heads; below, the lamenting sisters of Osiris—Isis and Nephthys. But to my taste the best pieces are the sandals that lay under the feet of the mummy, with a simple blue surface and a golden seam.

Our final task was to continue our excavations of the Greek cemetery, which had yielded the interesting colored wooden coffins and the Timotheos papyrus. This cemetery is by no means exhausted yet; we found on the western side 2 rows of coffins near the mastabas, one of which was untouched, while all coffins of the other one were half destroyed.

The appurtenances were alabaster vessels and black clay cups for the paint and sponges for the exterior care of the body. Food was also abundantly provided—incredible quantities of almonds, nuts, raisins, dates, apples, bread, eggs, and pieces of meat in bowls. These things lay partly in the coffins and partly outside. For the long journey a staff and strong shoes are added and to pay the passage in Charon's boat in Hades an obolos is placed in the mouth of the deceased. In one case, we found an Athenian triobolon, a small silver coin worth a few cents. This find gives an excellent illustration of the economical difference between the Greek and Egyptian civilization. If the Egyptian wanted to make a boat trip in Hades he had to take the boat and the rowers with him in effigy; the Greek took his obolos with him, with which he paid for the services of Charon.

In our report of last year we gave a description of these Greek coffins; we add a photograph of an opened coffin. The mummy lies on the back upon shavings, the head on a pillow, covered with a long linen, which is doubled over the face. A garland is placed on the hair. Near the feet are placed a pair of leather shoes, a leather purse, a loaf of bread, and 2 scrapers. Red ribbons are arranged irregularly over the body.

About 10 years ago a valuable find of old papyrus had been made at a place near Abusir in a brick temple, near the pyramid of Ne-

woser-re. We searched there and found several other documents relating to the management of the temple.

In conclusion, I want to state that we began work on January 12 and began with the opening of the pyramid on the 18 and with the mastabas on the 31; on February 15 we began excavations of the Greek cemetery. We finished work on April 10.

On March 10 we received the visit of his imperial highness, the German Crown Prince, who manifested great interest in the excavations, and took many photos of the work.



A LION HEAD, GARGOYLE



GEZER FOUNDATION DEPOSITS AND MODERN BELIEFS

BY DR. GHOSN EL-HOWIE

IT IS a little over an hour's ride south of the road which leads from Joppa to Jerusalem that the saddle-shaped mound known to the natives as Tell-el-Jezari is found. It lies east and west, and its western end is surmounted by a shrine of a modern cemetery and a mulberry garden.

Over 30 years ago Tell-el-Jezari was identified beyond doubt with the city of Gezer, which a King of Egypt sacked and burned with fire, but which a son-in-law of his, King Solomon, rebuilt. [1 *Kings* IX; see also *Joshua* XVI, 10, XXI, 21; *Judges* I, 29; 1 *Chr.* VI, 67.]

For sometime past the Palestine Exploration Fund, determined to question this mound and bring to light as many of its secrets as possible. Accordingly, preliminaries having been settled and license secured

from the Ottoman Government, excavations began in 1902. Over 70 native laborers at the cost of \$500 a month were put to work and have been working practically ever since.

It is now known that Gezer, in the days of Solomon, had already been familiar with sacking and burning. Four times before King Solomon's time Gezer had been destroyed and as many times rebuilt and reinhabited (intervals of desolation of greater or lesser length being presupposed).

The earliest race which inhabited the spot was pre-Semitic, lived in caves (natural or artificial) and cremated or burned the dead, about 2,500 years B. C.

These Troglodites were destroyed and succeeded by another race, and this succession is called the second occupation or the second city. This second succumbed to a third and the third to a fourth, and the top-most occupation is the seventh.

In an intermediate layer or stratum, which the archæologist of our Society teaches us to call the fifth, a strange if not unique rite, connected with building foundations came to light and increased at once our knowledge and our ignorance.

We know now that the people of those days deposited in the foundations of their dwellings jars, containing bodies of infants, lamps and bowls. These vessels moreover contain sand or fine earth, evidently brought from a particular spot at some distance from Gezer; this fact is now referred to in the *Quarterly Statement*, as the "lamp and bowl deposit."

The arrangement of these vessels varies in different foundations, and the *Quarterly Statement* has published various cuts to convey a more definite idea of them than could be done with words, but as to the meaning of this lamp and bowl deposit rite, ignorance still prevails. May it not be that present day practice in Hauran, East of Jordan, can throw a gleam of light upon this as yet dark problem.

A Hauranee employed a neighbor of mine to build a house for him. The building was soon erected and soon after collapsed to the great loss of the proprietor. It was thought that the loser would fasten the blame on the builder and ascribe the fall of his house to bad workmanship and bad material. This he did not do, but ascribed the disaster to "Ain," the "Eye."

This is one of a thousand instances arising from the belief, which existed in this country before Deuteronomy was written—namely, that some persons, men or women, are possessed of the power to injure and destroy by the mere looking with their eyes (even from a distance) at persons, animals, trees, houses and other objects. I have been assured by those who believe in the "eye" that the exercise of this hurtful power is not of necessity voluntary on the part of those who exercise it. Some of them cannot help it. If they look they hurt, whether they will or no, especially if they do not say audibly "s'mallah" (in the name of God).

About 2 years ago, a child of ours became suddenly ill. A servant

and a neighbor in the kindness of their hearts ran to a professional descendant of the charmer [*Deut.* XVIII, 11], who lives in the neighborhood, and utterly unknown to us obtained a charmed bowl of water and sprinkled the child with it and I believe made her drink some of it, and it was some days later that Mrs. Howie suspected a strange odor in the house and then it came out that our kind but ignorant servant had burned some substance in connection with the "rackwat," in accordance with the direction of the charmer.

A mule loaded with two heavy bags of wheat was being led by the owner up a road when suddenly the rope binding the bags to the mule broke, mule and load fell to the ground. The owner turned round and after a minute's consideration learned that no harm had been done beyond the breaking of the rope, then with great emotion he kissed the ground and thanked God. Turning to me he said: "Do you see the 'Ain' (eye)? Had that villain hit the mule with his eye he would have killed it as surely and as quickly as he cut the rope."

Talking the matter over afterward, I found that the muleteer believed that the man whom he called the "villain" looked upon the load without saying "s'mallar," but fortunately instead of hitting the mule and killing it, the rope was hit and cut. The rope, therefore, went, as it were, instead of the mule, or a ransom for it. The malignant power of the "Ain," or eye, is more feared now than an army, for an army of invasion can be seen and known, while the eye may hit you unexpectedly and without the possibility of your knowing the source of your injury. Hence, it is that cows, trees and children are provided with "kittab" (writings) fastened upon them to ward off, if possible, the invisible hit of the "eye."

The ancient inhabitants of Gezer, the Canaanites generally, the Egyptians and Babylonians, were tormented not less, but more than we are to-day by the suspicion of the presence of injurious eyes and malignant spirits, etc.

The Babylonian must have passed his life in perpetual terror of evil spirits and demons, and so we find addresses to every kind and sort of spirit to avert evil from the reciter.

In the Kouyunjik Gallery of the British Museum there is a tablet which contains formulated prayers, invoking and against different evils, prominent among which is the evil of the "eye." Ancient and modern Egyptians had and have the same views as the Babylonians and the Canaanites and hence the exhortation in Jeremiah: "Learn not the way of the heathen and be not dismayed at them, for the customs of the people are vain. Be not afraid of them, for they cannot do evil, neither also is it in them to do good."

In the Soudan to-day, houses may be pointed out in which no one would live because it is believed malignant spirits inhabit them and would most likely do harm to human beings, who may occupy them. Against such "spiritual" danger as well as against instability of structure, the ancient Canaanites doubtless provided by human and other

sacrifices, as is learned from the deposits now being found in house foundations in ancient Gezer.

The modern inhabitants of Hauran sacrifice sheep or camels and sprinkle the blood upon the masonry which forms the entrance into the building, but it is more efficacious to carry the animal up to the roof of the newly finished house and sacrifice it there, so that the blood may run down the walls, the front wall especially, and this is done on every possible occasion to-day.

The lamp and bowl deposits described in the *Quarterly Statements* of 1903, show plainly that the ancient Canaanites applied blood to the foundations of buildings, and it is not impossible, but they may have had a service resembling what is still practiced, viz: pouring the blood upon the building from the top for the purpose of protecting the structure from the destructive power of the "Ain" (eye), and for dislodging and banishing the evil spirits, which peradventure haunt the building.

Twice a year, on January 6 and on the 15 day after Easter, the houses of many Orientals are ceremoniously cleansed and consecrated. In some parts of the country this service is repeated every month, in addition, and consists in the main of the priests sprinkling with virtuous or holy water every building which is owned and used by his co-religionists and parishioners. Is it reasonable to infer that the ancient customs of blood-sprinkling have been altered or toned down to sprinkling with water? Some such change for the better appears to be indicated by the lamp and bowl deposits or foundation rites in ancient Gezer, for in some cases these consisted of infants sacrificed and deposited in jars. (In a single case one jar contained two infants.) These bowls may have contained blood and in some cases grape juice. It is a probable supposition, therefore, that the rite in its later stages dispensed with the human and substituted animal blood and still later wine became sufficient.

Foundation deposits appear to have been a characteristic of some ancient buildings in Egypt as well. In Daphnæe (Kasr Bint-el-yetrudi, the palace of the Jew's daughter) foundation deposits, bearing striking resemblances to those of Gezer, have been found. This place appears to have been an old fort on the Syrian frontier, guarding the road out of Egypt and here Psamtik settled part of his brazen men from the sea and built a great fortress and camp, the twin establishment to that of the rest of the Kreek mercenaries at Naukratis on the Lybian side. Beneath each corner of the fort was placed a set of plaques of various material, both metals and stones, with the name of Psamtik and at the southwest corner were also the bones of a sacrifice and other ceremonial deposits.

At Tell Nebesheh, near the entrance to the edifice, lay the throne of a statue of Usertes III, probably one of a pair by the door, and showing that a temple had existed as far back as the XII Dynasty. The foundation deposits in the corners they had to get out from be-

neath the water. They were plaques of metals and stones with the name of Aahmes Si-nit and pottery, showing that the temple had been built in the XXVI Dynasty. [*Ten Years Digging in Egypt*, p. 52 and 65, R. S. S., London.]

Nevertheless, it is too much to hope for a uniform and harmonious explanation of such rites, for even if the generations which practiced them were appealed to to-day, it would still be impossible, I presume, to get from them entirely satisfactory reasons for all their practices in those days. It is a case in point that my wife and I have for 10 years past been deeply interested observers and students of present day customs and rites, which are being observed by individuals, families and religious bodies with whom we are on intimate terms, and to whom we have free access, and yet many customs remain unexplained to us.

The facts are before us, plain and intelligible, but as to their origin or *raison de'etre* we either could hear nothing or anything consistent, but still we pursue our inquiry, and it may be that success in this line is nearer than we think.



THE BONE CAVE OF SAN CIRO, SICILY

BY PROF. GEORGE FREDERICK WRIGHT, D. D., LL. D.

THE records of comparatively recent geological changes in the vicinity of Palermo, Sicily, are of a most interesting nature, especially as they are doubtless contemporaneous with similar changes of level in other places in the world where man is known to have been in existence. Palermo is situated in a plain rising gradually from the sea to a height of 200 ft., where it is met by an abrupt precipitous bluff of limestone, which rises from 2,000 to 3,000 ft., forming a most picturesque and interesting amphitheater, opening to the north upon the bay. At the base of this encircling precipice are found numerous caves, in which large masses of bones of recently extinct animals are found, with an occasional occurrence of human bones in some of the caverns. But the mouths of these caves are largely obstructed by coarse debris, which has fallen from the mountains and buried earlier bone-bearing deposits, which had accumulated outside.

The most celebrated of these caverns is that of San Ciro, situated 2 miles to the southeast of Palermo at the foot of Monte Grifone. According to Prestwich: "This cave is 130 ft. long, 10 ft. wide at the entrance, 30 ft. wide in the center, and 21 ft. high, measured from the surface of the cave deposits. It is situated near the base of the escarpment, with grounds sloping from its entrance down to the church of San Ciro, a distance of 256 ft."

The cave was opened in 1830, and its contents were examined and described by Abbate D. Scinà, Dr. Turnbull Christie, and Dr. Falconer,



BROAD PLAIN IN WHICH PALERMO IS SITUATED. VIEW FROM THE BONE CAVE, SICILY

and many of the specimens preserved in the museum at Palermo. According to Scinà, the lower part of the cavern "was crammed with bones so fresh that they were cut into ornaments and polished, and that when burnt they gave out ammoniacal vapors. The quantity, however, was so great that, when afterwards exploited for commercial purposes, 20 tons were shipped to Marseilles and England in the first six months, where it is said they were used for the manufacture of animal charcoal for the sugar factories. * * * The bones were mostly those of *hippotami* with a few only of *deer*, *ox*, and *elephant*." A significant fact is that these bones belong to animals of all ages down to the foetus, and none of them bore marks of having been gnawed, showing that they were not carried in by hyenas and slowly accumulated.

As is well known, the hippopotamus has not been known in this region within historic times, being now limited to Central and South Africa. But the accumulation of bones in this cavern clearly shows that at a comparatively recent period, geologically speaking, great herds of hippopotami and elephants covered the plain on which Palermo stands, and everything indicates that they were driven into this cavern as a place of refuge.

According to Prestwich, the progress of events was about as follows: First, the land stood at a somewhat higher level than now, so

that the plain about Palermo extended out into the bay, thus enlarging the area over which these unwieldy animals could roam and procure the necessaries of life. Secondly, there followed a rather rapid subsidence of the land, so that the water encroached upon the feeding-ground of these animals until they were gradually driven into the plain within the encircling walls of the amphitheater, and finally to the very base of these precipitous walls, where their only place of refuge was the cave of San Ciro—nature thus having, so to speak, “corraled” them as savage hunters corral animals of similar size in many parts of the



MOUNT GRIFONE, SHOWING THE BONE CAVE OF SAN CIRO, SICILY

earth. But the smaller animals, and very likely man, if he were there, had opportunity and ability to escape to the higher lands, so that their remains are not found in this particular locality.

Finally, soon after the subsidence which drove the animals into this pocket occurred, there are many indications of a rather sudden rise of the land and restoration to its present level, accompanied with violent earthquake shocks. Thus Professor Prestwich would account for the great amount of coarse debris which accumulated rapidly at the base of the precipice and closed up the mouth of the cave, hiding it until it was discovered 75 years ago.

Altogether the record of recent geological changes in that region

furnished by this cavern is one of the most interesting that has ever been studied, and is worthy of much more attention than has been given to it. Tourists in Southern Italy miss one of the most delightful excursions if they fail to visit Palermo, and archæologists one of the most instructive object-lessons if they fail to make a pilgrimage to the cavern of San Ciro and to study the remains from it preserved in the museum of the university.



EDITORIAL NOTES

THE GOD HER-SHEF:—The chief treasure-trove that Prof. Petrie has brought back from Ahnas is a pretty gold statuette of the god Her-shef.

THREE HUNDRED STATUES FROM KARNAK:—At Karnak, M. Legrain discovered a *cache* containing nearly 300 statues of all periods from the time of the XII Dynasty to the Roman Era. Among them is a portrait of Amenemhat III with Hyksos features.

WHITE MONASTERY NEAR SOBAG IN UPPER EGYPT:—This monastery was founded by St. Shanuda in the V Century, and its church was considered one of the largest in the world, and used as a substitute for Jerusalem by those who could not make the long pilgrimage to that city. Although its ruins are now neglected and desecrated it shows that it was once the finest Christian building in Egypt. It was built early enough in the Christian Era so that ancient Egyptian forms appear in the architecture. At the height of its importance the monastery contained 4,000 monks and nuns, besides novices. What remains of the church to-day is a massive rectangular block of masonry 120 by 240 ft. with walls 45 ft. high. The ruins are built over with crude brick houses constructed by the Coptic community, who make them their home. Part of the pavement is made of old Egyptian slabs of marble and granite bearing Egyptian hieroglyphic inscriptions.—*From paper read before the Archaeological Institute of London by Mr. C. R. Peers.*

TRANSLATION OF NEW TELL-EL-AMARNA TABLETS:—Two new tablets of the Tell-el-Amarna series have been discovered in Egypt and translated by Father Scheil. The translation is as follows:

“To the King of the land of Egypt, says Assur-uballat, King of Assyria, to thee, to thy house, to thy wife, to thy chariots and soldiers, salutation. I have sent a messenger (envoy) to visit you and

your country. Things which aforesaid my fathers never forwarded to you, see here. I send you a splendid chariot and pair of horses, and further an *uhina* (some kind of carving, a small pillar or votive object) in pure lapis, as presents for you I forward. As to my messenger, receive him well, let him come and return to me."

"To the King, my lord, says Yabi-Sarru, thy slave, seven and seven times at your feet I bow. What the King has ordered me, I have performed. Full of fear is all the land before the King's soldiers. I have levied my troops; ships are at the disposition of the King's soldiers, and whosoever is a rebel, no house or hope" (of life) "is left in him. See I have safeguarded the position that the King my lord" (has confided to me). "The face of the King, my lord, be toward his servant, who is devoted to him."

The suggestion has been made that Yabi-Sarru signifies "Yahive is King." [See *Revue Biblique*, 1904, p. 141. See, also, *Palestine Exploration Fund*, April, 1904, p. 180.]

THE ARCHAEOLOGY OF THE DAKOTAS: Mr. A. C. Farrell, of North Dakota, recently presented to the Department of Archaeology of the American Museum of Natural History a number of shell-rings, which were discovered by him in the Turtle Mountains, about 6 miles west of Dunseith, Polette County, North Dakota.

These shell-rings when discovered were found in a row around the neck of a skeleton, which was the western one of a group of three. The right arm of each skeleton Mr. Farrell found missing. The skeletons were lying with the faces to the west and with their knees drawn up to the chests. These graves were found under a mound made of stone slabs, placed overlapping each other like shingles on a roof.

The mound was located on the top of a prominent mountain or butte. This mountain had terraced sides.

The skeletons were found below some 7 ft. of earth, on the natural soil, which had not been disturbed below them.

This gift was particularly welcome since the museum's collection from the Dakotas is small, occupying not over 10 square ft. of space. It includes only specimens numbered 20-6641, 20-6872, 20.0-144, and T-22846 to T-22961, inclusive.

Among the specimens from the Dakotas now in the museum are 2 human jaw bones, chipped stone points, such as were used for spears, arrows, knives, and small scrapers, a grooved stone club-head, hammer pebbles, a grooved arrow-shaft straightener or smoother, bones and teeth of the buffalo, a bone chisel, sharp bone implements, some of which may be sun-dance skewers, a bone bead, a bone whistle or drinking tube, tips from antlers, a skin-scraper, or hoe made of antler, fragments of pottery, some of which are decorated with incised lines, and charred corncobs. This is very little from the Dakotas in proportion to the large collections which the museum possesses from some other regions.

In the Dakotas, there are hundreds of mounds, some effigy mounds and embankments, an effigy of a man, one of a serpent and one of a turtle, all outlined with boulders, some other figures similarly outlined, trails of boulders, lines of bones, tepee circles of stone, and pictured rocks, all of which should be studied, and many of them saved by enclosing them in public parks. Among the best known of these are the mounds and fortifications of the Mandans, north of Bismarck.

The literature of Dakota archæology is not voluminous. Prof. Cyrus Thomas has published a report on the mounds of the region in the 12 *Annual Report of the Bureau of Ethnology* at Washington, and has given a catalogue of the pre-historic works of the 2 States in a *Bulletin* of the same Bureau. In these 2 publications we are referred to practically all that has been written regarding the archæology of the Dakotas. The thing to do now is to summarize and index all that has been published and then to explore carefully the remaining works, at least as fast as road building, cultivation or other dangers threaten them. Of course, records, maps and photographs should be made of everything, where this has not already been done.

It is hoped that Mr. Farrell can actively take up the preservation and study of the archæological remains of the Dakotas.

HARLAN I. SMITH.

DR. BAUM'S EXPEDITION TO THE SOUTHWEST:—On June 30, 1904, the Editor, Dr. Henry Mason Baum, left on an expedition to the Southwest, where he will visit the ruins of Southern Colorado, Arizona, and New Mexico. The main object is to locate those ruins on Indian Reservations, which are specially in need of immediate protection from despoliation. The Commissioner of Indian Affairs has agreed to take immediate measures for the protection of such ruins on Indian Reservations as Dr. Baum shall recommend. Also the Commissioner of Public Lands has agreed to reserve from entry such lands, on which important ruins are located, as he shall recommend, thus protecting them until the necessary legislation is secured. Although there has been a generous response from men of means to further this work, yet the amount already subscribed is not sufficient to cover the cost of the expedition. Contributions if sent to the Treasurer of Records of the Past Exploration Society will be acknowledged and forwarded to Dr. Baum.

In the autumn a printed list and other memoranda of the photographs made will be sent to each contributor, from which he can select two photographs, 6½x8½ inches, printed on 8x10 Cyko paper, for every dollar subscribed. There will also be a large number of panoramic views, 5x12 inches, printed on 7x14 paper, made by the Al-Vista camera, from which contributors will be allowed to make selections at the same rate.

We think this is a fair proposition and trust it will meet with a prompt and liberal response.

CONTRIBUTIONS TO THE EXPENSES OF THE EXPEDITION TO THE
SOUTHWEST

| | |
|---|----------|
| Archæological Institute of America..... | \$250.00 |
| Charles P. Bowditch, Boston..... | 50.00 |
| William Auchincloss, New York City..... | 50.00 |
| E. Francis Riggs, Washington D. C..... | 25.00 |
| Charles C. Scaife, Pittsburg..... | 10.00 |
| James E. Mooney, Cincinnati..... | 10.00 |
| Benjamin Thaw, Pittsburg..... | 10.00 |
| Samuel Mather, Cleveland..... | 10.00 |
| H. E. Pierrepont, New York City..... | 10.00 |
| Henry D. Woods, Boston..... | 20.00 |
| E. Brinton Coxe, Esq., Drifton, Pa..... | 25.00 |
| Col. Charles J. Hughes, Denver..... | 10.00 |
| George M. Diven, Elmira, N. Y..... | 5.00 |
| F. P. Graves, Doe Run, Mo..... | 5.00 |
| John H. Converse, Philadelphia..... | 25.00 |
| William P. Henszey, Philadelphia..... | 20.00 |
| Col. Ed N. Benson, Philadelphia..... | 20.00 |
| S. F. Houston, Philadelphia..... | 20.00 |
| R. Stuart Chase, Haverhill, Mass..... | 3.00 |
| Peabody Museum..... | 20.00 |
| Charles Curie, New York City..... | 5.00 |
| E. W. Bass, New York City..... | 5.00 |
| S. W. Fordyce, St. Louis, Mo..... | 10.00 |
| L. E. Holden, Cleveland, Ohio..... | 10.00 |
| Total..... | |
| | \$628.00 |

PRE-HISTORIC DEVELOPMENT OF ITALY:—The first traces of man in the peninsula date from the quaternary period. The islands and the western slopes of the Apennines were still untrodden, but in Umbria and Basilicata nomads armed with palæolithic weapons of "Chellean" type hunted the elephant and the hippopotamus. Before the elephant had become extinct a second group of families had appeared, using a different type of stone implement ("the Mousterian"), and living in caves—unlike their predecessors, who had no shelter from the sky. Their arrival coincides with the earliest settlement of western Italy and of Sicily. With such savages, whose level of culture may be aptly compared to that of the recently extinct Tasmanians, begins the history of Italy, and it is curious to note that down to the last days of the Roman republic palæolithic man maintained his ancient habits of living in the remote Veronese mountains. To immigration is ascribed the first great change implied in the sudden appearance of a neolithic civilization vastly superior to anything earlier. The new epoch is revealed by those remains of villages of circular huts, which dot the plains of Lombardy; the dwelling of a pastoral people, who also established themselves in the hills, where they lived in caves that some-

times served also for the burial of their dead. Whenever it was possible, however, the people of the neolithic period, rather than content themselves, as they were sometimes obliged, with surface graves in the plain or cave-burial in the mountains, hewed elaborate tombs out of the solid rocks. In form these, which are the earliest sepulchres of Italy, resemble a narrow oven (*i. e.*, their ground plan is identical with that of the contemporary house), and the entrance is furnished either by a sloping passage or by a round pit. The invariable rite is inhumation, the dead being laid in the "contracted" or "embryonic" posture. The construction of such graves shows how much can be achieved with quite primitive implements, for metal-working was still unknown, though tools and weapons were skillfully fashioned from stones, which seem in some cases to be foreign to the country. The superiority of the newcomers to the aboriginal inhabitants is shown, not only by their dexterous manufacture of polished stone implements, but also by their skill in pottery making. They did not, however, extirpate or entirely absorb their ruder neighbors, but continued here and there to maintain an independent living.

The 3 stage in the cultural evolution of Italy is signaled by the introduction of metal-working. This, like the last great change, must be attributed to an unchronicled immigration, which no doubt came from the East, and perhaps reached Italy across the sea. The introduction of the use of copper marks the close of the Neolithic Age, and the employment of stone implements does not cease abruptly; it is an eneolithic period which begins. The habits and customs of the preceding time were not immediately revolutionized, but a great impetus was given to the arts and industries, in particular to the manufacture of pottery and of weapons. At the same time commercial relations were opened with the other Mediterranean countries, and foreign imports increased the luxury of life. The most important characteristic of the period is the development of funerary grottoes hewn out of the rock, and the construction (confined, however, to the Terra d'Otranto and to Corsica) of megalithic monuments, similar to those which are found all over western Europe. The significance of this development will be variously estimated according as the archæologist accepts or does not accept unreservedly the author's opinion that "an artificial eneolithic grotto in Italy speaks the same language "as a dolman in Andalusia, Great Britain, or Drenthe." (For the arguments in support of this view see *Bullettino di paletnologia Italianna*, anno VIII, p. 21.) If megalithic monuments and artificial grottoes are to be regarded as constituting a single species, the remainder of the theory follows quite logically. For such constructions are entirely absent from central Europe, while it is precisely in that part of the continent, viz., from Wurtemberg and Savoy to Bavaria and Austria, that lake-dwellings occur. The two phenomena then would be mutually exclusive, one civilization being characterized by the presence of Megalithic monuments, and another of quite different origin by that of

lake-dwellings. The latter would be the work of a fresh race, which came along the valley of the Danube tempted by the chain of lakes. They pushed like a wedge into the heart of Europe, but all around their predecessors remained undisturbed, so that at the present day we may observe the Megalithic monuments encircle the settlements of the invaders with a ring which winds from the Caucasus to the Atlantic. The Alps were no barrier to the lake-dwellers, who crossed into Lombardy and freely planted their cities there, especially about the Lake of Varese. Like the people amongst whom they settled their culture was *eneolithic*, but they showed their superiority in all arts and industries with the exception of pottery making. Living in communities of a considerable size they kept large herds of cattle and cultivated flax and corn on an extensive scale.

The earliest lake-dwellers did not penetrate as far south as the valley of the Po, and their progress eastward was abruptly checked by the arrival of a race which was to fashion the future destinies of Italy, the ancestors, in short, of the Romans. Ethnically these fresh invaders were of the same stock as other lake-dwellers, for their habits of life and their industries were substantially the same. Like them they lived in pile dwellings, but these they constructed not only in the lakes, but also on dry land, a circumstance to which we owe the preservation of their tombs, which reveal a new burial rite—namely, that of cremation. Their remains can be traced to the valley of the Danube; they imported the amber of the Baltic, and brought with them the secret of bronze working, though they had not wholly abandoned the use of stone implements. Though their immigration took place at the moment when the civilization of the East was at its zenith, it is not clear as yet whether they had any sort of relations with it; and not only is there no trace of any intercourse with further Asia, but there is little satisfactory evidence of connections with Asia Minor or the Ægean. Arriving in Croatica, Moravia, and Lower Austria, their hordes spread out like a fan, one branch passing down to Bosnia, and another into Venetia, whence it spread into the territory of Mantua, Brescia, and Cremona. They next crossed the Po, invaded Emilia, and penetrated to the hills of Porretta.

It was toward the close of the II Millenium B. C. that they left the valley of the Po, and, following the eastern slope of the Apennines, made their way through the Marches and the Ambruzzi as far south as Tarentum. This brought them into peaceful contact with the flourishing communities of Sicily, which they made no effort to conquer; and admitted them to participation in the benefits of trade with the Ægean. But space forbids a detailed account of the development of this splendid Bronze Age civilization, on which the greatness of Italy was reared. The student must turn to Signor Pigorini's pages to read how the civilization of the *terremare* became the parent of mighty Rome, and how the construction of the pile dwellings determined the very walls and streets of the Eternal City. [See *Man*, London, March, 1904.]

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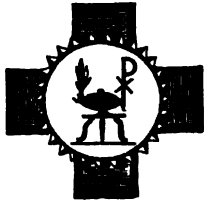
BAAL TEMPLE, ABOVE NIHA, SYRIA



A LEBANON FOUNTAIN, SYRIA

RECORDS ^{OF} THE PAST

VOL. III



PART VIII

AUGUST, 1904



NEGLECTED ARCHAEOLOGICAL RUINS IN COELESYRIA

BY REV. GEORGE C. DOOLITTLE, M. A.

THE towering ranges of the Lebanon and Antilebanon mountains are separated by a wide and fertile plain, which the ancients called Coelesyria (hollow-Syria), and in the Arabic of to-day El Bika'a. For a distance of nearly a hundred miles, from southwest to northeast, stretches this mighty plateau, averaging 7 miles in width, and rising to over 4,000 feet above the level of the Mediterranean. Throughout its length flows the Litâny river (the Leontes of classical writers), which leaves the elevated plain at its southernmost point and enters a narrow channel at the bottom of a gigantic chasm, emptying finally into the sea a few miles north of Tyre.

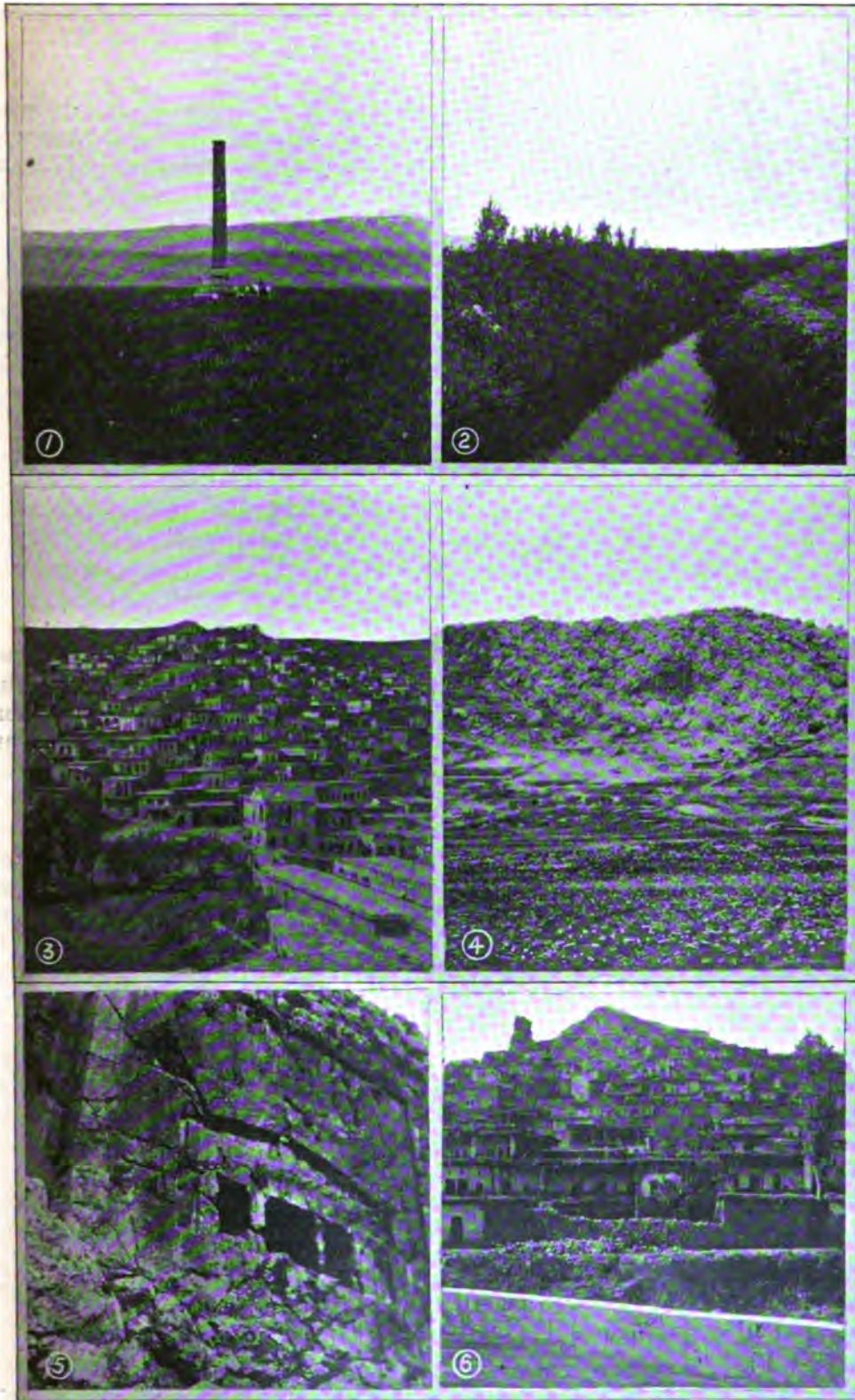
From the northern boundaries rises another important stream, the Orontes, whose northward course, contrary to the rivers of Syria, has given it the Arabic name of "the rebellious" (el 'Asy). The principal source of this river is a gushing fountain in a picturesque valley, or cleft, below the rock-hewn cavern, that is the reputed haunt of Marûn, founder of the Maronite religion. From the eastern side of the plain, below Lebweh, or ancient Libo, springs another fountain of clear, cold water, that adds its volume to the Orontes, carried thither by conduits, after irrigating the intervening fields. One of these aqueducts was built as early, at least, as 250 A. D., when Queen

Zenobia reigned in splendor at Palmyra on the Syrian desert. It led, not westward to the Orontes, but by a long circuit around the northern end of the Antilebanon and through the maze of valleys and hills out onto the eastern plain that stretches off to Palmyra (Tadmor), the gem of the desert. A bit of this ancient aqueduct, not far from Lebweh, appears in the accompanying illustration.

From earliest times Coelesyria has been prominent in the history of wars and conquests, in the rise and decline of civilizations and religions. Its broad stretches contain many artificial mounds that would doubtless amply reward the explorer's efforts. Ruined cities await investigation. One has recently been found along the line of the new railway. Much Biblical history is connected with this plain. At Ribleh, now a squalid hamlet, Nebuchadrezzar was wont to stay, while his officers conducted his campaigns against Israel and Judah (*2 Kings*, xxv, 6). Hither Pharaoh-nechoh summoned the wicked King, Jehoahaz, and "put him in bands" (*2 Kings*, xxiii, 33). The northern part of the Bika'a is defined in *Joshua* xiii, 5, as "the entering into Hamath." This whole valley was once under the sway of the Hittites, whose supremacy was disputed by the Pharaohs of Egypt.

If legend carries any weight, then Coelesyria is entitled to the greatest respect. For at Kerak, near Zahleh, is the grave of Noah, 132 ft. long, protected now by a narrow building, whose one door swings open only at the magic pass-word of "bakhshish." Noah was indeed a giant! Across the plain is the tomb of Seth. Both these shrines are visited by many pilgrims.

Coelesyria was the home of Baal-worship. On the eastern edge of its wide acres stands Baalbek, ancient Heliopolis, world-renowned for its stupendous temples to the sun-god. Although there is no intention in this article of touching upon these ruins, made doubly interesting by the recent work of German excavators, other lesser Baal-temples will be alluded to and described. All along the great plain, on either side, its guardian mountains carried upon their high points many temples of the heathen god, whose ruins are the forceful reminder of vanished glory. These temple-ruins seem to have had some connection with the central one at Baalbek, as if they had formed a circle about it, all pointing in that direction. There is one such temple across the plain from Zahleh, above the town of Kefr Zebed. Its ruins consist of a well-marked foundation area, columns and friezes. The needs of later generations, however, have caused the disappearance of the most of this ruin. Above Shleefa, northwest of Baalbek, a spur of the mountain projects into the plain, and at its tip is the ruin of another temple—hardly more than a name at the present day. In pleasing contrast is the well-preserved sun-temple at Niha, nestling in a subsidiary valley, half way up the western slope, 4,200 ft. above sea level. An hour's ride from Zahleh and a stiff climb past the village (where are other minor ruins) brings the traveler to this temple. It stands upon a platform 11 ft. high, with a front projection of nearly



1. YA'AT COLUMN. 2. ANCIENT AQUEDUCT, NEAR LIBO. 3. ZAH-
 LEH. 4. SHRINE NEAR KOBBI ELIAS. 5. NEAR VIEW OF TRIPLE NICHE.
 6. KOBBI ELIAS, SHOWING CRUSADER CASTLE

30 ft., and a series of steps leading up to this from the ground. The temple is solidly built of massive stones, some measuring 16 ft. in length. The carved ornamentation is excellent. There was evidently a portico in front, with large pillars. As at Baalbek, a winding staircase within the wall near the portal leads up to the roof. This temple, over 90 ft. in length, facing Baalbek and the east, was doubtless an important point in the circle of Baal-temples.

Another is found above the village of Mejdal 'Anjar, to the southeast, on the line of the old Damascus carriage road. This, too, faces toward Baalbek. Its portal is 47 ft. high. The temple is in a fair state of preservation.

Cross now to the village of Kobb Elias, above which are the remains of an old Crusader castle. Near by is a remarkable bit of carving in the face of a steep mountainside. A large section of this was smoothed off and edged with a frame of rock; then inside this smooth surface another frame was carved, containing a tripartite niche. No writing of any description has been found to explain this peculiar piece of work. As it faces the east, it may have been a shrine for morning sacrifice. Or was the intention to hollow out a chamber behind this opening as a family tomb, or a royal vault?

Leaving these relics of heathen religions, turn to memorials of ancient heroes. In the midst of the plain to the northwest of Baalbek stands a solitary column, 65 ft. high. The illegible inscription on its northern side reveals nothing of the secret of its existence. Behind rise the highest mountain-peaks in Syria. This Ya'at Column stands upon a base of 4 step-like rows and a pedestal composed of 2 pieces. The column proper contains 15 circular pieces and a double cap-stone, the upper being a badly-disintegrated Corinthian capital. Vandals have attempted to destroy the column with gunpowder, in order to get the iron binders.

At the northern end of the Coelesyria Plain, lifted high above the surrounding country, stands the Kamu'at Hirmil, a monument to the success of some ancient monarch in the chase. From its point of vantage may be seen Hums (ancient Emesa) and the regions toward Hamath, while far to the south rises the snow-clad peak of Hermon. The monument is built upon a foundation of basalt in 3 layers. The first layer is $37\frac{1}{4}$ ft. square, and 1 ft. 7 in. thick. The second and third are each 1 ft. 3 in. thick and proportionately smaller in area. The monument is in 3 distinct parts, the top one being a pyramid about 15 ft. high. At the corners of the lower story, which is 23 ft. high, are squared engaged columns, and it is surmounted by a cornice. The second story, 19 ft. in height, also has a cornice and columns, beside two half-columns in each face. The southwestern corner has been broken down by the gold-thirsty inhabitants of the district. Their only reward, however, was a bit of fruitless experience; for the monument is one solid piece of masonry, laid in excellent mortar. The inner part is not all of limestone, as is the face, but contains huge



KAMU'AT HIRMIL—FROM THE NORTHEAST



EASTERN FACE OF KAMU'AT HIRMIL, WILD BOAR ATTACKED BY DOGS



NORTHERN FACE OF KAMU'AT HIRMIL, ENLARGED VIEW OF RECUMBENT DEER

blocks of a conglomerate that has weathered the elements remarkably well. The 4 faces of the lower story were carved with hunting scenes. On the eastern face is a wild boar, attacked behind and before by his mortal enemies, the hunting dogs. The spears of his pursuers have also been aimed at his head, while at the edges of the picture are bows, arrows, quivers, etc. The distinguishing characteristics of the north face are 2 deer—the right one standing, the left one recumbent, with his head upon his forelimb. (Possibly he has been wounded.) This left-hand deer has been well preserved—nostril, eye, hoofs, fetlock, horns, and prongs all show distinctly. Here, too, are the weapons of the chase, the spears crossed at each end, and above them a peculiar, cage-like article, bound with leathern thongs and having a handle



SOUTHWESTERN CORNER OF KAMU'AT HIRMIL, DESTROYED BY TREASURE SEEKERS

above. Could it have been to carry a hunting bird? Another queer article is seen below each deer (very clearly in the enlarged picture). Its use is a puzzle. These figures must have been carved *in situ*, as each piece covers more than one stone. The hieroglyphs at the bottom of this face are *not* Hittite! They simply prove in Arabic the well-attested doggerel, "Fools' names, like their faces, often appear in public places." Of the western face, three-quarters are still standing, and show a large animal attacked by a smaller one—possibly a lion and a dog. But the head of each has disappeared.

These are a few of the most striking reminders of bygone ages in

Coelesyria. They are so greatly overshadowed by the titanic ruins of Baalbek as to have been neglected by most writers. Each one, however, has played its part in the drama of history, and points to some fact, or personage, or event (known now, or unknown), that excited in its time the wonder, or worship, or praise, or envy of this corner of the world.

Lest we should return from antiquity with too great momentum, let us stop at this fountain only a few centuries old. Its guardian lions, chained to the substantial archway, keep watch over the stream of clear, pure water that for many, many generations has filled the jars of modern Rebekahs in a little Lebanon town. As one stands upon the veranda of the missionary residence in oriental Zahleh he may look off across the level stretches of Coelesyria upon a scene of mingled colors in sky and mountain and plain. As he watches the play of light and shadow, and varying tints of the sunset glow, marvelous in their richness and rapidity of change, he may well forget that this great plain was for centuries shaken with the tread of armies and devoted to the worship of Baal. Man's attempts at world-empire have failed—his altars and temples are in ruins. But the eternal hills and the rolling plain reveal the handiwork of an almighty Creator, "the same, yesterday, and to-day, and forever."



GERMAN EXCAVATIONS IN FARA

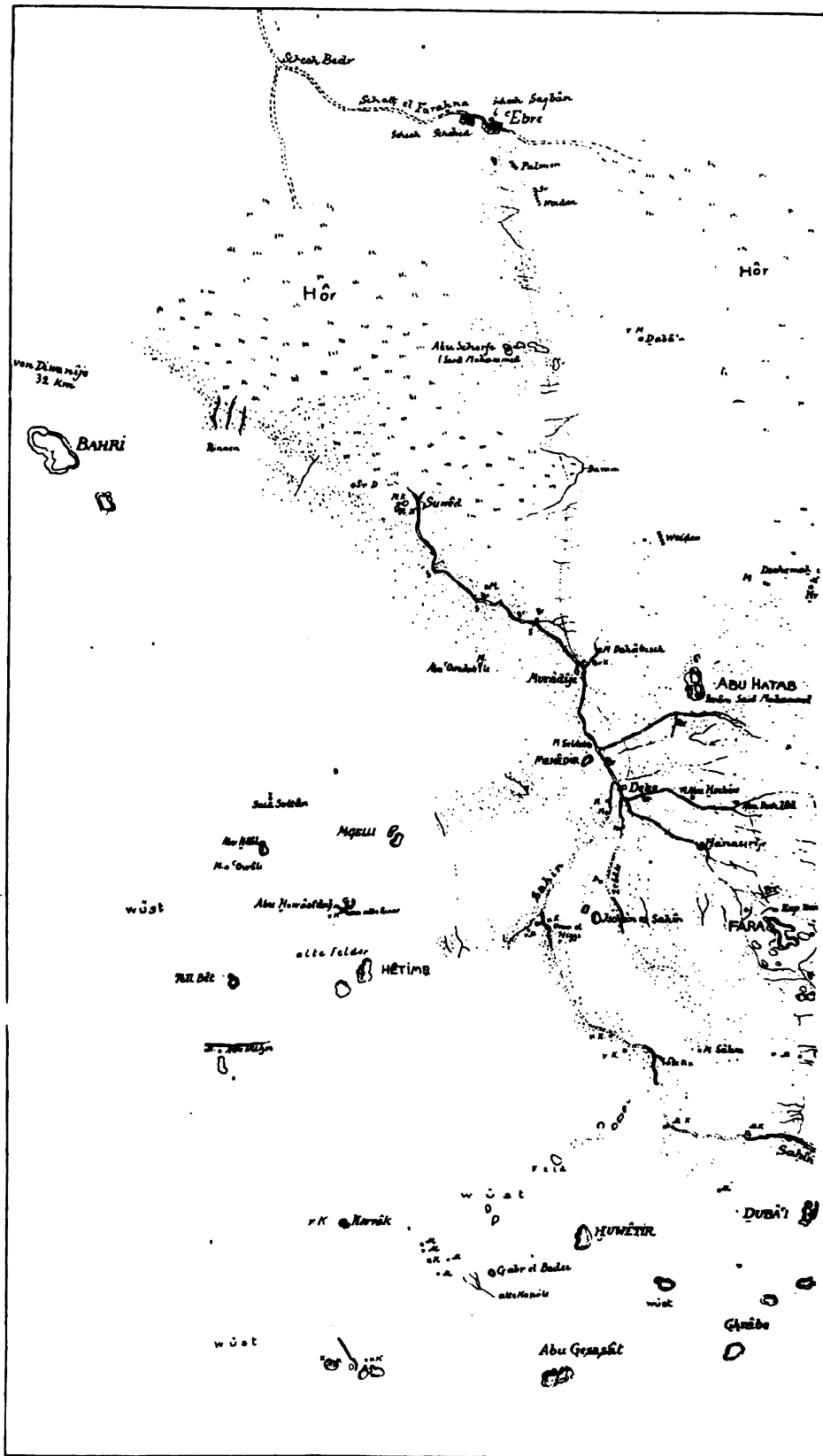
Translated and condensed from the official reports of the German Oriental Society by Prof. Karl Hau

THE expedition left Babylon on June 14, 1902. Dr. Delitzsch, Mr. Baumgarten, and myself [Dr. Koldewey], together with 30 laborers and baggage, took a boat down the Euphrates, entered the Dagara and arrived on the 15 in Suk-ed-Dagara, on the morning of the 16 at Suk-el-Affedsch. There the whole expedition was transferred to 24 smaller boats (Meschhof) and landed on the 18 near Fara. On the 20 we had encamped and will begin the excavations tomorrow.

A regular postal connection has been established with Babylon by way of Diwanieh; it takes a 3-days' ride from Fara to Babylon.

We began our excavations with a long ditch from north to south, through the northern part of the ruin. Our results up to the present time are as follows:

The whole ruin is very old, even the upper stratum. This is proven by numerous knives and saws of flint and obsidian, stone hatchets, tools made of stone and bone, and the utter absence of any remnants of a later period. Ill-shaped bronze coins and small copper or bronze utensils are found here and there. The pottery of simple



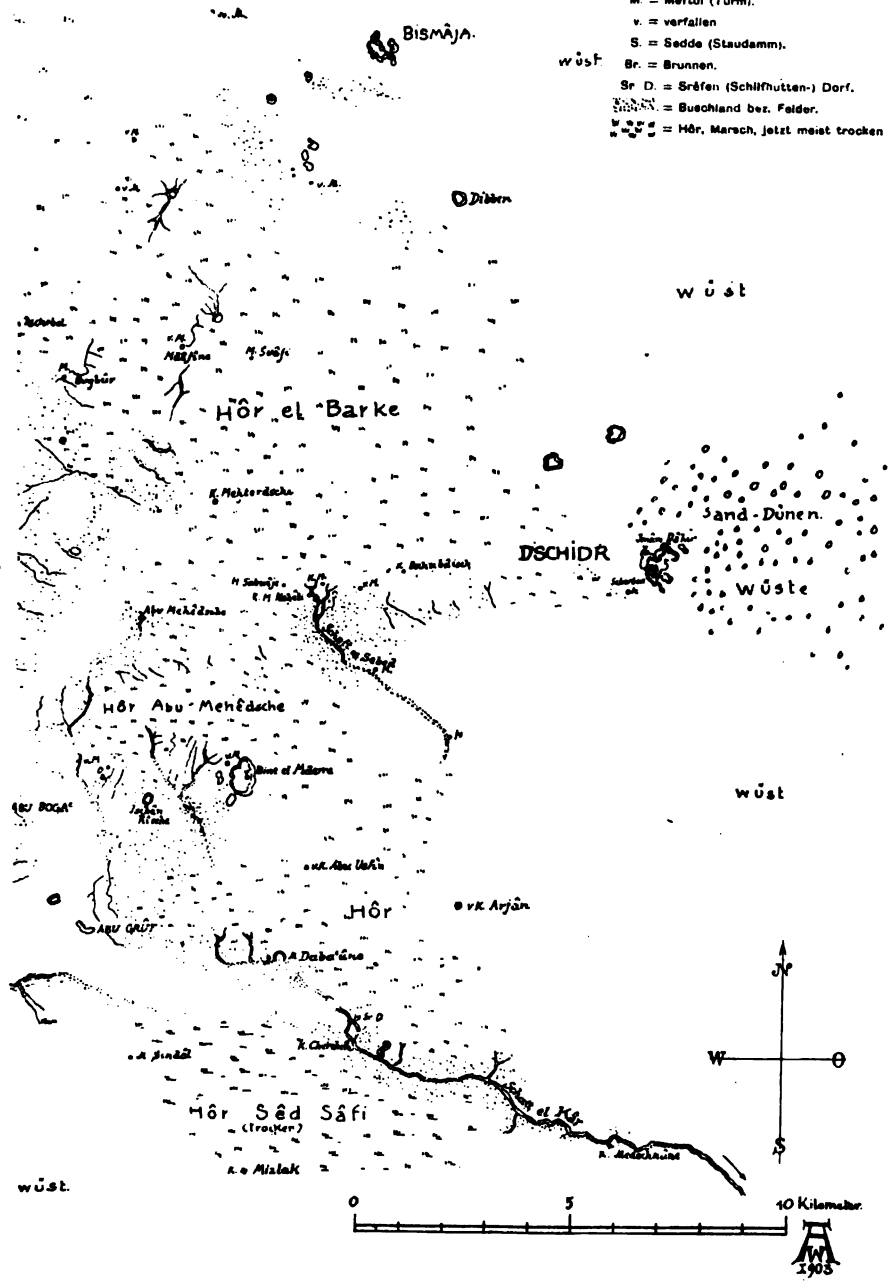
MAP OF FARA

UMGEBUNG
von
FARA UND ABU HATAB.

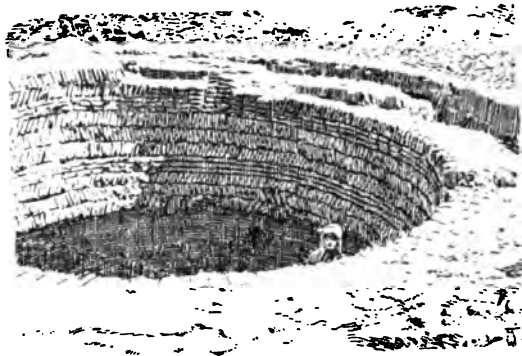
Aufgenommen im Jahre 1902 von W. Andrae.

wüst

- K. = Kalla (Burg).
- M. = Meftül (Turm).
- v. = verfallen
- S. = Sedde (Staudamm).
- Br. = Brunnen.
- Sr. D. = Sräfen (Schiffhütten-) Dorf.
- = Buschland bez. Felder.
- = Hör, Marsch, jetzt meist trocken



AND ABU HATAB



CIRCULAR BRICK WALL AT THE NORTH END OF TRENCH I

design resembles that of Surgul—flat vases, chalice goblets, and oval pots. A larger vessel with a socket and without a handle, as they are painted on the old seal-cylinders, is found more frequently—all without any ornament. Aside from these we find fragments showing attempts at phantastique ornamentation and simple cups of beautiful white stone, marble, etc.

We also found in the ditch about 400 stamps of seal-cylinders. They are round pieces of clay and almost all show the same impression. Most frequent is the struggle between the bull-man and the lion-killing antelope. The movements are exceedingly full of life and the heads with the strong nose and the simple round eye look like bird heads. The weapon is peculiar; a long staff at the end of which a half-moon is attached, and which is held in the middle and used like a poniard. The technique shows no trace of the polishing-wheel.

In the same stratum lay several clay tablets, with a simple incised design, bulls, bull-men, tools, etc., and finally a few tablets with very old cuniform characters.

The buildings are composed of baked and unbaked bricks of the old rectangular form. On the convexed surface lines and impressions are made with the finger; only a few of the walls are straight-lined. But there are a great many rotundas on the hill of doubtful use; they have a diameter of 2, 5 m. The walling consists of 2 or more concentrically placed vessels, succeeding in turns. This is the typical construction of the walls here. The rotundas are surmounted by a vault very similar to the burial vault in Mugheir or the Tholeu of Mycenæ. One of these rotundas we have cleared down to the bottom; it was filled with old rubbish, bricks, broken pottery, fishbones, etc. In the upper part of another one we found 4 human skulls. The modus of interment I have not yet been able to comprehend. The skeletons lie coffinless, without arrangement, together with many ornaments—necklaces of achat and lapislazuli, pearls of shells, corals, mother of pearl, amethyst; also a silver earring (?) of a peculiar form.

The well-known clay pipe fountains jut out of the ruins in great numbers. Part of them have a considerable diameter—1.50 m.—while

the adjoining cesspools consist of a very thin pierced tube, at the upper end of which stood a tilted vessel, serving as influx. On the whole, they resemble the Surguler; the skeleton, too, was found near the fountain.

The whole surface of the hill has been excavated before, as is clearly shown by the thousands of small holes that appear everywhere. All of these excavations, it is true, do not go very deep, but it must be remembered that even the surface is of pre-historic character.

Our camp is situated to the north of the ruins and nearly completed. We have about 160 workmen—together with wives and children, 400—500 of whom live in tents near the camp.

Frederick Delitzsch left Fara on July 13 to visit the southern ruins.

The ditch through Fara is now over 400 m. long; we have recently found some very good tablets in it, the copy of one of which I enclose.*

Besides the tombs contain some well-preserved seal-cylinders, plenty of pottery, a few bronze hatchets and the like. In one of the tombs all of the bones lay in asphalt and the skull was completely filled with asphalt, as well as the vessels that had been placed in the tomb.

The walls of the buildings made of clay bricks are generally very weak.

After the completion of the main ditch from north to south, we finished one from east to west in the southern part of the hill, partly having a depth of 7, 8 m. The strata are the same as in the former ditch, and contain no important building of any kind; where walls are discovered they are very insignificant showing the remnants of dwellings of a low civilization. Some tablets were found, but not deeper than 2 m.; the lower strata contain almost nothing, the upper ones some simple tombs with pretty seal-cylinders. From now on we will not make the ditches any deeper than 2 m. and can only hope for some good old tablets.

We heard that in Abu Hatab bricks with inscriptions had been found; our investigations resulted in the discovery of several of them. I enclose the copy of one of them.†

On September 14, 1902, Mr. Andræ reported from Fara that the ditch through the southern part of the hill had brought forth some

*Note by Dr. Messerschmidt—It is one of the oldest Babylonian tablets (conservatively estimated about 3000-2600 B. C.), as they have been excavated in great numbers at Telloh and Nippur. The contents are of no importance; they neither reveal the name of the place nor the exact period to which the tablet belongs.

†Note by Dr. Messerschmidt—Fara is apparently a Necropolis, like Surgul and El-Hibba, excavated in 1886; the discovery of these clay tablets, it is true, is rather remarkable and seems to point to at least a partial settlement of the place, unless the tablets have been carried over from Abu Hatab (?). According to the inscription on the tablet it owes its origin to "*I-am* (??) *Samas*, the son of *I-din-ilu*, the priest-prince of Kishurra, the beloved son of the Sun-god and the goddess Annunit." If the brick really belongs to Abu Hatab, the ancient name of the place probably was Kishurra. This city is mentioned in the geographical list, IV, R 36, No. 1, Rev. II, 3, and on one tablet of our collection (receipt for wheat), VA, Th. 2425. The latter is dated from the first year of the reign of King Gimil-Sin of Ur (approximately 2550).

further small tablets and seal-cylinders, also a fragment of a stone relief in small dimensions, representing 2 rowers in a boat; also a new ditch had been begun, going through the middle of the hill.

On December 3, 1902, Dr. Koldewey reports that among the tablets found recently there were about 30 more or less valuable pieces, completely preserved, mostly unbaked. Also several abnormally large fragments, one of which shows very beautiful characters, but, unfortunately, is incomplete.

The tablets found in ditch IX are very old; the bigger ones are flat on one side and convex on the other. One of them is about 8,9 m. thick, 18, 23 cm., and has 8½ columns of about 19 characters. The characters show roundly drawn lines mixed with cuniform.

Among the other findings a beautiful alabaster sculpture found in one of the tombs is quite noticeable. The ornaments consist of white triangular pieces of shell laid in a stripe of black paste.

Mr. Andræ reports: Our plan of excavation at Fara, as you know, has been to dig one ditch from north to south and numerous diagonal ones in those places where the most valuable finds were made. The northern part of the hill has given the best results. We intend to begin excavations at Abu Hatab as soon as water can be obtained there again.

The Ishtar gate is now completely excavated and lies between the Ninmach temple and Singur-Bel.

From Fara, Dr. Koldewey reports on February 20, 1903: Leaving Babylon on the 23 of January, I arrived here on the 26. The excavations at Fara and Abu Hatab are being carried on simultaneously. But Abu Hatab does not seem to furnish anything of importance. The unbaked tablets, found there, are badly preserved, also the quadrilateral prisms of unbaked clay. Only small and insignificant finds being made there, we concluded our excavations on the 25 of February, after they had lasted for 33 days. I admit that the hill has not been searched with all possible thoroughness, but am of the opinion that such a search extending over 6 or 8 months would not be profitable. The possibility to take up excavations again at a later time always remains.

In Fara we found a well-burned building, in the rubbish of which a great many well-preserved tablets of large and small size were found. Between January 29 and February 8, we got about 235 of them, 68 of large size, 35 of middle, and 135 of small size. Among them are well preserved and hardly damaged, 27 large ones, 20 middle, and 81 small ones. We designate as small ones those of 4x7 cm., middle ones 7x12 cm., large ones 12x20 cm. The largest tablet is 32x36 cm. The inscription on one side is very short, while the other side has 10 columns, each of 24 lines. I do not undertake, with the scanty means at my disposal, to clean and restore these valuable tablets here, but leave this task to the better equipped experts in Europe.

In general the finds repeat themselves, the same tools, vessels,

and cylinders. One cylinder, the copy of whose inscription I enclose,* is unique; it was found in the western part of the ruin.

After this important find, I think we can terminate our excavations in Fara with good conscience.

The excavations of Fara were closed on March 2, and all the members of the expedition returned to Babylon.



BRICK CANAL, FARA

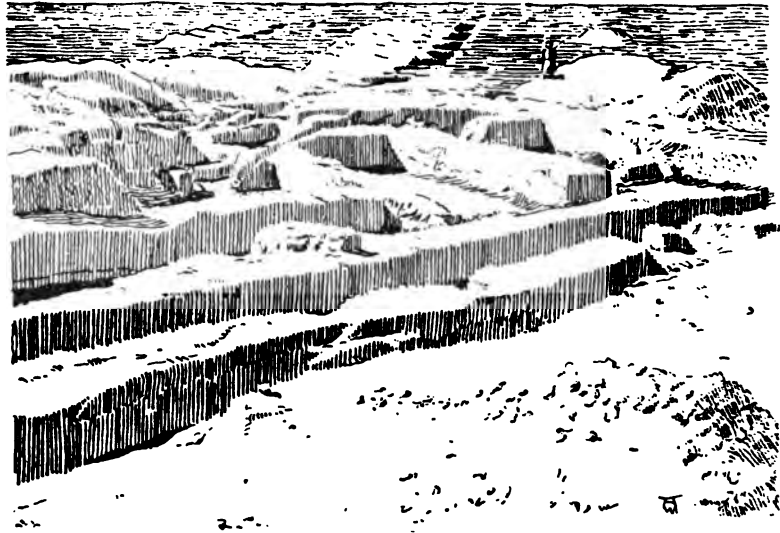
EXCAVATIONS AT FARA AND ABU HATAB, BETWEEN AUGUST 15, 1902, AND
JANUARY 10, 1903

BY W. ANDRAE

During the first 2 months of excavation at Fara it appeared clearly that the tablets, tools, and buildings found were limited to the upper stratum (2 m. deep); nothing was discovered below that. Therefore our ditches, about 3 m. broad and 900 m. long, never exceeded 2 m. in depth. The ditches I-VII (see plan at the end of this report) slowly brought forth the finds mentioned in Report 15, p. 9 ff. Isolated typical rounded tablets of baked and unbaked clay were rarely found, always with the same antique characters; also seal-cylinders were found partly in the rubbish, partly in tombs that were hardly distinguishable as such, showing some in crude and some in more delicate execution, struggles between beasts, fabulous animals and men. The material is, in most cases, alabaster, sometimes shells, rarely hard stone.

The tombs are either sarcophagi or mat-tombs. The comparatively rare clay-sarcophagi are unvarnished, have a flat bottom, perpendicular walls of even height, and an oblong oval ground-plan, are about 1, 80 m. long, 0, 30-0, 40 m. high, and are closed with a terra cotta cover; they are almost without ornament. In the case of the mat-tombs the corpse was wrapped up in reed-mats and together with the appurtenances placed in a pit. There is no trace of combustion. The corpse in most cases lies on one side, the legs bent in a rectangular

*Friedrich Delitzsch—The translation of this sumerian inscription is as follows: "Dada, Patesi of Sukurru, Haladda, Patesi of Sukurru, his son—the side (?) of the city gate of the god Sukurru he has supported (?)." If this table is found in situ, we get the Babylonian name of the ruin, now called Fara Sukurra, which is otherwise known to us both as a name of a city and of a god. [See Hugo Radau, *Early Babylonian History*, 1900, p. 302.]



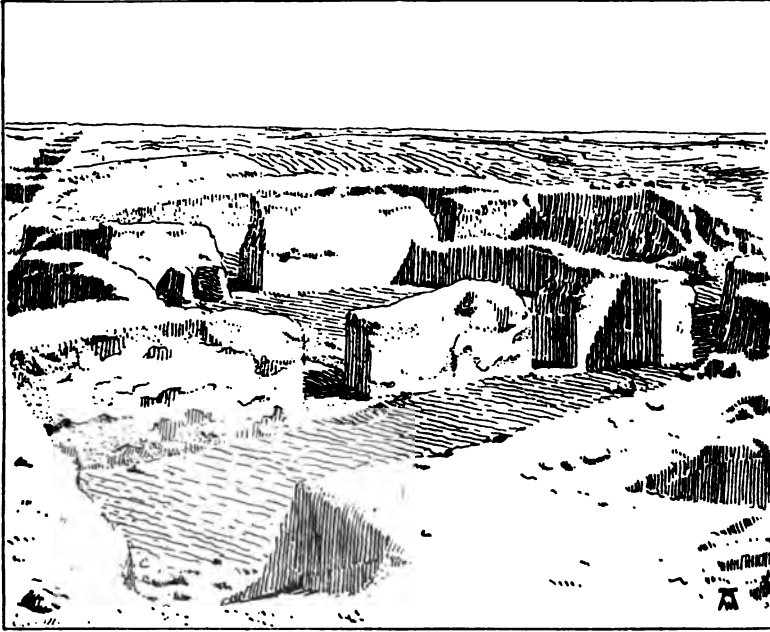
RUINS OF A HOUSE DESTROYED BY FIRE, FARA

position. The one hand carries to the mouth a cup of clay, copper, shell or stone; plenty of other cups lie near the skull and even outside the sarcophagus, apparently anticipating a considerable thirst in the other world. In the richer tombs the arms and jewelry of the deceased are added. The arms consist of bronze spears and arrow tips, bronze poniards, and bronze hatchets of different forms. The jewelry mainly consists in pearl chains, with which even the men are prodigiously adorned, the richer ones of lapislazuli and agate, the poorer ones of glass. Also finger and arm rings of silver and bronze are found and bronze staffs with lapis-points on both ends. The tools consist of bronze fishing hooks, net weights, bronze hatchets, and in almost all cases color-tubs of shell or alabaster. These tubs are typical and the colors are in most cases well preserved—black and yellow, red and light green. The tubs show very pretty ornaments and sometimes 2 or 3 of them are connected. What the purpose of these color tubs was is doubtful. Perhaps they were used as paint, and being considered essential were placed in the tomb of the deceased to be used in the next world.

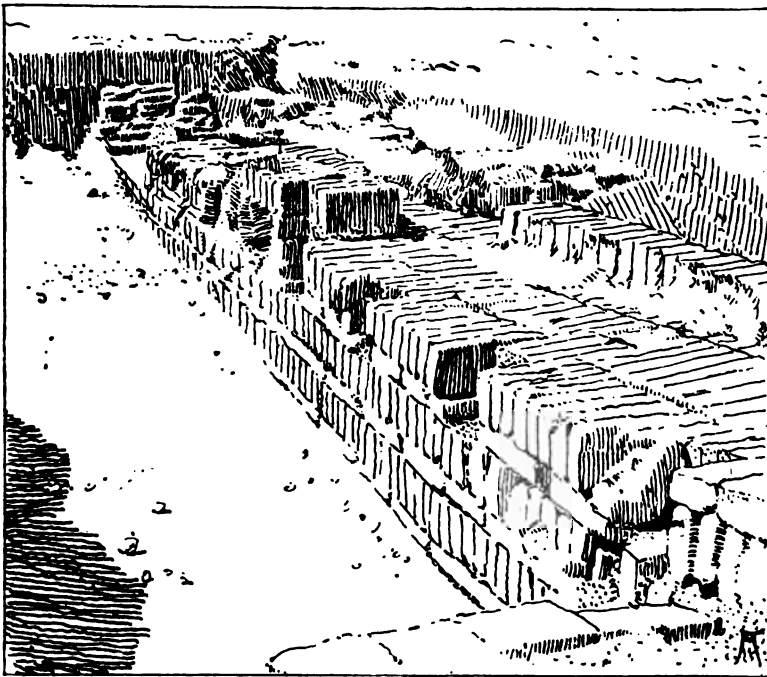
We could not determine whether the sarcophagi or the mat-tombs were the older; they seem to have been used interchangeably. Nor are the sarcophagi any richer than the others; rather the contrary seems to be the case.

The pottery is very simple and does not show many variations. Those described in Report 15, p. 9, are the most frequent. They have no ornaments worth mentioning.

Stone vessels, cups, and pots are rather frequent and mostly of alabaster; they are also very simple and of the same design as that now used in the neighborhood. They sometimes have reliefs of beasts and men.



COURT OF A HOUSE IN FARA



WALLS OF A BRICK BUILDING, FARA

Sculptures are very rare and mostly in alabaster. In ditch I-e several tablets with a very pretty design, showing bulls and men, were found, that betray considerable skill in drawing.

The brick building discovered in ditch III a-b is very incomplete. The plan consists of a quadrangular central court, surrounded by chambers. The walls are very weak, 1 m. or less thick, and the chambers very small.

The excavations at Abu Hatab were commenced December 24. The surface of the hill has been searched before like Fara, but is of rather recent date. It is covered with small brick buildings, the walls of which are very thin; some of the bricks are stamped with a stamp



THE COVERED GRAVE OF A CHILD, FARA

of 9 lines by a King of Ur, Bur-Sin. The stamp seems to me identical with the one given in K. B. III, 1, pp. 88, 89:

¹(Dingir) Bur-Sin ²In-lil-ki-a ³(dingir) In-lil-li ⁴mu-pad-da
⁵SAK.US ⁶I(dinger) In-lil-ka (?) ⁷nitah (?) lig-(?)-ga ⁸lugal Ur-
 (ki)-ma ⁹Lugal (AN). UB. DA. IV-ba: “¹Bur-Sin, ²in Nippur ³by
 Bel ⁴appointed ⁵SAK.US ⁶of the temple of Bel ⁷the brave hero ⁸King
 of Ur ⁹King of the 4 regions of the world.” These fragments were
 found in the northwestern part of the hill.

The buildings or their ruins were used as burial places; numerous antique tombs were found. Most frequent is a sarcophagus consisting of 2 large pots adjusted with their edges in a horizontal position. This rather peculiar form is known to us from the pre-Nebuchadrezzar strata in Babylon and Mugajir (see Perrot & Chipiez II, p. 373). In this pot-capsule the corpse lies on the back or on the side, the legs drawn up. One or both hands are near the head, where ordinarily

some vessel of clay or copper is placed. One of these consisted of a pot with the corpse of a child bearing an arm and a foot ring of bronze.

Clay tablets were found here and there in the rubbish of the buildings. They are unbaked, but comparatively well preserved. The form is essentially different from those found at Fara. They are rectangular in proportion of 1:2-2:5. In many cases they are sealed with stamps bearing the name of the owner and that of his father. The characters are of a later date than those in Fara.

The plastic art is represented by a few small terra cottas. Two of them show a nude woman (perhaps Nin-mah) holding her breast with her hands, a type found very frequently in Babylon. The picture of the head of the same goddess, remarkable through the elaborate hair dress, and the picture of a walking man appear frequently.

Of the pre-historic period we found in Abu Hatab almost nothing; the exact historical period of its settlement may, I hope, be discovered from the inscriptions of the tablets.



THE CAIRNS OR STONE SEPULCHERS OF BRITISH COLUMBIA AND WASHINGTON¹

BY HARLAN I. SMITH

IN THE southeastern part of Vancouver Island in British Columbia, and on the San Juan Group and Whidbey Island in Washington, numerous stone cairns containing graves are found. All of these, so far as known, are of considerable age. They certainly antedate the period of the first advent of objects manufactured by whites. The Indians have no historic tradition as to their origin.

The cairns are from 3 to 20 ft. in diameter, and generally consist of irregular piles of bowlders. In some cases a more or less rectangular cyst is built around the body, made by roughly arranging a number of bowlders, the straightest sides of which are placed so as to form an oblong cyst, and by covering the opening thus formed with one, two, or more slab-shaped rocks, each extending from side to side. These we will call "cover-stones." No cairns were found where two or more stones were wedged over the cyst in the manner of an arch. In other cases there are slab-like stones over the grave, but the cyst is ill defined, if present at all. In still other cases the enclosure is well made, but the stones used to cover the top are so small that they do not reach across. Above the cyst a rough pile of stones is reared. Many cairns are bounded by single rows of large stones, while the space between

¹The full report on this subject is given in *Cairns of British Columbia and Washington*, by Harlan I. Smith and Gerard Fowke, which appeared as a publication of the Jesup Expedition, being Part II of Vol. IV of the *Memoirs of the American Museum of Natural History*, January, 1901.

this outer wall and the cyst is filled with small fragments of boulders, and in some cases largely with soil or with a mixture of these materials. Several cairns have been found where the outer row of stones had been laid in a rectangle and carried up so as to form a retaining-wall, making the whole structure resemble a truncated pyramid. Other cairns have been found in which the body rested at the side of a large boulder, and was covered with small boulders piled up against the large rock. The stones forming the cyst and those in the outer row are often embedded deep in the soil around the grave. Probably they were not so placed, but sank to this position by reason of their large size and great weight. In some cases the stones of the cyst project above the rest of the cairn.

The position of the skeletons proves that the bodies were placed on the side, with the usual flexion. They were deposited either on the original surface of the soil, or in a shallow hole dug down into the surface soil or even into the gravel below. In some cases the skeletons are found sunk into the soil. Many of them are much decayed. This is especially the case in the cairns near Victoria, B. C., in which complete skulls are rarely obtained. In 42 cairns opened there, no entire bones were secured. At North Saanich, B. C., and near Coupeville, Wash., however, complete skeletons have been collected. A few of these were partly burned, but the burning probably did not take place in the cairns.

A few copper ornaments have been found buried with the skeletons, and in one cairn a stone object was secured from among the top stones. Bancroft² states that in a rectangular cairn near Comox, B. C., a pencil-shaped stone, sharp at both ends, was found with a skeleton. Objects other than these have not been found, except in cairns built on shell-heaps, as at North Saanich. But objects found in these cairns do not seem to be in positions suggesting that they were buried with the bodies, and their presence may be satisfactorily accounted for by assuming that they were taken up from the shell-heaps with the earth or boulders used in the construction of the cairn.

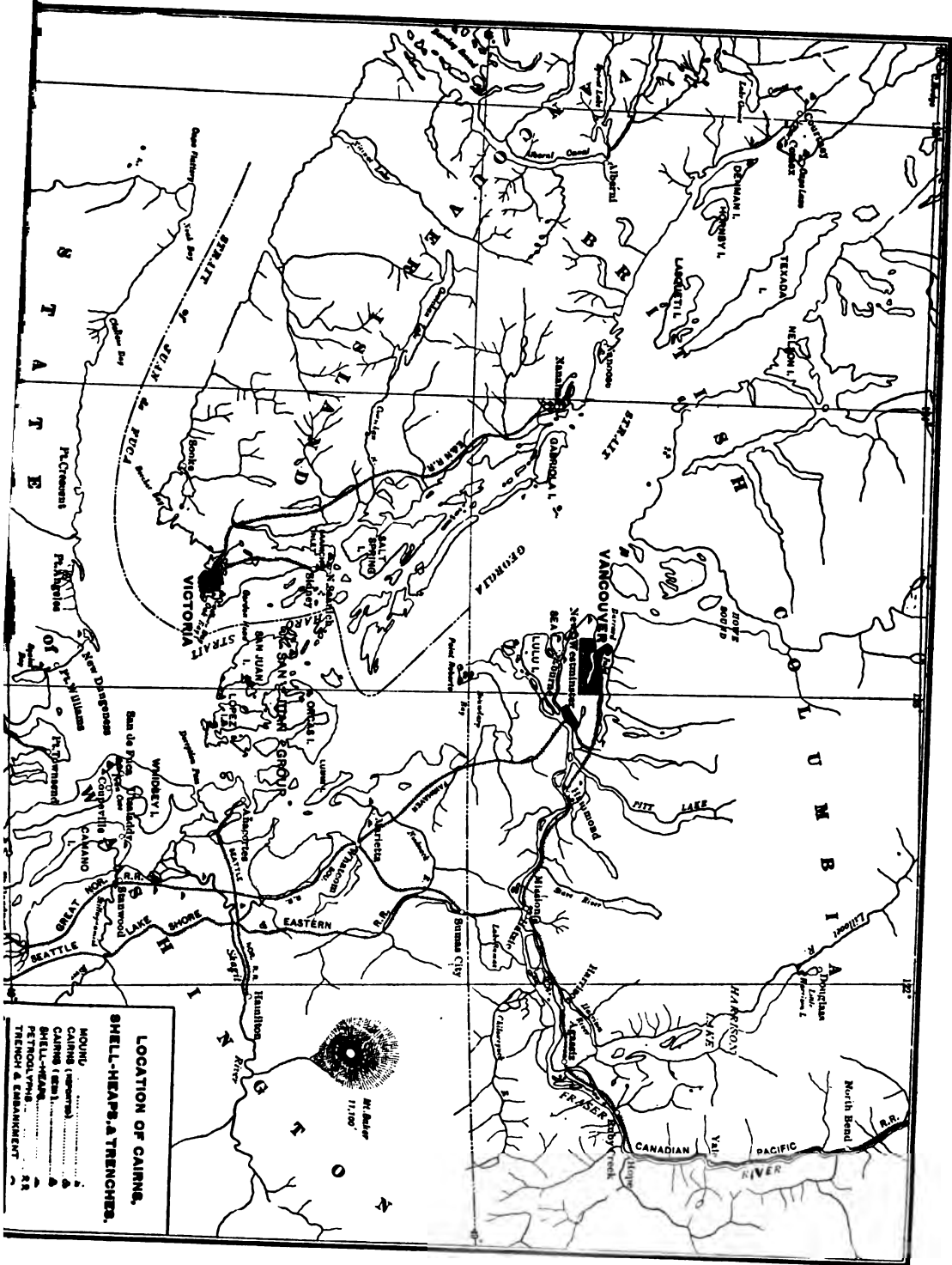
The scarcity in these cairns of all objects other than human bones is remarkable. In this respect the cairns resemble the graves in the shell-heaps of Lower Fraser River, where, excepting a few pieces of copper, hardly any specimens were found associated with skeletons, notwithstanding the wealth of material obtained from the shell-layers near by.³

The cairns on Vancouver Island near Victoria and Comox have been known for many years, and are described by Bancroft,⁴ from information furnished by Mr. James Deans, of Victoria, and embodying the results of examinations made by him in 1871. Mr. James Richardson, of the Canadian Geological Survey, was one of the first to open cairns. Those near Victoria, being convenient of access, have since

²*Native Races of the Pacific States*, Vol. IV, p. 739.

³See *RECORDS OF THE PAST*, March, 1904, p. 82.

⁴*Native Races of the Pacific States*, Vol. IV, pp. 737-739.



been examined by numerous investigators, including Professor Karl von den Steinen and members of the Natural History Society of Victoria. Prominent among the latter were Dr. Charles F. Newcombe and Mr. O. C. Hastings. Some osteological material resulting from their work is preserved in the Provincial Museum in Victoria. Professor Franz Boas examined a number of cairns at Parsons Bridge, near Victoria, and on the Saanich Peninsula. Dr. George A. Dorsey excavated a few at Cadboro Bay in 1897.

The following description is based on explorations conducted for the Jesup North Pacific Expedition in the years 1897, 1898, and 1899. A detailed statement of these is given in *Cairns of British Columbia and Washington*, by Harlan I. Smith and Gerard Fowke. With the exception of the explorations made by Mr. Fowke in 1898, the whole work was carried on under the direction of Mr. Smith.

In our investigations near Cadboro Bay, assistance was rendered by Mr. O. C. Hastings and Mr. James Deans; at Comox and North Saanich, by Mr. Albert A. Argyle; and at Coupeville by Mr. Thomas Murphine. Mr. W. H. Thacker made a reconnaissance on the San Juan Islands. The expedition is especially indebted to Mr. Alexander McDonald for permission to explore on his land in North Saanich. To Mr. Frederic T. Lazenby, who had explored burial-mounds near Port Hammond and Hatzic, we are indebted for the privilege of publishing his notes. The illustrations of specimens are from drawings made by Mr. Rudolf Weber.

The accompanying map shows the locations of typical cairns, so far as known. These structures are usually situated on slopes with gravelly soil, and strewn with angular bowlders. They overlook, or at least are near, the sea. At many places the single cairns are about 20 ft. apart. Locations of shell-heaps and trenches are also given on this map.

The most northwesterly cairns known are on top of the bluff at Cape Lazo, about 4 miles northeast of Comox. They are small, largely made up of gravel, and the skeletons found in them were almost entirely decomposed. At the base of the bluff is a small shell-heap.

Small cairns of the usual type were found near Courtney, on the ridge back of the Indian potato-patches which are situated west of the shell-heap that extends along the southern branch of the Comox River. Other mounds or cairns were situated near Courtney, on the slope south of the Mission Church and northern road. These were composed of pebbles and fragments of rock from 1 to 3 inches in diameter, and of loam. They resemble the natural mounds on the prairies south of Tacoma, Wash., and are probably of similar origin, as no artificial structure, artifacts, or bones were found in them. There are several shell-heaps at the same place. Cairns are said to have been found on the hillside that descends to the Indian village about a mile west of Comox in the direction of Courtney, between the northern and southern roads. They were destroyed by the road-builders.

A cairn was found on Denman Island at the western end of a small shell-heap that extends along the northern end of the island, and two more cairns were seen at the base of the high bluff on the eastern side of the north point of the island. These cairns on Denman Island were of the usual type, but rather small.

Mr. Deans reports that at Nanoose, about 12 miles north of Nanaimo, there are "cairns of earth" in which Indians made intrusive burials.

At Port Hammond and Hatzic, B. C., were a few burial-mounds which in some respects resembled the cairns under discussion.

At Point Roberts, Wash., on the southern end of the shell-heap situated at the eastern end of the bluff, were a series of burials, which, although covered with boulders, differed in many respects from typical cairns.

Cairns are found at several places on the islands of the San Juan Group, which lie directly across Haro Strait, east from Victoria.

Small cairns were found on every point of land on the bay at North Saanich, which is 15 miles north of Victoria.

Mr. Argyle discovered others on a point at Sidney, about 2 miles south of North Saanich, and on a point about 1 mile northeast of North Saanich. Mr. Hastings reports them on Salt Spring Island, which is about 5 miles northward from North Saanich.

About 4 miles northeast of Victoria, on land belonging to the Hudson Bay Company, and sloping eastward toward Cadboro Bay, were several hundred cairns made of boulders, apparently taken from a parent outcrop at this place. It was here that Messrs. Deans, Hastings, Newcombe, and other members of the Natural History Society of Victoria, as well as Professor Boas, Professor Von den Steinen, and Dr. Dorsey, made their principal examinations of cairns. Here and generally in the vicinity of Victoria the custom of constructing cairns seems to have had its highest development. The type of structure appears to have undergone modifications with increasing distance from this point.

Due east of this group, close to the beach on the south end of a little point, were a few small cairn-like structures. The north end of the point was cut off by a dry moat. Here were found traces of house sites, and 2 skeletons covered with a few stones.

Cairns also exist on Discovery Island, due east of Oak Bay, and not far from Victoria. Professor Boas observed many at Parsons Bridge, south of the Gorge. According to Mr. James Deans, there are cairns on the Hudson Bay Farm, east of the Victoria and Nanaimo Railroad and west of the Gorge. A druggist of Victoria reports cairns at Gordon Head, 6 miles from Victoria. Mr. Argyle reported some on Rocky Point, which is about 22 miles by road southwest of Victoria, in Metchosen County, and on Church Hill, near Beecher Bay, 1½ miles beyond Rocky Point. Others are said to exist on the Pemberton

estate, near McNeill Bay, and at Sooke, about 6 miles northwest of Beecher Bay.

On the south side of the Straits of San Juan de Fuca, cairns are reported at Port Angeles. On Whidbey Island, $3\frac{1}{2}$ miles northwest from Coupeville, or $1\frac{1}{2}$ miles west of San de Fuca, at the most westerly point of Penn Cove, were a number of small cairns made of angular boulders. They were situated on the slopes near the beach, on both sides of a small ravine.

The cairns, so far as known, are always near shell-heaps; but the latter are so numerous all along the coast that their proximity does not necessarily imply an historical relation between the 2 kinds of structures. In the area of cairns human bones are rarely found in shell-heaps, except when a cairn has been erected over the latter. It seems, however, that a few skeletons found at Comox, North Saanich, and near Coupeville, are the remains of bodies, buried on the shell-mound before it had reached its present height. It is only in the shell-mounds of Lower Fraser River that human remains are numerous. In the northern part of Vancouver Island and in Washington, south of Coupeville, in which regions no cairns have been found, human remains seem to be absent from shell-heaps.

On the whole, the evidence furnished by the region from which we have the fullest data tends to show that at one time the cairns were the burial-places of the makers of the shell-heaps near by, but that on other occasions and in the same region people who made shell-heaps did not bury in cairns. The variation in form of the cairns seems to be due to the character of the material available for their construction and to the greater or less care taken, rather than to difference in plan. The various forms are more or less abundant wherever cairns are numerous. Those made of large boulders are most common at Victoria, Coupeville, and other places where such materials occur. The most elaborate cairns, and the greatest variety, are found near Victoria.

Some cairns with an outer retaining-wall of stones and a cyst in the middle, such as have already been described, agree closely with the description of mounds given by Fowke.⁵ In these latter, soil was used in place of small stones to fill in the spaces between the cyst and the retaining-wall. The transition from one form to the other is quite gradual. At Cadboro Bay both types are found at the same site. It would seem that some among the burial-mounds located along the Lower Fraser River, between Hatzic and Port Hammond,⁶ may be considered as highly modified forms of cairns. No cairns made entirely of stone were found in the last-mentioned region.

Among the cairns at Cadboro Bay were a few rectangular en-

⁵See p. 73 (Cairn 17) *Cairns of British Columbia and Washington*, by Smith and Fowke; also Bancroft, *Native Races of the Pacific States*, Vol. IV, p. 737.

⁶Some of these were first explored in the summer of 1894 by Mr. Frederic T. Lazenby, of Retford, Notts, England, during his residence in British Columbia; see p. 60, *Cairns of British Columbia and Washington*.



CAIRNS NOS. 14 AND 15 AT NORTH SAANICH, B. C., SHOWING SKELETONS

closures, open on top, similar in form to the cysts in cairns. No remains were found in them. These may have been unused burial-places. There is no evidence that they were cairns opened by previous explorers. Such enclosures were all on high outcrops of rock near the center of the burial-place.

The cairns were evidently all built on a well-defined plan, looking towards the construction of a central cyst, which, however, was often very poorly made.

In Nicola Valley in the interior of British Columbia,⁷ in Montana, and in Idaho, graves are found in talus slopes. There graves are covered with piles of stone. None of them have cysts. Near the outlet of Nicola Lake and between Harrison Lake and Little Lillooet Lake, graves were found in which the body was buried in the ground. A few boulders were placed on top of the grave. Both structures are entirely distinct from the cairns with central cyst which we are discussing here.

Near the head of Harrison Lake, at Point Roberts, in the shell-heaps of the Lower Fraser River, and in those near North Saanich and at Comox, graves were found which were covered by a few boulders, like those just described; but both skeletons and boulders were covered by earth or shell-heap material.

At Point Roberts there were a number of pits, surrounded in some cases by boulders. In one of these pits, covered by a few boulders, several skeletons were found buried in one excavation, while cairns

⁷See *Memoirs of the American Museum of Natural History*, Vol. II, pp. 405, 437, et seq.

contain but one skeleton each. There were no objects with the skeletons found in these pits, which can hardly be classed with typical cairns.

The skulls from the cairns give evidence that the people practiced the same methods of deforming the head that were in common use in this area until recent times. A skull from Coupeville shows the characteristic deformation of the Chinook heads, in which forehead and occiput are so much flattened as to be nearly parallel. Most of the skulls from Victoria and vicinity are flattened to a less extent. A few skulls found near Victoria and at North Saanich suggest a method of deformation somewhat similar to that practiced by the Kwakiutl, which consists of a combination of antero-posterior and lateral pressure, and results in a narrowing and lengthening of the skull. On the whole, however, antero-posterior flattening seems to have been used most extensively.

DETAILED ACCOUNTS OF EXPLORATIONS

PORT HAMMOND

A burial-mound made of earth was found about a mile north of the shell-heap bordering the north side of Fraser River at Port Hammond. It was on the border of Pitt Meadows, measured 24 ft. in diameter by 5 ft. in height, was of the usual circular mound form, and below the surface layer was composed of yellow clay. Extending through the mound, on a level with the surface of the surrounding forest, was a stratum of vegetable mould averaging half an inch in thickness. Near the center of the mound this stratum contained pieces of charcoal, burned clay; and ashes, barely sufficient to be the result of the cremation of a body. Below this stratum was the natural surface soil, and about one foot lower down the yellow clay subsoil.

Another mound, situated on the bluff overlooking Fraser River, just above the shell-heap at Port Hammond, was explored by Mr. Lazenby in 1894. He reports that it was a simple mound of circular outline and about 10 ft. high, composed of a surface layer of vegetable mould, and under this of sandy soil similar to that found in the neighborhood. There were no boulders in it; a skeleton was found stretched out at full length on its back, in a good state of preservation, unaccompanied by objects; the skull was short; and the Indians knew nothing of the mound, and had no legend about it. Only 3 cases have come to my notice in which ancient skeletons have been found stretched out at full length, although I have opened several hundred graves in British Columbia.

POINT ROBERTS

At Point Roberts pits from 5 to 15 ft. in diameter by from 3 to 5 ft. deep were found. They contained human skeletons. In some cases, boulders stood around the edge of the pit, and others covered the skeletons. Dr. R. Eden Walker, of New Westminster, who described these pits to us, designated them as wells with paved bottoms



ENCLOSURE NO. 6, CADBORO BAY, NEAR VICTORIA, B. C., FORMED OF SIX
LARGE BOWLDERS AND SOME SMALL STONES



CAIRNS NOS. IO AND IOA, CADBORO BAY, NEAR VICTORIA, B. C.



CAIRNS NOS. 14 AND 15, NORTH SAANICH, B. C., IN RIGHT BACKGROUND AND LEFT FOREGROUND, RESPECTIVELY, BOTH FILLED WITH CLAY

which covered graves. Our excavations showed about 2 ft. of vegetable mould in the bottom of the pits, which extended down into the shell-mound material. In one pit 4 skeletons were found. The bones were disarranged, showing that the position of the skeletons must have been changed after burial. Over them were traces of wood, and above these boulders. The whole suggests that the bodies had been placed in boxes, and that these boxes were buried in pits and covered with boulders. When the boxes decayed the boulders fell down into the pit. These skeletons were found at a depth of from 2 to 3 ft. below the bottom of the pit. There were no objects with them.

Mr. Thacker first published some of his notes on the cairns of the San Juan Group in *The American Archaeologist*, Vol. II, Part 4 (April, 1898), p. 97.

NORTH SAANICH

Many of the cairns at North Saanich were built on top of the shell-heap, which is parallel to the beach at the postoffice. Some appeared like a small outcrop, but on excavation proved to be cairns with cysts, some of them 5 ft. in length, made of boulders weighing several hundred pounds. The best-made of these cysts were somewhat rectangular, the straightest sides of the boulders being placed inward. They were covered with slab-shaped stones, having at least one straight side, which was placed downward. Usually the stones forming the

cyst constituted the greater part of the structure. The pile was made up of few and comparatively small stones.

There were also found cairns so rude that no cyst could be recognized. They were simply stone piles, or a few heavy bowlders placed on top of the skeletons. In some of these rude cairns there was a row of stones placed around the body and the material covering it. In these the skeletons usually rested on the natural surface of the soil, the cairn being built over it. In some cairns with regular cysts the skeletons were found 4 ft. deep. Several cairns were covered and filled with clay, so that they appeared like some of the mounds at Hatzic, but were much smaller. On the whole, the cairns of this place are smaller than those found at Victoria.

In the cairns, well-preserved skeletons were usually found, although some were charred, and a few were much decayed. They were in a better state of preservation than any found by us near Victoria, but this does not necessarily indicate that the burials were more recent, since more favorable physical or chemical conditions of the soil would prevent rapid decomposition. In 1898 we explored 21 cairns at this place.

The fact that small barnacles still adhered to some of these stones in a cairn explored in 1898 near North Saanich, proves that they were taken up from the beach. A fir tree 1 ft. in diameter was growing up through the cairn. A fir tree 4 ft. in diameter, probably over 200 years old, stood over another cairn. Its roots were 8 in. thick over the skeleton. A large stone, in which a small mortar had been made, was used as a cover stone over the skull in one cairn.

A copper object with a small hole near one side, evidently for suspension, was found at the head of the skeleton in one cairn near here. It resembles in form the copper ornaments found in the Thompson River region (see Figs. 87-89 and Figs. 365-366, Vol. II, *Mem. A. M. N. H.*), and appears to be in 2 layers.

Another cairn near this place was about 1 ft. 6 in. high, and filled to a level with the highest bowlders with yellow clay, which probably originally covered the cairn. This feature is decidedly striking when compared to cairns in which the skeleton is found on the natural surface of the soil, surrounded by a row of bowlders, and covered with gravel.

CADBORO BAY, NEAR VICTORIA, B. C.

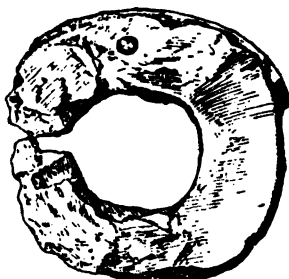
Cairns are very numerous at this point. Many have been opened at different times by various parties. In October, 1897, 21 were explored by Harlan I. Smith; while in April of the following year a like number were investigated by Gerard Fowke.

WHIDBEY ISLAND

The cairns on Whidbey Island resemble those found near Victoria more than do those of other places. Many of them are built at the sides of large bowlders. The body usually rests on the right side, with

the head west and the face toward the largest boulder, the small stones being at the back.

The report of Gerard Fowke forms a considerable part of the memoir *Cairns of British Columbia and Washington* previously mentioned, and like other reports here omitted, give details of cairn construction.



STONE OBJECT FROM A CAIRN IN BRITISH COLUMBIA



EDITORIAL NOTES

NEW ARCHAEOLOGICAL SOCIETY IN PARIS:—An Archæological Society has been founded in Paris on the lines of the Deutsche Orient Gesellschaft. The new society is under the name of Société Française de Fouilles Archéologique, and is presided over by M. Ernest Babelon.

ROCK-MARKING AT ETAMPES:—Mr. George Courty, in a paper read before the French Association for the Advancement of Science, describes and figures the rock-markings at Etampes, in the department of Seine-et-Oise, which he attributes to the Neolithic period. Some fragments of sandstone, with edges polished by prolonged rubbing, were found, by means of which the marks might have been made. The objects portrayed included a harpoon, figures representing boughs of trees, arrows, squares divided into numerous compartments, and other rectangular forms, but no figures of men or animals. They were found on rocks in 8 different parts of the same arrondissement.—[*Athenæum*, London.]

FRAGMENT OF THE TABLET OF NEGADAH:—The most important news in the archæological world of late is, perhaps, Mr. Garstang's discovery, as announced last week by Professor Sayce and confirmed by Mr. Garstang, of the missing fragment of the tablet of Negadah bearing the name of Aha, and called by some the tablet of Menes. *Teste* Professor Sayce, it fits exactly into the gap left in the part exhibited at Khasr-el-Nil, and a duplicate of the perfect tablet was also discovered by Mr. Garstang in a chamber left unexplored by M. de Morgan in 1897.—[*Athenæum*, London.]

LOST HISTORIC TREASURES:—Dr. Flinders Petrie says that every year sees remains which have lasted for thousands of years wiped out. Now, in our own day, the antiquities of South Africa and of Central and South America have been destroyed as rapidly as they are found. Elsewhere engineers of every nation use up buildings as quarries or wreck them for the sake of temporary profit. Speculators, native and European, tear to pieces every tomb they can find in the East and sell the few showy proceeds, which thus lose their meaning and history. And the casual discoveries that are made perish in a ghastly manner. The Saxon regalia of Harold, the treasures of Thomas a Becket's shrine, the burial of Alfred, the burial of Theodoric, and the summer palace of Peking have within modern memory all gone the same way as the wonders that have perished in the French sack of Rome or the Greek sack of Persia.

MEDICINE IN ANCIENT EGYPT:—In the Harveian Oration, delivered on Tuesday at the Royal College of Physicians, Dr. Richard Caton described some results of an inquiry into the earliest records of medicine in ancient Egypt, particularly as regards the circulation of the blood and diseases of the circulation. The most interesting figure among the early physicians of Egypt was a priest of Ra, the sun-god, named I-em-hotep, who lived during the III Dynasty, nearly 6,000 years ago, and was succeeded by a cult of priest-physicians, who carried on his work of healing. Temples for the worship of I-em-hotep, which were also hospitals for the sick, arose first at Memphis, and then extended to other parts of Egypt. Here the priests not only treated the sick, but also embalmed the bodies of men and the sacred animals. In this process the heart and viscera were removed, and the priests had thus an opportunity of learning something of anatomy and of the changes produced by disease. These priest-physicians were probably the first to acquire a rudimentary knowledge of the movement of the blood. It was clear that medical science was cultivated and had advanced considerably in Egypt long before it arose in Greece. In Egypt the evidence of this fact was decisive, and in the writings of the pseudo-Apuleius it was interesting to know that Hermes told the youthful Asklepios of his predecessor, the first inventor of medicine, the Egyptian god I-em-hotep. When, in later times, Greek colonists came to Egypt, they recognized I-em-hotep as a sort of pre-existing Asklepios, and spoke of his temples as Asklepieia. The views of the circulation of the blood entertained by the Greeks were almost exactly those of their predecessors, the Egyptians; and, in view of the frequent intercourse between the 2 countries at that time, it was highly probable that the Greek physicians obtained their knowledge of the circulation, such as it was, from the Egyptians. The Egyptian priests seemed, in fact, to have been the first to engage in that momentous inquiry, which was finally solved by Harvey, and on which the progress of medicine depended.—[*Nature*, London.]

EXCAVATIONS IN TURKESTAN:—Professor Raphael Pumpelly, who is engaged in explorations in Russian Turkestan under the auspices of the Carnegie Institution, has written a letter to Dr. D. C. Gilman, the president of the institution, in which he says:

The streams that rise in the high mountains of Northern Persia emerge on to the Turkoman plains, forming fans, or sub-aerial deltas, covering many

square miles and each making an oasis. The water is all used in irrigating these fertile spots. Beyond them is the desert. Anau, where we have excavated, is one of these fans.

Here at Anau, about 7 miles east of Aschabad, there are 2 great tumuli, and the ruins of a city—Anau—surrounded by moat and wall, and occupied till within the last century. The 2 tumuli, nearly one-half mile apart, are nearly equidistant from the city at a distance of less than a mile. We have explored both of these tumuli, and I have done some work in the city.

The northern and older tumulus rises 40 ft. *above the plain*; the southern and younger tumulus rises 52 ft. *above the plain*. Both of these start with their lowest culture strata on slight elevations in the same original plain surface, more than 20 ft. below the present surface of the surrounding plain. That is to say, the plain has grown up more than 20 ft. since the settlements began. I will show further on, the different phases of this growth.

In the older tumulus, we find a culture occupying the lower 45 ft., distinguished by the technique and direction of its wholly hand-made and interesting pottery. This is succeeded in the upper 15 ft. by a more advanced culture, in which the finding of some remnants of bronze implements and lead beads (all wholly altered to salts of the metals) show a beginning acquaintance with the bronze, while the hand-made pottery has changed and become more developed. Throughout this tumulus we have found nothing recognizable as a weapon of offense in either stone or metal, though flint knives abound.

The southern, younger tumulus, starts with a developed wheel-made pottery, unpainted and of a technique wholly different from that of the older tumulus—though some hand-made pottery occurs not unlike some of the young products of the older tumulus.

From its base under the plain to its summit this tumulus has 74 ft. of culture strata. There are evident here at least 2 successive cultures. Of these, that of the lower 62 ft. is wholly in the bronze stage (but with survival of flint implements), while the upper 14 ft. are marked by decided changes and by the introduction of iron, of which the wholly oxidized remnants of some implements were found.

We have thus at least 4 distinct cultures, occupying 136 ft., with a break in the column between the end of the old and the beginning of the new tumulus. We do not know how great this gap may be, but the presence of some fragments of wheel pottery on the surface on the older tumulus, as well as in the neighboring irrigation column, seems to represent a transition from the older to the newer. This suggests the possibility that the gap was filled by strata, which is disappearing through wind and water erosion, and which must in any event, have been of considerable thickness.

Through all the cultures except the last—that of the iron stage—there ran a remarkable and characteristic burial custom. The children—at least, certain children—and seemingly only children, were buried in the houses, under the floor, in a layer of fire-hardened earth. I was struck last year by the fact that all the human bones I sent from here to Professor Zittel were those of children. The skeletons lie on the side with the knees drawn up in the "*liegende höcker*" position. With them have been found beads of turquoise, lapis lazuli, carnelian, and other minerals. Eighteen of such burials have been studied.

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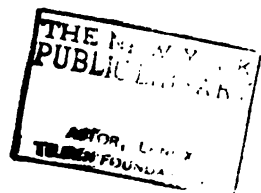


PHILAE AS IT WAS

[Presented by the kind and special permission of The Century Co., N. Y.]

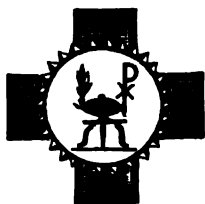


LOOKING AT PHILAE FROM THE SOUTHWEST, NOT LONG BEFORE THE BUILDING OF THE DAM



RECORDS ^{OF} THE PAST

VOL. III



PART IX

SEPTEMBER, 1904



PHILÆ

BY CHARLES DE WOLFE BROWER

THERE are few places of archæological interest, certainly none so small, which have received more general attention in recent years, than the subject of this sketch. None perhaps have been regarded with such sentiment. The Great Pyramid, Nippur, the Pueblos, appeal to our interest, but Philæ stands in a class by itself. Every traveler to the border of Nubia expected to be enchanted at Philæ, and countless persons who have never seen it have yet fallen under the sway of the witchery it has exercised through the ages, for this regard has been a race inheritance.

The truth of these statements received a vivid illustration when some 10 years ago the plans for that beneficent, magnificent engineering work, the Assouan dam, were first canvassed. A general outcry arose in protest because of the probable loss of the island. The most suitable spot for the structure, to accomplish the large irrigation ends proposed, was found to be about 2 miles north of Philæ. Part of the Archæan ridge here crosses the Nile. There are schists, quartzites, and dykes of granite and a diorite, the last two so much drawn on for ancient works of art. The Nubian red variegated sandstone rests on the Archæan crystalline rocks further south on both sides of the river, and was used extensively for building. With foundations like ada-

mant and abundance of granite for the structure, a suitable valley back and the desert to be redeemed before—this was the place for the dam. The river was to be allowed to run its course through the gates during the time of flood, then closed during subsidence. The water which otherwise would have flowed uselessly away, being thus ponded back, provided a supply for irrigation during the parching months. It was estimated that the dam would in this way rescue from the desert and make fruitful 2,500 square miles, an increase of cultivatable area to Egypt the size of Rhode Island, and that the country would be permanently benefited to the extent of \$100,000,000, while a direct annual return would be made to the revenues through the sale of land and by taxes of \$2,000,000, or a sum more than twice the amount to be paid to the English builders each year. But there was another side. Philæ would be submerged, and the outcry referred to became general. Before public bodies and through the press, indignation was expressed. In England the question assumed political importance. Sir Frederic Leighton said: "Any tampering with Philæ would be a lasting blot on the British occupation of Egypt." A writer in our own *Century Magazine* wrote: "A tragedy is going forward. Murder is being done. By the first raising of the gate the Pearl of Egypt, the fairy isle of Philæ was consecrated to destruction—Philæ, the most beautiful, the most loved of all the antiquities of Egypt."

The protest was sufficiently influential to bring about a modification of the original design, and the dam was made 26 ft. lower than first planned, so that while the island would be covered during the ponding back of the water the temples would stand above it. The dam was built of granite a mile and a quarter long, 30 to 40 ft. wide, and 75 ft. high. The Duchess of Connaught laid the stone which completed the work, December 10, 1902.

We now come to another and perhaps the last chapter in the history of Philæ. On August 10, a little more than a month ago, the *London Times* stated the fact that within 2 years of the completion of the Assouan dam it has proved itself so successful that Egypt has rejoiced and an extension of the work has been asked for. It has really meant large additional prosperity for a country so long subject to misrule, but at last knowing justice and forethought under English care. The Blue Book on Egypt, just issued, gives the plan for the work, which will involve many millions for canals, railroads, and other developments. These include cutting a channel through the morass in the far south and opening a new course of 200 miles for the White Nile, and—the raising of the Assouan dam. Twenty-seven million dollars, it is urged, should be utilized at an early date. Such a proposal ought to stir the most sluggish imagination and arouse hearty approval. The regulation of the Nile will mean the increase of the prosperity and happiness of millions of persons, "for whom," the *London Times* remarks, "we have made ourselves responsible." But it will be interesting to see whether there will be another outcry over Philæ.



LOOKING NORTH FROM TOP OF PYLON OF TEMPLE OF ISIS. DARK LINE
ALONG EDGE OF DISTANT WATER IS THE ASSUAN DAM

[From photograph by Charles De Wolfe Brower]

or whether the utilitarian view has gained ground with the success of the first work. But Philæ is passing, and so it is well to tell her story once again. The purpose of this article is to give briefly the reasons for the interest in the island and the regard so generally and deeply felt, and every such endeavor with reference to any antiquity is of value, for the printed word and picture will too often have to take the place of the monuments themselves. Prof. Petrie spoke a true word, when in one of his reports of some most valuable finds, he said that the treasures could not be looked on as abiding. Fire might consume them, thieves might carry them away, earthquake shock might bury them, but their story and their truth would be preserved in the written records.

The name Philæ does not appear in Egyptian history till a comparatively late date, and not in any of the earlier inscriptions, and the references to it by the writers of other countries are few. The most acceptable derivation is from the Egyptian word *P-aa-leq*, place of the frontier. The modern Arabs call it Anas el Wogud, after the hero of one of the stories in the Egyptian version of the *Arabian Nights*.

The Island is of granite rock and boulders and is the smaller of two about 2 miles above the first cataract; the other, which lies west of it, bearing the name Biggeh. It is 562 miles from Cairo by the river

and between 5 and 6 above Assouan. It is 1,260 ft. long from north to south and 450 wide from east to west, lying lengthwise in the river, and nearly 400 ft. above the Mediterranean, in latitude 24 degrees, 1 minute and 2 seconds north, longitude 32 degrees, 54 minutes and 16 seconds east. By situation it strictly belongs to Nubia, and, as its name implies, is at the southern boundary of Egypt. The sway of the ancient kings extended from the Mediterranean to Philæ, and added interest would attach to the situation because here enters the river which is the life of the land.

The Island lies in a quiet, lake-like widening of the Nile. "Philæ, the lovely," wrote Mr. C. D. Warner, "set like the stone of a ring with a circle of blue water about it in the clasp of higher, encircling granite peaks and ledges." The approach through the rush and noise and encircling rocks of the cataract¹ and windings of the river, past polished black boulders and shores of fantastic shape, intensify the picturesqueness of the scene and prepare the traveler for impressions of wonder and delight.

The land approach was also a preparation for Philæ. Back in 1737 Dr. Pococke speaks of riding towards Philæ from Assouan by an artificial way cut between hills and rocks, which was the old road from south to north, and the portage around the rapids, a road much of it peculiarly desolate. Egypt had a large trade in Nubia in salt and gold, and there was much traffic back and forth. The road, too, was the gateway for pilgrims to Philæ and for prisoners on their way to work the mines for the Pharaohs. All along the banks of the river between Elephantine and Philæ there is, as it were, a visitors' book, in which many generations of ancient Egypt and other countries are represented by inscriptions of names and thanksgivings in honor of a prosperous voyage. The attraction therefore of Philæ is due in no small part to its situation, and some visitors have urged that the far-famed beauty was due more to the framework of the picture than to the picture itself. The familiar reputation of Damascus as a paradise has been owing in large part to its situation in the desert. Such a place of flowing streams and verdure would indeed be enthralling to the Bedouin and explain the oft told remark of Mohammed about that city.²

Yet Philæ had a beauty all its own, and especially in its glory as no modern traveler ever saw it, with the temples in their perfection, the contrast of the red sandstone amidst the green of the vegetation and the rosy glow reflected on the water—it was the crowning point in the voyage to upper Egypt.

Philæ, we know, was held in highest veneration from a day preceding our era by several hundred years and possibly long before as a

¹Paul Lucas, a traveler of the time of Louis XIV, says that the cataract precipitated itself with such force from the top of the rock that the inhabitants of the district were deaf for several miles around. "This," naively comments Mariette, "is a manifest exaggeration."

²Looking down on the city from a neighboring hill he refused to enter, saying, "It is permitted to man to have but one paradise, and I choose the heavenly for mine."

religious center; and, like Jerusalem, Mecca, and Rome, drew its throngs of devotees. It was sacred to the worship of the triad, Osiris, Isis, and Horus. The cult of these divinities is very ancient and its phases were many. Osiris was said to have been buried here. At least this was one of his places of sepulchre, and no oath was so binding as that sworn "in the name of him who lies buried in Philæ." He was one of the principal Egyptian gods, an aspect of the sun, personifying the power of good. According to the ancient belief, he had taught the Egyptians the arts of civilization, enacted laws and established the worship of the gods. He was said also to be the child of Seb and Nut, or heaven and earth, as was Isis, his sister and wife.³ Plutarch has an interesting essay on Osiris and Isis. He finds the derivation of the name Isis in a Greek root, from the verb "to know," so he says, "The name is eminently wise and speculative, Isis being wisdom."

Isis symbolized fecundity. The cow was sacred to her and her emblems were a disk with horns supporting a throne. She carried a lotus sceptre. She was believed to have taught the Egyptians many arts. Horus was the son of Osiris and Isis and a manifestation of the sun.⁴

Opposed to this wise triad was Set, the principle of darkness and evil, the wicked brother of Osiris, who pulls in pieces the doctrines Isis collects. Set shuts Osiris in a box, which lies hidden till Isis, in long and sorrowful search, finds it, but Set gains possession of the body and dismembers it. Isis recovers the parts, and Osiris is restored to life to reign in the abode of the dead. Horus avenges his father's death. Whence the myths and the names came we do not know. There run through the stories the great elemental truths. Something mysterious and attractive has always attended the conception of Isis. She seems to have dominated all the others at Philæ.⁵

The worship of Isis as a nature goddess was introduced into Greece after the Alexandrine epoch and became very popular, as it did at Rome from the end of the republic; and her worship with that of Osiris extended also over Asia Minor, and hence the pilgrims from these countries to Philæ. We know that in the time of Diocletian the Nubians worshiped the Goddess of Philæ, as did a savage tribe called Bleimyes, and the priests of these peoples were permitted to offer sacrifices to Isis with the Egyptian priests. They were even given permission to remove the miraculous image of the Goddess from the island on certain occasions. One authority states that the priests at Philæ made use every day of 360 sacred vessels as they poured out 360

³Josiah Condor, author of 33 volumes of travels, quotes Dr. Richardson as describing the Nubian women as with sweet and animated countenances, like those portrayed on the temples, and Condor adds, "It would seem that Isis herself must have been a Nubian."

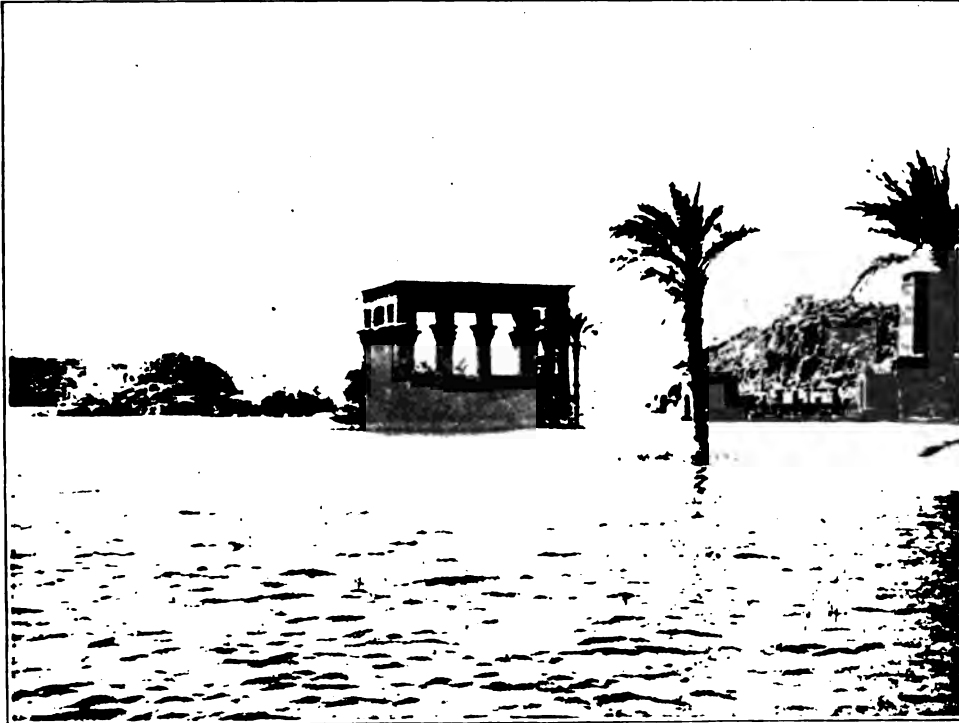
⁴One interesting interpretation makes Osiris the Nile, Isis the rich earth, Horus the vegetation, and Set the hateful, destroying desert.

⁵Plutarch would have agreed with Ruskin, who, writing of the criticism of the worship of the Virgin, says that the love and adoration of a good woman is infinitely better than the worship of beer mug and pipe, in which so many men indulge.

libations of milk in honor of Osiris and in token of his sufferings. We learn on the authority of Seneca that offerings of gold and other gifts were thrown into the Nile at Philæ by the priests to propitiate the divinity of the river.

We come now to the buildings on the Island, all of which were associated with religious worship, and find in them a prominent attraction from the day of their erection to the present. There is reason to believe that there were buildings antedating those which have remained to us, but only a few traces of them remain in fragments and foundations. The excavations conducted by Captain H. G. Lyons in 1895, under the direction of the government, brought to light little that was new. Maspero says that in 1882 he found the remains of fortifications and of a temple of the time of Amasis II, of the XXVI Dynasty. The granite sides of the Island show signs of having had walls built on them, and we read that Diocletian destroyed the fortifications of Philæ. Plutarch speaks of it as inaccessible and unapproachable except to the priests. There are some remains of the ancient quay. Compared with many other monuments of Egypt those of Philæ can not be considered ancient. If Cheops belongs to 3800 B. C., a few hundred years before Christ is comparative youth. If the buildings are considered small it must be remembered that they were wisely proportioned to the size of the Island. It may be said in general that there is one principal and several subordinate buildings. The oldest one standing and belonging to the pre-Ptolemaic period is the portal or temple of Nectanebo, built in honor of Isis, on the southwest corner of the Island. This was Nectanebo II, of the XXX Dynasty, who reigned from 361-343 B. C., the last of the native kings of Egypt. Very fitting is it that at least one of his monuments should have remained, and on Philæ. For a long time he repulsed the Persians, but they finally made themselves masters of the delta and Nectanebo fled to Ethiopia. It may be that he occasionally visited Philæ as a retreat untroubled by his foes.

Facing the south and the landing staircase is the large propylon, 120 ft. wide and 60 ft. high, stately, impressive. There are steps within the east half by which ascent is made to the top. It was commenced by Ptolemy Philadelphus and Arsinoe 286 B. C. On the exterior face of this pylon are colossal sculptures of the divinities and Ptolemy Philometer swinging a battle-axe over his enemies. On the west side of the gateway is a large figure of Isis. Within this pylon is a large court closed at the north end by another pylon. On the east of the court is a portico begun by Ptolemy Philadelphus, with 10 columns and several chambers opening from it. On the west side is a temple, called the Mammeisi, or Birthhouse, dedicated to the birth of Horus, representations of which are given on its walls. It was built by Ptolemy Euergetes, "Benefactor." The second pylon is part of the great temple of Isis begun by Ptolemy Philadelphus and Arsinoe, while succeeding monarchs carried on the work. Many of the sculptures of



SUBMERGENCE OF PHILAE ACCORDING TO PRESENT HEIGHT OF ASSOUAN DAM

[By permission of Brown Bros., New York City]



PYLON AND PART OF THE COURT BEFORE THE TEMPLE OF ISIS. LARGE OVAL BEARS INSCRIPTION RELATIVE TO GRANTS OF LAND TO THE PRIESTS

the exterior are of the later epoch of the Roman emperors from Augustus to Trajan. On their far off thrones these world monarchs knew of the little island and through superstition, policy or admiration shared in the decoration of the shrine. The columns are remarkable for brilliancy of colors. The walls and ceiling are covered with figures of divinities and other subjects. There are 3 chambers in succession, the last of which was the sanctuary in which is a monolithic granite shrine, and on the wall a representation of Ptolemy Philadelphus suckled by Isis. There are other rooms on the eastern side of these chambers and entrances to the crypt. From a chamber on the opposite side a staircase leads up to a terrace, and on top is a small room, covered with sculptures picturing the death and resurrection of Osiris. We can see his mummy passing through the stages of the under world, his members scattered, reassembled, and the resurrection.

From the top of the pylon a far-reaching and beautiful view is gained. Of this temple Mr. J. Fergusson wrote, "No Gothic architecture ever produced anything so beautifully picturesque as this. It provides for all the play of light and shade, all the variety of Gothic art with the massiveness and grandeur of the Egyptian style. As it is still tolerably entire and retains much of its color, there is no building out of Thebes that gives so favorable an impression of Egyptian art as this. It is true that it is far less sublime than many, but hardly one can be quoted as more beautiful." Miss Edwards says, "Perfect grace, exquisite proportion, most varied and capricious grouping here take the place of massiveness." The partial ruin of the temple is ascribed to Justinian.—In 557 A. D. this temple became the Christian Church of St. Stephen, and crosses were carved here and there. It is estimated that no less than 5 Christian churches were erected on the island.

The Kiosque, or Pharaoh's Bed, as it is popularly known, on the southeast of the island, has well been called the symbol of Philæ. When we think of Philæ, that slender and graceful temple with its palm trees rises before us; the work of Nerva Trajanus, it was never fully completed above the floral capitals. On the walls are reliefs showing Trajan offering wine to Isis and the hawk-headed Horus, and again Trajan before Osiris and Isis. Once seen it is never forgotten, and the effect of its loveliness on many persons defies description. A large Nileometer had a place on the west side of the island with hieratic and demotic scales. Hadrian's Gateway bears the celebrated representation of the source of the Nile. At the foot of a rocky eminence, on which perch a vulture and a hawk, the Nile god surrounded by a serpent, pours water from two vases.

It was the custom in Egypt, as in Greece, to set up special public decrees in the temples, and so we find a number of them at Philæ. Among them one of the first we mention is a copy of the so-called Rosetta Stone, on the wall on the east side of the great court. Lepsius is said to have been the first to observe this inscription. It is remarkable as having only the hieroglyphic and demotic forms and not the

Greek. The first was the original and sacred form of Egyptian writing, the second was the ordinary script and the Greek, the language of the Court. The last was unpopular with many, and it has been suggested that the priesthood, feeling secure in their solitude at Philæ, could with impunity evade the order to inscribe the decree in the 3 characters.

Another decree of great interest was inscribed on an obelisk and pedestal at the forefront of the Temple of Isis. It records the relief which Ptolemy IX granted the priests from the exaction of government officials and other travelers who demanded entertainment at the Island, even to the impoverishing of its guardians. It shows that the power of this king extended into Nubia. This monument was removed by an English traveler to his private estate in Dorsetshire, so illustrating the permanence of the spirit which called forth the decree at the first.

Another inscription is cut on the face of a granite boulder, which forms part of the foundation for the eastern side of the pylon before the Temple of Isis. It tells of grants of land made to the Temple by Ptolemies VI and VII. This also is in the hieroglyphic and demotic.

On the great pylon there is an inscription left by the French expedition in February, in the seventh year of the republic, towards the close of the XVIII Century, stating that under Desaix they reached this point in pursuit of the Mamelukes. In one of the chambers in the Temple of Isis the scientific members of the same expedition recorded the latitude and longitude of the island.

Another noteworthy inscription near the great court commemorates the bravery and sacrifice to the death of certain English officers and men in the Soudan campaign.

Theodosius, the Christian emperor of Rome, published his famous decree abolishing the pagan religion about 383 A. D., but 70 years after the worship, against which it was particularly aimed, was still continued in the celebration of the mysteries of Osiris and Isis by priestly families at Philæ, as we learn from a Greek inscription in one of the chambers. It seems to have been the last spot on earth where for hundreds of years after the coming of Christ the old, old cult still lived. As we have seen, Christianity finally reigned supreme, and the old temples resounded to the songs and prayers of the disciples of Christ. Then came the Arabs and with them Islam, which has held its sway over the land to this day.

Entering the great pylon to mount to its top a diminutive native boy, perhaps 3 or 4 years old, attached himself to the writer and pattered along close behind all the way up the steps. He carried one of the curiously woven palm leaf fans, never spoke, but watched as if one of the old guardians of the place had come again as a child. He wore a large flat silver amulet over his breast. Standing dangerously near the edge of the great gateway he looked off on the scene of beauty, then silently followed the strange being from another land down and

about the court. When at last, before stepping in the boat to leave the Island, the tourist offered him some piastres for his fan, the child began to cry and ran, sobbing, to his father, who stood watching not far away. And here we may find a suggestion of the compensations for the passing of Philæ. For ages long the common people of Egypt have been oppressed. The yoke laid on the children of Israel is but a type of the sorrows known now and again by those who too often were forced to maintain the wicked splendors of the courts and carry on bloody wars at their master's whims. But a few decades ago the corvee was still in force, and living men have seen the slaveries under the Khedives. Heavy taxes with no receipts are of but few years ago. Now, the day of the Fellaheen has come. With the justice of the English has entered prosperity. The Assouan dam may mean the hiding of the beautiful and sacred Isle, but it means for the little child who pattered over its ruins a chance for life, for education, and happiness, such as his fathers never knew. For his sake and the sake of countless others yet to live in the narrow confines to which the Nile gives life, let us, while rejoicing in all the treasures of the past, rejoice in the new achievements the more. The stone bulwark, in the light of the wise word of Socrates, is after all more beautiful than the ruined temples because more useful.

If the Island sinks beneath the waves, it will rest there a Nile gold treasure undisturbed by covetous Nibelungs. It will abide throughout the years a perpetual charm to memory and imagination; its story a theme unsurpassed for some master's music-drama.



EGYPTIAN SCARAB

SOME UNKNOWN FORMS OF STONE OBJECTS *

WARREN K. MOOREHEAD.

THAT we need an archæologic nomenclature no one will deny. Particularly is this emphasized when one views the multitudinous stone artifacts and unknown objects which fill the cases in our museums. Some of these by their shape testify as to the purpose for which they were made. Others are of fantastic and unusual forms, are wrought from shales, granites or quartzes and because our ancestors made use of nothing just like them we cannot conceive by comparison (or *lack* of comparison, rather) aright concerning them. For years they have remained an enigma.

The light of history fails to aid us. Such specimens as are here illustrated have not been found elsewhere in the world. Earliest explorers and travelers in America allude occasionally to stone pendants worn by the natives, but do not specify what kind. A student cannot determine from these early narratives whether a small slate ornament, a large winged-perforated object or yet another form is meant. The historical references are vague; they do not help us. So far as my reading extends, none of them assist in solving the problem. If there are references that clearly define the use of winged-perforated stones, and I have overlooked them, then I stand corrected. Manifestly, we must depend on the field testimony and follow the natural history method in treating of the specimens themselves.

Archæologists, for the most part, are silent on the subject. Holmes, Rau, Beauchamp, Fowke and others make brief remarks. Cushing had prepared a paper on such forms as are here presented, but no one seems to know what became of it—an unfortunate thing, most certainly.

Several museums possess fine series of the winged-perforated class. There is a comprehensive exhibit at Columbus in the joint museum of the Ohio State Archæological and Historical Society and the University, and also a large series in the Andover Museum. These collections comprise unfinished as well as completed types. It was my purpose at Columbus to secure as many of the objects as possible—particularly of those in which the evolution of the type was marked. In the Andover collection there are about 600 of the shapes presented, and Mr. Mills informs me that his museum now contains 1,000. With these 2 series I am more familiar. In an inspection of the Smithsonian, New York and Peabody collections one observes many variations, and there are forms quite different, but it is best to confine the discussion to the illustrations.

Plate I shows 4 unfinished specimens of the winged type. In none of them is the drilling begun. It was the intention of the aborigines to complete the pecking, grinding and polishing before attempting the perforation. We can readily understand the wisdom of

*A preliminary paper.

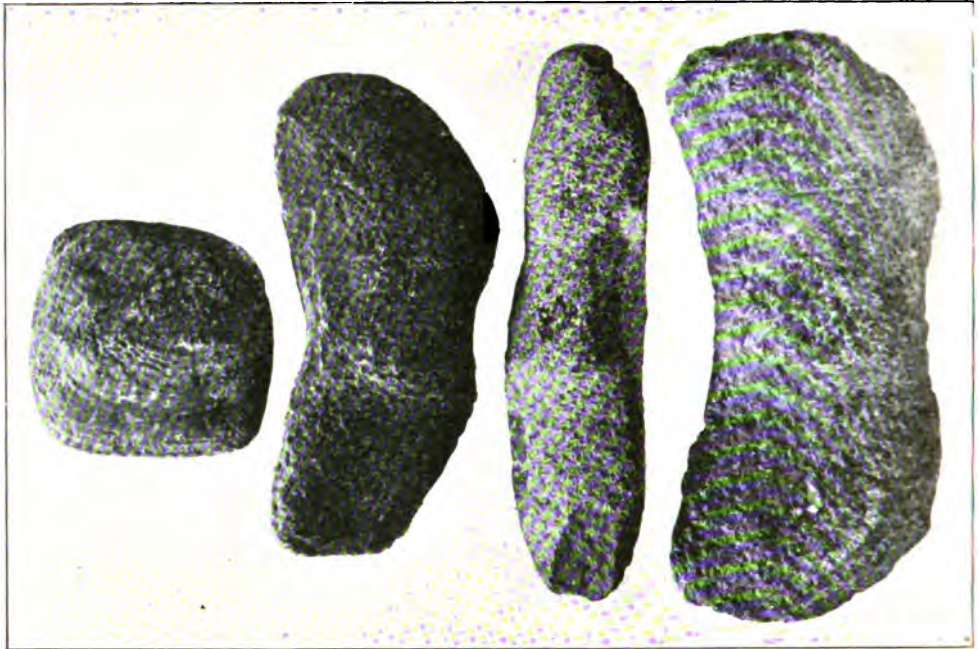


FIGURE I



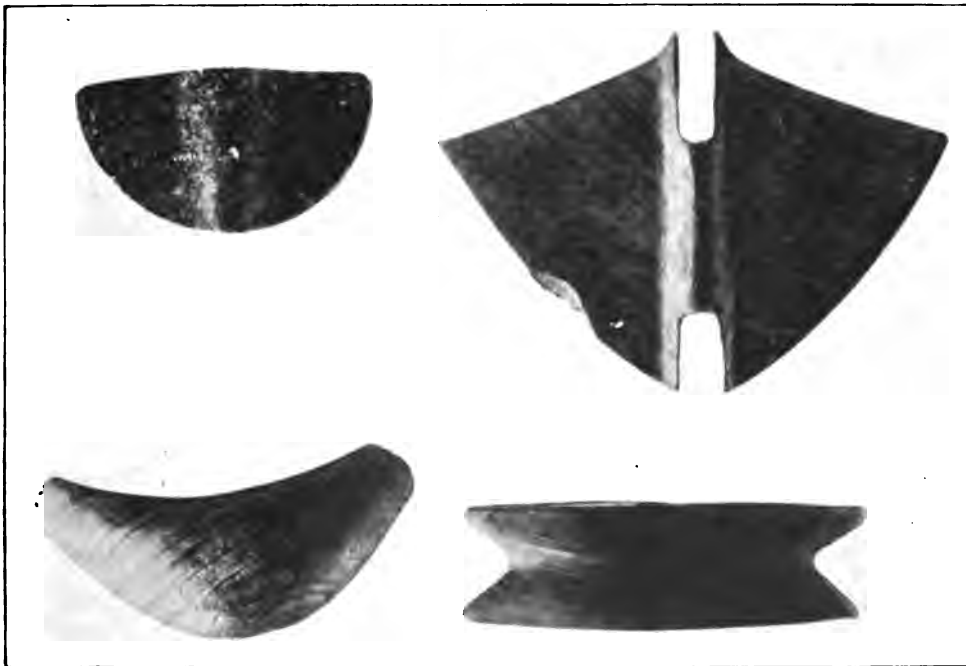
FIGURE II



B
D

FIGURE III

A
C



D
C

FIGURE IV

A
B

their action. A thin and delicately finished specimen is drilled with safety, whereas if first drilled it is weakened and subsequent pecking or grinding might destroy it. The rougher or heavier work, in most cases, was done first.

Selecting a block of slate or other banded and bright-colored material the workman roughly fashioned it, using the ever-present hammer-stone, holding the block edge uppermost; that is, the grain of the stone parallel with his body. He struck to right and left and then turned the stone over and repeated the process. Not unlike the first chipping on a block of flint is this preliminary work. Indeed, the processes are almost identical. A sharp pointed stone is used in pecking the specimen into the form presented by the 4 objects on Plate I. The manipulation is simple and consists of thousands of gentle blows. Grinding follows and last of all the polishing.

Reed drills, I think, were preferred to others of flint or bone. The drilling in the majority of specimens is very even and true. Some unfinished types in every collection contain cores—clear evidence as to the use of hollow drills.

The left-hand figure in Figure I is from Indiana, the other 3 were found on Shimer's farm, Martin's Creek, Pa.* In the secondary stage the slate-bands scarcely appear, and it is only when the polishing is complete that they are brought out clearly.

In Figure II, No. 18,769, from Ohio, is almost ready for the grinding. No. 18,905, from Ohio, and No. 18,678, from Indiana, have been pecked and the grinding is partly completed. The unnumbered object [Ohio] is ground and now ready to be polished.

In Figure III, specimen A is finished. B is all complete save the perforation—as is C. D is polished and drilled. All are from Northern or Central Ohio.

Figure IV shows 4 completed types. A, the "butterfly," is from Southern Ohio. No. 13,507, of granite, was found near Cairo, Ill. B and C are from Ohio and made of slate.

Figure V is the New England type of "butterfly" in slate. Locality, near Burlington, Vt.

The wings are more rounded than in the Ohio Valley types. Indeed, this is more like the Southern form. The winged-perforated

*Illustrations are from objects in the collection of Phillips Academy, Andover, except where otherwise stated.

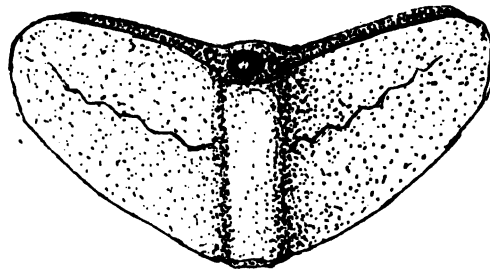


FIGURE V

stones found in the South have short, broad wings, the edges gracefully rounded. The material used is often blooded quartz.

Figure VI, introduced by way of comparison, is quite different from the broad winged types and may, possibly, at some future time, when these objects are better understood, be found to convey a different meaning. They are from Western Indiana, of slate and well polished. Does the larger specimen typify horns in stone?



FIGURE VI

Figure VII is from Mr. Hamilton's collection, Eastern Wisconsin. Material, banded slate. From a small, oval slate bead (drilled) we can build up a graduating series until the thin large winged "butterfly" form is reached. Yet all of these do not occur in the same locality. These points must be taken into consideration—the geographical distribution—in the study.



FIGURE VII

Figure VIII shows two slate objects also different from the common form. As in all cases, the specimens are curved, but no one knows whether the specimen was mounted with the arms up or down. This type is not common.

Figure IX shows the Wisconsin types (some of them) from the Wisconsin Historical Society collection. The "butterfly" might pass for one from the Ohio Valley, but the two upper specimens are seldom found in the Ohio-Indiana region. Materials; slate.

These are a few of the many forms of "unknowns." One type

graduates into another, and it is impossible to draw a sharp line of demarcation.

It was said of that strange form, the bird stone, that it was seldom met with outside of the Iroquois region. That statement may or may not mean much. Of these, that claim cannot be made. They cover a



FIGURE VIII

wide range, and excepting the "butterfly," have been found in mounds and in gravel interments. The shape may vary, but the concept is the same whether the winged-perforated object comes from Wisconsin or Kentucky. How did this peculiar form originate? From the north did it spread to the east and south, or vice versa? These are questions easy to ask and difficult to answer.

The modern tribes know nothing concerning them. That they mean more than mere ornaments nearly all observers concede. Is it possible for us to ferret out their correct interpretation? One thing is certain, the variations emphasize our extreme poverty concerning an archæologic nomenclature. Our Latin scholars should give us terms, so that we can intelligently and specifically deal with these and other unknown forms.

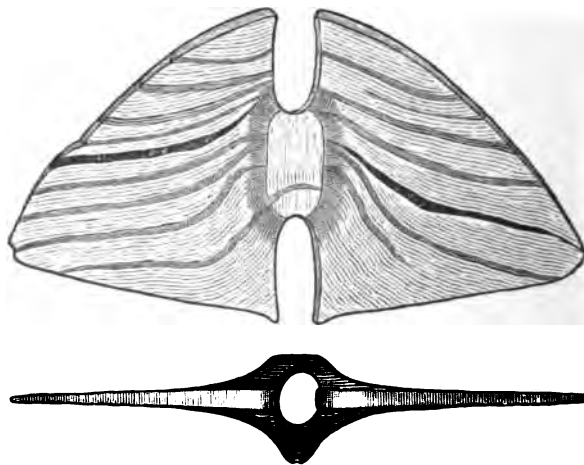


FIGURE IX

THE EXPLORATION OF THE POTTER CREEK CAVE, CALIFORNIA*

IN California the limestone deposits contain numerous caves which have afforded favorable opportunities for the entombment of human remains and of Quarternary fauna of the Pacific Coast. Although much valuable evidence has been obtained from the European caves as to the fauna of the Quarternary period, and the existence of man at that time, very little attention has been paid the caves in North America, which might furnish similar evidence. The University of California has taken the lead in this work and has published a full report of the results of the first cave which has been scientifically explored by them, that on the north side of Potter Creek, California, about 1 mile southeast of the United States fishery station at Baird, on the McCloud River.

This cave was discovered in 1878 by Mr. J. A. Richardson, who found a skull of an extinct species of bear; however, he did not descend into the lower chamber. The cave was rediscovered by Mr. E. L. Furlong in 1902, and that year and during 1903 the Department of Anthropology of the University of California has carried on the explorations with a view to determining the existence of man in Quarternary times on the Pacific Coast.

DESCRIPTION OF THE CAVE

The cave lies in a belt of Carboniferous limestone, at an elevation of 1,500 ft. above sea level and 800 ft. above the McCloud River at the mouth of Potter Creek.

The system of galleries forming the cave trends in a northwest-southeast direction, approximately parallel with the strike of the McCloud limestone [the carboniferous limestone in which the cave is located]. The arched entrance communicates with a smaller chamber, through which admittance is gained to a narrow passageway. Beyond this point the explorer must depend for light on lamp or candle. Following this passage to the left, it is found to terminate abruptly on the margin of a great pit. Here a convenient stalagmite pillar offers a secure point of attachment for a rope ladder. A vertical descent of 42 ft. affords entrance to a room 107 ft. long and about 30 ft. wide at its widest part, with the roof rising about 75 ft. above the lowest point of the floor. Both walls of the chamber slope towards the west. The west wall overhangs, and is fringed with numerous massive pendants.

Forming the floor of this great room were two fan-like deposits of earth and stalagmite-cemented breccia, sloping from opposite ends of the chamber and coalescing at their borders. Above the apices of the fans rose almost vertical chimney-like openings.

Ascending the chute above the apex of the northwest fan by the rope and ladder, a point was reached, 41 ft. above the earth floor, where a small

*The paper, of which this article is a condensation, appeared in Vol. II, No. 1, of the University of California publication, *American Archaeology and Ethnology*, Prof. William J. Sinclair, being the author.

arched cavity communicated with an earth-choked fissure leading toward the surface. Live pine roots were protruding from the clay filling the fissure. On the hillside above, a depression in the limestone, filled with yellow earth and supporting a vigorous growth of brush and one or two young pine trees, may represent the continuation of the fissure toward the surface.

Above the apex of the southeast fan a vertical chimney sub-divides into several openings too small to follow. Leading off from this chimney a deep pocket-like hole was found, containing a large number of bones imbedded in a highly calcareous earthy matrix. A sheet of stalagmite covered the surface of both fans along the western side of the chamber. Four prominent rock masses rose above the even slope of the floor. The largest of these was in the form of an altar resting upon a base of crystalline stalagmite. Above the altar a great stalactite hung from the roof. Two broad benches of white calcite, rising above the floor, were overlapped by the stalagmite sheet. A large fallen block, fringed with pendants and partly imbedded in the surface stalagmite and clay lay against one of the benches. A record of Mr. Richardson's visit was found on this block, together with the names of several other visitors. Loose blocks of limestone were scattered over the surface of both slopes, especially that in the southeast end. Bat excrement had accumulated over a part of the floor, reaching a depth of a foot and a half along the east wall. It was in the stalagmite floor of this chamber that the bones collected by Mr. Richardson were found. * * *

ORIGIN OF THE CAVE DEPOSIT

With the exception of the stalagmitic growths and fallen blocks, the entire cave deposit was brought in through the vertical chutes, which are situated above the apices of the alluvial fans, and through other openings, which have been more or less completely closed by the formation of calcite growths. These openings still permit the entrance of water after several days of rain.

Excepting the chocolate-colored mud and the volcanic ash, which show every indication of having been laid down in shallow, water-filled basins, the structure of the main deposit is that of alluvial fans, over which successive accumulations arranged themselves with reference to the surface slopes, without involving much water as the stratifying agent.

Numerous gravel layers occur in the deposit, which represent halts in the process of accumulation during which sheets of stalagmite began to form in the most favorable places along the west wall of the chamber. These furnish the only data as to the rate of accumulation.

Surface soil was probably added during each wet season, while earthquakes may have detached some of the larger fallen blocks. Aeolian agencies were effective in transporting the fine volcanic ash, which is found in deposits varying from 0 to 1½ ft. in thickness. This ash is very pure and probably was carried by the wind from some of the numerous volcanic peaks to the north or east, and must have entered the cave through some of the larger openings. The fans were also added to by dry clay and loose rocks, which fell through the openings from the surface.

CHARACTER AND MODE OF INTRODUCTION OF ORGANIC REMAINS

Bones were found in all the strata explored excepting the volcanic ash and the chocolate-colored mud. Part of the skull of an *Arctotherium* and



INTERIOR OF THE MAIN CHAMBER OF POTTER CREEK CAVE. LOOKING
TOWARD THE SOUTHEAST FROM THE TOP OF THE EARTH SLOPE IN
THE NORTHWEST END

[Loaned by the University of California]

some remains of *Ursus* lay among the loose rocks on the surface of the south-east fan. Additional material was secured from the stalagmite on the surface of the slope in the northwest end.

The majority of the specimens collected are dissociated limb bones, jaws, teeth, and indeterminate fragments. Complete skeletons were not common. Associated parts of the skeletons of a few squirrels and wood-rats, a snake (*Crotalus*), and a bat were found in the gravel layers. In addition to these, several complete limbs of *Arctotherium simum*, with all the elements in their natural positions, were discovered imbedded in soft clay, in the main chamber. Associated with these were various parts of the skeletons of several individuals of this species.

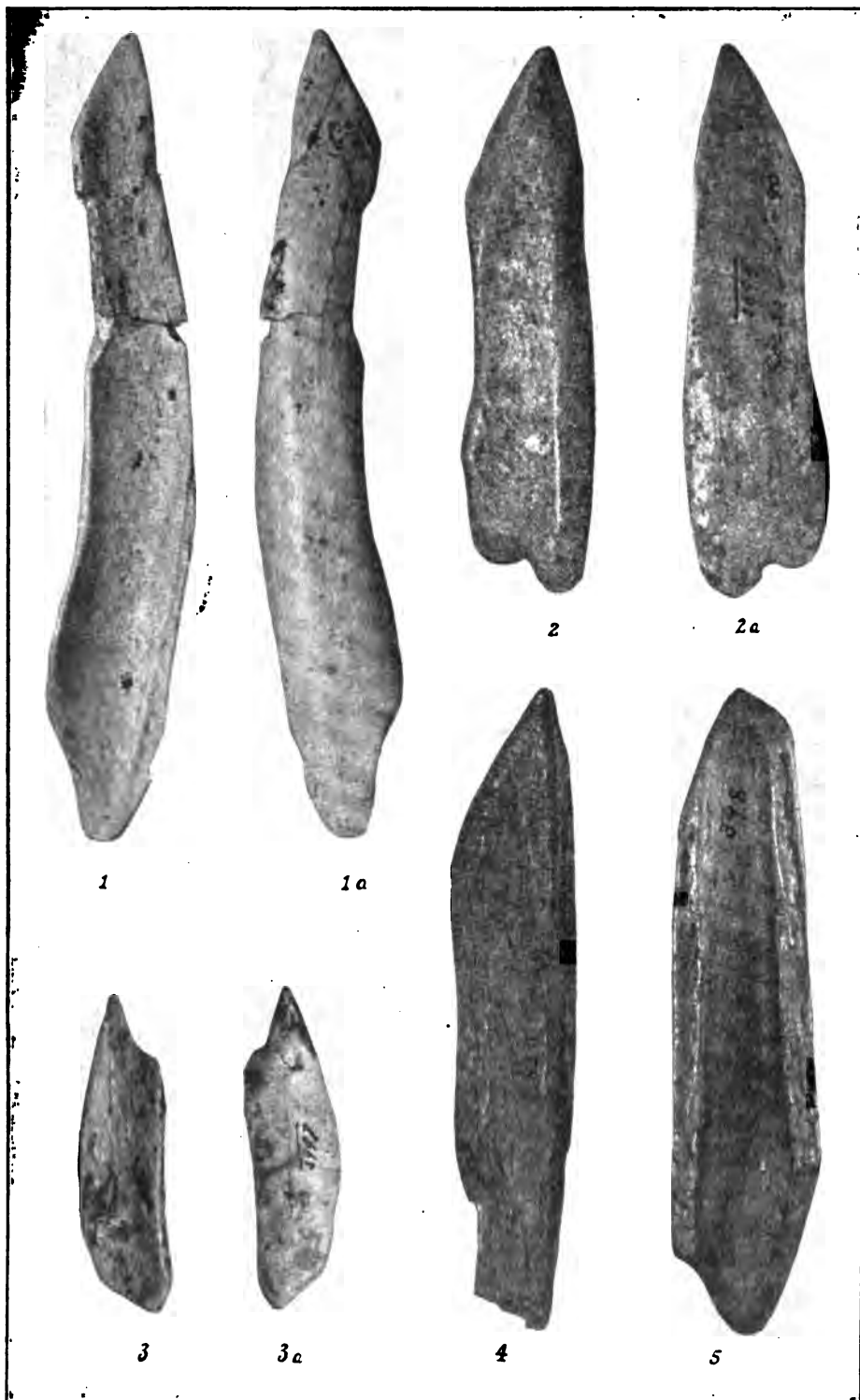
In all cases the bones have lost their organic matter completely, adhering to the moistened fingers like kaolin. Some of them are weather cracked, indicating that they lay for a time on the surface. The decay of bones in the cave is exceptional, but has been noticed at several places, where they were found reduced to a fine yellow powder. Occasionally some of the large limb bones were found broken across where they had become softened by percolating water and were unable to support the weight of the earth above them. Many of the bones have been gnawed by rodents.

Apart from fragments, over 4,600 determinable specimens were collected. This material requires no preparation except to wash off the adhering clay. The bones are usually white, but often show yellow and faint blue discolorations. Those from the superficial layers of the upper stratum [which is composed of clay with lenses of gravel] are often blackened.

It is difficult to see how such a variety of animal remains could accumulate in the cave, as the number of individuals of the larger forms represented by dissociated parts is considerable. There is little definite evidence indicating that *Arctotherium* lived in any of the existing galleries, and, as it could not easily have climbed into the chamber where its remains were found, it is possible that it fell in, but not necessarily by way of the present entrance. There is nothing to indicate that a catastrophic event destroyed large numbers of animals in this vicinity. The cave seems to have remained open for a long time, receiving bones swept in by rills during wet weather, and the remains of such forms as accidentally fell in. It is possible that the *Arctotherium* inhabited a den adjoining the large chamber, and that from this, bones found their way into the cave. The edges of some of the larger bone fragments are flaked off in such a manner as to suggest that they might have been broken by the powerful teeth of this great carnivore. No trace of such a den can now be found, owing to later erosion, which dissected the surface of the region.

RELICS OF POSSIBLE HUMAN ORIGIN

Human remains and implements were carefully sought during the whole course of excavation in the Potter Creek Cave. During the first season's exploration several polished bones were found, which bear a striking resemblance to rude implements. Three typical specimens are represented, natural size [in the accompanying illustration]. The largest of these (Figs. 1 and 1a) is pointed at both ends, with indications of beveling at one extremity. The whole fragment is polished. The second specimen (Figs. 2 and 2a) has the edges on either side of the point beveled and polished, and shows a distinct notch in the broad end. The remaining edges are rounded and polished. This specimen was found embedded in soft clay, between 80 and 90 in. beneath



FIGURES I-3A. IMPLEMENT-LIKE BONE FRAGMENTS FROM POTTER CREEK CAVE (NATURAL SIZE). FIGURES 4, 5. BONE IMPLEMENTS FROM THE EMERYVILLE SHELL MOUND (NATURAL SIZE).

[Loaned by the University of California]

the surface. In an adjacent section several teeth of an extinct ungulate, *Euceratherium collinum*, were found at a level 6 ft. above the implement-like piece of bone. The considerable depth at which the specimen was found in undisturbed earth and the presence of remains of an extinct species above it, indicate that it is not of recent origin. The third specimen (Figs. 3 and 3a) is sharply pointed at one end, both surfaces are polished, and the edges rounded. These polished bones closely resemble many of the rough implements from the shell mounds of California. Figures of two of these implements, reproduced from the plates accompanying the manuscript of Dr. Max Uhle's report on the exploration of the shell mound at Emeryville, are given in Figures 4 and 5. Dr. Uhle believes that these implements were originally splinters accidentally formed in breaking up long bones. Favorable pieces were selected because they had sharp points and these were polished in use. Often the point has been beveled by rubbing on one side.

To eliminate as far as possible all question regarding the nature and origin of these polished bones, every fragment encountered during the excavation was preserved. These were carefully examined in the laboratory for traces of polish and any indication of cutting or rubbing to form a point or beveled edge. The result has been that a considerable number of specimens were found, showing all degrees of polish associated with much variety of form. Some of these fragments bear no relation to any known form of implement, and it is not easy to see how they could have been used. Many gradations exist between the irregular polished fragments and the implement-like specimens. This suggests the idea that they have all been made in some other way than through the agency of man, and that the rough, implement-like form is purely a chance occurrence. It is therefore important to inquire whether the wear and polish could have been produced by natural means. In one or two instances polished fragments were found associated with limestone gravel in small rock-rimmed basins, where they had been exposed to the action of dripping water. The association of polished bones with drip-washed gravel suggests that some of the worn bones found in the clay may have been abraded in pot holes by this means, or by rill action, before they were entombed.

While the explanation just given may readily apply to the irregularly-shaped polished fragments, the beveled edges and notched base of the specimen shown in Figure 2 convey a very strong impression of definite purpose controlling its fashioning. On the other hand, the writer does not feel justified in positively asserting the human origin of this relic, believing that we require stronger evidence than it has yet been possible to obtain before such a statement is made.

A large part of the material collected consists of sharp-edged bone splinters. These are found at all depths in the bone-bearing deposits, and in all parts of the cave. Many of the splinters occur low down in the deposits and are associated with remains of numerous extinct animals. They resemble the fractured bones from the shell mounds along the coast. We can conceive of these splinters having been formed in a number of ways. They might have been produced by large bone-crushing carnivores, but well-marked traces of gnawing, excepting those referable to rodents, have not been observed on these fragments. In some cases, bones may have been fractured by the impact of their dropping into the cave, or by heavy stones crushing down upon them, but these explanations can not account for the presence of the large

number of sharp-edged splinters found, without having some very definite evidence in their support, and this has been obtained in only a few cases. Fractured bones were found near the entrance in the upper gallery, where the distance from the surface is small. Again, bones may have been broken by striking against the irregular walls of the chutes, through which much of the cave earth entered. Regarding this, it may be said that fragile bones were often recovered entire, while most of the splinters were produced from the fracture of large limb bones. Furthermore, the percentage of abraded specimens is much smaller than would be required by this theory, as most of the splinters still have sharp edges.

Another possible explanation is that they were produced on the surface of the ground outside the cave by the process of weather cracking. Only a few could have been formed in this way, and they would in the majority of cases have the edges rubbed down in the process of being carried into the cave.

Since other suggestions fail to explain the presence of these splinters satisfactorily, it is not beyond the limits of possibility to suppose that they were made through the agency of man. In the case of the material from the shell mounds, the bones were broken to extract the marrow by pounding with a heavy stone, resulting in the production of splinters identical in character with those from the cave. A difficult point to explain by this hypothesis is the presence of these fragments in all manner of inaccessible places, as in the pocket in the east wall, where they could not have been thrown, and must have been carried down through narrow rock channels, now closed by stalagmitic growths. Possibly they were washed in from a refuse heap or the accumulation in a rock shelter. The uncertainty of the evidence must be advanced in this case also. At the present time no explanation of the origin of the fragments has been discovered which accords with all the observed facts, though the suggestion that they were made by man appears, on the evidence of occurrence, to be open to the fewest objections.

In the clay flooring the passage leading back to the top of the swinging ladder, a sharp-edged stone chip, flaked from a river worn pebble, was found associated with the charcoal mentioned as occurring in the clay. A *Margaritana* shell, several bone fragments, a tooth of a large ungulate, *Eucera-therium*, and a fragment of a mammoth tooth were associated with the stone chip. The charcoal did not occur as a definite stratum, but was scattered in small fragments through a fine clay from 6 to 18 in. beneath the surface of the floor of the gallery. It seems to have accumulated with clays which were carried in from the surface by rain water percolating through fissures in the limestone. It can hardly be considered as certainly representing a local hearth deposit, though such may be the case. It is also possible that it is the result of Quarternary forest fires and has been washed into the cave.

A careful study of the cave collection has failed to indicate the presence of human bones. Early man might have been in existence in the region and yet his remains have escaped preservation in the cave. Those chambers in which the ossiferous deposit attained its maximum accumulation may not have been easily accessible to man or may have been so far from the entrance that he would have preferred not to visit them frequently. A fragment of modern Indian basket work was found on the surface near the top of the ladder, indicating that the entrance chambers may have been used occasionally in recent years as a place of storage. There was nothing to indicate that they had been so used in prehistoric times. It seems probable that the main chamber

of the cave originally had free communication with the surface, serving as a pitfall to catch unwary mammals. The accumulation of human remains in such a pitfall would be of rare occurrence, depending upon accidents against which the superior intelligence of man would protect him.

The cave fauna is not too old to negative the idea of contemporaneity with man. There can be little doubt that if man reached the North American continent during the Quarternary it was by way of the land bridge, which then united Alaska with Siberia at Bering Strait. This land connection permitted the migration of many of the mammals now common to the most northern parts of both continents.* It seems reasonable to expect that some of the earliest traces of man in North America would be found on the Pacific Coast, where the climate was congenial and food supply abundant, while the eastern portion of the continent was submerged beneath the ice sheet. Glaciation in California has never been general, occurring only at the higher altitudes. At its maximum the coast was almost as well adapted to human habitation as it is to-day.

Although the evidence found in the Potter Creek Cave does not prove the existence of man on the Pacific Coast during Quarternary time, yet it is very suggestive, and should lead to the careful examination of many other caves on the coast, some of which may throw a vast amount of light on the age of man in the western part of our continent, and possibly give an important clue as to the migrations of man in this region.

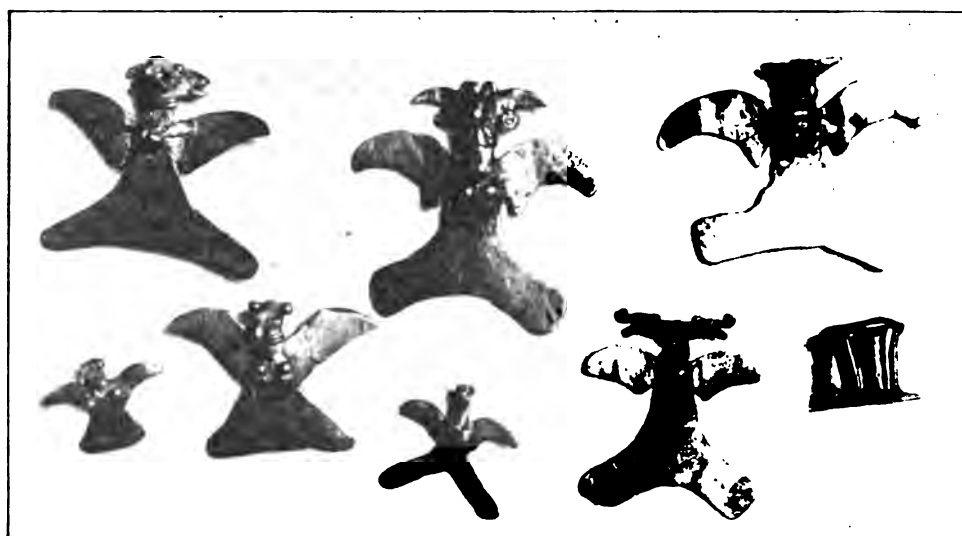


GOLD PLATES AND FIGURES FROM COSTA RICA

IN THE scattering reports of objects of prehistoric character which occasionally come from Costa Rica and other points in Central America we have brought to our attention the great possibilities which exist in that country for the student of archæology, anthropology, and ethnology. Further research in this country will doubtless throw much light on the connection which the ancient civilization of our Southwest and Mexico had with the ancient South American centers of civilization.

A Spanish trader, Don Juan Lau Don by name, is one of the few favored individuals who is allowed access to some of the central sections of Costa Rica, for the Indians here are very unfriendly to foreigners. The trail which he follows in crossing over from the Atlantic to the Pacific Ocean is about 150 miles long and very difficult. On the Pacific side it follows a small river, which empties into the Gulf of Dulce. Some time ago, after a series of heavy rains, this stream overflowed its banks and in one of the bends washed out a precipitous bank, uncovering a large number of ancient tombs, in which were bones, pottery, carved stones, and gold objects. The natives recog-

*R. Lydekker. *A Geographical History of Mammals*, p. 337, pp. 346-348.



GOLD OBJECTS FROM COSTA RICA



GOLD PLATES AND OTHER OBJECTS IN GOLD FROM COSTA RICA

nizing the intrinsic value of the gold, gathered the specimens and traded them to the Spaniards.

According to his report, the graves from which these objects came were situated 20 ft. below the surface of the ground. At least half of this superimposed earth must be an accumulation since the burials were made and so roughly represents the time which has elapsed since the high civilization which produced the finely carved and beaten gold objects existed in Costa Rica.

Don Juan Lau Don reports that these tombs were very carefully constructed. The crypt in which the body was placed is approximately 3 ft. wide by 7 long and 3 high. The bottom and sides were lined with stone and a large stone slab or else 2 smaller stones, carefully cemented together, formed the cover which was placed over the top. From these graves, pottery, stone implements, and carvings, as well as gold images were recovered, however, as the gold was the only find which interested the natives; that is, all which we have preserved. It is to be hoped that the river will not cut away the whole of this ancient cemetery before it is possible for archæologists to make a careful systematic study of this cemetery and the surrounding region.

This valuable collection of gold objects was purchased by the Spaniard from the natives and has now come into the possession of Mr. George C. Dissette, of Glenville, Ohio, who is going to keep the collection together as a whole and not allow it to be scattered. The objects are all of pure gold and show the exceedingly high artistic taste, as well as the great skill of goldsmiths of that time. In the collection there are 2 gold plates, one about the size of an ordinary tea plate and of very thin gold; bearing simple circular designs. The other gold plate, much smaller in size, is plain, without decorations. These plates show the marks of the hammer, while the smaller and more carefully designed images show marks of the tracing tool, where the design had not been completed. In the case of one of the images, probably an idol, there is some inlaid work. The eyes, made of small greenish stones, have been inlaid.

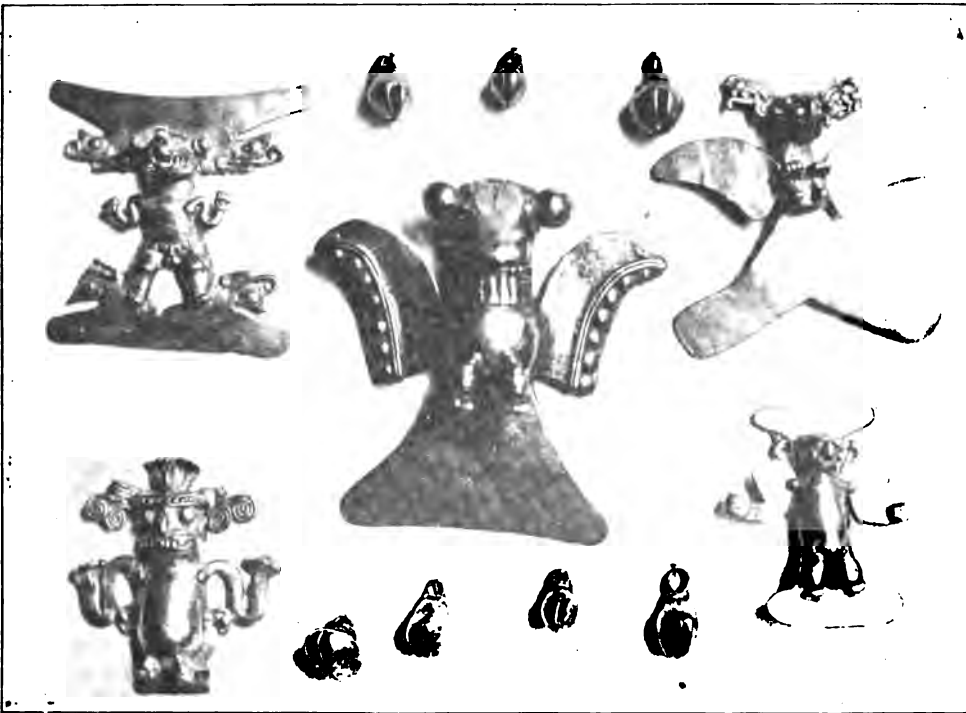
The execution of the carvings in the images is very fine and delicate. Some of them appear to have been used as amulets and show the hole through which the string was run for attaching it. Numerous bird-like figures occur, the object of which is hard to surmise, but some were doubtless used as charms or amulets.

There are a number of small gold bells with nuggets of virgin gold for their clappers. Another series representing frogs, lizards, and other small animals show very skillful designing. The study of the accompanying illustrations will give some idea as to the character, variety, and exquisite workmanship of these gold objects.

Perhaps the most interesting fact is the light thrown by these images on the high development of the goldsmith's art in times far antedating the discovery of America by Europeans. Not only was



GOLD FROGS AND LIZARDS FROM COSTA RICA



GOLD IMAGES AND BELLS FROM COSTA RICA

the virgin gold beaten into various shapes and forms, but a method of soldering gold was evidently known. By our present method of uniting pieces of gold, solder of much less purity than the parts to be united is used. In time this inferior gold cement corrodes and makes the joint painfully evident. In the case of these images the joints, even after the long centuries, which they have lain buried in the earth, show no traces of corroding. By testing, Mr. Webb C. Ball determined the fact that the cement used was scarcely below 18 karats fine, while the parts cemented were virgin gold. Mr. Ball further observed that "these ancient workmen were careful that the joints should have as great strength as the separate parts. Small bands are to be seen across those places where small pieces were soldered to larger ones. The result is that the entire piece with its intricate embellishments seems to be one."

That the makers and users of these gold objects were not the predecessors of the present Indians is evident. The relation which existed between these people in Costa Rica and the Incas of Mexico, the pueblo dwellers of our Southwest, and the prehistoric nations of South America is a question which awaits settlement. The completion of the Panama Canal and the consequent opening up of the whole of Central America will place a special responsibility on all persons interested in early history and archæology, to create public sentiment to insure the scientific collecting of facts and the preservation of as many ruins as is practicable, before they have been despoiled for commercial purposes. Not only the archæologist has a responsibility in this matter, but also the anthropologist and ethnologist, and, in fact, all educated persons.



EDITORIAL NOTES

THE DEVIL AND EVIL SPIRITS OF BABYLONIA:—Mr. R. Campbell Thompson's translation of Volume XV of Lusac's Semitic Text Series contains much of special interest concerning ancient Babylonian ideas as to the devil and evil spirits. Lusac's translation was from the original cuneiform texts, comprising 240 tablets and fragments. The redaction by the scribes of Assurbanipal has not, Mr. Thompson thinks, resulted in any considerable rewriting of the spells, and he is disposed to regard them as essentially unchanged from the Sumerian archetype in use 6,000 or 7,000 years ago.

The introduction classifies the kinds of evil spirits against which protection was needed, of which the most important were the *utukku* and the *ekimmu*. Both these words were used of disembodied human souls, and it does not appear whether there was any fundamental dif-

ference between the conceptions they embodied. The *utukku* was used of the ghost called from the under-world by the necromancer; but it seems also to have been applied to a ghost that lay in wait in desert places or graveyards. The *ekimmu* was also a restless spirit, the soul of some one whose remains were unburied or who did not receive from the living those offerings and libations, which, with the dust and mud of the nether world, formed the nutriment of the departed. In the one case the ghost never reached the "House of Darkness," in the other hunger and thirst forced it to leave its abode in Ekurra and seek on earth the food and drink which its descendants should by rights have transmitted from the upper world. The second reason for its return to earth was that it was entitled to fasten on any one who had been in some way connected with it in this life, and demand from them the rites that give it peace. The chance sharing of food, the mere act of drinking together was, we learn, enough to confer this rite. Probably hospitality was more honored in the breach than in the observance in Babylonia.

Another species of demon was the *alû*, which was supposed to hide in dark corners and, like spirits in general, to haunt deserted buildings. Another side of its activities brings it in close connection with the nightmare; it was supposed to steal sleep from tired eyes by standing at the bedside ready to pounce on the unfortunate who ventured to yield to his weariness. It was only half human, sometimes without mouth, ears, or limbs, the offspring, perhaps, of a human being and a *ghoulish lilitu*.

None of these spirits seem to have been able or willing to do men a serious injury. There were, however, others whose function it was, like *Ura*, the plague-spirit, and *Asakku*, the fever-spirit, to disseminate disease. Others, again, like the ghost of a woman who died in childbirth, were probably regarded as draining men of their life blood. At the same time the idea that the child would recall the mother to earth may be the foundation of this belief. The not infrequent custom of killing nurslings after the death of the mother may well have superstitious as well as practical grounds in Babylonia.

As an interesting parallel to a well-known European type of spell may be noted the Sumerian practice of repeating in the magical verses long traditional stories of the doings of their gods.

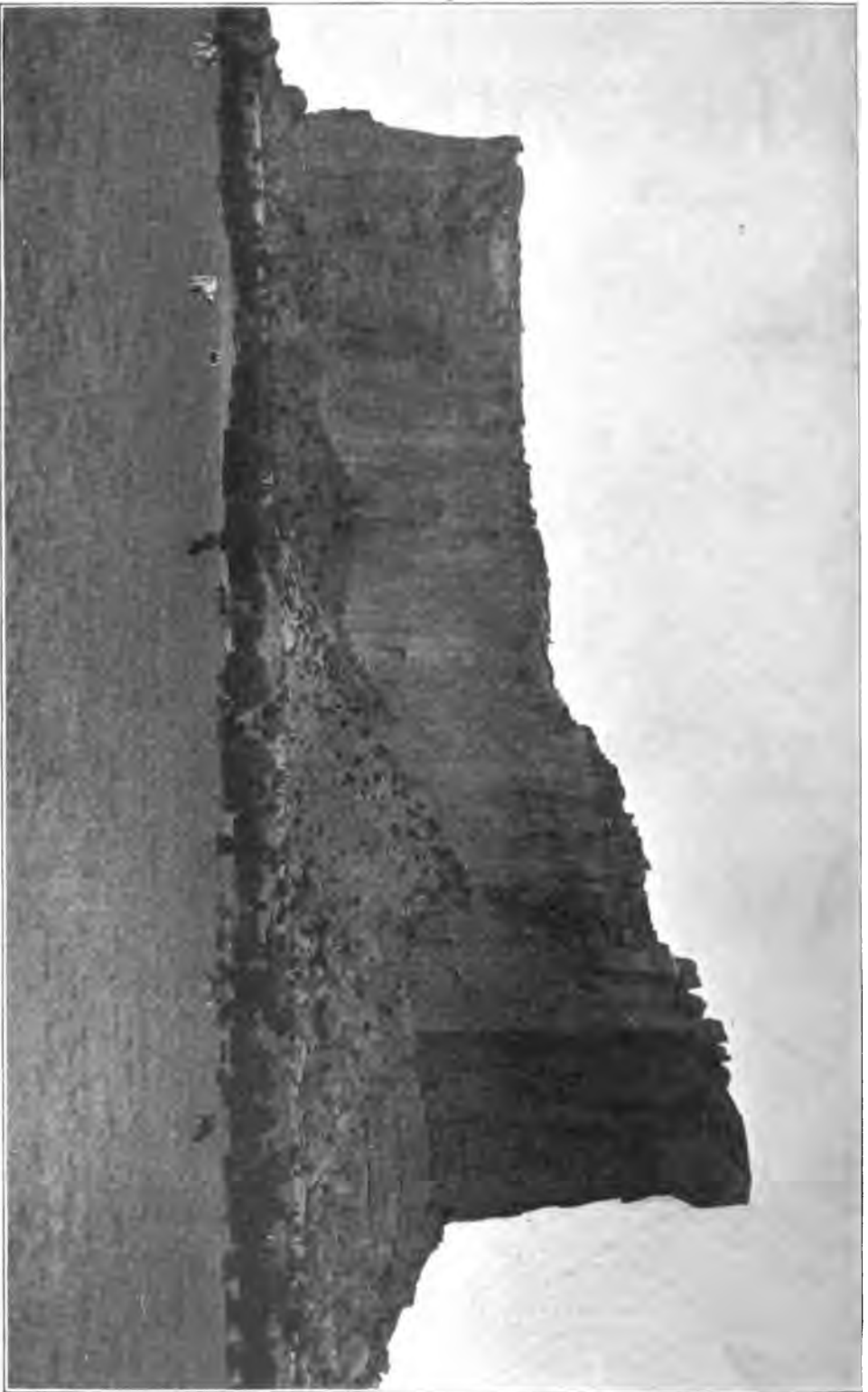
TWO EXHIBITIONS OF EGYPTIAN ANTIQUITIES:—Foremost among the exhibits shown during the summer in London is that at the Society of Antiquaries of the work done by Mr. Garstang during the last two seasons for a committee of ladies and gentlemen, including such well-known names in this connection as the Rev. William MacGregor and Mr. Hilton Price. The exhibits include many objects from the rock-hewn tombs of Beni Hassan, mostly of the XI and XII Dynasties, such as the magnificent coffin of Sebek-hetep-aa and high temple official, which is inscribed both within and without with texts from the Book of the Dead and kindred compilations. There is also the coffin in a more fragmentary condition of one Neter-nekht-aa, which contains a variant of some part of the famous Pyramid texts copied years ago

by M. Maspero at Saqqarah, which have thrown so much light upon the earliest religion and language of Egypt. Both these, of course, originally contained mummies, but as if to show that, even in conservative Egypt, one fashion of burial at certain periods replaced another, there are also to be seen here examples of what are known as "pottery burials." In one of these the body is laid, in the doubled up position common in Neolithic times, in a round earthenware pot with a lid. Mr. Garstang dates this with great apparent truth as belonging to the III Dynasty, and near to it is a similar pottery coffin, in which the body was laid at full length, marking the revival of the earlier method. Older than the pot is probably the burial in the contracted position, but in a square wooden box, bearing on its east face a row of small pilasters that may possibly have been the origin of the "facade," always found on the royal cognizance called by the Egyptians *srekh*, which showed that the deceased king had become identified with the god Horus.

Among the smaller objects are a most complete set of those doll-like figures which the pious Egyptian thought would procure for him by art magic the repetition in the next world of the scenes which they enacted in this. Thus we can see, beside bakeries and granaries, a representation of an Egyptian brewery in full working order, with one body of slaves preparing the malt, another putting it into the large pottery vessels in which it was left to ferment, and a third bearing away on their shoulders parts of the finished beverage. Here, too, are many slaughter houses, where large oxen are represented as being cut up for the kitchen of the master—the thigh, which was originally used for sacrifice, being, in most cases, carefully set aside. More elaborate still are the models of boats, some of them containing as many as 20 rowers, while in one appears a party of warriors playing chess or draughts on the poop. There is also an exceedingly life-like figure of a girl from market, bearing on her head a basket and in her hand 2 geese, which she grasps by the neck. But the gem of this part of the collection is a small wooden statuette of a man walking with the aid of a long staff, which for truth and delicacy of execution, as well as by its pose, recalls the famous statue known as the Sheik-el-Beled, to which it is indeed little, if at all inferior. * * *

For the professed Egyptologist, however, all these must yield in interest to the relics from Negadah, where Mr. Garstang, in a flying visit, went through the work of M. de Morgan, formerly Director of the Service des Antiquités, and succeeded in gleaning several things which had escaped the lynx eye even of that careful excavator. Here is the hitherto missing piece which nearly fills up the gap left in the ivory tablet of King Aha, now the glory of the Cairo Museum, which has led many enthusiasts to identify that extremely early king with the legendary Menes, first ruler over united Egypt. Here is also what appears to be a duplicate of the whole tablet, making clear what was before obscure, and rendering it possible to reproduce the whole inscription nearly as it left the hand of the graver. When this is done, and when Dr. Naville, who has already published an interpretation of the part discovered by M. de Morgan, has had more time to study it, we have no doubt that he or Mr. Garstang will be able to give a guess at its contents, and to clear up what is at present the most important point in Egyptian history. There are also many relics of the king hitherto called Marmer, which leaves but little doubt that he was in point of time a near neighbor to Aha, and that his name was probably Bedjau, which, as M. Foucart was the first to point out, is not far from the Boethos of Manetho.—*Athenaeum*, London.

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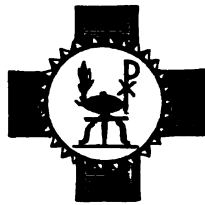
(Photo by Dr. Baum.)

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VOL. III



PART X

OCTOBER, 1904



HISTORY OF THE QUERES PUEBLOS OF LAGUNA AND ACOMA ✓

PART I

BY JOHN M. GUNN

WITH authentic history left us by the early Spanish explorers in this country I introduce the Pueblo Indians of Laguna and Acoma.

I have followed the accounts of these old "conquistadores" as long as they remained sovereigns of the province of New Mexico; then by the pale, flickering light of tradition traced the ancestors of these people into the dim past; if not to their origin, at least to a remote antiquity. Guided only by fragments of tradition (a word, a phrase, or certain features of their language), scattered here and there at long intervals along the path now almost obliterated, and as we follow (in imagination) their wanderings across the big waters, the home of the "Wä-wä-keh," to the "unripe" land; through the cane brakes, and forests, over plains and mountains, we feel for them a melancholy sympathy. They are the same in manners, customs, and beliefs as they were centuries before the haughty Caucasian trod the Western Continent, but at the dawn of the XX Century we see the signs of a change, and the time may be when the descendants of these Queres Pueblos will give to the world minds as great as the world has yet produced. Hoping that they may be guarded by that great Intelligence "Sitch-tche-na-ko" (the spirit of reason), to whom they

pray, I have gathered these old traditions and historic facts, which have survived the obliterating influence of time, and present the history of the Queres Pueblos of Laguna and Acoma.



MAP SHOWING THE VARIOUS SETTLEMENTS MADE BY THE QUERES ON THE NORTH AMERICAN CONTINENT

Laguna, village of the lake, though the lake has long been drained, and where the ripples once chased each other across an expanse of water 2 miles long by one-half mile wide, now wave fields of wheat and corn.

Youngest of the Keres villages, the exact date of settlement is indefinite. Certain, however, something more than 200 years have received the shelter of its walls and passed on to oblivion.

The Spanish records of the country put the date of settlement in the year 1699. De Thoma says, "The Queres of Cieneguilla, Santo Domingo, and Cochiti, constructed in the same year (1699) a new pueblo close to an arroyo, 4 leagues north of Acoma. On the 4 day of July, in 1699 this pueblo swore its vassalage and obedience, and received the name of "San Jose de la Laguna." But from other historical sources and traditions it is evident that it was settled several years previous to this date.

The first reference to this particular place is by Hernando de Alvarado, an officer in the expedition of Coronado. In his report to the general he says:

We set out from Granada (Ojo Caliente, one of the Zuni villages) on Sunday, the day of the beheading of John the Baptist, the 29 of August, in the year 1540, on the way to Co Co (Acoma). After we had gone 2 leagues we came to an ancient building, like a fortress, and a league beyond we found another, and yet another; a little further on, and beyond these we found an ancient city, very large, entirely destroyed, although a large part of the walls were standing, which were 6 times as tall as a man, the walls well made, of good stone, with gates and gutters like a city in Castile. Half a league or more beyond this we found another ruined city, the walls of which must have been very fine, built of very large granite blocks as high as a man.

Here 2 roads separate, one to Chia (Zia) and the other to Co Co (Acoma). We took the latter and reached that place, which is one of the strongest places that we have ever seen, because the city is on a very high rock, with such a rough ascent that we repented having gone up to the place. The houses have 3 or 4 stories. The people are the same sort as those of the province of Cibola; they have plenty of food, of corn and beans and fowls, like those of New Spain. From here we went to a very good lake or (Laguna) marsh, where there are trees like those of Castile.

From here we went to a river, which we named Nuestra Senora, because we reached it the evening before her day. In the month of September (8) we sent the cross by a guide to the village in advance, and the next day the people came from 12 villages, the chief men and people in order, those of one village behind those of another, and they approached the tent to the sound of a pipe, and with an old man for spokesman. In this fashion they came into the tent and gave me the food and clothing and skins they had brought, and I gave them some trinkets and they went off.

The river of Nuestra Senora flows through a very open plain, sowed with corn plants. There are several groves and there are 12 villages.

The houses are of earth, 2 stories high. The people have a good appearance, more like laborers than a war-like race. They have a large food supply of corn, beans, melons, and fowls in great plenty. They clothe themselves with cotton and skins of cows and dresses of the feathers of the fowls.

Those who have most authority are the old men. We regarded them as witches because they say that they go up into the sky and other things of the same sort. In this province there are 7 other villages, depopulated and destroyed by those Indians who paint their eyes, of whom the guide will tell your grace. They say that they live in the same region as the cows, and that they have corn and houses of straw. Here the people of another village came to make peace with me, and as your grace may see in this memorandum there are 80 villages there, of the same sort as I have described, and among them one which is located on some stream. It is divided into 20 divisions, which is something remarkable. The houses have 3 stories of mud walls, and 3 other of small wooden boards, and on the outside of the 3 stories with the mud walls they have 3 balconies. It seems to us that there were nearly 15,000 persons in this village. The country is very cold. They do not raise fowls or cotton. They worship the Sun and water. In some mounds of earth outside of the places where they are buried and in the places where crosses were raised we saw them worship there. They made offerings to these of their powder and feathers, and some left the blankets they had on. They showed so much zeal that some climbed up on the others to grasp the arms of the cross to place

feathers and flowers there, and the others bringing ladders, while some held them others went up to tie strings so as to fasten the flowers and feathers.

Here abruptly ends the report.

The lake of which Alvarado speaks, and which gave to the village the name of Laguna, was a short distance west of the Pueblo. Geological evidence shows that at some time, many years ago, a stream of molten lava flowed down the valley, following the river, and filling up the channel where the stream ran, between bluffs, thus damming the river in many places and forming lakes. Such was the lake at Laguna. It is evident that a much larger river than the present one once flowed through the valley, filling the basins formed by the lava flow and then pouring over the rocky obstructions, in time wore a new channel, through the solid lava, in some places a quarter of a mile long and 40 ft. deep, which must have taken ages to accomplish; the water being furnished in all probability by local glaciers, as there are signs of glacial action and moraines in the Zuni Mountains to the west. After a new channel had thus been formed and the lake drained there came a period of drought, and the beavers, taking advantage of the narrow channels, constructed artificial dams, again backing up the water and refilled the basins; such was the lake when Alvarado and his soldiers first passed through here.

When the Indians came to build the town the beavers were frightened away, but the villagers continued to repair the dam from time to time until the year 1850, when on account of religious disputes the people refused to obey the officers or work together in unity. The dam washed away and the lake was drained. The Spaniards named the stream, which supplied the lake, the Rio del Gallo, probably on account of the mud hens which infested these marshes and lakes in great numbers, and which have some resemblance to a chicken, but as no mention is made of any habitation, it is safe to say that there was no settlement here at that time.

Fifteen miles southwest of Laguna rises the great rock of Acoma, crowned by the ancient pueblo of the same name. Basking in the summer suns and swept by the winter blasts of centuries the old village, though now slightly in ruins, still smiles on the rugged mesas and fantastically shaped rocks with which nature has surrounded it, the great buttes and curiously eroded pillars, nearly all of which have some entertaining story of folk lore connected with them, and are sure to excite the imagination when viewed for the first time. The town was ever a source of wonder to the early Spaniards who visited the country. They wrote the name indifferently, Co-co, Acuco, Tutuhaco, Hacus. Acuco was the name most frequently used. This name was adopted from the Zuni pronunciation, as Prof. F. W. Hodge shows. The native name for the village is Ah-ko or Stche-ahko, a contraction of the word Stche-ah-ko-ki or Stchuk-ko-ki, meaning a rude form of ladder, formed by driving sticks into the crevices of a rock. The



(Photo by Dr. Baum)

THE PUEBLO VILLAGE, LAGUNA, NEW MEXICO

Acoma Indians have a peculiar habit of accenting certain syllables of a word and slurring the rest. Thus it may be seen how the word originated.

From the base to the summit the rock of Acoma is about 300 ft. There are at least 10 trails leading up to the village from the valley below, 2 of which it is practical to ride on horseback.

The date of the first settlement of Acoma lies away back in the dim past. There was a tradition among the Indians when the first Spaniards came into the country that their ancestors inhabited a valley about 12 miles north of Acoma, between the present Mexican village of Cubero and Mount Taylor, and that they were compelled to abandon their dwellings here and locate on the rock for protection against the constant raids of the Navajos and Apaches; this, they claimed, was 300 years before the coming of the Spaniards. This story is probable, as there are several ruins of pueblo villages in the valley.

Their stories and traditions show that at one time they inhabited the country to the west and south. There are extensive pueblo ruins in these parts not many miles distant from Acoma; the inhabitants, no doubt, being compelled to flee to the rock for mutual protection against their warlike neighbors.

There are numerous interesting ruins in the vicinity of Acoma;

most of these are located to the south and west of the village, and from 15 to 30 miles distant, but to the northwest of the Acoma pueblo, however, about 15 miles, are the ruins of a compact village covering a little more than an acre of ground. This ruin is popularly known as the old mission of San Rafæl, although there is no authentic history of any such mission having ever existed in this country.

What might lend credence to the belief is the fact that a Mexican in recent times unearthed a bell, which seemed to have belonged to some church paraphernalia. The story is that the missionaries who were located there had collected a vast amount of gold and silver, turquois, etc., and having to flee from the infuriated Indians at the breaking out of the rebellion of 1680, they buried their treasures in the vicinity of the old mission or hid it among the lava beds.

The Mexicans have done considerable digging near the ruin, hunting for the treasures, but nothing of particular value has yet been discovered.

It is claimed that there are several inscriptions on the rocks in this vicinity, which first led the Mexicans to think that there might be treasure buried there. The following is one of the inscriptions:

A M - O

d a ° h a

b ° e m

Another is in this form:

∞ v

And another like this:

∧

One of the most notable sights in the vicinity of Acoma is the enchanted mesa, 430 ft. from base to summit, with an area on top of about 12 acres. The Indian name for this gigantic rock is Kut-semuh, meaning he who stands in the door. The walls are precipitous, but there is one place where it is practicable to climb to the top by the aid of ladders. It is not probable that this butte was even inhabited. The interesting story told by Charles F. Sumis, the Indians say, is true, but applies to another mesa, which the Acoma Indians once inhabited far back in their history.

Although Fray Marcos de Niza was the first white man to visit Zuni and the first to give to the world a definite description of Acoma or Hacuco, as he called the village, Coronado's soldiers were the first Europeans to gaze on the wonderful pueblo, and although most of Coronado's army passed this way on their journey to the Rio Grande, Coronado himself did not see Acoma till 2 years later, on his way back to Mexico.

As these pueblos are closely associated with the early Spanish history of New Mexico, I will begin with the first explorations in the country. The history of these pueblos is like a trail; it has its beginnings and endings, crooks and turns, forks, branches, and crossings; in some places it is clear and easily followed, in other places it is dim, or totally obliterated, and the historian is compelled to grope around, with no land marks to guide him, nothing but a few fragments of tradition scattered here and there at long intervals. The authentic history of Laguna and Acoma begins with Coronado's expedition at Zuni. On August 29, 1540, Coronado sent Alvarado with a company of 20 men to explore the country to the east, taking as guide the war captain of Pecos, who, with 2 companions, had come to Zuni to see the white men. The soldiers named the war captain "Bigotes," meaning whiskers. The instructions to Alvarado were to return in 80 days, but arriving at the Rio Grande and exploring the country quite thoroughly, he sent a messenger back with the report which we have already seen. About this time word was received that Tristan de Arellanes would soon arrive with reinforcements and fresh supplies from Sonora, so Coronado decided to move on to the river. With this end in view he dispatched Garcia Lopez de Cardenas to intercept Alvarado on his return and pick out a suitable place to camp the army for the winter. As soon as Arellanes arrived Coronado placed him in command, with instructions to move on to the river, after resting the army 20 days, while Coronado himself, with a company of 30 men, instead of following the direct route which Alvarado had traveled, diverged to the south of Acoma in order to explore the country and visit a group of 6 or 8 pueblos at that time inhabited to the southeast of Zuni.

After a journey of 8 days of hardships, occasioned by cold and lack of water, Coronado and his little band reached the Rio Grande, near Isleta, and soon after joined Alvarado and Cardenas, 30 miles further north. The winter of 1540-41 seemed to have been very severe, but the Spanish suffered very little from the cold, being domiciled in comfortable houses. Castenada says, "As it was necessary that the Indians should give the Spaniards lodging places, the people in one village had to abandon it and go to others belonging to their friends, and they took nothing with them but themselves and the clothing they had on." But the Spaniards' clothing was wearing out and to provide new wearing apparel for his soldiers Coronado ordered the governor of Tiguex, a large pueblo close to where the army was encamped, to furnish 300 or more pieces of suitable cotton cloth. The governor agreed to furnish what cloth his people could spare, but suggested that the levy be divided among the different pueblos. Acting on this suggestion, Coronado sent his soldiers up and down the valley to collect the cloth. This turned out to be nothing less than a foraging expedition. Instead of taking what was given, the soldiers took what they wanted. At one of the towns one of the Spaniards got into trouble

over a woman, the wife of one of the principal men of the village. The Indians brought this grievance before the commander, but failed to obtain satisfaction. Concluding that there was no justice to be expected from the Spaniards they decided on a bold move, and one which, had it been successful, would have seriously affected the Spaniards. This was to drive the horses of the expedition inside the fortifications of Tiguex. This village was surrounded by a palisade or picket fence of cedar posts. In getting possession of the horses one of the Indian herders was killed, but the other escaped and gave the alarm to the Spaniards, who came in a body to the rescue of their animals. The pueblos were forced to abandon the greater part of the herd, but a few of the horses were rushed into the enclosure and the gates hastily barred. The next day some of the Spaniards went to the village to see about their horses. The Indians refused to allow them to enter the fortifications. The horses were being chased around and shot with arrows.

One account says that 40 head of horses and 7 head of the General's mules were killed at this time by the Indians. The Spaniards then attacked the town, but on account of its being so well fortified they could accomplish nothing. The General then ordered his soldiers, under Cardenas, to attack another town close to Tiguex, but not so well fortified. The fight lasted 2 days and nights and then, under promise of fair treatment the Pueblos surrendered. The instructions to Cardenas were to make an example of the Indians, so as to intimidate the rest of the natives and make them fear the Spaniards. Accordingly he had 200 of them burnt at the stake. The rest of the Pueblos, whom the Spaniards had under guard, seeing the fate of their companions, broke away from their captors, but were pursued by the horsemen and slain to a man.

The same day that this tragedy happened the main body of the army, under Tristan de Arellanes, arrived from Zuni. Intercourse between the Pueblos and the Spaniards was suspended. For nearly 2 months the army remained in its quarters, partly for this reason and partly on account of the snow and cold weather. The order which had been executed by Cardenas had its effect. The natives were suspicious and afraid of the Spaniards and refused all attempts at communication volunteered by the white men, especially at the village of Tiguex. As time passed the Spaniards became restless and wished to restore friendly relations and confidence with the natives. For this reason Cardenas, with a guard of 30 men, went to the village of Tiguex to have a talk with the principal men. The governor and one man agreed to meet him outside the village, provided he came alone and unarmed. This was complied with, and when the 3 had come together the governor seized Cardenas, while his companion struck him twice on the head with a club, which he had brought concealed under his blanket. The guards seeing their chief in danger rode hastily up and rescued him, while the 2 Indians retreated to the shelter of the village, the in-

habitants meanwhile pouring a shower of arrows on the Spaniards, but without doing any severe damage. Coronado then ordered an attack on Tiguex, but on account of its fortified condition and the fierce resistance of the Indians, he changed his tactics, and settled down to besiege the town, well knowing that in time the natives would be compelled to surrender. The siege lasted 50 days. The lack of water at last determined the Indians to abandon the town. This was done one dark night, but they were discovered and the sentries gave the alarm, and a fierce hand-to-hand fight ensued, in which nearly all the Indians were killed or forced to jump into the river and were drowned. What few escaped were captured the next day and forced into slavery.

I have related how the war captain acted as guide for Alvarado to the Rio Grande and from there to Pecos, where the Spaniards were royally received. There at the village of Pecos Alvarado met an Indian of a different tribe, a foreigner. The Spaniards gave him the name of Turk, on account of his peculiar head dress. He entertained his eager listeners with wonderful stories of a land far to the east, which he called "Quivira," and the fantastic imagination of the Spaniards easily pictured a land far richer than Hernando Cortez had found in Mexico, or Francisco Pizarro in Peru. The Turk accompanied Alvarado's command back to the Rio Grande, and when Coronado arrived and heard the stories, the Turk was the lion of the hour; nothing was talked of but the land of "Quivira" and the great treasures of gold and silver which the Turk described.

The Turk claimed that he had brought some trinkets of gold and silver and that the people of Pecos had taken them away from him. To obtain these trinkets, Coronado sent Alvarado with a small squad of men back to Pecos. The people of the village solemnly denied ever having seen the gold and silver of the Turk. Unable to get what he was sent for he succeeded in arresting the governor and his war captain and took them to the army headquarters, and during all this time they were held as close prisoners by order of Coronado. The historian tells us how, after keeping these two Indians prisoners for 6 months, they finally turned them loose, and then the expedition started on that grand march,* with the Turk as guide, in search of the "Quivira," across the seemingly boundless plains of Kansas, and after reaching somewhere near the south boundary of Nebraska, they strangled the unfortunate Turk, thinking that he had deceived them, and then returned to the land of the Pueblos.

It is possible that the Turk was sincere and was leading the Spaniards to the great copper deposits of Lake Superior. Although Pedro de Tobar had arrived with supplies and reinforcements to assist Coronado in his search for the "Quivira," the General decided to return, and after giving the army a brief rest, conducted the expedition back

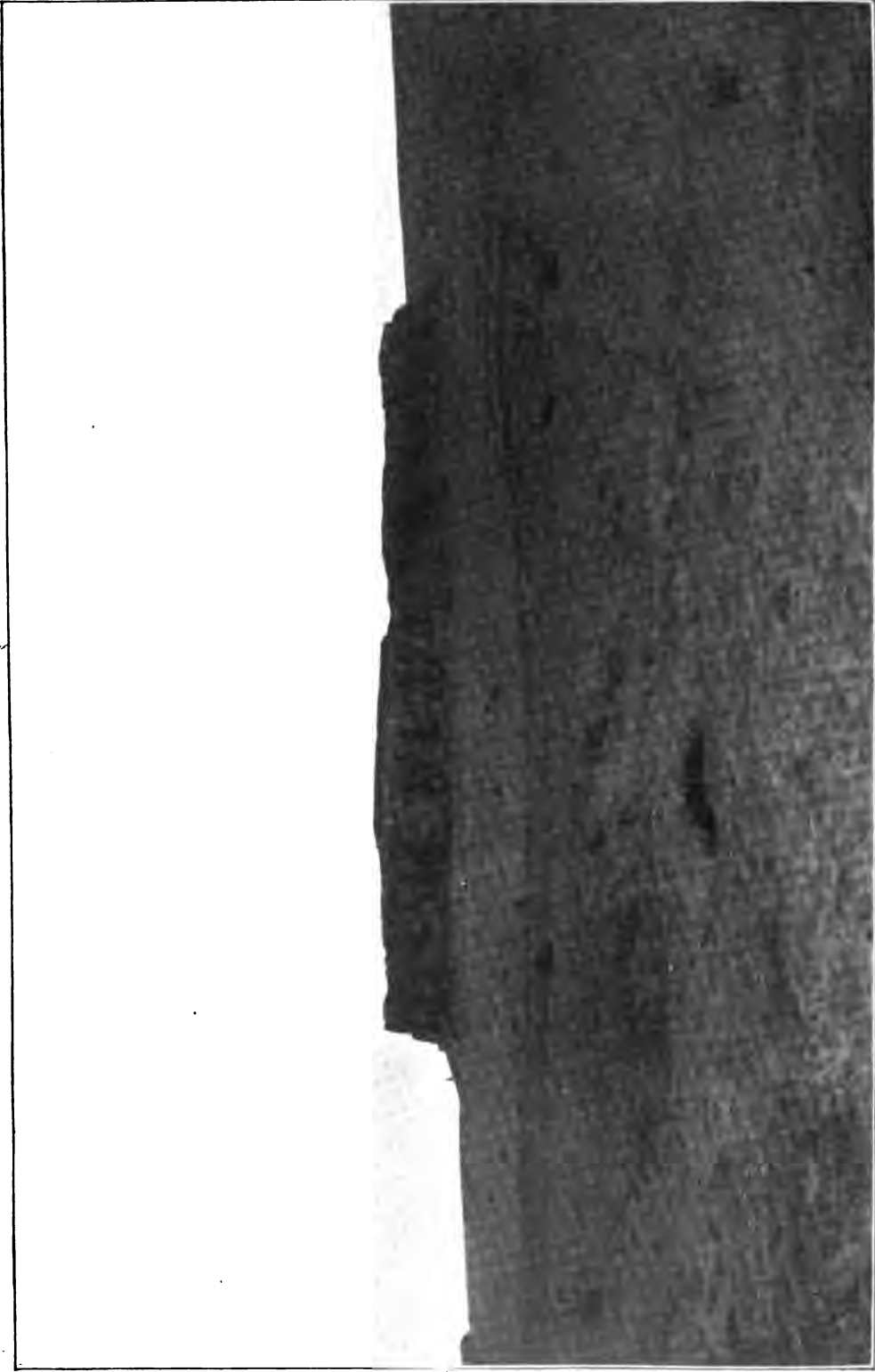
*We make no excuses nor offer any apologies for the evil acts of Coronado's expedition. Such deeds were common, even in Europe, at that time. It was the spirit of the ages.

to Mexico, passing by Acoma and the present site of Laguna in the year 1542.

Almost half a century passes before we again hear of this country. The reports brought back by the expedition of Coronado were not reassuring, and few cared to brave the cold, the drought, the storms, and the privations, which seemed the only reward to be gained; but among these few were yet stout hearts willing to plunge into the wilderness of what is now New Mexico and Arizona for the sake of science and their religious faith. Among these was Antonio Espejo, who commanded an expedition to New Mexico in 1582. This expedition was organized by Fray Bernardino Beltran for this purpose, and for which he obtained permission from the Viceroy of Mexico to rescue or determine the fate of 3 priests—Augustino Rodrigues, Juan de Santa Maria, and Francisco Lopez—who had come to the Pueblos the summer previous with a small escort of 28 men, under the command of Sanchez Chamuscado; the priests with their servants remaining among the Indians, while the escort was sent back to Mexico. A short time after, however, 2 of the servants appeared in Mexico and reported that the priests had been assassinated, and to determine the truth this expedition started toward the north, following the Rio Grande, or as near to it as practical. Arriving at the Pueblo of Tiguex, which Espejo calls Paola, in the winter of 1582, they learned that the report which the servants had circulated in Mexico was true.

Espejo and Beltran then turned their attention to exploring the country, visiting Acoma, Zuni, and the Moqui villages, and going as far west as where the town of Flagstaff now stands. From there they returned, passing by Zuni, Acoma, and the present site of Laguna, in the early summer of 1683, and after visiting a few more of the Pueblos in the vicinity of the Rio Grande the explorers continued on to the Pecos village, where their reception was not very cordial, but nothing occurred to mar the record of the expedition. From here they followed the Pecos river to its junction with the Rio Grande, and thence to Mexico.

Espejo and Beltran were men of intelligence and humane principles. The account of their expedition is a bright page in history, not like that of Coronado and some others, who came later, who left to posterity a record stained with blood. Espejo was the first to give to the world an exact and minute account of the country and its inhabitants. He says: "Here we found houses very well built, with gallant lodgings, and in most of them were stoves (fire places probably) for the winter season. Their garments were of cotton and deer skins and the attire both of men and women was after the manner of the Indians of Mexico. But the strangest thing of all was to see both men and women wear shoes and boots with good soles of neat's leather, a thing which we never saw in any other part of Mexico. The women keep their hair well combed and dressed, wearing nothing else on their heads. In all these towns they had caciques, people like the caciques



(Photo by Dr. Baum, 2 miles distant from Mesa.)

MESA, ON WHICH STANDS THE PUEBLO VILLAGE OF ACOMA, NEW MEXICO

of Mexico, with serjeants to execute their commands, who go through the town proclaiming with a loud voice the pleasure of the cacique, commanding the same to be put into execution. The weapons they use are strong bows with arrows headed with flint, which will pierce through a coat of mail, and macanas, which are clubs of half a yard to a yard long, so set with sharp flints that they are sufficient to cleave a man asunder in the midst. They also use a kind of shield made of raw hide." It is a peculiar fact that within the last 100 years many of the arts practiced by the Pueblo Indians at the time of the Spanish Invasion have been discontinued or lost.

One of these was the tanning of leather at Laguna. The first settlers understood the art, as the old vats in the sandstone indicate. This process was accomplished by the aid of the canaigre root, a species of dock, which carries a large percentage of tannic acid and which grows luxuriantly in the arid places of the Southwest.

Another was the raising of the cotton plant. This was cultivated at Laguna and Acoma and probably by the Pueblos further west. It is true the climate is too cold to make much success farming cotton at these Pueblos, but it may have been of a more hardy variety than that which is now cultivated in the Southern States. The average temperature at Laguna and Acoma is about 60 degrees, but subject to extreme variations in winter. The thermometer frequently records 20 degrees below zero, and in summer very often 120 degrees. They still do some weaving, such as belts and legging strings and a coarse woolen cloth, which in color is black and used as an outer garment by the women, and worn in the same fashion as when Castenada wrote his narrative. He says: "They wear long robes of feathers and skins of hares and cotton blankets. The women wear blankets, which they tie or knot over the left shoulder, leaving the right arm out." They also wove a coarse cloth out of the maguey plant. This cloth was used as a background on which to construct their feather robes. The women wear heavy leggings; these leggings are of buckskins, wound several times around, in some instances 2 or 3 in. thick. The principal reason for wearing them now seems to be style, but it may have been adopted primarily to guard against snakes.

At Laguna and Acoma were formerly large droves of turkeys; they were herded something after the manner of sheep. They told the Spaniards that the turkeys were reared for their feathers.

They had no idea of the metals other than the name. Espejo being a practical miner, examined the mineral resources of the country over which he traveled quite thoroughly, considering the time he was here, and speaks very flatteringly of the mineral deposits; not quite so enthusiastic, however, as Fray Geronimo Zarata de Salmeron, of whom I will speak later, who says: "As for saying that this is a poor country, I answer that there has not been discovered in the whole world a country of more mineral deposits than New Mexico." When we consider that at that time New Mexico embraced nearly

all of the country west of the Missouri river, we come to the conclusion that Salmeron was correct in his statement. The ideas of the early Spaniards with regard to the mineral wealth of New Mexico, were romantic, and would have led one at that time to suppose that Midas had visited this country. The 7 cities of Cibola. What fantastic dreams of gold and silver chased each other through the brains of those old Spaniards, and when it was discovered that those fabled cities were nothing more than rude Indian villages, with houses built of mud, with no doors except a hole in the roof, as one writer says, "like the hatchways of ships." Another mirage started up in the distance to lure them on—the "Gran Quivira"—but still it is not to be wondered at that the most absurd tales of treasure in this vast wilderness of the north would find belief after the discovery of such quantities of gold and silver by Cortez in Mexico and Pizarro in Peru, and this feverish craze seems to have been the principal incentive for most of the early explorations in this country. In the year 1862 there was found in the Pueblo of San Juan, 40 miles north of Santa Fe, a peculiar old document by Theodore Greiner, at that time agent for the Pueblo Indians. It seems to have been a conversation, in which certain agreements were made between Cortez and Guatimotzin. Cortez asked this question: "Now, I also wish you to answer me concerning how many provinces has New Mexico, and mines of gold and silver." The monarch said: "I will respond to you forever, as you have to me. I command this province, which is the first of New Mexico, the Pueblo of Tigüeyo, which governs 102 pueblos. In this pueblo there is a great mine close by, in which they cut with stone hatchets the gold of my crown. The great province of Zuni, where was born the great Malinche. This pueblo is very large, increasing in Indians of light complexion, who are governed well. In this province is a silver mine, and this capital controls 18 pueblos. The province of Moqui, the province of the Navajos, the great province of the Gran Quivira, that governs the pueblos of the Queres and the Tanos. These provinces have different tongues, which only Malinche understands. The province of Acoma, in which there is a blackish colored hill, in which there is found a silver mine." It might appear from this old document that the name Zuni was known in Mexico even at that early date, which is not probable, as the name is a contraction of a Queres word—se-un-ne, meaning acquainted; or se-un-ne-mish, acquaintance or friend. The Zuni name for themselves is She-we.

The first Spanish explorers in this country called them "Cibola." The Queres language has given another word to the English vocabulary—Coconino, the name of a county in Arizona. The word is a modification of Co-ne-ne, a name applied to the Supai Indians, inhabiting a branch of the Grand Canyon of the Colorado. The name means nearly the opposite of the word for Zuni; as generally applied it means a person who is dull, or very reserved, or hard to get acquainted with.

In the early spring of the year 1598, Juan de Onate entered the province of New Mexico with a command of 201 men, taking formal possession and assuming control as first governor of the territory, commissioned by Count de Monterey, Viceroy of Mexico. Going as far north as the pueblo of San Juan, close to where the Rio Chama enters the Rio Grande, here he established his headquarters and base of supplies, naming the new settlement San Gabriel. Onate entered upon the work with an energy worthy of the time, visiting all the pueblos of New Mexico, and even those in what is now the territory of Arizona, the first year, receiving from each their oath of allegiance and obedience to Spain. It was Onate's wish and cherished ambition to explore the country to the west, as far as the coast, and as everything seemed tranquil, he decided to carry his wish into effect, sending Capt. Juan de Zaldivar ahead with a small company to rendezvous at a certain place in Arizona, where he intended joining him later. It had been noticed that the cacique or governor of Acoma, Zuta-kapan (the name probably a corruption of Seutchene-kapana, meaning I gave him pancakes), was one of the very last to come before the governor and take the oath of allegiance, and this was done in a sullen manner. But at this time Onate considered the occurrence not worthy of serious thought. The oath was taken on October 27, 1598. On December 4, just a month and 8 days after, Zaldivar and his companions arrived at Acoma, and camped at the foot of the rock. The Spaniards confiding in the apparent friendship of the Indians, climbed the steep trail and were scattered through the village in small groups, when all at once, without a moment's warning, the Indians rushed upon them and hand-to-hand the Spaniards fought for their lives, but the numbers were against them. Zaldivar was killed by Zuta-kapan with a club. Besides Zaldivar, 10 of his men fell before the fury of the Indians. Two servants were thrown into the crevices of the rock and perished there. Five of the soldiers jumped from the rock to the valley below; one lost his life and the other four escaped with slight injuries. These carried the news back to Onate, who immediately dispatched Vicente de Zaldivar with 70 men to punish the Acomas and quell the revolt. On January 21 the Spaniards appeared before the pueblo of Acoma. On the 22 they began the attack, fighting 2 days and 1 night before the Indians surrendered. Of the 3,000 inhabitants of the village but 600 remained. These were compelled by the Spaniards to abandon the village on the rock and build habitations in the valley, the old town being destroyed and the fortification torn down. Some historians think that the description of the place where the fight took place, as given by Onate, is not applicable to Acoma, and that it is a question whether this trouble did not occur at some other village similarly situated. The Acoma Indians have no tradition of this particular fight or that the town was ever destroyed, nor does the old village show any evidence of having once been torn down, and there is no indication of any settlement having been made in

the valley near the Acoma mesa. It is possible that Zaldivar and his companions mistook some other pueblo for the real Acoma.

To the west of Acoma and within a radius of 15 to 20 miles are the ruins of several different pueblos, some of these like Acoma and similarly located, one in particular, about 16 miles west of the pueblo of Acoma. There are the ruins of a village, or rather 2 villages, close together, on a rock of about the same dimensions as that of Acoma. The place is known to the Americans as the "Montezuma mesa," and to the Acoma and Laguna Indians as the Aut-sin-ish, meaning "like a woman's dress." The ruins appear as though the village had been destroyed by some other force than the slow disintegration that time produces.

To jump from either Acoma or this rock would be equally dangerous. At the foot of the mesa in the valley are the ruins of a compact village, which might correspond to the dwellings which the Spaniards compelled the Indians to build after the village on the rock was destroyed.

On the 7 of October, 1604, Onate, accompanied by 32 men, sallied forth on his last trip of exploration that history records. This was the second attempt to clear away the mists that veiled the country to the west.

Like the former expedition, in which the brave Zaldivar lost his life, this came very near ending disastrously. Passing by Acoma in the fall of 1604, then to Zuni and from there to the Moqui pueblos, thence southwest to about where the town of Prescott is located, thence south to the Gila river, which he followed to its junction with the Rio Colorado, which stream he followed to its mouth; crossing the river here he took formal possession of the country to the west in the name of Spain.

On his return, instead of retracing the route already traveled, Onate struck a direct course northeast, toward the pueblos. The expedition was launched almost immediately into a trackless desert, where thickets of cactus contested their march at every step. They suffered severely from lack of water. Their provisions became exhausted, and finally they were compelled to kill and eat their horses for food. The expedition at last reached Zuni in a forlorn condition in the spring of 1605. Onate held the office of governor until the year 1608.

From this date on for 72 years the history of New Mexico is almost a complete blank. During all this time we have only the names of 2 governors. Of these Enrique de Abilu y Pachech was administrator of affairs in New Mexico, during the year 1656. How long he served and the date of his appointment are unknown. Governor Trevino probably held the reins of government up to the time that Otermin took charge. The date of Trevino's appointment is also unknown. That these two were the only executives appointed during this period seems improbable. There are several reasons for this discrepancy.

Principal among these was the Pueblo revolt of 1680. General Antonio de Otermin, who was governor of New Mexico at that time, may have carried many of the records away, and these might yet be found in Mexico or in Madrid, and possibly some of them in Rome. What were left were destroyed by the infuriated Indians.

Another destruction of valuable records occurred in 1846. Governor Manuel Armijo allowed many valuable records to be used in making cartridges to repel the Americans under the command of General Kearney, but were never used. It was reported that William A. Pile, who was governor of the territory in 1869-70, consigned many valuable documents, historical records, and land papers to the waste basket, thinking no doubt that that was the quickest way to settle the grant title question, which was even then, and has been ever since, a thorn in the side of New Mexico, by retarding immigration and keeping the people in isolated communities where ignorance is rampant. There are many valuable church records of historical value still in existence. In 1618 Geronimo de Zarate de Salmeron was appointed first parish priest of the pueblos, embracing Jemez, Zia, and Acoma, consequently visiting the latter many times. He returned to Mexico, where he lived to write a valuable work, entitled *Relaciones*. Acoma, ever a rebellious factor, revolted against the Spanish rule in 1629 and again in 1645.

In the year 1650 the Pueblo Indians were on the verge of a grand rebellion, faint rumblings of the storm which 30 years later swept the Spaniards from the country. A priest by the name of Juan Ramirez lived in Acoma during the decade 1650-60 and returned to Mexico, where he died in the year 1664. The Acomas, who from the first defied the authority of the Spanish soldiers, allowed the priests to come among them unmolested, and had these old generals used a milder form of persuasion to bring the Pueblo Indians under subjection than the force of gunpowder, the sword, and the battleaxe, I would have no hesitation in saying that there would have been little trouble with these people.

Nearly all who wrote at this time of the Pueblos testify to the amity of their disposition. Alvarado says, "The people have a good appearance, more like laborers than a war-like race." Castaneda says, "These people are not cruel." Jaramillo says, "All these Indians, except the first in the first village of Cibola, received us well."

The coming of the bearded warriors with coats of mail had been prophesied years before by the Indian seers, and the natives as a rule revered the first of those haughty Conquistadores with a deference almost akin to worship, but the cruel treatment in return and the heartless persecution of the natives kindled a spark of hatred and distrust which smouldered in the hearts of the Pueblo Indians for years, and at last blazed forth in that fierce fire of revenge, the great Pueblo revolt, sometimes called the "Popé rebellion," when, with but probably a single exception, every Caucasian was put to death or driven from

the country, and for 12 years the Pueblos held the country against the successive attacks of Otermin, Ramirez, Cruzate, and Posada, and it was owing to enmity among the Pueblos, which resulted in a war, and prevented them from acting in unity, that Diego de Vargas reconquered them in 1691-92.

There is a difference of opinion among historians as to the cause of these wars among the Pueblos after the Spaniards were compelled to abandon the country. I will not stop to debate the cause. Enough to say that the facts show it to have been jealousy and rivalry. This rebellion, which proved so destructive to the Spaniards, was planned and generated by a Tigua Indian from the Pueblo of San Juan, known to history as Popé, at that time a fugitive from justice, and living in Taos. The word Popé is a Queres word, a form of the word "you tell," and it is probable that he was of Queres extraction.

It was intended that the general revolt should take place on the 13 of August, the first harvest moon, and plans laid accordingly. Somewhere about the latter part of June or the first of July, Popé sent to each of the different Pueblos, with the exception of the Piros, who refused to join the rebellion, messengers with final instructions and bearing a knotted cord for each of the villages, each knot corresponding to a day, and when the last knot was counted the massacre was to begin; but Popé, hearing that the Spaniards were aware of the contemplated outbreak, changed the date to 3 days earlier, and the smouldering volcano blazed forth with all its fury on August 10, 1681. Every Spaniard was sentenced to death, 380 soldiers and civilians and 21 priests suffering that penalty, and all surviving Caucasians were compelled to flee from the country to save their lives. General Antonio Otermin, who was governor of New Mexico at that time, was forced to abandon Santa Fe, and with a venom compounded of jealousy, hatred, and ignorance, every paper and Spanish document was destroyed. Churches were desecrated, pillaged, and torn down, and mines that had been worked by the Spaniards were filled up. A severe punishment was inflicted on any one who should speak a word of the Spanish language. All marriages performed by the priests were annulled and Spanish names canceled. Popé also decreed that all villages which had harbored the Spaniards should be abandoned, and he even went so far as to prohibit the planting of grain and garden seeds which the Spaniards had introduced. It was further decreed that no Spaniard should ever witness their custom dances or religious ceremonies, rites, etc. To the latter they adhere to the present day.

When Otermin was driven from Santa Fe, Popé became dictator, a good commander in war, but a poor executive and counsellor in time of peace.

Intoxicated by his success Popé, like Alexander the Great, imagined that he was superior to mortal beings, and insisted that the Pueblos pay him divine honors. The Indians soon tired of this hero worship and of certain obnoxious customs that he had instituted, and

Popé was deposed and Luis Tupatu, a Tano, of the village of Picuries, was elected to his place, but held the office only a short time, when he was deposed and Popé reinstated, but he died in 1688, and Luis Tupatu was again placed in command. He held the office until he surrendered to the authority of Diego de Vargas in 1691; but long before this the internal wars among the tribes had severed the bonds of union, and Popé's dream of an empire comprising all the Pueblos of New Mexico and Arizona faded like the colors of the rainbow as the storm dis-appears.

In speculating on this rebellion, though tradition is silent and history meager, it is barely possible that La Salle, that daring French explorer, or his emissaries had more to do with inciting this revolt than has ever been recorded.

During this period the inhabitants of the pueblo of Cieneguilla, a Queres village near Santa Fe, abandoned their town and moved in a body to Laguna. Others in small bands soon followed from the Queres villages Zia, Santo Domingo, and Cochiti. About one-half mile southwest from the Pueblo of Laguna are the ruins of a small village. This, according to tradition, is the first settlement made at this place. The town was settled by Indians from Acoma and called Kosh-tea. They organized an independent or separate government of their own. This led to trouble with the parent town, Acoma, culminating in a series of fights. It was at this time that the Queres Indians around Santa Fe were leaving their villages and seeking new habitations. They were welcomed by the villagers of Kosh-tea, but the newcomers not liking the location of Kosh-tea, on account of its exposed position, settled on the present site of Laguna. This was a rough sandstone hill or point of ridge covered with oak brush, cedar, and piñon. The place was known to the hunters and people who frequented these parts as Kush-tit Kow-ike. Kushtit is a word used for dry sticks and limbs suitable for firewood, and Kowike is a contraction of the word Kowisho or Kowinesho, meaning a pond or lake.

The old pueblo of Kosh-tea was finally abandoned, the inhabitants taking up their residence in the new village of Laguna, or as they call it, Kowike. The internal wars among the Pueblos produced great changes. All the tribes were greatly reduced in numbers. The Tompiros were completely exterminated. The Queres, for some reason, suffered least of all.

One branch of the Tanos, tiring of the ceaseless warfare and fearing the vengeance of the Spaniards, should they return, moved away from Santa Fe, under the leadership of Frasquillo, a mere boy, who had been educated by a Spanish missionary, and had a fairly good education. For this reason and from the fact that he had distinguished himself in murdering his benefactor, Simon de Jesus, he was placed in command. This band sent their agents to Laguna and Acoma in search of a new location to build habitations, but being of a different nation, and late antagonists of the Queres, they were advised to move

on. They next went to Zuni, but with no better success. From here they went to the Moquis. These people being of a mild disposition allowed them to settle in their country for a certain length of time, but at the expiration of that time they refused to move, and their descendants still live in the village of Tigua, or as it is sometimes called, Hano.

At the breaking out of the Popé rebellion there were 3 priests in Acoma—Christobal Figueroa, Albino Maldonado, and Juan Mora. With regard to the manner in which these priests were put to death historians differ. One account says that they were taken to a high point on the edge of the Acoma mesa, where the face of the rock is a sheer precipice of 300 ft. and compelled to jump off. Two were killed outright on striking the ground beneath; the third escaped in a peculiar manner. In jumping, the air caught under his cloak or gown, forming a sort of parachute, and thus the force of the fall was broken. The Indians seeing how he had escaped death, attributed it to divine intervention and gave him his liberty. Another account says that they were tied together with a hair rope and driven through the streets of the village, beaten with sticks and pelted with rocks until Figueroa, becoming desperate, infuriated the Indians by prophesying that within 3 years the Spaniards would return, that the village of Acoma would be torn down, and the inhabitants exterminated. On hearing this the Indians rushed upon them and speedily put them to death. The bodies were afterward placed in a cave in the rocks north of the town.

In 1681 Otermin came back to recapture the pueblos. He met with no serious opposition, as most of the Indians had abandoned their villages, and fled to the mountains. Some of these abandoned towns Otermin had burned, but fearing the effect of a severe winter on his stock he returned to El Paso, taking with him 8 prisoners and 393 newly converted Indians, principally from Isleta. Among the captives was a Queres priest or medicine man, known as Pedro Naranjo, from the pueblo of San Felipe, and had the distinction of being one of Popé's chief advisers and councillors. When questioned with regard to the Pueblo revolt, he said that there were two principal causes: First, the persecution of the Indians by the various predecessors of Otermin; and, second, the interference of the Spaniards with the Indians' religion, which came to a climax during the administration of Governor Trevino, who had all the estufas destroyed. Near where the town of Bernalillo now stands, but on the opposite side of the Rio Grande, is a heap of mouldering ruins, last sad relics of a once happy and prosperous village. This is the Tiguex of Coronado, Paola of Espejo, and Puari of Rodrigues. This was a Queres village and called by the natives, "Po-ri-kun-neh." The name signifies butterflies. Here is where Coronado allowed the atrocities to be committed in the winter of 1540-41. At the time of the breaking out of the rebellion there was a priest at this village, who, by kindness and humanity, had won the affections of the natives; so instead of putting him to death, one of the Indians took him a long way from the village under cover of dark-

ness, and then giving him sufficient food for several days, commanded him to go in peace. The priest kept in the mountains, avoiding the settlements and traveling westward until he reached the Pescado spring, near Zuni; here he was discovered by a party of Indians, who were hunting antelope. The Zunis took pity on the poor, half-starved being, fed him, and took him to the village of Zuni. There he adopted the costume of the Indians. I shall speak of him again.

(To be Continued in the November Issue.)



THE TOPOGRAPHY AND MONUMENTS OF ANCIENT ROME*

BY PROF. ALBERT R. CRITTENDEN

FOR some time the appearance of Professor Platner's *Topography and Monuments of Ancient Rome* has been awaited with more than ordinary interest by classical scholars throughout the country. There has been a distinct demand for a handbook which should furnish an accurate and tolerably complete survey of the salient facts of Roman topography and archæology, and which should present, in their proper relationship, the exceedingly interesting results of the excavations carried on during the last few years. Such a work is now, for the first time, accessible in English.

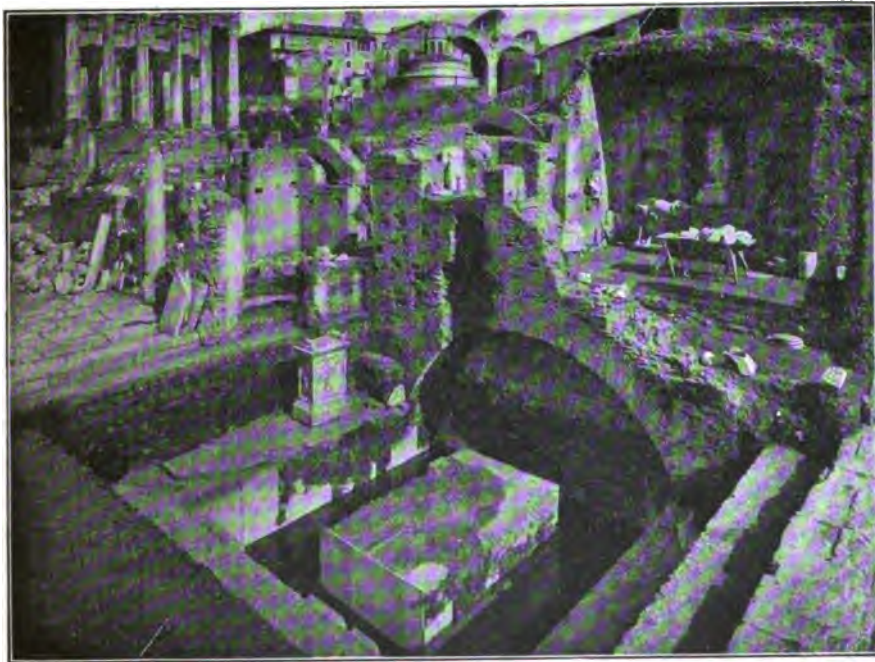
The first 7 chapters of the book are devoted to general topographical material; the last 13 are given to the description of particular quarters of the City and the architectural remains existing in each. At the outset, the chief sources of our information, ancient and mediæval, are briefly but adequately described, including—aside from the numerous allusions in classical authors—inscriptions, the Capitoline Plan, the Regionary Catalogues, coins and reliefs, the *Einsiedeln Itinerary*, the *Marabilia Romæ*, and the various drawings and sketches which have come down to us from mediæval times.

Of especial interest is the chapter descriptive of the peculiar formation and contour of the Campagna, which are so intimately connected with the history, particularly with the architectural development, of the City. The most significant fact about the Roman Campagna is its volcanic origin. The larger part of this undulating plain is underlaid with soft volcanic rock, *tufa*, apparently of submarine formation, which afforded building material for most of the earlier structures of the City. At first the center of volcanic activity was probably near the northern extremity of the Campagna, where Lake Bracciano occupies the center of an extinct volcano. Later it was located in the Alban Mountains, southeast of Rome, whence various igneous products were discharged into the plain, forming the deposits of peperino, lava, and other materials which were used in the construction of the buildings and roads of the City.

**Topography and Monuments of Ancient Rome*, by Prof. Samuel Ball Platner. Boston: Allyn and Bacon, 1904.



THE TEMPLE OF CASTOR



THE LACUS JUTURNAE



THE FORUM OF AUGUSTUS

After a chapter which deals in some detail with the principal building materials and methods of construction employed by the Romans in classical times, Professor Platner traces the development of the City from the primitive shepherd hamlet on the Palatine through the period of the Septimontium or City of the Seven Hills, the City of the Four Regions, the Servian City, the "open City" of the Fourteen Regions, and the City of Aurelian, down to the time of Diocletian. The main development during each of these 6 epochs is clearly indicated and the principal buildings added in the course of each period are briefly mentioned. A condensed historical survey of this character is practically a necessity for the elementary student. Without it, the attempt to disentangle the various strata of complicated structures which remain would be a well-nigh hopeless task.

The author devotes 3 chapters to the Tiber and its bridges, the aqueducts and sewers of the City, and its walls, gates, and roads, including the main highways leading to and from the capital. He marks out the route of each of these great arteries of war and traffic and describes the method of their construction. He also gives an unusually complete and accurate account, both descriptive and historical, of the chief aqueducts, whose ruins form so conspicuous a feature of the environment of Rome.

In proceeding to the more detailed account of the several parts of the City itself, the author begins with the Palatine, according to unanimous tradition the seat of the earliest settlement; then the Forum and the Imperial Fora are taken up; next, the parts immediately adjacent to these, and lastly the outlying quarters of the City. This arrangement has the advantage of allowing the work to conform, in the main, to the chronology of the monuments. The chapter devoted to the Palatine will perhaps seem less satisfactory to the general reader than the remainder of the work. The summit and some of the slopes of the hill are covered with so complicated epochs, a network of foundations belonging to buildings of widely different epochs, and the excavations are still so incomplete, that any account which it is possible to write at the present time must necessarily seem inadequate.

Much the longest chapter of the volume is concerned with the building in and about the Roman Forum. To most readers this will prove the most attractive portion of the book. The discoveries made in the course of the excavations carried on under the direction of Sig. Boni since 1898 have rendered obsolete all maps and plans of the Forum made before that date. Professor Platner has given us a remarkably clear and concise summary of the recent discoveries, not in a separate section, but in appropriate connection with the facts known before. Among the most important of the new discoveries are the group of monuments connected with the fountain and shrine of Juturna, which were found in the area formerly occupied by the church of S. Maria Liberatrice, those made in the area of the Comitium, and, most noteworthy of all, the uncovering of the pavement of the Basilica



THE REGIA AND THE TEMPLE OF ANTONIUS AND FAUSTINA

Aemilia, an edifice of which our knowledge has hitherto been exceedingly fragmentary. The ground plan of the building has now been revealed. It included a portico fronting on the Forum, a row of rooms, the so-called *tabernae*, just back of the portico, and in the rear of these the great hall of the basilica, consisting of a nave and two aisles. Little now remains of the building except the lower part of some of the division walls, some architectural fragments and considerable portions of the pavement of colored marbles.

Very satisfactory accounts are given of the imperial fora, of the buildings of the Capitoline, those along the Sacra Via and on the Velia. The description then passes to the Campus Martius and the outer portions of the City, which are chiefly occupied by structures of

the imperial period. The greater Roman buildings, theaters, amphitheaters and the baths of the emperors are the subjects of detailed and careful treatment.

The author's interpretation of the monuments is throughout scholarly and discriminating. His statements in the case of a few disputed points may seem a trifle dogmatic to some, but it is manifestly impossible in a work of this character to enter into the merits of the mass of controversial literature which has been written in connection with some of the more recent discoveries. Professor Platner's conclusions are, with few if any exceptions, safe and sensible, and the minor errors, which seem inseparable from the first edition of such a work, are in this case surprisingly few. The value of the work is greatly enhanced by numerous carefully selected illustrations, many of them from photographs now published for the first time. No one feature of the volume is of greater value to the student than the series of remarkably accurate and beautiful maps and plans, which are in the highest style of the engraver's and printer's art. The work as a whole is a notable contribution to American classical scholarship, and will at once take its place as the standard hand-book of Roman topography for American students.



THE PAVEMENT OF THE SACRA VIA

EDITORIAL NOTES

MARKINGS ON NEOLITHIC CRANIA:—With regard to the markings that have been found on certain neolithic crania, which have been interpreted as due to operations of a surgical character, M. Bertholon refers to a statement by Heroditus that—

* * * many of the nomadic Libyans, when their children are 4 years old, burn the veins on the crown of the head with unclean sheep's wool, and some of them do it on the veins in the temples, to the end that humors flowing down from the head may not injure them as long as they live, and for this reason they say they are so very healthy, for the Libyans are, in truth, the most healthy of all men with whom we are acquainted.

M. Bertholon thinks that it seems likely that such an operation would give rise to the marks observed on certain neolithic crania.

STONE IMPLEMENTS FROM 70° NORTH LATITUDE IN SIBERIA:—In a recent issue of *Man* [London] 6 stone implements are figured from the Yensisei River above 70° north latitude. They were found in the frozen gravel of the region and present great variety in their forms. One is a well shaped and polished flint adze 214 mm. long and 58 mm. wide at its broadest point. Another is a short adze about half the length of the preceding one. Still another specimen is a small well shaped spear head. Perhaps the most interesting is a core or pointed wedge of agate used for splitting bones.

A ROMAN VILLA AT BOX, ENGLAND:—The pavement of a Roman Villa at Box, England, discovered in 1831, has just been carefully excavated. The plaster of the walls was colored and painted and many of the fragments when first uncovered are very brilliant. It appears from the fragments that the general scheme of decoration was large panels of color, bordered with designs in red, green and white lines. Fragments of imitation marble, made by splashing on colors with a brush, are numerous. Two kinds of tile were used in the roofs, one made of Pennant stones in elongated hexagonal forms, the other "ordinary" red flat flanged *tegulae*. The best of the mosaic floors are of fine grained limestone pieces varying in color from light cream to dark grey and chocolate. In the hypocaust of one of the chambers 51 straight-sided stone pilæ were still in position as well as the stake-hole in the center of the north wall. The excavations brought to light a number of carved stone figures and pottery.

THE OLD ROMAN CITY AT SILCHESTER:—The excavations of the Roman City at Silchester have brought to light 50 complete houses, a number of small structures, the great bathes, some private bathing establishments, a Christian church, "and a series of buildings which seem to have been extensive dye-works." The town was probably built on the site of an earlier Celtic encampment. The arrangement of the hot and cold chambers was traced out and showed that they resembled the Turkish baths of to-day. The market-place or Forum was 100 ft. square. The remains of these temples, the largest

polygonal in plan, were discovered. The Christian church dates from early in the IV Century.

SILVER COIN OF 800 B. C.:—The Berlin Society of Scientific Research in Anatolia has recently come into possession of a silver coin bearing an Aramean inscription of Panammu Bar Rerub, King of Schamoi; hence its date is about 800 B. C. This is the oldest coin yet discovered and is 200 years older than the Lydian coin which has heretofore been considered the oldest known coin.

PRINCETON UNIVERSITY'S SYRIAN EXPEDITION:—Under the direction of Professors H. C. Butler and Ermo Littman, and accompanied by Mr. F. A. Norris, civil engineer, and Dr. R. S. Hooker, the Syrian Expedition of Princeton University, will spend the next few months in the practically unexplored regions east of Jordan and south-east of the Hauranitis. It is planned to spend the winter at Hauran, and the spring between the Orontes and Euphrates rivers. A special effort will be made to locate the sites of ancient Græco-Roman cities, some of which are supposed to have existed in this region.

STATUE OF THE TIME OF KING DADDU:—Dr. E. S. Banks, Field Director of the Babylonian Expedition of the University of Chicago, writes of a recent discovery on the site of the ancient city of Ud-nun:

BAGDAD, Aug. 1.—During the afternoon of the 27 of last January, while standing on the summit of the temple at Bismya, watching the progress of the excavations, Abbas, a bright young Arab from Affedj, stuck his head out of the trench in which he was working and excitedly motioned to me. In a moment I was in the trench. Two and a half meters below the surface and imbedded in the west corner of the mud-brick platform of the temple appeared the smooth, white shoulder of a large marble statue. As the discovery of such an object creates great excitement among the superstitious men I quickly covered the white marble with dirt and with the remark that it was nothing but stone, transferred the gang to another place.

The remainder of the afternoon was spent in wondering if the statue were perfect or if its head were lacking; if it bore an inscription and what its age might be. When at sunset the last man had left the excavations we descended into the trench and with our hands carefully dug away the hard dirt from beneath the statue. The bent elbow appeared; we had found a statue with the arms free from the body. We dug toward the neck and to our disappointment the marble came to an end; the statue was headless. Then, digging at the other end, we reached the feet; the toes were missing, but we recovered them from among the small fragments of marble which were scattered about in the dirt. It was dark when the statue was released, and, standing upright, by the light of a match we searched it over for an inscription. Wrapping about it in aba we each took turn in carrying it to camp, fully a quarter of a mile away. It was not an easy task, for our ancient king weighed nearly 200 pounds. In the tent a bath was quickly prepared and as the dirt was washed away three lines of a beautifully distinct inscription in the most archaic character appeared written across the right upper arm. There were but three short lines, little more than three words, but later when I was able to translate them they told us all that we most wished to know.

About three weeks later, February 18, a workman who was employed at the north corner of the temple, 30 meters from the spot where the statue was found, was clearing away the dirt near a wall when a large, round piece of dirty marble rolled out. We picked it up and cleared away the dirt. Slowly the eyes, the nose and the ears of the head of a statue appeared. I hurriedly took it to my tent and placed it upon the neck of the headless statue. It fitted; the statue was complete. From beneath the thick coating of dirt the marble face seemed to light up with a wonderful smile of gratitude, for the long sleep of thousands of years in the grave was at an end and the long lost head was restored, or perhaps the smile was but the reflection of our own feelings.

The inscription shows that the statue was erected in the time of King Daddu of the city of Ud-nun. Its exact period is not known.

DR. BAUM'S EXPEDITION TO THE SOUTHWEST:—Dr. Baum returned from his expedition to the Southwest the last of September, having traveled over 1,000 miles by pack train. The principal region traversed was the Rio Grande Valley and west of it about 100 miles. An account of the work of the expedition will be given later in RECORDS OF THE PAST and in greater detail in a Monograph to be published, entitled, *The Antiquities of the United States*. New Mexico was the great center of the Southwestern Pueblo population. A large number of ruins were surveyed and photographed in the part of New Mexico through which the Jemez River flows, some of which contained over 2,000 rooms. These ruins are scattered through the Great Pine Forests and are only to be found by diligent exploration. Another ancient center of Pueblo life was in Southern New Mexico in the vicinity of the great Salt Lake.

One of the most interesting features of the trip was the examination of the great lava flows of Central New Mexico, in search of evidences of the occupation of the country before the great volcanoes of that region were active. Dr. Baum is convinced that several of the volcanoes were active long after the country was densely populated and is of the opinion that the Pueblo people fled from the country when it was undergoing great seismic disturbances and the now extinct volcanoes were very active. The lava flows from them indicate that some were comparatively recent, possibly within the past 1,000 years, while others show great age.

The condition of the country can be imagined when the investigator examines a stream of lava over 100 miles long and at points over 30 miles wide, with crevices in places 100 ft. deep. Around these great lava streams are the cones of several extinct volcanoes, which rise to a height of from 400 to 600 ft., with craters $\frac{1}{4}$ of a mile across. It was impossible for life in any form to have existed during the time of their eruptions. If the present Pueblos of the Southwest are the descendants of the people who erected the great buildings now in ruins, they must have returned to the country after the cessation of these volcanic disturbances. The architecture of the older ruins is entirely different from that of the Pueblo villages, which were in existence at the time of the Spanish Conquest, and that have since been erected. The great

similarity of the ruins in Northwest Mexico and the older ruins of New Mexico, Arizona, Utah, and Colorado, leads one to believe that the inhabitants of this region fled to Mexico and remained there for a long time, later returning to the home of their ancestors. The whole subject awaits scientific investigation. The great ruins of the region through which Dr. Baum passed during this expedition have scarcely been disturbed, and it is believed that with the precautions taken the past summer no excavations will be carried on in them without the Interior Department being notified at once, when prompt measures will be taken to prevent the work of destruction.

THE EARLY CHRISTIAN ART OF NOVA ISaura:—The sites of the ancient cities of Asia Minor have generally been exposed to such ravages at the hands of builders and stone-cutters in search of good stones for use in their occupation, especially during the last 30 years, that the explorer rarely has the good fortune to light upon one which has escaped all seekers after stones, and has lain quiet and unknown, exposed only to the soft influences of nature, and the comparatively gentle destructiveness of the Turkish villager, that mild-eyed lotus-eater and idler. It has been our happy lot to find such a site in Nova Isaura. The city is only 40 miles from Konia, and every other within that distance of the great city has been ruthlessly plundered and turned upside down to supply its constant demand for building stone and gravestones. A peasant who is in urgent need of a few piasters (which he rarely is, because he buys nothing, pays his taxes in kind or in labor, and lives on the produce of the fields around his village), knows that he can generally find a stone-cutter ready to purchase, and in this way stones are transported to a great distance. But Dorla, or Dorrula, the modern village on the site of Nova Isaura, is a peculiarly happy village, at the mouth of a glen leading up among Isaurian hills, possessed of fertile territory, wood, and water and delightful atmosphere, about 3,600 ft. above sea level. If I were asked to name the most favorable specimen of a Turkish village that I had ever seen, I should unhesitatingly name Dorla.

Dorla lies at the mouth of a glen, looking out north over the great Lycaonian plain, at the extreme eastern edge of the Isaurian mountains. A small rapid river, liable to very quick change of size after rain has fallen on the Isaurian mountains, out of which it runs, flows down the glen; but its waters are quickly used up for irrigation in the plain. The modern village lies on both sides of the river, which is crossed by an old Turkish stone bridge of unusually fine character, and at low-level also by stepping stones above the bridge, where it is broad and shallow (in dry weather 30 ft. or so broad, 9 in. deep in the middle), on the right or eastern bank, the ground rises rapidly to a broad plateau, which stretches away back to the most easterly ridge of the Isaurian mountains; this ridge stretches east and west nearly 3 miles south of Dorla, and ends in a high point above the plain, about 4 miles southeast of the village. This ancient city was evidently situated for the most part on this plateau, which is now occupied by the village cemetery, cornfields, and uncultivated lands beyond. One wall of cut stone could be seen emerging from the ground among the corn, 400 yards northeast of the village, at our former visit in 1901; but no proper examination is possible in May or June, when the crops are standing. The city extended down to the right bank of the stream in ancient times; and may, perhaps, have occupied also part of the left bank.

On the left bank of the river an isolated hill rises close to the bridge in the middle of the glen. The larger part of the modern village is situated on this hill. In ancient times the hill was outside of the town, for javelins could be thrown from it, as Sallust mentions, into a part of the city. It was sacred to the Great Mother-Goddess, who on certain days of the year came here to feast in her tomb on the summit. In Christian times the temple was destroyed or transformed into a church; and at the present time on the summit of the hill part of the walls of a church, built of large blocks of the excellent limestone which abounds in this neighborhood can be traced among the houses. The holy hill of the goddess was evidently used as a cemetery of the ancient city in Anatolian, non-Hellenic fashion; here children in death returned to the mother who bore them and rested in her bosom, just as the Lydian heroes, sons of the Gygæan Lake, were buried on its margin. This Anatolian custom and belief has been often pointed out as traceable in many parts of the land. The hill is evidently full of graves, and there lie about 4 or 5 ft. below the surface vast numbers of cut blocks of the usual fine limestone, as the villagers testify. Far fewer stones are likely to be found on the site of the city, as the dwelling houses were undoubtedly built, for the most part, of mud-bricks, dried in the sun, but the finest and most imperishable building was needed for the long home in death.

In 1890 Messrs. Hogarth, Headlam, and I [W. H. Ramsay] came by accident and in error to Dorla at sunset; we copied a few inscriptions in the fading light, and hurried on to camp, more than 2 hours distant, without observing the importance of the site. In 1901 I remembered that we had left some inscriptions there uncopied, and thus my wife and I discovered Nova Isaura, with its many interesting monuments. Finally, in studying Strzygowski's recent revolutionary views on Byzantine art, I saw that these monuments furnished strong evidence in his favor; and so we returned again to make a more careful examination. It illustrates the curious history of inscriptions that, in 1904, we could not find, after long search, about 20 of the monuments which we saw in 1901, but on the other hand, we discovered quite a dozen that we had not seen then. There is no site in which the character of a certain class of purely native monuments can be seen so well as at Nova Isaura; they illustrate admirably the decorative character of the Anatolian art and they prove conclusively that there was a distinct reinvigoration of indigenous art in this region in the later Roman period. The love of decoration for its own sake was strong and many elements were used; the most interesting in some respects are the fish and the open book (strictly an open pair of tablets), both occurring only once, beside which are formed the swastika in varied forms, cross, vine-branches, rosettes, implements, other forms of leaf, nets, etc.; the human figure is rare at Dorla, and occurs only on the most developed form of monument. * * *

The chief interest of this city lies in its being the seat of a genuinely native art, well marked in character, and traceable in the same place for 1,400 years at least. Strzygowski * * * will find here a strong confirmation of his theory that Asia Minor exercised a great influence on the formation of a distinctive Christian and Byzantine art, an influence which he perhaps expresses a little too emphatically and exclusively. In various districts of Asia Minor one finds certain forms of artistic production strongly marked in character and distinguished from all others, lasting for many centuries. Thus, for example, we have purchased in a village in the heart of the Phrygian mountains a carpet, woven in the village, of wool grown on the village flocks and

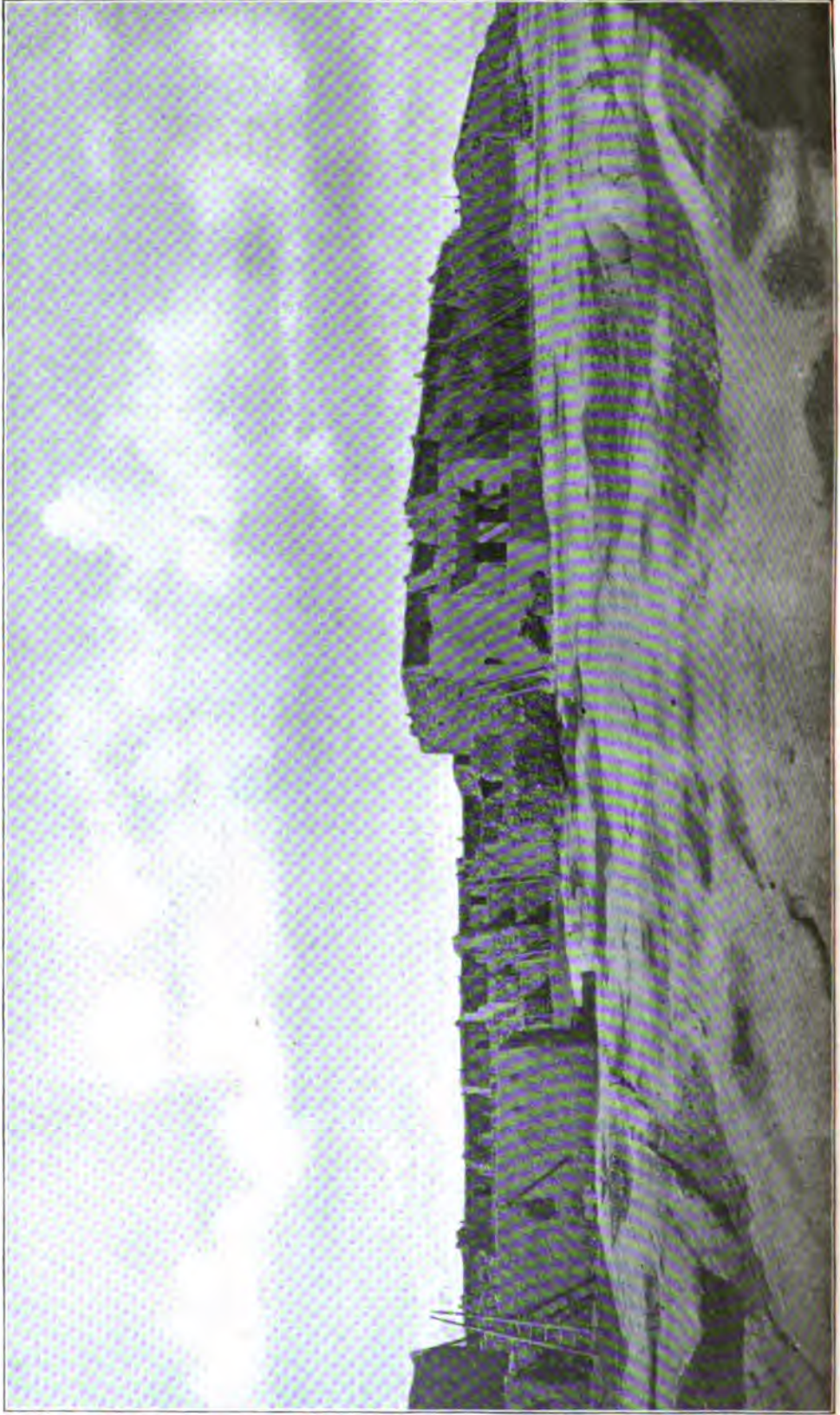
dyed with colors made from the plants in the fields around, and showing very similar pattern to the Tomb of Midas on the rock close by. That pattern is entirely unknown to me outside of a narrow circle in the northern Phrygian highlands. * * *

The monuments at Dorla are marked as belonging for the most part to a narrowly restricted period by the lettering. There is very little development in the form of the letters; the general forms are practically the same, with a few exceptions, in which some later shapes of certain letters occur. This uniformity can hardly be explained except on the supposition that a certain style was formed during the III Century (of which period the forms are very characteristic, though they might very well be earlier), and persisted in the stereotyped form through a sort of local school of trained artisans. References to artistically trained workmen, *technitai*, occur in the inscriptions of this region, thrice at Dorla, thrice at least about 5 hours south from Dorla. Accordingly, the evidence seems to be that the art of Nova Isaura belongs to the period 280-450 A. D. Why it stopped in the V Century is a wider and difficult question, which concerns Asia Minor as a whole. But the reason why it began about 250-300 is easier to state with confidence, and of high interest in itself.

The late date and overwhelmingly Christian character of the documents of Isaura must arrest attention. Most of the inscriptions are obviously Christian; a few are indifferent; not one is certainly. There is only one explanation possible for this sudden appearance of Greek writing in abundance about A. D. 250. Greek began to be commonly spoken in Nova Isaura during the III Century. Previously it was only a small town, whose inhabitants spoke Lycaonian or Isaurian, like the common mob, even in a Roman colonia like Lystra, about A. D. 48. About 250 the town was mainly Christian and the language which spread was the Christian Greek, *i. e.*, the common dialect adapted to Christian ideas and thoughts. Thus we find one more proof, corroborating much other evidence to the same effect, that Lycaonia had become thoroughly Christian before the time of Constantine, and its ecclesiastical system was more complete early in the IV Century than at a later time. Our conclusion is that the art of Nova Isaura is Christian entirely in development, though undoubtedly founded on simpler pre-Christian indigenous forms; and that its development was due to the invigorating influence of the complete Christianization of the town, consummated in the III Century, after nearly 2 centuries of conflict with the older religion. Nova Isaura must be ranked as one of those cities which were wholly Christian before the time of Constantine.

A word may be added in conclusion about the earlier history of this little-known town when Servilius marched up from Cilicia with a Roman army about 78 B. C. He captures Isaura by turning aside the river, on which the city depended for water. This operation was easily within the power of a Roman army used to spade work; the river could readily be made to flow on the opposite side of the glen, behind and west of the isolated hill of the Mother-Goddess. The city then suffered from thirst and was obliged to surrender, and Servilius occupied the hill of the Goddess. * * * It would seem that the Senate accepted the fiction that Servilius conquered the country Isauria, Palaia Isaura, and hence the epithet Isauricus was bestowed on him. Evidently he never penetrated the Isaurian mountains, a far stronger and greater place than this little town of Nova Isaura on the edge of the plain.—Dr. W. M. Ramsay, in the London *Athenaeum*.

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VIEW IN ACOMA, SHOWING PRINCIPAL STREET

Photo by Dr. Baum

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HISTORY OF THE QUERES PUEBLOS OF LAGUNA AND ACOMA

PART II

BY JOHN M. GUNN

IN 1691 Diego de Vargas was commissioned governor of New Mexico by the Count of Galves, Viceroy of Mexico at that time, and dispatched with an escort of 50 soldiers to bring the pueblos into subjection. The pueblos, as we have seen, were divided against one another, and de Vargas found it comparatively easy to recapture the towns along the Rio Grande and around Santa Fe. After the river pueblos were brought into subjection de Vargas led the attack in person against the pueblos of the west, Laguna and Acoma, Zuni and Moqui. The Laguna Indians, hearing that the Spaniards were coming, placed all the women and children of the tribe on a high bluff, or rather bench of the mesa, about 3 miles north of the town, and left the old men to guard them. The old fortifications are still there. The place is known as the Schumits Sin-otes (white bluff).

The Spaniards were repulsed at the first attack, but the Lagunas, seeing that further resistance was useless, surrendered, after arranging terms of peace. With them de Vargas secured the services of the cacique and his war captain to act as guides for the expedition to Acoma and Zuni.

The Spaniards named the cacique, Antonio Covote. His Indian name was "Kum-mus-tche-kush" (white hand).

The war captain they called Pancho. The expedition arrived at Acoma on November 3, with something over 100 Spanish soldiers (the command having been reinforced) and 50 Indian auxiliaries.

The Acomas surrendered without a blow and on the 4 again swore the oath of allegiance and obedience to Spain. On reaching the pueblo of Zuni, de Vargas was met by an unexpected obstacle, the natives having fled to the top of "Thunder mountain," from which it was impossible to dislodge them. The Spaniards decided to surround the mountain, which is only a large butte of about 1,000 ft. altitude, and starve the Indians into subjection. The Indians laughed at the Spaniards, and would throw down rushes, which had been brought from the springs in the valley, to make the enemy think that there was abundance of food and water on the mesa. But time passed; the wily Spaniard kept his ground; things begun to look serious for the Zunis; they knew that the tanks of water would soon be exhausted and the food consumed. They held a council and it was decided that the priest, whom we have before spoken of, should treat with his countrymen. The priest asked for a tanned buckskin, then with a piece of kiel he wrote a message to the commander. When the writing was finished the priest handed it to the chief man, requesting him to have it thrown down where the soldiers would see it. One of the warriors, tying a stone in the end of the skin, threw it far out from the edge of the mesa. The Spanish guards, ever on the alert, saw that something of importance was taking place on the mountain, and hardly had the skin touched the ground when they were there to pick it up; but imagine their surprise when, upon examination, they found a message in their own native tongue. It was speedily delivered to de Vargas, who at once opened negotiations with the priest, and terms of surrender were agreed upon. The priest accompanied de Vargas and his command when they returned to the river. Several of the Zuni Indians, who had become attached to the priest, followed as far as Laguna, where they took up their residence. This story of the priest is traditionary, but there is historic evidence enough to show that some priest survived the massacre of August 10. Cushing refers to him in some of his writings of the Zuni history and tradition. De Thoma says, "Fray Jose de Esboleta, a native of Estella, in the heroic province of Navarre, came to New Mexico in the year 1650 and took charge of the missions of Oraibe, one of the Moqui villages," and that Juan, a Picuries Indian, informed the authorities at El Paso that he had seen the priest alive in the pueblo of Xongopabi, one of the Moqui villages, in 1682, enslaved by the Indians. De Vargas, however, makes no mention of him in his reports, but this may be accounted for from the fact that de Vargas was brief in all his writings, verifying the old saying that actions speak louder than words; or as one writer, speaking of de Vargas, says, "His manuscripts, unlike the old Spanish documents, which are beautifully engraved, forces on you the reflection that as he carved his way through the country with the blade of his sword, he did his writing with the hilt."

There is no mention in history of this fight at Laguna. De Vargas states that after receiving the oath of allegiance and obedience of Acoma he and his command moved on towards Zuni. Arriving there they found the Indians fortified on the butte, "Thunder mountain," or as he calls it, "Penasco de Galisteo," and that before beginning the attack he sent a certain man of the pueblo to tell them that he had come with peaceable intentions, and on November 11 the Zuni Indians surrendered. In one of the houses he found several articles of church apparel.

From Zuni de Vargas made a short trip to some of the Moqui villages, and then returned to the Rio Grande by the way of Acoma and Laguna. He left, however, his autograph on the rock "El Moro," or "Inscription Rock," about 24 miles east of Zuni. The inscription was discovered by one of Lieut. Wheeler's parties during the early occupation of the country by the Americans. This is the inscription translated:

Here was General Don Diego de Vargas, who conquered for the Holy Faith and the Royal Crown at his own expense, all of New Mexico in the year 1692.

De Vargas was not the first, however, who carved his name on this rock, as there is another inscription, bearing the early date of 1626.

Referring to the priest, it is possible that he returned to Zuni and took up his abode, adopted the costume, and accommodated himself to the customs of the Indians (in fact, there is traditionary evidence to emphasize this statement); and by so doing was dropped from the Church calendar. The Zuni Indians who followed the command as far as Laguna brought with them a new society or order, called "Chaquin." In some respects it resembles Masonry. The Zunis claimed that it had been taught to them by the priest, but not being allowed to practice it in Zuni, on account of the opposition of the medicine orders, they had come to Laguna, which, being a new pueblo, any new order would be welcomed. It is quite a popular order yet, and known as the "Chaquin," or the Order of the Black Mask.

The 2 guides and several others from Laguna accompanied the command to the Rio Grande. There de Vargas presented Antonio Coyote (Kum-mus-che Kush) with a cane, as a badge of office as governor of the new pueblo, and requested the Lagunas to return to their village and build a church, and that when it was completed he would send a priest to preside.

The church was built in due time. The old structure still stands, adjoining the present Roman Catholic Church, on the south, and is known as the "House of the Principales." Once every year in April the old men of the tribe meet in this building and rehearse their beliefs and ancient traditions. The priest, Fray Juan Merando, came, as promised, and brought with him the image of San Jose. Taking the image to the river he dipped its feet into the water and rechristened the stream Rio de San Jose, the name which the stream bears to this

day. In 1696 many of the Pueblos again revolted against the authority of Spain. De Vargas succeeded in bringing them all to terms as far west as Acoma, which stubbornly refused to surrender. The same year de Vargas' term of office expired, and Pedro Rodriguez Cubero was appointed to fill the vacancy. Cubero had also been empowered to arrest de Vargas on certain untrue and unjust charges, preferred against him by those who were jealous of his fame and popularity and success in quelling the Indian troubles of New Mexico.

On these charges de Vargas was imprisoned for 3 years in Santa Fe, but finally obtaining a hearing before the Viceroy of Mexico, was pardoned, and reappointed Governor of New Mexico in 1702, and Cubero returned to Mexico. It was during Cubero's administration that Laguna took the oath of allegiance and obedience to Spain, which we have before alluded to, on July 4, 1699, and received the name of San Jose de la Laguna, in honor of its patron saint, San Jose. On July 6, of the same year, 1699, the Acomas renewed their oath of obedience and allegiance, which had been so many times broken, and their patron saint was changed from San Pedro to San Estevan. De Vargas died on April 7, 1704, at the town of Bernalillo, and his remains were buried in the wall of the old church at Santa Fe.

Let us go back to the year 1689. Domingo Giron Petriz de Cruzate, at that time Military Governor of New Mexico, was waging a war of extermination against the Pueblos. In his attack on the Zia Indians, 600 of them were killed and 73 captured, the captives being taken to Mexico as slaves. Among these captives was an Indian known by the name of Antonio de Obejada (probably a corruption of Antonio de Ojeda). He seldom is mentioned in history. He was one of the principal chiefs in the Popé rebellion, and held the same rank as Tupatu, Catiti, and Jaca of Taos. He claimed to be a native of Zia.

He was well educated, being able to read and write the Spanish language, and although suffering from a serious wound received in battle, he was taken to El Paso. The authorities finding him very intelligent, questioned him with regard to the lands claimed by the different pueblos, and on his testimony grant titles were issued to several of the pueblo villages—namely, Picuries, San Juan, Cochiti, Santo Domingo, San Felipe, Jemez, Zia, Laguna, and Acoma.

The records show that like papers were issued to all these different pueblos in the year 1689. The original grant title papers of Acoma and Laguna, however, have never been found since the occupation of the country by the Americans, but on the recorded evidence, the U. S. Government, in 1876, surveyed to them the lands claimed. The Acoma grant was confirmed by Congress and patented as surveyed. The Laguna grant as surveyed in 1876 was never confirmed by Congress. In 1890 the Government appointed a commission to investigate the old grant titles in New Mexico and Arizona. They found evidence to show that the Laguna claim was valid, but too large, and suggested that it be cut down. Consequently it was surveyed again in 1895,

giving them a body of land 6 miles square, with the village of Laguna in the center. Subsequent to the date of the grant, 1689, Spanish squatters settled at different times on different parts of the land claimed by the Lagunas, and in order to get them away without trouble the Indians bought their improvements and what land they claimed. These parcels of land are 3 in number and comprise about one-half of the original grant. They are known as purchases. Their claim to their land was recognized by Spain and later by the Republic of Mexico. We will speak of these different purchases as we come to them.

In 1744 Joaquin Codallos became Governor and Captain General. It seems that he tried in a way to assist the Indians, for in 1746 he had two missions established for the conversion of the Navajos, one about 15 miles north of Laguna, at Cebolleta, and the other about 10 miles northwest of Laguna at Encinal. These missions were quite popular with the Indians for a time, but when the novelty of the institution wore off the Navajos, like their prototypes (Arabs) folded their tents and moved away, and the church vestments were removed to Laguna.

Gov. Codallos also lent his aid in re-establishing the pueblo of Sandia, which had been abandoned since the rebellion of 1680-91.

This town was repopulated with Indians from Moqui principally, a few from Acoma and Laguna. Sandia is located about 15 miles north of Albuquerque; it has very few inhabitants now and seems to be again on the verge of extinction. It may interest the reader to know a little more of the history of this pueblo of Sandia. During the revolt of 1680-90 the Indians of the village abandoned their pueblo and moved in a body to Moqui. During the administration of Codallos they were brought back and settled, first on the Rio Puerco, at a place called Ojito, but for several reasons, principally the incessant raids of the Navajos and Apaches, they were again removed to the old pueblo of Sandia. The ruins of this settlement on the Rio Puerco are still to be seen close to the little village of Ojito. In 1788 Juan Bautista de Anza was appointed Civil and Military Governor of New Mexico. He undertook the task of christianizing the Moqui Indians, but met with no success, further than inducing about 30 families to abandon their country, which is very arid and barren, and settle among the pueblos of the Rio Grande. As they were passing Laguna a little girl of the party became sleepy and hid herself among the weeds and pumpkin vines and went to sleep, while the party continued on without her. When night came on she awoke, and seeing the lights in the houses, came to the village, was adopted, and grew up with the rest of the Laguna children. Her descendants, the Moqui Sun people, represent one of the largest clans in the tribe.

In the year 1801, during the administration of Ferdinand Chacon, a Spanish colony and presidio, or military post, was established at Cebolleta, 15 miles north of Laguna. This is the place where Gov-

ernor Codallos 55 years before had the mission built for the purpose of evangelizing the Navajos. The garrison consisted of 35 soldiers. The grant issued to the colonists bears the date of 1801 and names 33 grantees. Among the first on the list are the names of Jose Maria Aragon, and his brother, Francisco Aragon. Soon after the settlement of the colony Jose Maria Aragon took up his residence among the Laguna Indians and married a woman of the tribe. In 1802 the Navajos, who claimed that section of the country, forced the colonists to abandon the settlement and they returned to Chihuahua, Mexico, but were brought back the following year under a military escort, and cautioned that if they ever returned again their lives would pay the penalty. This statement seems singular, that free-born citizens of Mexico should be transported back to New Mexico by force, and might lead one to the belief that Cebolleta was originally a convict colony. But it is claimed by the old settlers that the colonists were under contract to remain in the country and the Spanish governor took this means of compelling them to live up to their agreement. In 1805 the Navajos laid siege to the town in earnest. The village was at that time surrounded by a high wall, but the Navajos, numbering about 3,000, succeeded in forcing the gates, and would have massacred the entire population, but for the timely assistance of the Laguna Indians, under the leadership of Jose Maria Aragon, who was recognized by the Spanish authorities as *alcalde*, or justice of the peace, of Laguna. When the Navajos broke through the gates the settlers were compelled to barricade themselves in their houses, and then the fight began at close quarters.

It is said that a woman killed a Navajo chief by dropping a metate from a window on his head. A metate is a stone used for grinding corn by hand. The story says that there was an American in the village at the time. They called him the *Sargento* (sergeant). He had received a desperate wound from an arrow, but with the fighting instinct peculiar to those old pioneers, he climbed to a window, and there with his trusty rifle, fought till he died from the effect of his wound. The Laguna Indians in the meantime had attacked the Navajos in the rear, and they were compelled to retreat. In return for the services of the Lagunas the settlers recognized the Pueblos' title to a strip of land joining the Cebolleta grant on the south, which had been in dispute. The land was occupied at the time by 4 Mexicans, Miguel Moquino, Vicente Pajarito, Pascual Pajarito, and Antonio Paguat, from the village of Cabolleta, but to quiet the title the Lagunas purchased the improvements of these settlers, and under petition the Spanish governor gave them a title to that part of the grant which is now known as the Paguate Purchase. The military post, or presidio, established at Cebolleta was continued by the Spanish authorities until Mexico became a republic in 1821; then by the republic of Mexico till New Mexico became a territory of the United States, and was re-established as a camp by the U. S. Government and continued until

1862, when it was removed to "El Gallo," close to the present town of San Rafæl, 35 miles west of Laguna, and called Fort Wingate. In the year 1760 a Spaniard by the name of Mateo Pino settled on the Laguna grant at a place which is known as "El Rito," but on account of the raids of the Navajos and Apaches he was compelled to move away, but in 1825 his son and sole heir, Guachin Pino, and another Spaniard, by the name of Marcos Baca, returned to the place, claiming that Mateo Pino had been granted a large strip of land in that vicinity. The Laguna Indians bought the claimant out and by petition to the Mexican governor secured title to the land. It is known as the "El Rito" purchase.

In 1836 Pino and Baca moved to a place 11 m. west of Laguna and bought a quit claim from a Navajo Indian by the name of Francisco Baca, and established the town of Cubero.

In 1870 Fort Wingate was moved to its present site at the west end of the Zuni mountains. The history from here down to the occupation of the country by the Americans is meager and not of much interest. There were occasional raids of the Navajos and Apaches, and even Utes. These prowling nomads never attacked the pueblos of Laguna and Acoma in force, but contented themselves with waylaying the lone herder or hunter, robbing him, and in many cases leaving his dead body as a ghastly reminder of their wanton atrocities. Many wonderful tales of daring are told by the old men of the village; of fights with these wild denizens of the mountains; of children that were captured by the Navajos or Apaches, and certain instances, when after long years, they returned to their native pueblos. Many of these stories are strange and romantic. It was necessary for the people to be continually on their guard. Their stock was penned in the village or as near as possible. The only door to the dwellings was a hole in the roof, only accessible by means of a ladder, which could be drawn up in time of a siege. The windows were small, with slats set in, or sometimes a slab of selenite (crystalized gypsum) to answer the purpose of glass. With all the trials and troubles which they have passed through, however, Acoma and Laguna have about the same number of inhabitants as when their first authentic history began. The early Spaniards were prone to exaggerate the number of inhabitants of nearly all the pueblo villages. The population of Acoma in 1680 was estimated at 1,500; in 1798 at 757; in 1860 at 491; at present about 500.

The population of Laguna in 1797 was 817; in 1860, 988; at present about 1,500.

The Queres Indians were never cruel to their captives or criminals. When death was the sentence they were speedily executed or marooned on a high rock or ledge of a precipice, from which it was impossible to escape, and there left to perish from hunger and thirst, or throw themselves down, to be killed on the rocks below. This mode of punishment was called Tit-Kash. Their war whoop was Ah-Ah-Ai, the first two syllables prolonged, the last short and abrupt.

Thus far we have followed authentic history or traditions, which can be verified by historic records. We now take the trail of tradition pure and simple. This lays before me a task of no small magnitude, to trace this people back over the road now all but obliterated, with no familiar landmarks to guide me, nothing but the few fragments of tradition scattered here and there at long intervals, the sound of a word that has survived the changing influences of time or the echo of an ancient song that seems to float down to us from the dim past. Rollin, the great historian, says that, "the principal incentive to the study of the history of a people and the value derived from it is to discover where they made mistakes and to profit by their experience." With philosophers and statesmen this is true, but with the average person the incentive is curiosity, and the value derived is the satisfaction of knowing.

This peculiar condition of the mind called curiosity, a compound of reason and instinct, or in the undeveloped brain probably the first shadow of reason. We find throughout the animal kingdom, with but few exceptions, a certain desire or longing, to find out, to become familiar with that which is mysterious, or that which they do not understand. It is this same mystic influence that impels the human mind to delve into the unknown and to gather fragments of truth, which arranged in proper order, we call knowledge. Who are the Queres Indians; who were their ancestors, and where did they come from? The early Spanish explorers in the country classified the pueblos of New Mexico and Arizona according to their languages into 9 different nations, viz., Tigua, Tegua, Tano, Queres, Piro, Tompiros, Xumanos, Tusayan, and Cibolan. Of these the Queres were then, as now, one of the most enlightened, as well as one of the most numerous; at present numbering 7 different tribes—Acoma, Laguna, Zia, Santa Ana, San Felipe, Santo Domingo, and Cochiti.

Their traditions are faded and covered with the dust of ages and badly patched with fragments from other traditions, but enough is left revealed to show that we may be able to trace these people, if not to their origin, at least to a remote antiquity. The meaning of the name Queres is rather indefinite; it seems to be an obsolete word, but possibly may be some word changed by Spanish usage. There is a secret society or medicine order called Korina or Que-ran-na, which may have suggested the name to the Spaniards. Hano is their own name for their people. The word is significant; literally translated it means "Down East," but it may be a Phœnician word, as Hanno was a name common among the Phœnicians. In all tradition there is a thread of truth, which, if it could be untangled from the romance which ages of superstition and ignorance have surrounded it, would prove a valuable addition to history. One great trouble in deciphering these old traditions is that in many instances they have been mixed, not only with other traditions of the same people, but with traditions from other people.



ENCHANTED MESA, FACING ACOMA

Photo by Dr. Baum



JOSE COUCHO, GOVERNOR OF ACOMA

Photo by Dr. Baum

When a Queres Indian commences to tell a story he begins by saying Humma-ha; these words to him now have no particular signification, and are used merely as words of attention or introduction, as we would say "once upon a time," but at one time they meant something more, as the words indicate, Humma, when, and ha, east, and were used to introduce a class of stories brought from an eastern country. Among all the tribes of the Queres nation there is a tradition, or rather two versions of the same tradition, called "Shipop, stchemo;" the exodus from Shipop.

One version of the tradition says that in an eastern country all the people came out of a big water into which poured all the rivers of the earth, and though these rivers flowed for ages, never was the big water augmented, but that it would rise and fall at intervals.

Another version of this same tradition says that somewhere in the north, a few days' journey from the present pueblo village, all the first people came out of a deep hole in the earth. Into this hole poured four great rivers from the four cardinal points, and although these rivers flowed constantly, never was the pit completely filled to the brim. The water would, however, rise and fall rhythmically. The latter version of the tradition is part Queres and part borrowed. Many of the Indian tribes of the Southwest have this tradition of their origin in the bottomless pit. These traditions, as the Indians tell them are clothed with a great deal of romantic and mythical nonsense, having been handed down orally from generation to generation, each one who repeats them making slight changes. Thus one tradition becomes merged or confounded with another, until time and place become a confused mass; so when asked where his ancestors came from, the Queres Indian will answer "from the North," which is correct, but only answers a part of the question, as we shall proceed to demonstrate. Many of the old folk lore tales not only describe in a way the country from which they were brought, but also give the direction. Thus some refer to the North, others to the East or Southeast.

The story or tradition of Shipop says that when the first people came out of the water the land was soft, or, as they express it, the land was not ripe (Sah-kun-nut), and that not finding firm ground on which to build habitations they continued on to the south of the unripe land, and there finding a suitable place built a village and called it the "Kush-kut-ret;" kush is now an obsolete word, but in ancient times it was their word for white; kutret is the Queres name for house, so the structure they built must have been a compact village or pueblo, with numerous rooms, resembling a large house. We will call it the "White village."

From here the tradition refers to a country still east of the "unripe land," a country of no small extent, for it was considered a remarkable feat to make a journey around it, and they say that but one man ever made the trip. They tell us that the country was surrounded by water on all sides (shra-ena-komisho-putch), literally the edge of the

water all round. Their early traditions and beliefs point to this island, for such it must have been, as the cradle of the Queres nation. The island of Shipap. Now, in the water which surrounded this island lived a monstrous animal or fish, the "Wa-wa-keh," that vomited water.

This fish came up and threw such quantities of water over the land that it was submerged, and all the people who had remained on the island perished. These traditions at first seem nonsensical, but when we apply reason, assisted by the recent discoveries in archæology, we find that they are consistent. They are peculiar in one way, showing that these Indians were at one time a seafaring people.

Along with these romantic traditions there are several others for making this assertion. They speak of the land they once inhabited as being surrounded by water (shra-ena-komisho-putch), and the end or limit of the world, or where the sky, to their early belief, met the horizon. They call the edge of the water "komisho-putch," and they call the place where the Sun rises and sets "the house of the sea or lake of flame," "kowi-kutsch," showing that the sun must have risen and set, according to their belief in former times, in the waters. The big animal or fish, "Wa-wa-keh," that vomited or blowed water, was the whale. Certain features of the language also verify this statement. The name for some of the colors was suggested to them by the water; thus, striped, kow-i-shu-shuts, the trembling of the sea or lake; spotted, kow-i-sup-pe-puts, the splashing of the sea or lake; the name for white, kow-i-stchum-mits, the reflection of the light on the sea or lake; the name for blue, kow-wishk, though somewhat obscure, may be traced to a similar source, a word or phrase meaning "like the sea or lake." I have traced these Indians to their origin, or at least as far back as their traditions will take us, and witnessed the destruction of their island home.

Of course, we can not accept their romantic theory of the destruction of their land by the marine monster, the "Wa-wa-keh," but we can believe that such a catastrophe may have happened, caused by some seismic disturbance of nature, as geology cites us many such instances, even in modern times. In tracing these people I have given but a hasty glance along the trail they long since traveled. Let us follow these argonauts of the western hemisphere, as their boats leave the island. Their course is west; they reach the coast of Florida at a time when that peninsula was shoals and shifting sand bars, or vast swamps and marshes. Not finding a suitable place to land they continue on to the south, skirting the coast till they reach the southwest extremity of the peninsula. Here on the islands or keys they build their first habitations or first settlement on the North American continent and called it "Kush-kut-ret," or the "White village." Here the traditions are verified by archæological discoveries of vast pueblo ruins on the keys and west coast of Florida, constructed of conch shells. There is a faint tradition among the Lagunas and Acomas that their ancestors built structures of some kind of shells, and the color of these

shells may have suggested the name for their village. On the islands and main land of Florida are vast quantities of broken pottery, a silent but undisputed witness that a superior race of Indians once inhabited the peninsula. The broken pieces of pottery show that it was vastly inferior to the nicely constructed jars which the pueblos of to-day make. But no doubt their crude pots answered the purpose admirably for which they were intended.

It is reasonable to suppose that communication was kept up at intervals with the island until some boat returning learned of the terrible disaster, and seeing the whale spouting in the vicinity of where the island had been, adopted the theory as the most plausible, that this animal was responsible for its destruction. Years pass, some climatic change is taking place, the rainfall each year becomes less and less, until everything is parched and dry. A character whom they call "Po-chai-an-ny" comes to them from the cane brakes of the north; he professes to have control of the seasons; he obtains a large number of followers; the ruler, or "Ho-tchin," is deposed and Po-chi-an-ny is elected to the place. He changes their medicine from the use of simple remedies to incantations and jugglery, but he fails to produce the desired change in the seasons. The anger of the natives finally becomes aroused. Po-chi-an-ny flees from their wrath, but is pursued and captured, and tying large stones to him they cast him into the deep water, but matters become worse, and at last they are compelled to move. Their course is to the northwest.

On the banks of a large river (the tradition does not describe this stream) they construct another village, and in remembrance of the first settlement name this the "White village." Here a plague, which they call "Ki-oat," something like smallpox, overtakes them. A daughter of the ruler becomes afflicted. The disease baffles the skill of the medicine men.

To the west of the village in a house thatched with big leaves lives an old woman by the name of Que-o Ka-pe, who is celebrated for her skill in medicine. The ruler sends his war captain and brings her to the village. She cures his daughter and many others merely by the application of water. The medicine men become jealous of the old woman on account of her skill in overcoming the disease with so simple a remedy when they were powerless with all their incantations. The medicine men hold a consultation and Que-o Ka-pe is sentenced to be killed, but before the deed is executed she makes a prophecy. The Queres Indians say that she pronounced a curse on them; that misfortune and misery would pursue them relentlessly for generation after generation.

Again the disease broke out more violently than before and again they are compelled to migrate, and again their course is toward the northwest. They say the reason they had followed this course was to join a people who years before had come from the same place, "Shipop," and had settled in this, to them, northwestern territory. In a

valley surrounded by rugged mountains and perpendicular bluffs we again hear of the "White village;" last of grand settlements of the Queres.

The tradition gives several significant landmarks. It might be questionable whether these were on the island which was sunk or somewhere in the vicinity of the last of the "White villages," most probably the latter. These landmarks were 4 majestic mountains. On the north was the "Kow-i-stchum-ma Kote," literally the "mountain of the white lake," but probably a snow-capped mountain. Kote is the Queres name for mountain. On the east was a tall, straight mountain, called "Kutch-um-mah Kote." On the south was the "Tout-u-ma Kote," the "Hooded mountain," probably a flat-topped mountain, capped with basalt. On the west was a rugged mountain covered with forests, called the "Spinna Kote."

From the earliest times the Queres were governed from one central seat called "Kush Kut-ret," or the "White village." The ruler or "Ho-tchin" was elected for life, selected for his knowledge and executive ability. At his death another was selected in a similar way. His duties, besides governing the people, were to keep the ancient traditions and history of the people of the nation. He was also the head of the medicine orders. He had one officer, the war captain (Sah-te Ho-tchin).

The last of the White villages was built in Southern Colorado, or possibly in Utah, and the tributary settlements extended throughout that part of the country, where the 4 states corner—Colorado, New Mexico, Arizona, and Utah. The destruction of this grand settlement was caused by a tributary village declaring its independence and electing a new ruler. This led to a grand war among the inhabitants, and to finish what the Queres had themselves begun, those fierce warriors, the Apaches, appear. The destruction is complete. The nation which for thousands of years had held together, fighting their way across the North American continent, was scattered, some going to the valley of the Rio Grande, others further west. One party went on southwest, and were never heard of after. The invasion of the Apaches is supposed to have been between 800 and 1,000 years ago. The Navajo Indians who inhabit the country where the Queres had their last settlements show a mixture of the Pueblo and Apache. Many words in the Queres and Navajo are alike, and some of their religious customs are similar, for instance, the sand paintings. The Queres call the Navajos "Mo-a-shrum." The name means "those who came out of the hills, or rough country."

There are several incidents related in these traditions which I have necessarily omitted, not being able definitely to locate the places where they happened. They tell that at one time, on account of famine, their ancestors were reduced to cannibalism. The tradition seems to point to Florida as the place where this happened, which does not seem possible, with the sea so near, teeming with its myriad forms of ani-

mal and vegetable life. Another incident they speak of was a people called the She-ken, who came to them from the south pass, wherever that may have been; these people were under the leadership of a man by the name of Korina; that when they arrived each one of the party carried in his hand a peculiar flower or plant, and that during the night after the arrival the plants were frost bitten and became withered, but the next day when the Sun came up the flowers resumed their former shape and the party continued on to the east into the forest, where they built houses of boards. I have given this tradition verbatim as it is told.

In comparing it with some of the other traditions, however, I find that the She-ken tarried quite a while with the Queres, at least until Korina, the leader, died. The Queres adopted several customs from these people, and their language shows a mixture with some other language, possibly the language of the She-ken. I have attempted to untangle these old traditions in a truthful and logical manner, but have necessarily been compelled at times to assume certain premises and deduce the conclusions. There is still room for a good deal of speculation. Was the island of Shipop Plato's Atlantis, which Ignacio Donnelly attempts to prove existed at one time in the Atlantic Ocean? If such an island existed there must be certain indelible signs left; for instance, a body of land, such as it seems to have been, would have diverted or split the Gulf Stream, and the changing of this current could be noticed in the fossil remains on the coast of Europe. Should it be proven that these Queres Indians are descendants of the Atlanteans it gives them an unbroken national record of at least 10,000 years.

The religious belief of the ancient Queres Indians is as strange as their ancient history. It is philosophical and reveals a depth of thought far ahead of their descendants of the present day. The belief in a supreme being or beings is as old as reason in the human brain. The first theory of a deity evolved by mental reasoning was necessarily crude, but as the mind expanded old theories were dropped and new ones adopted, and so it has been going on since the dawn of reason. Everything in creation, nature in all its varied forms, shows itself to be the product of profound reason, and whence this reason? Who will be the Copernicus or the Newton to discover the true theory? Is there a personal God, or is all matter imbued more or less with intelligence? The religion of the Queres is not exactly a polytheism, neither is it a pantheism, but seems to be a compound of the two, with a slight strain of totemism. Their theory is that reason (personified) is the supreme power, a master mind that has always existed, which they call Sitch-tche-na-ko. This is the feminine form for thought or reason. She had one sister, Shro-tu-me-na-ko, memory or instinct. Their belief is that Sitch-tche-na-ko is the creator of all, and to her they offer their most devout prayers, but never to Shro-tu-me-na-ko. They say it is bad to do so. This shows that they knew of the 2

divisions of the mind, reason and instinct, and also that they were aware of the uselessness and evil consequences of cultivating the subjective mind. E-yet-e-co is the most beloved of all the deities; to her they can all pray; she is the mother who brought them forth and receives them when they die. E-yet-e-co means the earth, but they speak of her in much the same manner as we speak of nature; She-wo-na, the spirit of force, who reveals himself in the fog, the rain, the dew, and the mists, who manifests his power in the roll and surge of the waters, the storm, and the rending stroke of the lightning, and whose voice is the deep roar of the thunder; Sitch-tche-na-ko created him out of a dew drop; Shru-wat-tu-ma, the evil spirit. Here is something singular; literally the name means the one from a short way up. Spiritualists claim that the evil spirits inhabit the lower plane, just above the earth. Thus we have mind (reason and instinct), matter and force woven into a religion. Without mind there could be no conception of anything. Without matter there could be no force that we know of and *vice versa*. The evil spirits in all religions are a logical creation. There seems to be an opposition pervading all nature, a part of nature's laws, thus force and resistance, attraction and repulsion, positive and negative, action and reaction, construction and destruction, good and bad. Here the religion takes more the form of polytheism; Wa-ah-me-na-ko, the guardian spirit; Ka-tu-te-a, the giver or spirit of charity; Kap-poon-na-ko, the spirit of sleep; she seems to have been a demi-goddess, because she is said to have been the wife of Hutch-a-mun Ki-uk, the ruler of the first Kush-kut-tet; Moe-a-na-ko, the spirit of the yellow earth; Mots-sin-ne-na-ko, spirit of the hills and mountains.

There are several more, but their identity is lost. Merely the name remains, and many appear to be borrowed from some other religion or else the product of ignorant jugglery. The only thing in their religion which indicates totemism was the worship of the "Tsets-Shri-na." This was a monstrous green serpent, with horns, that they say inhabited the big water. The Queres knew something of astronomy; they knew the difference between the fixed stars and the planets, and had names for some of the constellations. According to their way of mapping them they say the Sun had eight children. Is this only a coincidence in their mythological tales, or had they by some means discovered the 8 planets?

In reason's ear they all rejoice,
And utter forth a joyous voice;
Forever singing as they shine,
The hand that made us is divine.

Resuming the history of Laguna and Acoma where we left it, just before the Mexican war, the first and most notable event was the treaty of Guadalupe Hidalgo, in 1848, by which New Mexico and Arizona became the property of the United States. The invasion of the Americans produced a change in these old pueblos, slow at first,

but like the sleeper at the sound of an awakening call, these people of a forgotten past rouse to action. The causes which had so long kept them in a state of idleness and bondage have ceased to exist. Advancement is the countersign, and as time passes we recognize no longer the old customs and Indian traits; all have changed with the advance of education and modern civilization.

In 1851 Samuel C. Gorman, a native of Cincinnati, Ohio, came to Laguna as a missionary sent by the Baptist Mission Society. In 1856 the Indian Department of the Government authorized Mr. Gorman to have a building erected for school purposes and as a chapel. This building is still used as a Government school house and Protestant Church. Mr. Gorman was recalled shortly after the breaking out of the Civil War.

In the latter fifties Gen. McCook established a military camp at Laguna, which was continued about a year; the foundations of the old barracks are still visible north of the town. Gen. McCook recruited a company of Laguna Indians to act as scouts in the campaign after those bloodthirsty followers of Nane and Mangus Colorado, and it is needless to say that they settled many a long-standing account with their old-time foes, the Apaches.

In the early sixties President Lincoln sent to each of the Pueblo villages a silver-headed cane, to be held by the governor of the Pueblo as a badge of office.

In 1866 the Navajo Indians became a dangerous factor in the Southwest. Early in the sixties, or to be more exact, in 1862, the Government established an agency and military post in the Navajo country, known as Fort Defiance, to keep these savage bandits in some kind of subjection, and to quell their lawless maraudings, which had long held the country in a state of terror. While the exact cause may have been various imaginary wrongs on the part of the red men, we will accept the following, which, like most happenings of that kind, come unexpectedly and all at once:

Early one morning a powerful Navajo came to a kitchen door at Fort Defiance and asked for a drink of water. The cook, having just finished washing the dishes, as the Indian stepped to the door, accidentally or intentionally threw the pan of dirty water in the Indian's face. Enraged beyond the boundary of reason, the Navajo drew an arrow and laid his insultor lifeless on the floor. The guard seeing what had happened, but not knowing the cause, thinking it to be assassination, fired on the Navajo, killing him instantly.

The Navajos in the vicinity of the Post rushed to their arms. The news of the killing flashed over the Navajo country with almost the speed of thought, and it quickly became evident to the soldiers at the Post that the Indians were on the war path. The Navajos at once began a raid of destruction and devastation. Gen. Canby, assisted by such experienced Indian fighters as Gen. Carleton and Kit Carson, took the field, and commenced a vigorous campaign against them, pursuing them relentlessly.

Their sheep and horses were confiscated or driven into corrals and killed; peach orchards were cut down; the cavalry horses turned loose in their fields of grain, and what the horses could not destroy was burned by the soldiers. Two years of war was enough for the Navajos; the lean, starved warriors began coming in singly and in bands to surrender and accept what terms of peace or punishment might await them; the first time in history probably that these fighters, descendants, perhaps, of those same people who gave to the world that noted warrior, Genghis Kahn, ever bowed to a conqueror. As soon as they were gathered in they were taken to the Bosque Redondo on the Pecos river, where a reservation had been set aside for them, and a military post established. Owing to certain features of the climate it proved very unhealthy for the Navajos, and the death rate soon became fearful. Gen. William T. Sherman was on a tour of inspection at that time, and it occurred to the captives that he might do something for them, but Sherman refused to listen to the petition of the warriors to be again returned to their old reservation. Then it was that all the young women of the tribe, dressed in their best attire, besieged the old commander. They promised that if allowed to return to their old reservation the women of the tribe would so train their children that never again would the Navajos go on the war path against the American Government. They told in their way of all the sorrows and griefs that the war and their captivity had caused. The gallant old general was conquered; hero of many a hard fought battle, who led the famous march from Atlanta to the sea, had surrendered, and on his recommendation the Navajos were returned to their old reservation in Northwestern New Mexico. The Lagunas and Acomas assisted the Government in this war, from start to finish, and won great praise from their officers. As I have once before said, the Navajos are largely mixed with the Queres Pueblos, and ethnologists will some time confirm this statement.

In 1868 W. F. M. Arny was appointed agent to look after the affairs of the Pueblo Indians and give them a helping hand. Arny was a man who was not afraid to act on his own convictions of what was right; not like too many before and since, who, from fear of doing something wrong, do nothing or as little as possible to hold their positions and draw their salaries. The Pueblos now had some show of redress by law. Years of subjection and seclusion have produced a state of timidity among these people which only time and proper education will ever eradicate.

In the year 1871 Walter G. Marmon was appointed Government teacher at Laguna, the first teacher ever appointed by the Government to teach among the Pueblos. Some time previous to this date some of the more progressive Indians, seeing the advantages of an education, had instituted a select or subscription school, and hired a Mexican by the name of Manuel Cassius, who was fairly well educated in Spanish, to teach their children. However, when Mr. Marmon came to Laguna

as teacher, not one in the tribe could speak the English language, and only one could read and write the Spanish. He was Luis Sarracino, and was educated in Durango, Mexico, by the Roman Catholic Church, but joined the Protestant Church while Mr. Gorman was here. Arriving at Laguna, Mr. Marmon at once became teacher, doctor, councillor, and minister. On taking charge of the school house he discovered that there were no seats in the building. In an ante-room of the Roman Church were 2 sets of stocks, relics of the past; these Mr. Marmon had sawed into blocks for seats. One day the parish priest visited the school, and in the course of the conversation Mr. Marmon remarked that he was again using the stocks, that he had resorted to them to help teach the youthful Lagunas. The priest replied that he was putting them to better use than they had ever been put to before.

It had been the custom for a number of years, or at least since the new Roman Church had been built (in the latter part of 1799 or the fore part of 1800) to bury the dead either in the church or in the yard in front. The church is about 60 ft. long and 25 ft. wide, the yard probably 100 by 50 ft., and at this time the inhabitants of the village of Laguna numbered about 1,000. It can readily be seen that in a few years all the space would be occupied; and such was the case. The remains of one would be exhumed and another deposited, the bones of the exhumed carelessly thrown over into an outer corral adjoining the church yard. Mr. Marmon made a report to the agent regarding this inhuman custom, and asked that he come to Laguna. When the agent arrived he found things as stated, and called a meeting, forbidding them from burying any more of the dead in or around the church, both on account of sanitary principles and for humanity's sake; so by common consent they abandoned the practice and selected 2 new sites for graveyards, Protestant and Roman Catholic, respectively. In 1875 Dr. John Menaul was sent to Laguna as missionary by the Presbyterian board of missions. He was also appointed Government teacher, Mr. Marmon having resigned.

Dr. Menaul established a printing press at Laguna, devoted to missionary work principally. He translated and published in the Queres language McGuffey's first reader. In 1884 a bell was placed on the school building by Pueblo subscription. Dr. John Menaul spent 12 years of earnest work among the Lagunas. He left in 1887, loved and respected by all. The old mission built by Mr. Gorman in the early fifties stands about one-half mile northeast of the village, and is still used as a dwelling, though constructed of adobe and having received but slight repairs since it was built, is apparently as substantial as ever. A good deal of history is connected with the old building; its walls have echoed to the tread of Sherman, Logan, Carleton, Canby, Kit Carson, and many others, whose names adorn the history of the United States. Part of Gen. Lew Wallace's famous story, *Ben Hur*, was composed beneath its rustic roof. "Billy the Kid," the hero of the Lincoln County war, spent two weeks in one of the rooms of this old house, a fugitive from justice.

A notable event, and one worthy of record, occurred in the year 1876. The Acoma grant was to be surveyed. To the northwest of the village about 25 m. is a big spring, called El Gallo, known to the Indians as the warm spring. This was one of the landmarks in the boundary calls of the grant papers issued to Acoma by Spain in 1689. In 1862 the Government established a military post at this place and set aside the land around the spring for a military reservation. The post was abandoned in 1868. This was the same year that the Navajos were brought back from the Bosque Redondo, but the land was still held as a military reservation. When the post was abandoned a number of camp followers and ex-soldiers, whose time had expired, remained. The spring flows a large volume of water and the soldiers had constructed an irrigation ditch and had several fields under cultivation. These improvements the squatters wished to retain, but the land being a military reservation, they were notified to move, but they refused to go, and a detachment of soldiers was sent to remove them. They obstinately resisted, until one of them, a Mexican, attempting to decapitate the officer in charge, was killed. The others then left without further trouble. In 1870 the place was opened for settlement, and all those who had been expelled returned, and with them came others. In the meantime it became known that the spring was the property of the Acoma Indians; a council was held and the squatters were advised to bribe the officers and principal men of the tribe to change the boundary calls by representing to the surveyor that another spring, about 10 m. further east, was the "Ojo del Gallo," or Warm spring. Besides the considerations in money, these settlers proposed to give to the Acomas part of the Laguna grant, which as yet had not been surveyed. The Acomas gave their testimony to the surveyor, as agreed upon, and by so doing the Acóma tribe lost about one-third of their original grant, which was surveyed and later patented to them, according to the survey.

It now remained to put the Acomas in possession of the Laguna land. The Indians of Acoma were notified to be upon the ground on a certain day, and a Mexican justice of the peace would give them legal possession and title to the same. The Mexicans and Americans in the scheme knew it was a farce, but the unfortunate Indians were sincere, and considered the alcald's court as supreme. The Laguna Indians becoming aware of what was going on, came to Mr. Marmon, who was at that time conducting a trading post at Laguna. Considering that the only way to stop the trouble was by a display of force, he hastily armed 2 companies (one of infantry and one of cavalry) with Springfield muskets, which had been placed in the town for the protection of the Lagunas from the Apaches. He took command of one company in person and the other he placed under the command of George H. Pratt, a Government surveyor, and, like himself, a veteran of the Civil War, and together they marched to the scene of trouble.

The Acomas were already on the ground in large numbers, armed

with every conceivable weapon. The 2 Laguna companies and the alcald (justice of the peace) and posse arrived on the ground at about the same time, and without further ceremony the alcald began to read the decree which would put the Acomas in possession. The charge was sounded, the alcald and his posse fled, but the Acomas held their ground, and a pitched battle ensued, in which quite a number were seriously hurt, but no one fatally. The Acomas were finally forced from the land. The agent was notified of the trouble, and came at once to the village. He called a joint meeting of the officers and principal men of each pueblo. This land in question was a purchase by the Laguna Pueblo from a Spaniard by the name of Garviso, about the year 1825, and the Mexican Government issued them a title to it. It is called the Santa Ana Purchase.

When the Acoma grant was surveyed a part of the purchase fell inside the Acoma lines. After a good deal of debate a compromise line was agreed on. The Lagunas were to relinquish about one-half of what they claimed inside of the Acoma grant and the Acoma Pueblo gave to Laguna a quit claim for the balance of the disputed lands, inside the Acoma lines, and so it was settled. The first irrigating ditch was taken out of the San Jose river by the Laguna Indians, about $9\frac{1}{2}$ m. west of the village of Laguna, in 1840. The next ditch was taken out about 3 m. west of where Acomita now stands, in 1860, or 10 years before the Acomas had any settlements in the valley of the San Jose. Acomita was built in 1870.

PROPHECY OF SHE-AKE

Away back in the Queres tradition they tell of a certain medicine man and seer of the nation, who made a number of prophecies, which have all been fulfilled. Coronado refers to this prophecy in his letter to Mendoza, Viceroy of Mexico. He says, "They declare that it was foretold among them more than 50 years ago that a people, such as we are, should come, and the direction they should come from, and that the whole country would be conquered." The story says that this old magician would lay himself flat and striking the ground with his clenched fist, commanded his audience to listen. Then he would tell what he saw and heard. He told of the coming of the Spaniards, the bearded warriors with shirts of metal and how that they would conquer and enslave the Indians. Then he told of the people of the light-colored hair, who would come from the East, would conquer the country, and would be the friends and champions of the Pueblo Indians; that these people from the East would build metal roads (sow-a-ka-he-an-ne), and the prophecy or curse pronounced by Queo-Kape would be lifted and the rains would return, and then the Queres Indians would again be a prosperous, contented and happy people. In 1880 the iron bands of the great Santa Fe Railroad stretched slowly from the East into the lands of the Pueblos. The prophecy was being fulfilled. Robert G. Marmon, a brother of W. G. Marmon, was elected Governor

of Laguna, the first white man that ever held the ancient office of ruler of the Queres Indians. Many of the old customs were abandoned and their further practice prohibited by a vote of the people. Certain ones of the conservative class on this account left Laguna and moved to Isleta, on the Rio Grande.

With regard to the government of these Pueblos, they are both democratic and republican. All business of minor importance is regulated by the governor and a staff of officers. In Laguna the executive body consists of a governor, two lieutenant-governors, a war captain, seven fiscals, or supervisors, one for each of the villages, seven major domos, or overseers of ditches, one for each village. When there is business of such a nature that the officers do not feel competent to decide it is then laid before the whole people in council for their vote. These officers meet once a month or oftener if necessary. Their pay is 50 cents a day while in council. Regarding their land tenure, the grant is held in common, but each individual or family have their own private fields or parcels of land, and any man or family can hold as much land as they can cultivate. Failure to cultivate any land for a period of 3 years works a forfeiture, and the land reverts to the pueblo. They can buy and sell lands among themselves, but not to an outsider or one who does not belong to the tribe.

The Queres Pueblo Indian is as yet a mystery. Whether scientific research will ever draw aside the veil which shrouds the identity of this interesting people remains to be seen. All that is left of their ancient history is a few mythological traditions, folk lore tales, and ceremonial songs. The Laguna Indians claim to have had 3 books of records of the past. These were in existence until within recent years, but on account of religious disputes they were either hidden away or destroyed. The oldest of these was the book of "Water People;" the next was the book of the "Eagle People;" the third and most recent was the book of the "Corn People." What these books were like is only conjecture. The Indians say they were painted on some kind of skin. The writing was no doubt symbolic, as there is no evidence of phonetic writing having been understood among them. Laguna was constructed by refugees from the river pueblos after the Spanish invasion, of the Queres stock principally. They brought their books with them, along with their household goods. Could these old records be brought to light they might prove of historic value. There are certain peculiarities about the Queres Indians which lead one to speculate as to the possibility of their being descendants of the Phœnicians, those great mariners of the past.

Hano, the name these people apply to themselves, was a name common among the Phœnicians. Could it be that these people were refugees from Tyre after the conquest by Alexander, or from Carthage, which the Romans destroyed in later years? I have before referred to the fabled Atlantis as a possible starting point.

Suppose we could prove that they were Atlanteans; we would

still be in the dark. We have no authentic history of Atlantis. The incomplete narration of Plato and ancient tradition placed it somewhere in the West.

However, there is one thing reasonably certain, the Queres Indians are a remnant of a people far advanced in civilization.



DISCOVERY OF AN ANCIENT WOODEN STRUCTURE IN THE EXCAVATIONS OF PORT ZEEBRUGGE*

BY M. BON ALFRED DE LOE

ON JUNE 15, M. Van Gansberghe, Chief Engineer and Director of the special coast service at Ostende, informed the Minister of Finance and Public Works [Belgium], of the appearance of the remains of an ancient wooden structure in the excavations for the wet dock in the artificial channel at Port Zeebrugge.

We, on our part, were officially notified of this discovery by M. Edouard Jonckheere, of Bruges, who had the kindness to write us to come for the first visit to this place.

The Curator in Chief was very diligent in his efforts to obtain for us, with as little delay as possible, all the requisite authorizations. Our work of excavation at Zeebrugge began July 1. This work of completely clearing out 700 sq. m. was carried on at his expense. He then photographed the whole and the details and took, with the permission of the Chief Engineer, Mr. Piens, the protective measures necessary to secure to the State [Belgium] the possession of the collection of objects brought to light.

At last on July 9, M. A. Rutol, Conservateur of the Royal Museum of Natural History, went, at our request, to examine the geological section.

The point where the discovery was made is situated approximately 3,200 meters north of the tower of Lisseweghe and 1,300 m. from the sea, in the excavation for the wet dock, at the southwest angle of the inner harbor, near the coke ovens of the Moselle and the Solvay mills.

The ancient structure was lying at one side beneath 2 m. of marine alluvium.

It was a sort of huge rectangular framework formed of timbers about 12 m. long, with the bark on, lying parallel, separated from each other by a space of from 2 to 3 m. and joined by cross beams.

The whole has been held in place and spiked to the ground by two lateral rows of stakes driven very deep into the ground and crowded one against the other. (Fig. 1.)

The main beams and the pieces which have joined them are not

*Translated for RECORDS OF THE PAST from *Bulletin des Muses Royaux des Arts Decoratifs et Industriels*—a Bruxelles.



ROMAN STRUCTURE AT ZEEBRUGGE, LOOKING TOWARD THE SOUTH
[FIG. 1]



CONSTRUCTION OF THE PILE WORK IN THE ROMAN STRUCTURE AT
ZEEBRUGGE [FIG. 2]

of larch, as has been erroneously stated, but of sylvan pine. The stakes which are sometimes 2 m. 80 (the shortest measuring 1 m. 30) are of birch.

All these woods, very perfect and completely soaked with water, are reduced to pulp on exposure to the air; so we fear that, in spite of our pains, it will be impossible to keep the specimens which have been transported here [The Royal Museum of Brussels] in a satisfactory state. The great beams all present at the ends a rectangular opening, into which the joint of the cross beam penetrates. [Fig. 2.]

They seem, on the other hand, to have filled certain compartments of the work, whose orientation, the long direction, is northwest and southeast, with sand which was brought in and compact turf.

Concerning this the horizontal pieces of wood forming the frame show a pronounced subsidence, but not the stakes; these prove that the land, in this place, had simply subsided or been undermined, but not sunk.

Finally the Roman Epoch can be fixed on in our region, as the age of this gigantic building covered by a thick bed of marine alluvium, the deposition of which began no later than the IV Century, and at a level in which there have been found a portion of a human cranium and the maxillary of a dog, the fragments of the upper part of a jar with 2 handles (lagena) of the Belgium-Roman period. Geology is in perfect accord with archæology on this point.

But the intention of this curious work, where no trace of metal is apparent, is less easy to decide.

In fact, it is a question whether it is a bridge or a raft, or a wharf for shipping, but probably a frame of ground timber lain in a level marsh (protected from the sea) and intended to support a building or an artificial island (crannoge). The invasion of the sea to which we have made allusion would have been the cause of abandoning this project.

Such was also the impression of M. l'abbe J. Claerhout when he visited the works at Zeebrugge on July 12 [1904].

It appears from our borings that the work extended possibly to the delta, towards the southeast, for a distance at least equal in extent to that which has been cleared. * * *

CURRENT LITERATURE

EXPLORATION OF JACOBS CAVERN*

DURING the past year, besides the Cave Excavations done by the University of California, and noted at length in the September issue of *RECORDS OF THE PAST*, another cavern has been carefully examined by the Department of Archæology of Phillips Academy. The greater part of the excavating was done by Mr. E. H. Jacobs under the guidance of Mr. Chas. Peabody and Prof. W. K. Moorehead.

This cavern is situated on the north bank of Little Sugar Creek, 2 miles east of Pineville, McDonald County, Missouri, and has been named Jacobs Cavern.

The cave is in a limestone region of the Ozark Uplift and is but one of a great number which vary in size from small rock-shelters to large caverns. The limestone is full of flint nodules which furnished the primitive inhabitants plenty of material for arrow and spear points, and knives of different kinds.

The cave is truly a rock-shelter, with floor, roof and walls of limestone, irregularly V-shaped; it is throughout natural, no marks of human workmanship being visible in the walls or roof.

The flat top is composed of a single stratum of limestone, while along the sides of the cave stratification lines are well exhibited.

The rock-floor is covered to a depth of 1 m. with clay, usually a homogeneous mass, yellowish brown, containing fragments of limestone.

Above this was a deposit of ashes. There seems no reason to doubt that the clay is a residual result of the disintegration of the limestone, for, so far as noticed, it has never been disturbed, and the line of separation between it and the ashes above is generally sharply marked. Pits dug in different places showed essentially the same clay structure. Near the bottom of the clay the small limestone fragments are more numerous than above, while at the top they are practically wanting.

At the back of the cave is a fissure, extending upward from the roof to a height of 3 m., separating the roof of the cave from the rear wall. The fissure, probably a master-joint of the series described above, is from $\frac{1}{2}$ m. to less than 1 m. wide, and continues along the back of the cave beyond the main part, forming a narrow recess, which in turn extends for about 5 m. * * *

To the mind of the writer, there is no doubt that the ash-breccia was formed very slowly during and after the deposition of the ashes. * * *

Finally, when the deposition of the ashes ceased, the stalagmite continued to grow until it joined the stalactite from above, forming a pilaster.

Near the back of the cave, particularly underneath the fissure, the greater part of the ashes and some of the clay covering the limestone floor have been cemented by the action of CaCO_3 , forming ash, clay, and limestone-breccia, often very firm and solid. In other parts of the cave both ashes and clay are soft and easily moved.

*For full account see Bul. I, Department of Archæology, Phillips Academy, Andover, Mass. By Charles Peabody and W. K. Moorehead, 1904. The Norwood Press.

A number of blocks and slabs of limestone were found on the surface of the ashes, or embedded in them or in the clay beneath. They have evidently fallen from the roof, some before man's occupancy, others during it, and still others quite recently.

Of the sandstone fragments and flint flakes in the ash stratum, there seems no doubt that all were carried into the cave from the outside. The possibility of their having entered from above through the fissure at the back is rendered small, first, by their great number, second, by their even distribution throughout the cavern.

The nearest sandstone outcrop on the surface is, so far as could be determined, 6 km. distant, near White Rock, although small sandstone boulders and pebbles are occasionally found on the gravel bars of Sugar Creek.

Whatever the source of supply, man has necessarily brought the sandstone specimens into the cavern.

As to the thousands of flint flakes, varying from small "spalls" to pieces the size of the hand, it was at first thought that they might have fallen from the roof; careful search, however, failed to detect the presence of flint in roof or walls.

Hence (outside of the slight possibility of their having entered by way of the fissure) it is believed that the flakes and implements have all been carried into the cave or produced within it by human agency.

Much of the flint was obtained from the hills near by; but judging from the lithological character of other pieces, it is evident that they have been brought from a distance, some of them, probably, from the flint hills of central Kansas.

All the traces of human occupancy were found in and above the ash stratum and none in the clay underlying it. Several feet back from the entrance a "heavy stratum of animal bones was met, embedded in the soft deposit above a large flat stone."

This continued for nearly 1 m. backward into the recess. One bone awl and a few flint chips formed part of the bone stratum, which itself was dry and in probably the driest part of the recess. In the rear there were many stones, 10 cm. to 40 cm. down in the soft deposit. This part is damper, and the decomposition of the bones may account for their lessened frequency here.

Six human burials were found in a poor state of preservation. Both the "bundle" and "scissors" types of Indian burial were represented. There was no uniformity in the orientation of the bodies. Two were found with the head to the north while the other 4 were in different positions.

Many of the animal bones found show signs of having been split for marrow, others show signs of having been cooked.

Although nothing was found indicating great antiquity, yet the types of stone implements are quite different from those of the neighboring Arkansas lower-Mississippi basin.

They are here ruder in form and finish, and the small arrow and spear-points of the lower region are almost absent.

The large proportion of very rough knives—round, oblong, shouldered, and not shouldered (often by haphazard)—characterize the Ozark district, and are almost sufficient in themselves to determine a race of occupants different from the so-called "mound-builders."



JACOBS CAVERN : OPENING FROM THE WEST



JACOBS CAVERN: STALAGMITIC MATERIAL WITH FLINT AND BONE

This distinction is enforced by the absence of the finer pottery, as characteristic itself of the Arkansas-Missouri culture, as the knives are in Jacobs Cavern.

To one versed for years in excavation, there comes a certain inexplicable feeling that the specimens from Jacobs Cavern look old in comparison to the mound specimens.

Outside the entrance to the cave are some rocks which present large sections with a highly polished surface.

That the rocks have been polished by the naked bodies or the skin clothing of human beings becomes more probable when we find that, though a few other rocks with a similar polish exist in the Ozark district, they are not present where other evidences of man's occupancy are lacking. The polished rocks indicate a long occupation. The only similar cases known to the explorers are provided by the walls of the stone gallery at Tiryns, where the polishing is said to be due to the herding of sheep for centuries in that celebrated place.

The following rather negative conclusions are reached by the authors:

The evidence from the quantity of the ashes, the types of implements, the stalagmitic deposits, is toward the assumption of a very early and protracted occupancy of Jacobs Cavern by man.

That the occupants were different from the Osages and also from the lower Mississippi tribes is negatively suggested by the human remains, the pictographs, and again by the types of implements.

The polished rocks point to a long occupation, and its date and length, while not supported, is not denied by the animal remains.

An early inhabiting of the cavern by man, who continued to abide there, perhaps hundreds, perhaps thousands, of years, is all that may at present be asserted.

CAPTAIN JOHN SMITH. By Tudor Jenks. The Century Co., New York, 1904.

Mr. Tudor Jenks has just contributed a very interesting account of the life and work of Captain John Smith in his book bearing the above title. The book is illustrated with a number of cuts from old drawings and portraits. He confines himself strictly to the life of Captain Smith, tracing it from his boyhood, when he picked up old Roman coins on his father's farm, on the lowlands of Lincolnshire, England, to his death in London in 1631. He cites the destruction of the Spanish Armada, which occurred when Smith was 8 years old, as one of the strong factors in determining his seafaring life. He deplors the fact that historians "who sought above all things to make picturesque and striking narrations" have made so prominent the 2 "petty episodes" in Smith's life, the duel with the 3 Turks and his rescue by Pocahontas, for by the exaggerated importance attached to these events the real worth of Captain Smith as a good statesman, soldier, navigator, explorer, and writer have been greatly overshadowed and his true worth underestimated. Nevertheless Mr. Jenks believes that both these incidents were in the main as recorded. The object of the book is to present the salient features of Captain Smith's career and those which

can be proved. The result is that one cannot read the book without feeling that Captain Smith has not received the credit due him for his unselfish endeavors at founding the first colonies along the coast of Chesapeake Bay.

THE YOUTH OF WASHINGTON, told in the form of an autobiography. By S. Weir Mitchell. 12mo, 300 pages. The Century Co., New York.

Dr. Mitchell has contributed a very interesting account of the youth of Washington in the pseudo-biography entitled *The Youth of Washington*. It purports to be written by Washington in his latter years at Mount Vernon, a method of treatment which greatly adds to the interest of the narrative. However, there is some doubt in our minds as to the wisdom of giving such history in the form of an autobiography, on account of the danger that in a few generations it may be accepted as genuine.



EDITORIAL NOTES

DISCOVERY AT SUSE:—What is supposed to be the head of a statue of Marcus Vipsanius Agrippa, who was the great-grandfather of Nero, was discovered the past summer in Suse, the ancient Segusio, in the Province of Turin. This colossal head is twice life size and made of bronze. It was found at a depth of over 6 ft. in the excavations which were being carried on near the Arch of Augustus. As Marcus Vipsanius Agrippa died in 12 B. C., the date of the statue is probably the latter part of the I Century B. C., or the first of the I Century A. D.

A FORTIFIED ROMAN FARM:—Among the discoveries which have recently been made by the Tunisian Society of Antiquities and Arts, is that of a fortified Roman farm. This farm is in a remote mountainous region, 10 miles from the post of Matmata. It is the most important find that has been made, showing the presence of a Roman civilization in this region. These Roman settlements were established south of Tunisia shortly after the military occupation of the country in the II and III Centuries A. D.

PRIMITIVE CHART BY THE POLYNESIANS:—The British Museum has recently come into possession of a chart of the Marshall Islands of the South Pacific Ocean, which was prepared by the native Polynesians as a chart to use in traveling from island to island. The different "routes, currents, and prevailing winds are represented by pieces of split cane, straight or bent according to the chart maker's knowledge of the facts of the case, while the islands are indicated by unvalve shells attached to the cane."

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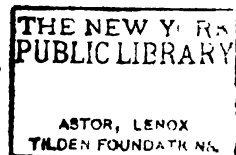
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NECK OF LAND CONNECTING CYZICUS WITH THE MAINLAND

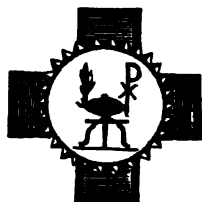


ARCHITECTURAL OPENING IN THE CITY WALL OF CYZICUS



RECORDS OF THE PAST

VOL. III



PART XII

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SURVEY OF CYZICUS ✓

BY ARTHUR E. HENDERSON, R. B. A.

AS HAS been stated in a previous article by Edgar J. Banks Ph. D. [see RECORDS OF THE PAST, Vol. I, pp. 304-306], the City of Cyzicus is situated on the southern portion [facing the mainland] of what was once the island of Arctonnesus, now called the "Kapu Dagh" peninsula, the highest mountainous peak on the southern shore of the Sea of Marmora.

Three sketch surveys of the site have been made previously, viz.: By Perrot et Guillame, by the British Admiralty for the chart of the Sea of Marmora, and by Mr. J. Rustafjæll, F. R. G. S.; but it was decided by the British School of Archæology at Athens to have something more definite, so in 1902 I was sent as a student of the school to make an accurate survey. Mr. F. W. Hasluck, M. A., another student, assisted me, and we succeeded in completing the circuit of the city walls and their environment. In 1903 I was accompanied by Mr. W. Peet, a student of Robert College, Constantinople, when we succeeded in finishing the topography within the city walls.

The time at our disposal did not allow for contouring, but this was not important, for it is fairly well shown on the Admiralty chart. As seen, the city lay on a promontory site, being purposely chosen as insuring the burgers from attack from an enemy by land. The central, eastern, and western portions of the city lie on fairly level ground, but

not so the northern districts, for the tendency is a gradual inclination of the ground to rise behind the city. As it nears the "Upper Road" it increases rapidly, and northward from here the ground is much broken up by granite quarries, but otherwise it rises terrace upon terrace until a decently level plateau is reached stretching from the "Acropolis" to a point a quarter of a mile westward, where was once the site of a temple, from which a magnificent view of the lower city, lagoons, and mainland can be had. The width of the city is a little over a mile, and its depth generally over half that, the whole circumference of the city wall being a little under 4 miles.

A roadstead or channel (connecting Peramo Bay with Artaki Bay) just over a mile long and half a mile wide, separated the island and city from the adjoining shore. Unfortunately for the permanency of Cyzicus as a city the prevailing winds are from the east or west or up either bay, so naturally a gradual silting up of the roadstead took place, there being no river to wash the sand back into the sea.

The first connecting link with the mainland was made when the Aqueduct was constructed by order of Alexander the Great to supply the city with pure drinking water from the Adrarteia range of hills on the mainland. Then, later, as bars were formed at either extremity of the roadstead causeways were built upon them. Probably the shipping then only used the western front of the city walls as entrances to the basin, now enclosed, and the central harbor. Movable bridges of boats and drawbridges must have spanned the moats.

Exchange was the very life's blood of the Cyziceans; commerce was their sole object. Their money currency was "standard," so, of course, their harbor and shipping took precedence over political strife. Their fleets traded both with the Black and Mediterranean Seas, using their home port as the great central depot.

They also carried on a large trade with the interior of Asia Minor, as a great main road comes down to the sea at Panormus (now Panderma) a few miles southeastward on the mainland.

In later times, when the prosperity of the city was declining (Constantinople being in a far better situation and taking her trade away), two other harbors were constructed. The eastern one lay where a "Marsh" is now visible and had a channel connected with Peramo Bay. The western one is also still represented by a "Marsh" lying southward of Bal-kiz Serai, and was connected with Artaki Bay. Moles or breakwaters still indicate their entrances.

The tracing of the city wall was the most important and difficult item in the survey. I shall describe it and the city by following its circuit, but before starting should state that there are several kinds of masonry employed.

I. Granite blocks laid in irregular courses, their interstices filled with mortar and small stones.

II. Facing of rectangular granite blocks; the jointing is fair and the core of the wall is generally whitish cement and rubble.



DECORATED MARBLE FROM THE
TEMPLE OF HADRIAN

LIME KILN ON THE SITE OF THE
TEMPLE OF HADRIAN

III. Facing of long granite stretchers (as much as 7 ft. at times). The headers are not often more than a foot in thickness and are at times portions of marble cornices, etc.

IV. Massive, but irregular, granite facing with coarse joints filled with white cement daubed carelessly over the face of the wall. This construction may date from the XIV Century defences of the Isthmus.

V. Rough rubble building work with facing of small stones, which seem to be of late additions.

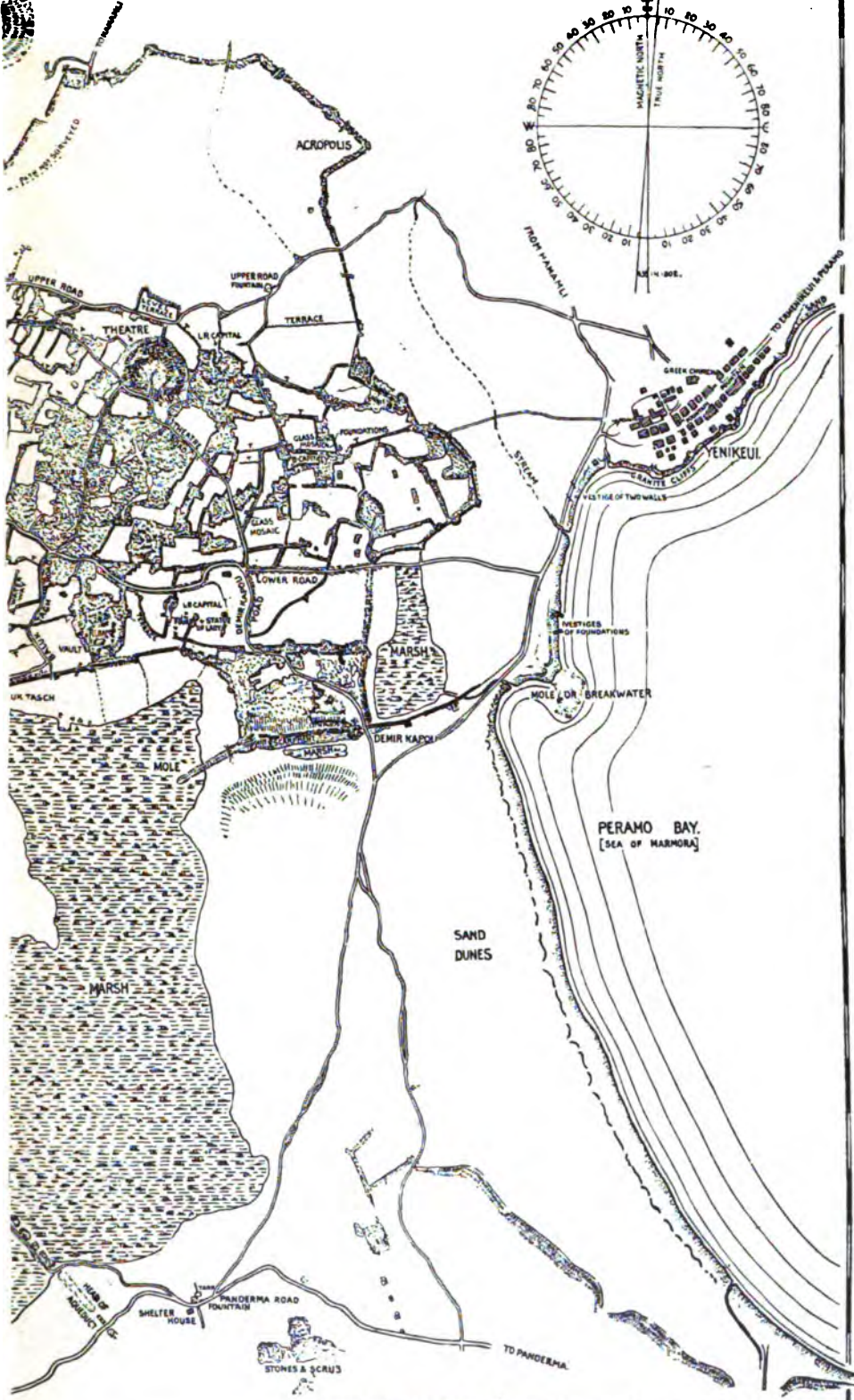
A convenient starting point is "Demir Kapu," a high and fairly well preserved tower built in style II in the southeastern portion of the city wall facing south. From here going westward the wall has a sloping escarpment down to the moat (now "Marsh"). The ground behind has considerable elevation, as though the moat had been cut through a hill, but grading downwards to another wall overgrown with brushwood running parallel about 180 yds. to its rear. This wall seems to be a continuation of the harbor wall and connecting it with the city wall facing Peramo Bay.

The harbor wall is clearly defined on its outer face. Its thickness cannot be accurately measured, as the city is at a higher level than the "Reclaimed Land" below.

Behind this portion of the city wall there are several high and extensive ruins, but they are so entirely covered with bushes and scrub, growing upon the debris of fallen masonry and stones collected from the vineyards, that it forbids any surmise as to their identity.

The ruin eastward of "Baluk Tash Road" has partly standing a semi-dome flanked by 2 smaller ones, but these are facing eastward, and, besides other indications, suggest something other than a Byzantine church.

Note About 2 miles further north up the stream is the ruin of a bath with 30 00 long & 4 50 high about the level of the stream bed.



SURVEYED & DRAWN BY ARTHUR E. HENDERSON ASSISTED BY F. W. HASLUCK 1902 & W. PEET 1903

A little further eastward near "Demir Kapu Road" an important find was made by De Rustafjæll in a marble Hellenistic statue of a female. Mr. Hasluck believes it represents "Kore Soteria, whose cult, as we know from countless coins as well as of other evidence, was down to late Roman times, among the most important at Cyzicus." The statue unfortunately has lost the head, arms and feet, as they were attachments, but enough still remains to show how beautiful the drapery was.

There is another large ruin westward of the "Baluk Tash Road" about 200 yds. long and 80 wide and from 20 to 30 high. It is formed by 2 parallel ridges with a depression between them. These ridges are connected at the western end but not at the eastern. Considerable vestiges and indications of vaults and substructures are visible, but with no ascents to them.

Further within the city behind this ruin is what is called by the watchman the "Devil's Own Country," where there are considerable vestiges of vaults with water in them, huge pieces of masonry surrounded by stones and architectural fragments picked out of the vineyards.

In the center of the Great Harbor, standing just below the wall, as though on the quay side, is the "Baluk Tash." Mr. Hasluck has made a special study of this monument [see *Journal of Hellenic Studies*, Vol. XXII pt. I, 1902]. It is cylindrical in shape and was a pedestal raised for a statue of the sea god Poseidon. It is of large size, as it measures 9 ft. 9 in. in circumference, with a total height of 5 ft. 9 in., as given by De Rustafjæll when he excavated the lower portion.

The drum is adorned with tridents, 4 half galleys, dolphins and tunny fish. There are also 2 dedicatory inscriptions, and translated run thus: (a) "'A thank offering to Poseidon of the Isthmus (dedicated) after the restoration of the long choked portion of the channels and of the lagoon at her own charges, and of the surrounding (quays?) at the expense of herself and her son Rhœmetalces, King of Thrace, and in the name of his brothers, Polemo, King of Pontus and Cobys, (by) Antonia Tryphæna, daughter and mother of Kings, herself a Queen.' (b) 'Till Tryphæna reformed the island, defined the bed of the channels and finding me, set me here, a statue dedicated to the god of the sea.

"Do thou, Poseidon (look to) thine own bulwark and I will vouch for the 2 channels of the surgeless sea.'"

It is probable that this statue and pedestal was erected during the reign of Tiberius, as later in the reign of Caligula she appears on an inscription as a widowed queen.

Following the harbor wall westward we come to the spot on the map "Triangle" (where 3 paths meet). Here the wall is almost entirely buried, and extending northwestward from this spot to the stream is a portion of the city devoid of ruins or stone walls. The soil is poorer than elsewhere within the city bounds.



WESTERN HEXAGONAL TOWER OF BAL-KIZ SERAI—HONEY-MAIDEN'S
PALACE



WELL PRESERVED SECTION OF CITY WALL OF CYZICUS

We now come to the southwestern portion of the city wall which has unquestionably been reconstructed as a Byzantine or Mediæval fortress, reminding one of the great land wall of Constantinople in miniature. Here is the moat, the walk or lower rampart and in the rear the defending wall with towers, but here there is no secondary line of defending rampart with towers. And what strengthens the surmise is that much of the wall and of the towers is built in style IV. I could not find any vestige of how the aqueduct spanned the moat nor of its entrance into or passage through the city.

Now, proceeding westward, we turn at right angles near the Bay of Artaki and proceed northward and crossing the little stream (De Rustafjæll calls "Kleite"), which rises in the hills above Hamamli, we reach an extensive ruin called by the Turks Bal-kiz Serai—the Honey-
maiden's Palace.

This extensive ruin is composed of 2 large hexagonal towers about 100 yds. apart. Their basements and the wall connecting them are of style III, but the superstructure is of IV, and certainly of Byzantine construction, as is also the ruin to their rear.

From beneath the massive stone wall connecting the 2 towers and near a giant plane tree, which is a conspicuous land mark from many points of view, a stream of clear, cold water issues from a long stone-vaulted conduit. This stream is thought by some to be the water of Oblivion.

From this point northward for some 250 yds. the city wall is only traceable by heaps of stones and shapeless portions of masonry. At some 150 yds. westward of this stands the largest and most important ruin in Cyzicus, namely, the colossal "temple of Hadrian." This temple was once one of the wonders of the world, but it was destroyed in 943 with all the monuments of Cyzicus by an earthquake. It is now only a shapeless mass of debris covering 3 long tunnels, which supported the Cella, flanked by one other on either side. These are given over to thousands of bats.

The marble architecture of the superstructure has almost all been taken away and also broken up and burnt in a lime kiln on the very temple itself. Flanking the northern side of the temple was the "Agora" or market-place, of Hadrian. It had a length of at least 500 yds. and a width of about 90 yds. There are records of a colonnade having been erected against its retaining walls.

The length of city wall from this point to the spot where the stream enters the city is uninteresting, but from here to the "Threshing Floor" on the "Upper Road" it bounds numerous interior walls, but is of poor construction in itself.

The stream (to the west of the "Threshing Floor") emerges from a beautiful valley, with the city wall rising along its crest. In this length of wall, there is the only architectural opening that can be found in the whole circuit of city wall. It occurs in a piece of good masonry of No. II pattern.

The wall continues northward for a short distance. From thence one overlooks the amphitheater in the gorge below; then it turns eastward, still rising over broken ground to its most northerly and highest point, from whence it turns southeastward to the "Acropolis" and then descends with a steep decline to the "Upper Road."

The eastern portion of the city wall, between the "Upper and Lower" roads is still in a fair state of preservation. We see walling of Nos. I and II patterns, but it is difficult to date the portion projecting eastward containing towers and bastions.

The remaining length of wall between the "Lower Road" and "Demir Kapu" has been denuded of its facing and is now merely an embankment.

Conspicuous among the debris of ruins in the city is the "Theater." This is of horse shoe shape and was restored and greatly enlarged



A HELLENISTIC STATUE FOUND NEAR THE "DEMIR KAPU ROAD,"
POSSIBLY OF KOVA-SOTERA.

and beautified in Roman times, but like all monuments at Cyzicus it has been stripped of its marble glories, some going to Brusa and more to Constantinople to adorn the mosques and mausoleums of the Sultans.

Southward of the "Theater" are fine pieces of Roman marble mosaics as well as architecture built into retaining walls, while considerably eastward of the "Theater" is the foundation of a Byzantine church or monastery. Glass mosaics and fragments of marble streeting can be picked out of the soil of the vineyards hard by.

Outside, to the north of the city and picturesquely filling the valley, are the remains of a Roman amphitheater. The stream now

meanders through dense brushwood in the arena where formerly naval battles took place.

At the time of making the survey, and doubtless still, there is not a single habitation within the walls of the city of Cyzicus, but it is entirely given over to earthquake stricken structures denuded of their glories and buried in their own debris; huge dykes made up of stones and architectural fragments such as drums and shafts of pillars, friezes and cornices, picked up from the vineyards, all kindly covered by Dame Nature with her mantle of prickly brushwood and scrub. Sandwiched in between these ruins and dykes are the finest vineyards, mulberry groves, melon patches, and fruit orchards in the country.

Though there are no habitations of man, the city abounds with life; snakes and lizards of brilliant hues sun themselves, turtles and tortoises bask in the heat, gauzy dragon flies flit along the hedge grown lanes, while the stork keeps a vigorous eye on the furrow just turned by the primitive plough drawn by patient oxen.

At times we could hardly hear each other speak for the croaking of frogs in the marshes and cicadas on the trees. Such is the present desolation of the once queenly city of Cyzicus.



BUSINESS HOUSE OF MURASHU SONS OF NIPPUR*

BY HERMANN RANKE, PH. D.

PROFESSOR ALBERT T. CLAY, of the University of Pennsylvania, in a volume of texts, not generally accessible to those interested in Archæology, has offered most valuable material for a reconstruction of the history of the life and customs of the people living in Babylonia at the time of Ezra and Nehemiah. Taking into consideration the fact that a great many contracts, here published, were drawn up with Hebrews, who had become influential after the captivity, and that on one of the tablets of this same archive was identified the River Chebar, known to us in Ezekiel as the river on the banks of which the Hebrews lived in their exile, these documents become also of special interest to the Biblical student.

Professor Clay's book, published as Volume X of Series A of "The Babylonian Expedition of the University of Pennsylvania," is a most valuable addition to the previous publications of the Department of Archæology of the University. The author, well known to Assyriologists from his considerable share in the preparation of the preceding volume of Murashu texts, and probably the foremost living copyist of cuneiform tablets, has almost surpassed himself in this new edition of Neo-Babylonian texts.

* *Business Documents of Murashu Sons of Nippur*. Dated in the reign of Darius II (424-404 B. C.). By Rev. Albert T. Clay, Ph. D., Assistant Professor of Semitic Philology and Archaeology in the University of Pennsylvania, Philadelphia, Pa., 1904.



MODERN BABYLONIAN WATER WHEEL

The tablets were discovered by Dr. J. H. Haynes in 1893 at the beginning of the third campaign of the Babylonian Expedition of the University of Pennsylvania. Opposite the great Temple of Bel, on the other side of the Shatt-en-Nil, the canal which divided Nippur into 2 equal parts, Haynes came across a room in an upper stratum (5.5 by 2.75 m. wide) about 6 m. below the surface. Scattered over the floor he found 730 tablets and fragments, of which those published are a part. The room proved to be either the business place, or the archive room of an influential firm, which may be called the Murashu Sons.

The documents had been drawn up in the interest of the several sons. They contain deeds of sale, rentals of houses, animals, lands; mortgages, bonds of various descriptions, as bailments of individuals, guarantees, promissory notes, etc., etc. The tablets are dated in the reign of Artaxerxes I., 464-424 B. C., and Darius II., 423-405 B. C. As Professor Clay has proved, the one published in Vol. IX., as the first in chronological order, is really the last; and belongs to the reign of Artaxerxes II. instead of Artaxerxes I., the former having reigned after Darius II. Concerning the quality of the clay tablets and the numerous seal impressions appearing on their surface, Professor Clay writes as follows:

The tablets, which are simply sun dried, are made of very smooth clay. It is free from grit, which was removed by washing, preparatory to its use

for tablet making. This has increased its adhesive power, so that the tablets have the appearance of being baked, offering an exceedingly smooth surface for the writing.

The number of seal impressions found on these contracts is very large. A great many are of rare beauty and indicate remarkable skill in the execution of the seal, or seal cylinder, by the lapidary of the age. It was customary for the obligor, judge or witness first to make his seal impression, after which the scribe wrote in proximity, either to the right of it, or above and below it, the name of the man to whom it belonged. In quite a number of instances it can be shown that before the names of witnesses were regularly affixed, the obligor or debtor had made his seal impression. The same is true with regard to the witnesses, who frequently made their seal impressions before all their names were attached to the document. In some instances, unless a number of witnesses, or the judge or judges, left their seal impressions, the person or persons who received the benefits involved in the documents or upon whom the obligation rested, either left their seal upon the tablet, or instead, made an impression in the soft clay with their thumb-nails. The individual in whose interest the tablet was made, whether as a receipt for a cancelled debt, a lease, due bill, mortgage, etc., has not in a single instance left his seal or mark upon the tablet of the Murashu archives.

The thumb-nail marks of both volumes, with but three exceptions, when accompanied by the name of the individual who made them, belong to the recipient, debtor or obligor.

A special feature of this volume is the unusually large number of Aramaic "dockets" or filing endorsements. These are reference notes intended for the owner of the tablet to readily recognize the contents of the document. On the 132 texts of tablets we find no less than 25 dockets reproduced. Professor Clay has made a special study of these difficult and often very faint inscriptions, which are either painted with a black fluid or lightly incised in the clay, and thanks to his untiring efforts they have yielded us a number of interesting results.

In every instance where the name or names written in Aramaic are preserved on the tablet, we learn that they belong to the individuals who receive the benefits mentioned in the documents, or upon whom the obligations rested. Naturally, the name of the second party might appear as well, but where a single name is given, it always belongs to the obligor or recipient.

These Aramaic endorsements are not only of great value for our knowledge of the Aramaic script of this time, but besides, for ascertaining the pronunciations of some of the proper names which are written with ideograms in the cuneiform texts of the tablet. Thus we find *sh V sh* for the god Shamash (in the name Sham (w) ash-uballit), *mr dk* for the name Marduk-a, *tbj* for the name *Tâbija*, etc. Of special value are the Aramaic equivalents of the names of 2 Babylonian deities, discovered by Professor Clay. *'V r* is found as part of names, which are composed with the god *Kur-gal*, formerly read *Shadû-rabû*. The author compares the probable pronunciation Avurru (-Amurru) of the West Semitic god MAR-TU. On the other hand, the equivalent for the god NIN-IB unfortunately is not yet beyond doubt. Professor Clay reads *anwsht*, only the *w* being not abso-



TABLETS WITH SEAL IMPRESSIONS AND THUMB NAIL MARKS



TABLETS WITH INCISED ARAMAIC ENDORSEMENTS CONTAINING THE NAME OF THE SO-CALLED GOD NIN-IB

lutely certain. The understanding of the name is not yet quite clear. The reading of the same by Professor Hilprecht, the editor of the series, as *a n r sh ch*, and his consequent conclusions as to the meaning and origin of this name, associating it with the Nisrok of the Old Testament, will hardly appeal to Semitists, as the value of the last character being a *t* (not *ch*) seems to be certain.

In connection with the extensive use of Aramaic endorsements which evidently were intended to be readable for the owner of the tablet, Professor Clay expresses the view that Aramaic probably was spoken at that time by a large percentage of the common people in Nippur. Says Professor Clay:

The Assyrian officials in the time of Sennacherib spoke Aramaic according to the episode with the representatives of Hezekiah, related in II Kings. 18:26, f. The Hebrews in all probability spoke the Aramaic language after their return from Babylonia. Aramaic was used for filing endorsements as above, some of which are dated as early as the time of Sennacherib. Bricks, containing legends of kings in Aramaic, similar to those inscribed in cuneiform, besides quite a number of inscribed seals, weights, etc., have been found in Babylonia and Assyria. More than one-half of the contracts, in connection with the Murashu Sons, were made with persons bearing West Semitic names. The list of names in the documents of both volumes show that about one-third of them are foreign, a goodly number of which are West Semitic. Taking these things into consideration, are we not impressed with the fact that the Aramaic language was very extensively used in Babylonia at this time? Furthermore, it is quite natural to conjecture, at least that the Aramaic in this period was the language of a large percentage of the common people in Nippur, and that the Babylonian language, while still spoken, was on the decline, although for centuries it continued to some extent to be the literary and legal language of the country, as was the case with the Sumerian, long after it ceased to be spoken.

To my mind it is even an open question whether the Babylonian language was continued to be spoken at all at this late period, and whether it was not only used for literary and legal purposes, learned and understood only by the specially educated scribes and scholars.

Among the author's notes on Palaeography his identification of the new sign *tad* (*tat, dat*), formerly read *ad* or even *Bel*, may be mentioned. This is followed by an interesting excursus on arbitrary introduction of new values for cuneiform signs for convenience sake in the Babylonian schools of scribes. For *AN-MESH* (*i. e.*, the sign for "god" followed by the sign of plurality) occurring as an element in personal names, Professor Clay proposes the view that this writing was introduced for the West Semitic *El*, in connection with the Hebrew plural *Elohim* for "god." Professor Hilprecht continues to see in *AN-MESH* the rendering of a West Semitic *Eli*, but contrary to his former view, he accepts the conclusion arrived at by Professor Clay that it is not the pronominal suffix of the first person singular, and now explains it as the scriptio plena for West Semitic *ili*, "god." This



FISH POND LEASE

Translated as No. 1.



TABLETS CONTAINING ARAMAIC ENDORSEMENTS

The translation of the lower is, "The document of the Nagariva, lands which Hidura the son of Habsir gave to Rihet the son of Bel-erhallof, rent."

question is a very difficult one and does not yet seem to be settled entirely. It must be separated, however, from NI-NI (-ili) in the early Babylonian personal names, since this occurs only in genuine Babylonian and never among the frequent West Semitic names of that time.

The element *Jakhû* identified before with the Hebrew *Jehô*, according to Professor Clay, may have been pronounced more exactly as *Jakho*, thus very closely corresponding to the Hebrew form. On the other hand, in the element *Jâma* (pronounced Java), which is found in a large number of these names, the author recognizes the element Jahu from the Hebrew personal names as the contracted form of *Jahve*. He offers 23 names ending with the element Jama, e. g., Natanu-Jâma, Jgdal-Jâma, Malaki-Jâma, etc. All the elements in connection with Jama are found in Old Testament names. If Jama or Java represents the element Jahu in Hebrew personal names, then 21 of the 23 names are found in the Old Testament. If Java does not represent Jahu, then there are no Old Testament names with which to compare these 23, most of which are unquestionably Hebrew; and, *vice versa*, we would look in vain in the Neo-Babylonian literature for the Hebrew names compounded with this very common element. Professor Hilprecht, in his editorial preface to Professor Clay's book, says that he is unable to recognize any god in *iama*, and that he regards it as nothing else but the Hebrew ending *yâm*, comparing *Abiyâm* and *Abyâh*, which occur in the Old Testament as name of one and the same person. He thus revives Professor Jastrow's view, as published in the *Journal of Biblical Literature*, and says that "this *Jam (a)*, *Ya* is merely the common Semitic *Rufe suffix ia*, which at the bottom may be identical with the vocative particle *iâ* in Arabic."*

However, according to what has been stated above, it seems necessary, as Professor Clay proposes, to connect the Yama (pronounced Yava) in these Babylonian names with Yahu in the corresponding Hebrew names.

A few translations which are offered in the introduction, serve as an illustration of the contents of the published text. The translations are followed by an analysis of new words and phrases found in the text. Some characteristic texts may be given here in Professor Clay's translation:

1. A lease of certain fish pool, in which the lessee, besides paying a stipulated sum, agrees to furnish the agent daily with a mess of fish.

Ribat, son of Bel-erib, servant of Bel-nadin-shumu, of his own free will spoke to Bel-nadin-shumu, son of Murashu, thus: The fish ponds which are between the towns Ahshanu and Gishshu, belonging to Bel-ab-usur which are in the fields of the chief of the brokers; the fish pools which are in the field of the prefect of the *hindanu* (professional name); the fish pools which are in the town *Natuel* let me have for rent for one year. For the year, one-half of a talent of refined (?) silver; in addition, from the day I am given possession

*As I learn from Professor Jastrow, he has now abandoned his former view, on account of the large number of examples presented by Professor Clay.



A RELEASE ON ACCOUNT OF A CLAIM FOR DAMAGES
ARISING FROM TRESPASS
No. 5 of the translations

of those fish ponds for fishing daily, a mess (lit. fixed amount) of fish for thy table I will furnish. Thereupon Bel-nadin-shumu complied his request, and rented him those pools of fish, for the year, for one-half talent of silver. For the year the silver, *i. e.*, one-half talent, rent for those pools, Ribat shall pay to Bel-nadin-shumu, and the fish for his table he shall furnish. From the first day of Marchesvan, year first, those pools are at the disposal of Ribat.

In the presence of Belshunu and Umardatu judges of the canal Nar-Sin. Names of 6 witnesses and the scribe. Seal impressions of 5 witnesses, including that of Rimut-Ninib, son of Murashu.

2. A contract made with an individual for the gathering of a harvest with a penalty attached in case the work has not been accomplished at a specified time..

TRANSLATION :

Unto the second day of the month Ab, year first of Darius, king of countries, the harvest (namely), which as the apportionment of Rimut-Ninib, son of Murashu, has been set apart, he gave to Ninib-iddina, son of Ninib-etir, to gather in. If on the second day of the month Ab, year first of Darius, that harvest he has not completely gather in, the produce as much of it as should have been delivered, Ninib-iddina shall turn over to Rimut-Ninib from his own possessions, and there shall be nothing for him and the farmers, as regards the balance of the harvest.

Names of 4 witnesses and the scribe. Seal impression of one witness. Aramaic indorsement: "Document of Ninibiddina."

3. A partnership agreement made by 2 individuals to farm certain lands, and divide equally the profits.

TRANSLATION :

Ninib-muballit, son of Mushezib, and Adgishiri-zabdu, son of Bel-erib, who had spoken to one another as follows. Let us sow 5 gur of seed in the field of *rab-mun(?)*-gu along the bank of Nar-Baltia, in the town Bit-Hadiia. They agreed thereupon together, and the seed, *i. e.*, 5 gur for a crop they planted. The seed, *i. e.*, 5 gur, Adgishiri-zabaddu shall measure and deliver to Ninib-muballit. They have sworn by the king that whatsoever grows on it shall be equally divided with regard to their profit.

Five witnesses and the name of the scribe follow; also the seal of Adgishiri-zabaddu, and his name written in Aramaic characters.

4. An agreement and its acceptance embodying a proposition to farm certain fields on equal shares.

TRANSLATION :

Shum-iddina, son of Puhhuru, spoke to Rimut-Ninib, son of Murashu, thus: Let me put 2 of my oxen with 2 of thine oxen into thy pasture lands, and everything, as much as in those fields grow, by our work of irrigation, is ours in common. Afterwards Rimut-Ninib complied with his request and gave him oxen and seed; ox for ox, seed for seed. They have sworn by the king that whatsoever grows in it, shall be divided equally among them.

Names of 4 witnesses and the scribe. Seal impressions of 3 witnesses.

5. A release given by an individual to Bel-nadin-shumu for and on account of a claim for damages arising from trespass committed by the latter and his servants. The charge of trespass, followed by its denial, and then payment of consideration for settlement or release, is analogous to similar transactions of the present day.

TRANSLATION :

Baga'data the *ustaribari*, son of Bel-nadin, who spoke to Bel-nadin-shumu, son of Murashu, as follows: The town Rabiia, from which silver was taken, Hazatu, and its suburbs, thou hast destroyed; silver, gold, my cattle and my sheep and everything belonging to me, all, thou, thy bond servant, thy messenger, thy servant and the Nippurians carried away. Whereupon Bel-nadin-shumu spoke as follows: We did not destroy Rabiia, thy town, from which thy money was carried, and the suburbs of Rabiia; thy silver, thy gold, thy cattle, thy sheep and everything that is thy property, all, I, my bond servants, my messenger, my servant and the Nippurians, did not carry away. Bel-nadin-shumu gave to Baga'data on condition that no legal proceedings on account of these claims which Baga'data and one with the other made, 350 gurs of spelt (?), 56 gurs of wheat (?), 50 good large jars full of old wine, including bottles, 50 good jars full of new wine, including the bottles, 200 gur of dates, 200 female sheep, 20 oxen, 5 talents of wool. Baga'data received from Bel-nadin-shumu barley, *i. e.*, 350 gur; spelt (?), *i. e.*, 1 gur wheat (?), *i. e.*, 50 gur; jars, *i. e.*, 50 good vessels full of old wine, including the bottles;

dates, *i. e.*, 200 gur; sheep, *i. e.*, 200 female sheep; oxen, *i. e.*, 20 wool, *i. e.*, 5 talents he has been paid. There shall be no legal proceedings *in perpetuo* on the part of Baga'data, his bond servant, his messenger, his servants and the men of those cities, and their suburbs, which were entered, *i. e.*, of Babiia, Hazatu and the suburbs? * * * by any of them, against Bel-nadin-shumu, his bond servant, his messenger, his servant and the Nippurians? Baga'data, his bond servant, his messenger, his servant and the men of those cities, on account of that which they said concerning Rabiia, Hazatum, the suburbs of Rabiia, and everything pertaining to that property, none of them shall bring suit again, *in perpetuo*, against Bel-nadin-shumu, his bond servant, his messenger, his servant, and the Nippurians. By the gods and the king they have sworn that they will renounce all claims as regards those charges. Baga'data bears the responsibility that no claim shall arise on the part of the men of those cities against Bel-nadin-shumu, his bond servant, his messenger, his servant and the Nippurians.



RECORDS OF SHEEP AND GOATS
DELIVERED TO SHEPHERDS
FOR STOCK RAISING

They contain incised Aramaic endorsements. The upper and lower have thumb-nail marks instead of seals

6. An assignment of a debt, with the security which was pledged for its payment, to another; with a penalty attached should the original creditor seek to recover against the security pledged.

TRANSLATION:

One mine of silver is the claim of Iadah-Iama, son of Shamesh-Iadin, which is against Sha-Marduk-ul-ini, son of Bel-nadin, and the tenant of his fief land, and their field. Their bit-qashti, cultivated and uncultivated, situated in the town Bit-rab-uratu, at the bank of the canal Harripqud, is held as a pledge. The silver, *i. e.*, one mine Iadah-Iama, son of Samesh-ladin, has received from Rimut-Ninib, son of Murashu, charged against Sha-Marduk-ul-ini, and the tenants of his fief land; he has been paid. There shall be no legal proceedings whatsoever *in perpetuo* with Rimut-Ninib by Iadah-Iama on account of the field of Sha-Marduk-ul-ini. If Iadah-Iama institutes legal proceedings against that field he shall pay ten mana of silver without legal process. The certificate of debt which was taken out against Sha-Marduk-ul-ini and the field, the pledged estate, on the name of Idah-Iama, is a guarantee (namely for Rimut-Ninib).

Names of 8 witnesses and the scribe. Seal impressions of 4 witnesses, besides the thumb-nail mark of Iadah-Iama.

Taking Professor Clay's work as a whole, it must be said that it forms an excellent addition to our Assyriological literature and will be of great value for Assyriologists as well as for general Semitists. It is to be hoped that the author will continue his work in this direction and that the publication of the Cassite archives of the Temple of Bel, in the preparation of which he is engaged at present, will appear in not too distant a future, and increase anew the high reputation of the Babylonian section of the University of Pennsylvania.



BABYLONIAN WINE JARS. INSIDE IS COVERED WITH BITUMEN

The one on the left has a hole, into which a plug or faucet was inserted,
around which bitumen was smeared

EDITORIAL NOTES

A FOSSIL EGG:—A prospector recently discovered a remarkable fossil egg in the valley of the Gila River, Arizona. It is about the size of a goose egg and is so perfectly preserved that it must have been imbedded, soon after being laid, in a soft calcareous ooze which soon consolidated into a limestone. The contents of the egg have been converted into a bituminous substance resembling asphalt.

A REMARKABLY THIN FLINT ARROWHEAD:—A thin leaf-shaped arrowhead has been discovered in the north slope of the great earthwork, known as "Maiden Castle," Dorchester, England. The remarkable point about this arrowhead is its thinness. Its present length is 38 mm. (1½ in.), its greatest width, 21 mm. (8-10 in.), and its greatest thickness only 2.5 mm. (less than 1-10 of an inch). About 1-8 of the implements is missing. It is exceedingly symmetrical and well worked on both sides.

ANCIENT METHODS OF WORKING JADE:—In the Heber R. Bishop collection of Jade and Hardstone Objects in the Metropolitan Museum of Art, there are 2 specimens of jade which show some ancient methods of working this hard material. One from Guatemala is described as "Exceedingly interesting as showing that in pre-Columbian times, crude jadite existed in Guatemala or Mexico, that it was worked on the spot, and that the aborigines of these regions knew the use of the cylindrical drill." The other partly worked piece of jade from New Zealand shows several ground facets and saw marks, made in an attempt to remove a long kern or eardrop.

THE ENTOMOLOGY OF THE SCARAB:—Professor W. M. Plinders Petrie in discussing the various species and genera of beetles which were used by makers of scarabs in ancient Egypt at the different periods, distinguishes 5 principal types representing the genera *scarabaeus*, *catharsius*, *copris*, *gymnopleurus* and *hypselenia*. The characteristic forms of these kinds of beetle are shown in the shape of the head, outline on the wings, and the treatment of the legs. The use of these numerous kinds of beetles as models for scarab amulets is illustrated both in Egyptian medical papyri and in the modern folklore of Egypt.

THE EVOLUTION OF THE LOTUS ORNAMENT:—In Egypt, according to Professor Oscar Montelius, the lotus has been represented from earliest times as real flowers, often together with buds and leaves, or as ornamental designs. It is drawn in the realistic form, as well as in conventional shapes, and is often combined with spirals. In Assyria, where the lotus ornaments are later than in Europe, both the realistic and the conventional lotus

are found. In Cyprus and in Phœnicia, the conventional lotus often has a peculiar form, called "the Phœnician" or Cypriote palmette." In Greece the lotus was used in the Mycenæan time, but became common in the first Millennium B. C., when it was used in combination with spirals, the realistic and the conventional lotus being employed. Capitals in the shape of the lotus-flower occur in Egypt and Asia Minor, from which evolved the form known as the "Ionian capital."

THE LATEST DISCOVERIES IN PREHISTORIC SCIENCE IN DENMARK:—The oldest period of the Danish Stone Age, only recently discovered, is earlier in time than the "kitchen-middens," and much anterior to the dolmens, from which the bulk of the well known Danish flint implements have been derived. In a peat-bog in Western Zealand we find many objects of stone and wood of a primitive order, evidently from an early part of the Stone Age. A careful study of these objects and of their position in the bog proved that the prehistoric inhabitants who left or dropped those implements must have been dwelling on rafts in the middle of the lake.

It has been discovered, during the past few years, what kinds of grains of corn, wheat, and barley were in common use in the different prehistoric periods of Denmark, from the impressions of the grains of corn in the pottery.

Special study has been devoted lately to the distribution of tumuli in different parts of Denmark. The Directors of the Prehistoric Museum of Copenhagen, Dr. Sophus Muller, who has been the leader in the cartography of prehistoric remains, has recently stated that the tumuli always follows ancient roads through the country, and that lines of tumuli always lead towards the fords of the largest rivers, and avoid the swampy ground. It is to be supposed that the people who were buried in the tumuli had dwelt near their graves but the traces of such dwelling places have been found at some future place. [*London Athenaeum.*]

EXCAVATIONS AT HELEIA (PALAIKASTRO) AND PRAISOS IN EASTERN CRETE:—The British School again excavated at Palaikastro, the Minoan town which yielded such important results in 2 previous seasons. Mr. R. C. Bosanquet, the Director of the British school, says that—

The further excavation of Block Delta showed that this was the Palace or Government House of the latest Mycenaen period. It has an imposing facade of huge ashlar blocks, and the general plan of the ground floor can be recovered. Some well preserved magazines yielded an important series of painted vases and some terra cotta figures of a goddess, in one case grasping a snake. Remains of 3 earlier periods were revealed. Fragments of an ostrich egg, found at a very low level, point to early intercourse with Africa.

The main street was followed in both directions, and 2 low hills to the west and southwest of it were excavated. Four blocks of somewhat poor houses were opened up and yielded valuable finds, notably 3 delicately carved

ivory statuettes, a large bronze ewer, and a richly painted bath. An ivory plate carved with conventional crocodiles betrays indirect Egyptian influence.

In the curious ossuaries of the middle Minoan period, we found seals of ivory and steatite, a miniature gold bird, and small models of a dagger and of sickles. A very early burial place near the headland of Kastri contained beaked jugs of an exaggerated pattern and a remarkable clay model of a boat. A later cemetery, containing larnax burials, yielded bronze implements, beads, and vases like those in the palace magazines. South of the town a steatite libation table, on which are engraved 17 characters of the Minoan linear script, was discovered.

In trenching the area within the Minoan town, Mr. Bosanquet found a broken slab of grey marble, inscribed with a Doric hymn in honor of the youthful Zeus. The lettering is of the Roman age, the composition genuinely archaic. It refers to his nativity in the Dictæan cave, and leaves no doubt that we have here the temple of Zeus Diktaios, the territory of which was a subject of dispute between Hierapytua and Itanos until the matter was settled by arbitration in the second century B. C. We may now restore to the plan of Palaikastro its classical name of Heleia mentioned in the arbitration award.

At Praisos numerous architectural remains and fragments of inscriptions have not been found.

A temple on the summit seems to have been demolished and its materials thrown over the cliff. It is probable that this was the chief sanctuary of Praisos, possibly the temple of Dictæan Zeus mentioned by Strabo. The most important inscription is one in the ancient Eteocretan language, which was hitherto known only from 2 inscriptions, both found on this hill, in Greek characters, of the III and IV Century before our era. [*Annual of the British School.*]

NOTES FROM ROME:—Coming back from Rome after an absence of several months, I was struck by the almost complete want of new facts of archæological interest. Whether it is on account of the abandonment of public works, or on account of the great heat which has prevailed since the month of May, or simply because the *genius almae urbis* feels in a less liberal mood in yielding hidden treasures, there is no denying that the official account of discoveries for the last quarter in the *Notizie degli Scavi* covers only the space of a few pages.

I need not go back to the announcement of the find of the pedestal of Domitian's equestrian statue, which appeared in the press some months ago, and which was exaggerated beyond its real value. Kings and emperors and eminent personages were led to the Forum to behold a rude mass of concrete sunk in its muddy bed, as if it was a new and startling revelation, throwing an unexpected light on the topography and history of ancient Rome. That cube of the rubble simply marks the site of a monument which lasted only a few years, and was pulled to pieces and disappeared immediately after the murder of the emperor. In fact, had this equestrian group not been mentioned accidentally by Statius in Book I of the "*Silvæ*" we should never have had a suspicion of its existence.

The subsoil of the Forum, at all events, contains a great many of these substructures or foundations of honorary monuments, columns, pedestals, single or equestrian statues. The one attributed to Domitian's group comprises 630 sq. ft., and descends 15 ft. below the pavement of the Forum.

One passage in the description of Staius has led to a discovery of undeniable value. The poet represents Domitian as welcomed on his arrival at that precise spot by Quintus Curtius, the tutelary hero of the middle Forum. This passage proves that the two monuments, namely, the "Equus Maximus Domitiani" and the "Lacus Curtius," were adjoining each other, and, to be sure, only a few feet west of the pedestal, a structure has been laid bare which form its outline and general correspondence with the accounts given by ancient writers, especially by Varro and Ovid, must be identified with the Lacus Curtius, or at least with a later substitute for the original basin. I shall not enter into a description of this find, because the press informs us that its exploration by Comn. Boni will demand at least 2 years. I can only say that the words used by Francis Morgan Nichols (*Forum*, p. 73), "A dry space of ground, marked off by a low fence, within which, in Ovid's time, an altar was included," describe to perfection the general aspect of the place.

Another point of discussion which I mean to avoid is the one concerning the find of a stone receptacle in the mass of concrete just described containing 5 vases of so-called prehistoric make. The receptacle is composed of a block of travertine roughly hollowed out and covered with a horizontal slab of the same material. It is embedded in the east side of the cube forming the foundation of the pedestal. The 5 vases are identical in shape, in the roughness of make and decoration, and in the quality of the clay, with those discovered in the early tombs of the Septimontium or in the cemetery of Alba Longa. In other words, the vases belong to a period 8 or 9 centuries older than the age of Domitian. Specialists disagree as to the meaning of this curious find. Some suppose that the workmen employed in the construction of this monument must have accidentally come across an archaic grave, the contents of which were collected and preserved with due reverence. Others think that the 5 goblets represent the sacred implements used by the College of Pontiffs on the day of the laying of the foundation-stone. Both theories are open to serious objections, the respective value of which I do not think it possible to discuss in a letter devoted to the plain statement of facts.

We know from Livy that in the year 448 of Rome, 306 B. C., the consul, Q. Marcius Tremulus, having celebrated a triumph after the subjugation of the district of the Hernici, the Senate decreed an equestrian statue to be erected to him in the Forum, before the steps of the Temple of Castor and Pollux. We know, also, that the statue, seen and mentioned by Cicero, had ceased to exist at the time of Pliny. The court of the pedestal of this venerable monument has lately come to light in the exact place assigned to it by the above-mentioned writers.

Near the northeast corner of Michaelangelo's cloisters in the Certosa di Termini (Baths of Diocletian) a headless Hermæ has been found, set as a curb stone on the paved road which surrounds the baths themselves. The loss of the head is to be particularly regretted, because it represents the features of Quintus Ennius, the celebrated poet from Calabria, who taught Cato the Greek language while the latter was governor of Sardinia, and who originated the strange fashion of doubling the consonants in the Latin language. Ovid rightly calls him "Ennius ingenio maximus arte rudis," because the literary form and the inelegant style of his writings do not correspond with the nobility of his conceptions. Having been brought to a premature death by gout, produced by excessive drinking, in the year 169 B. C., he was buried in the tomb of the Scipios, outside the Porta Capena, where a statue was raised to him,

together with those of Publius and Lucius Cornelii. The Hermæ just found at the Baths of Diocletian would have proved invaluable if whole, because it would have supplied us, for the first time, with the authentic features of Ennius, which are virtually unknown, because the well-known amethyst marked with the initials Q. E. and the bust illustrated by Bernouilli ("Ron. Ikonogi," i 234) are documents the iconographic value of which has not yet been fully demonstrated.

The excavations of the Ara Pacis Augustæ in the cellars of the Palazzo Frano-Almagia, at the corner of the Via del Corso and the Via in Lucina, have been given up for want of funds. During the last period of the search the whole front of the inclosure facing the Via Flaminia had been laid bare, together with many fragments of the beautiful panels representing the inaugural procession. The best piece contains the upper half of 6 personages of the imperial Court wearing the insignia of priesthood, and following Augustus on his way to the altar. A few feet west of the Ara, behind the apse of the church of S. Lorenzo in Lucina, the remains of a private house of the IV Century after Christ have been dug out. In another cellar of the same Fiano palace, there is a room with a mosaic pavement, which in its color and pattern and the size of the tesserae recalls those of the Baths of Diocletian. This house, contemporary with or not much later than the freedom given to the Church by Constantine, is probably the original Titulus Lucinæ, where Damascus was elected Pope in 366, and where, according to tradition, dwelt the ubiquitous matron Lucina.

In the foundations of a new building at the corner of the Viale Principessa Margherita and the Piazza Guglielmo Pepe, on the Esquiline, fragments of a monument have been brought to light, dedicated in 197 A. D. to Caracalla, not yet emperor, by Verginius Gallus, who had obtained the consulship through his liberality. The inscription is interesting in this sense, that it reveals for the first time the family name of Gallus, who had been wrongly supposed by Borghesi to be either Lucius Aurelius Gallus, governor of Mœsia, or Caius Julius Gallus, governor of Dacia.

The exploration of the site of Norba has been brought to a close, after a campaign of 2 years, with the official announcement that the venerable stronghold, commanding the whole extent of the Pontine district from that lofty spur of the Lepine range, does not belong to prehistoric or pelasgic ages, but was founded and fortified only at the end of the V or at the beginning of the IV Century B. C. The most noticeable edifice of this city is the Temple of Juno Lucina, which must have been held in great veneration, to judge from the quantity and quality of the votive objects gathered in the neighboring favessæ. The best are a bronze statuette representing a priestess with a dove in the left hand, and another of Juno Lucina, with a patera in the right and a bunch of flowers in the left hand, both the works of Campanian artists, endeavoring to imitate pure Greek originals. There are also certain votive tablets put up by 3 members of the Rutilian family, and written in that uncouth style which stands to the Latin language in the same ratio as the dialect of the present *ciociari* stands to pure Italian.—Rodolfo Lanciani, in the London *Athenaeum*.

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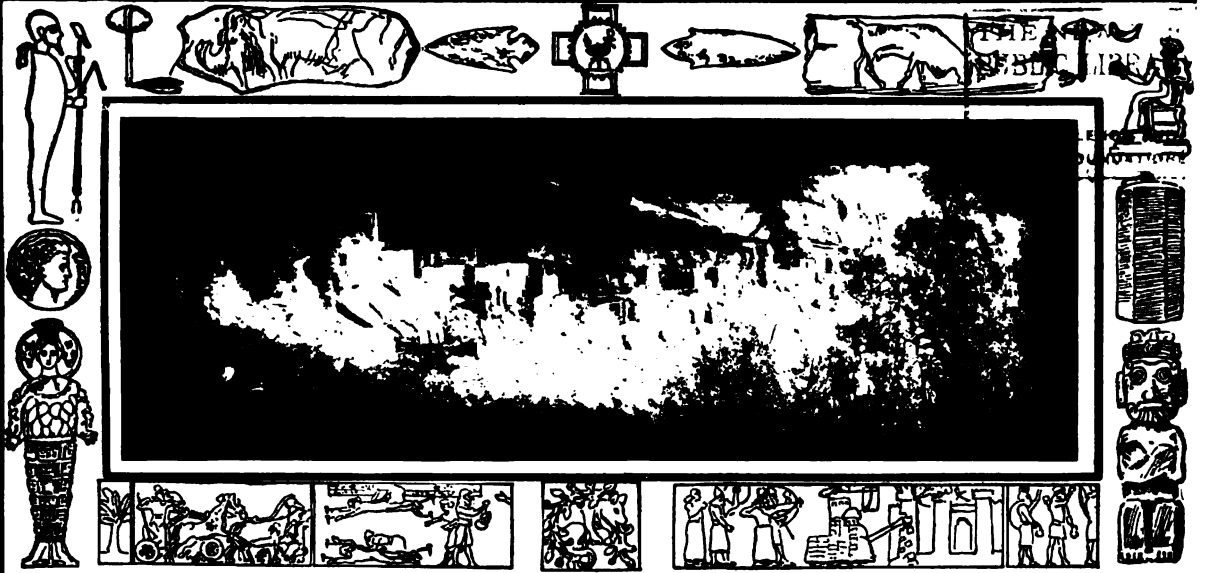
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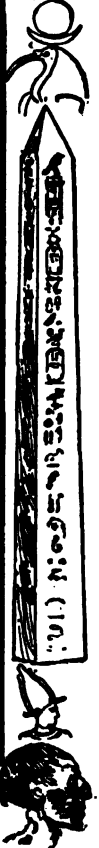
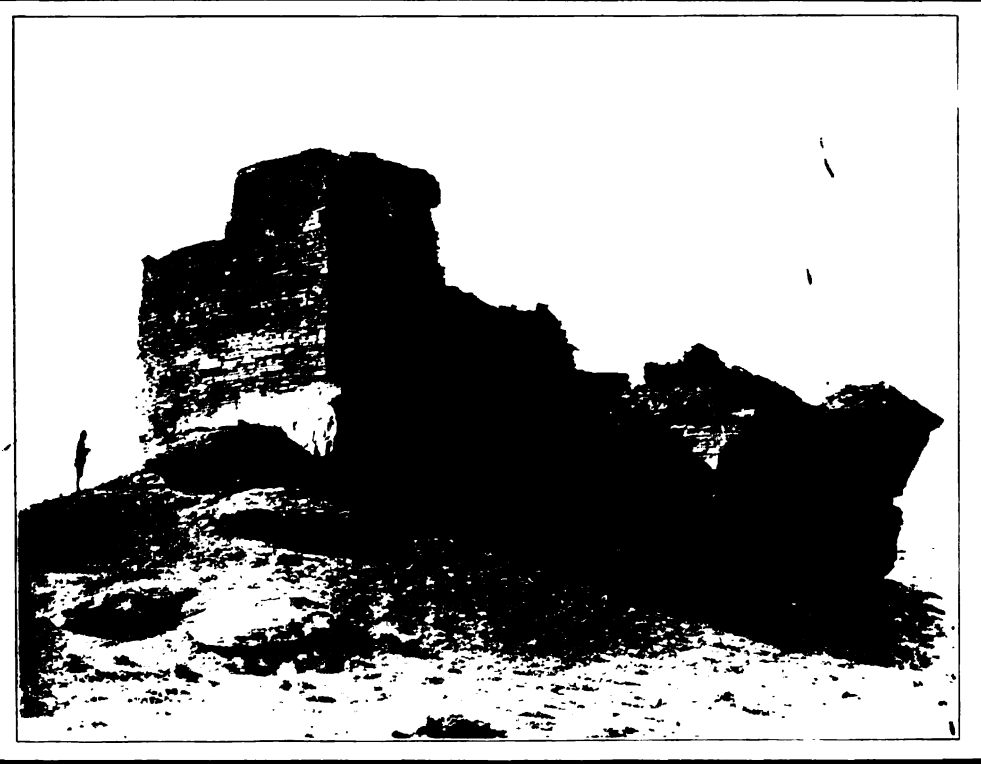


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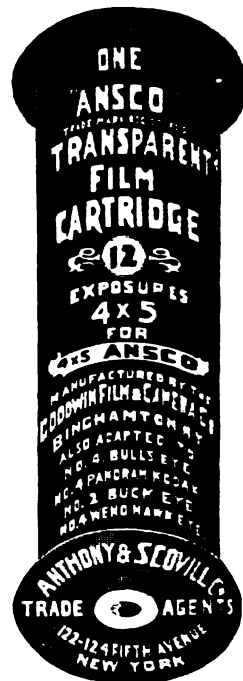
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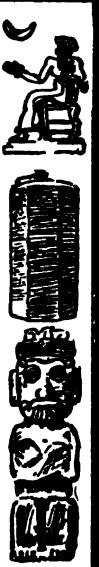
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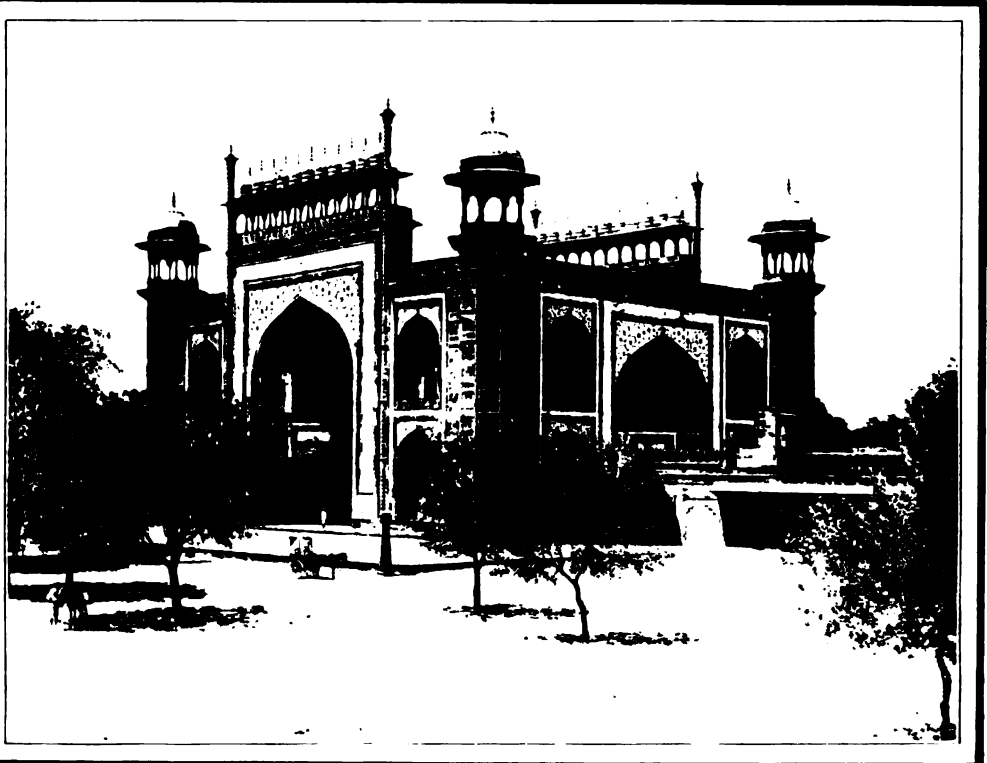


RECORDS OF THE PAST

VOLUME III

FEBRUARY, 1904

PART II



REV. HENRY MASON BAUM, D. C. L.
Editor

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MR. FREDERICK BENNETT WRIGHT
Assistant Editor

FEBRUARY, 1904

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MARCH, 1904

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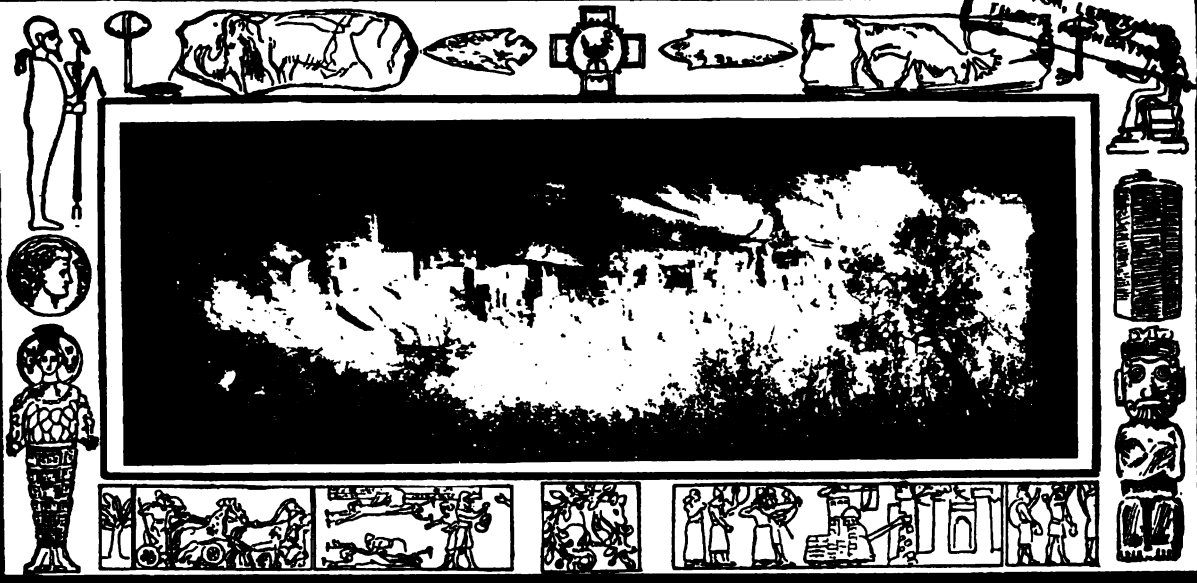
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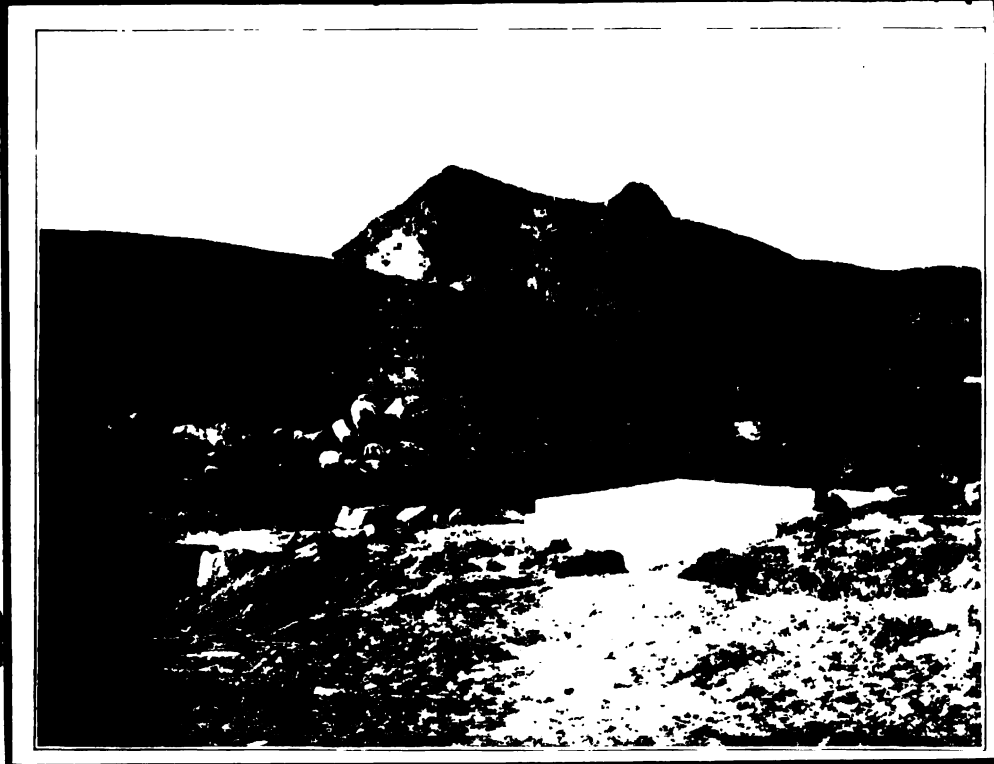


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Assistant Editor

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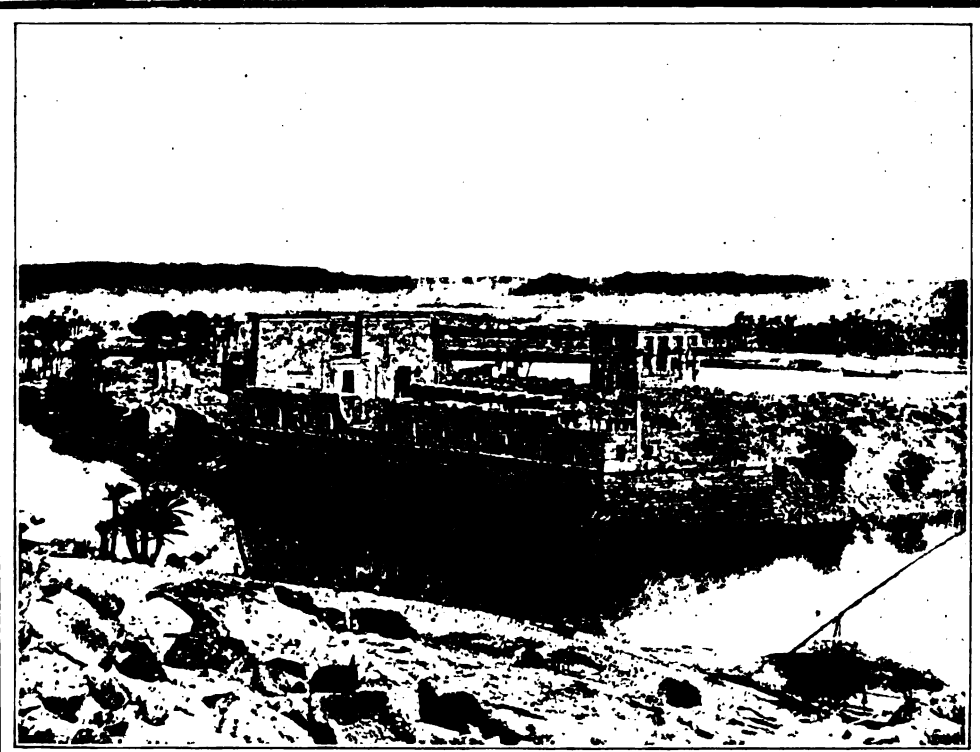


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SEPTEMBER, 1904

PART IX



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MR. FREDERICK BENNETT WRIGHT
Assistant Editor

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VOLUME III

OCTOBER, 1904

PART X



REV. HENRY MASON BAUM, D. C. L.
Editor

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MR. FREDERICK BENNETT WRIGHT
Assistant Editor

OCTOBER, 1904

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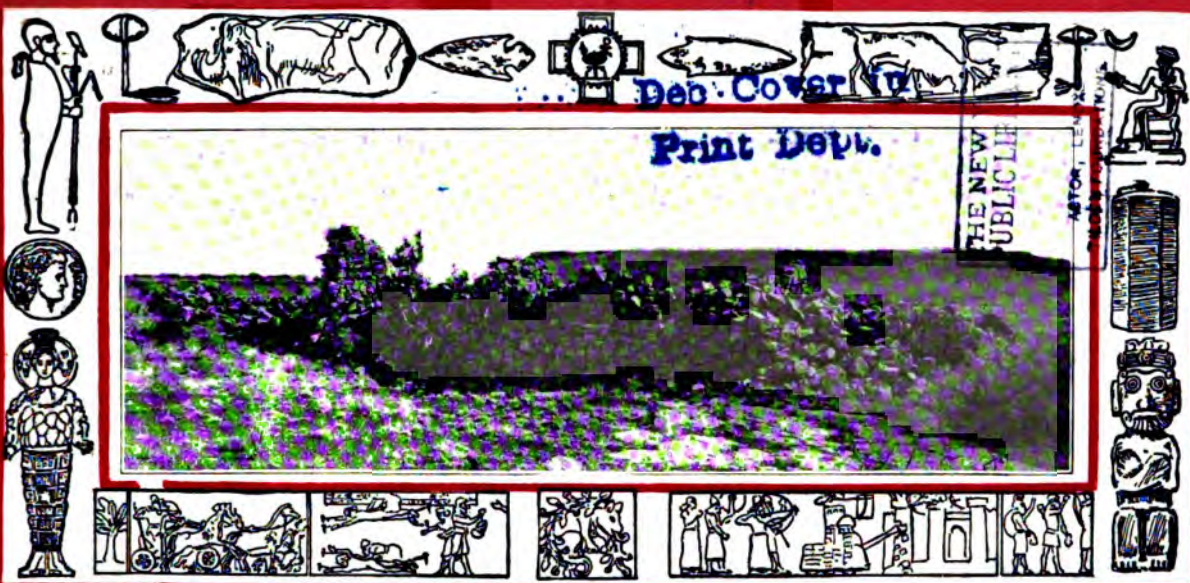
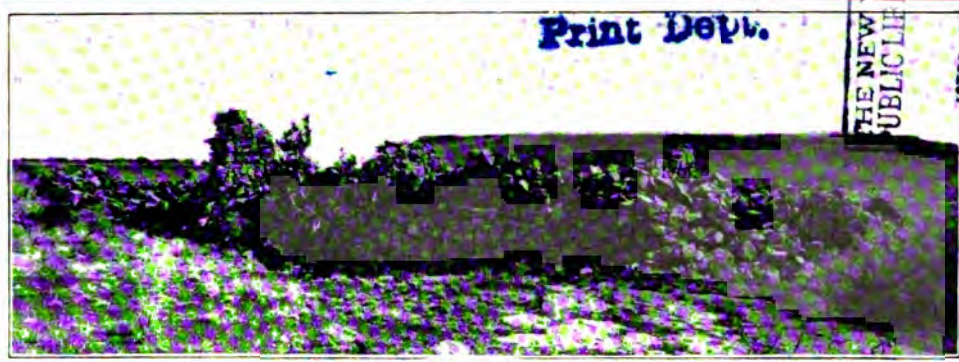
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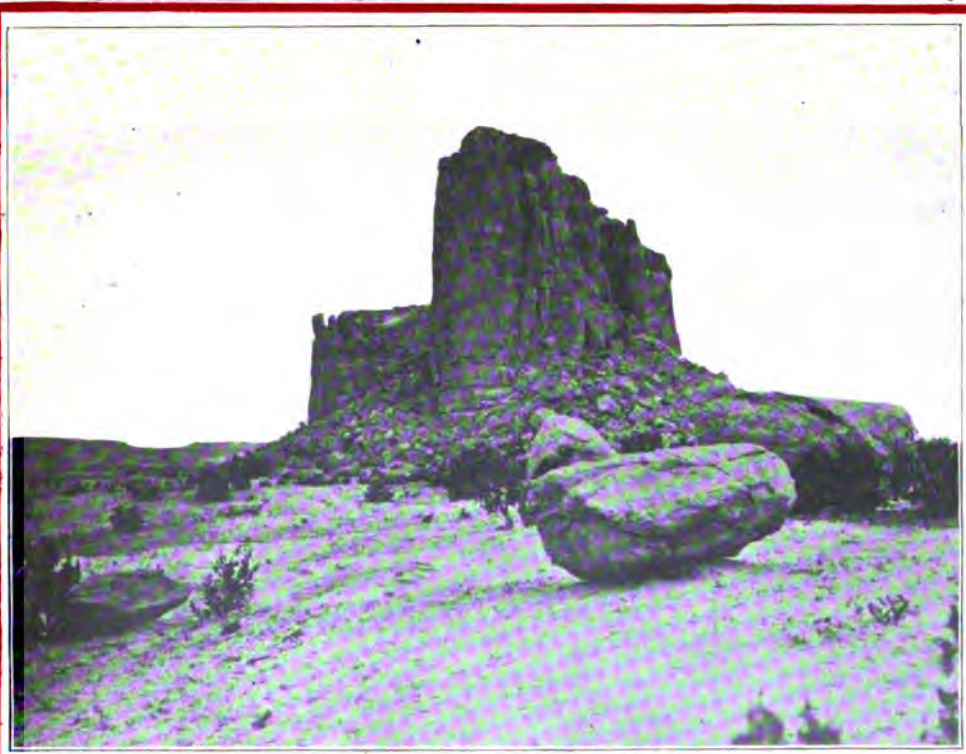


RECORDS OF THE PAST

VOLUME III

NOVEMBER, 1904

PART XI



REV. HENRY MASON BAUM, D. C. L.
Editor

**

MR. FREDERICK BENNETT WRIGHT
Assistant Editor

NOVEMBER, 1904

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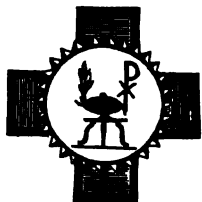
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UNITED STATES



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OF THE

MOUND BUILDERS, CLIFF DWELLERS
AND PUEBLOS

ILLUSTRATED WITH PHOTOGRAPHS BY THE

REV. HENRY MASON BAUM, D. C. L.

EDITOR

RECORDS OF THE PAST

Edition de Luxe of One Thousand Copies Printed for the Contributors to the Expeditions made by the Author in 1902 and 1904



ANNOUNCEMENT

THE work of the Mound Builders, which extends from the Atlantic Coast to beyond the Mississippi River, and of the Cliff Dwellers and Pueblos of Arizona, a part of California, Southern Utah, Colorado, New Mexico and Northern Texas, constitutes the archæological remains, of what may justly be termed, the prehistoric races within the United States. My duties as an editor and the desire to secure accurate data for national legislation to protect our priceless antiquities led me to make an expedition to the Mississippi Valley and the Southwest in 1902.

The wanton despoliation of our antiquities wrought by the commercial excavator, and in many cases the unscientific explorations by public institutions, induced me to renew the various efforts that had been made during the past quarter of a century to secure suitable legislation for their protection.

A personal appeal to Mr. Hitchcock, the Hon-

orable Secretary of the Interior, led to the appointment of a custodian for the Canyons de Chelly and del Muerto in Northeastern Arizona. These canyons, of unrivaled natural beauty, contain over 300 Pueblo and Cliff ruins, and form one of the most interesting historic localities in the Western Hemisphere.

During the past winter, I framed a bill for the protection of the antiquities on the Public Domain. Copies were sent to the chief educational and scientific institutions of the United States and it received their almost unanimous approval. It was recommended for passage by the Committees on Public Lands of the House of Representatives and the Senate, and passed the Senate by unanimous consent three days before the adjournment of Congress, and there is every assurance that it will be passed by the House on the reassembling of Congress.

I was urged by many persons to visit the Southwest again the past summer to make fur-

ther investigations and secure the necessary information regarding some of the more important ruins, to enable the Interior Department to withdraw the lands on which they are located from homestead entry. The Hon. William A. Jones, Commissioner of Indian Affairs, who has taken a deep interest in the efforts to protect our antiquities, many of which are on Indian reservations, gave me the following letter, which was of great service to me:

DEPARTMENT OF THE INTERIOR,
OFFICE OF INDIAN AFFAIRS.
WASHINGTON, APRIL 30, 1904.

To all Indian Agents and Superintendents of Schools.

This will be exhibited to you by Rev. Henry Mason Baum, D. C. L., Editor of "Records of the Past," Washington, D. C. Dr. Baum expects to visit the reservation under your charge for the purpose of investigating prehistoric ruins and relics. You will accord him every facility for this purpose while on your reservation, and any personal favors that you may be able to show him will be greatly appreciated by me personally.

Respectfully yours,
W. A. JONES,
Commissioner of Indian Affairs.

A vast extent of territory was traversed by my Expedition, and many ruins were photographed and surveyed. The photographs made on this and the previous expedition form the most complete series that has ever been made of the antiquities of the United States. The expenses of the two expeditions amount to nearly \$2,500. In view of the services rendered to the cause in which every American should be interested, I feel warranted in appealing to the generosity of public-spirited citizens of the United States to help me bear the financial burden of this work. My own services and those of some of the members of my expedition have been freely given.

Many persons have requested me to write a Monograph on the antiquities of the United States, which would give briefly an idea of the work done by those who were here before us. This I decided to do, and the work will be published in December next, in time to be of service on the reassembling of Congress.

In return for the contributions made toward the expenses of my expeditions in 1902 and 1904 and another which I contemplate the coming summer, I will send the monograph, which will be printed on heavy paper specially made for

it, 10 by 12 inches, type page 6¼ by 8¼ inches, together with a portfolio in which the monograph and photographic prints (10x12 inches) can be inclosed. The monograph, portfolio and 20 photographs will be sent to each contributor of \$10.00, and additional photographs at the rate of 50 cents each. The portfolio of pictures and the Monograph may justly be considered an Edition de Luxe, of a work on a subject of great importance to everyone interested in the history of man in the Western Hemisphere. The edition will be limited to 1,000 copies and will not be for sale by the trade or by agents, and can only be obtained by those who contribute \$10 or more for the prosecution of this work of National importance.

From Prof. Francis W. Kelsey, of the University of Michigan, and Secretary of the Archaeological Institute of America.

ANN ARBOR, MICH., JUNE 10, 1904.

DEAR DR. BAUM:

I have just received the prospectus of your Expedition to the Pueblos and Cliff Ruins of the Southwest this summer. I feel that all men interested in archæology, and particularly in the preservation of our American antiquities, owe you a debt of gratitude for the service which you are rendering to the good cause. Unless prompt and efficient measures are adopted for the preservation of these remains, the campaign of excavation the present summer will obliterate monuments of priceless value from the scientific point of view. I sincerely hope that you will be able to make a prompt start and keep in advance of the commercial excavators, furnishing to the authorities in Washington so prompt information regarding the remains most in danger that further depredations may be prevented.

Sincerely yours,

FRANCIS W. KELSEY.

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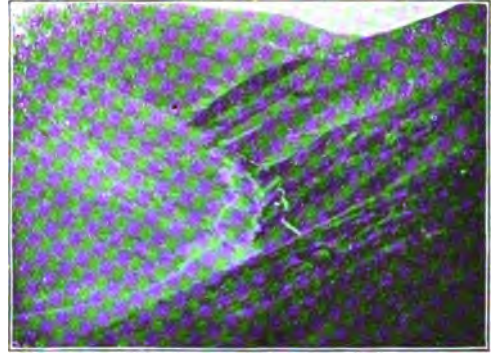
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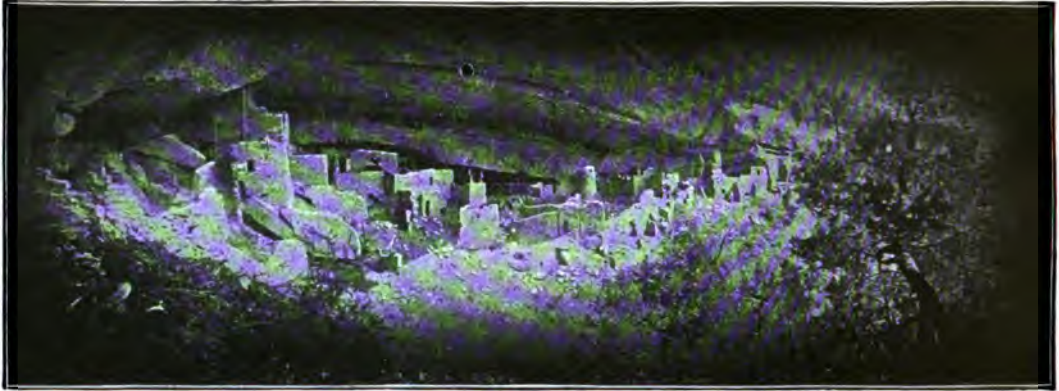
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