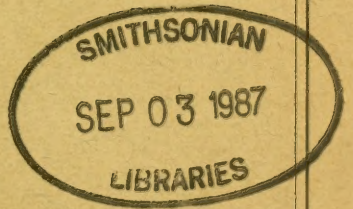


SMITHSONIAN MISCELLANEOUS COLLECTIONS
VOLUME 72, NUMBER 15

EXPLORATIONS AND FIELD-WORK OF THE
SMITHSONIAN INSTITUTION
IN 1921



(PUBLICATION 2669)



CITY OF WASHINGTON
PUBLISHED BY THE SMITHSONIAN INSTITUTION
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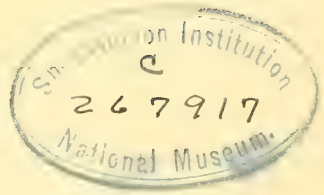
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rail from this point in the semi-arid coastal plain to the capital, San José, lying at an altitude of 1,140 meters in the cool *meseta central*, is through a region remarkably diverse as to physiography. From San José three principal trips were made: First, to La Palma, a classical botanical locality on the cloud-drenched southwestern slopes of Irazú volcano; next to Santa Clara, in the mountains a few leagues south of Cartago; then to Vara Blanca, lying high up in an almost unexplored region between the volcanoes Poás and Barba. Special attention was here given to ferns and orchids, both groups being



FIG. 57.—Street scene in Puntarenas, the Pacific port of Costa Rica.

extremely abundant both as to species and individuals, and many new and interesting species in these and other groups were collected. The flora of the upper slopes of the interior mountain region appears well-nigh inexhaustible and will long be a most profitable field for botanical exploration.

STUDIES ON EARLY MAN IN EUROPE

During the summer and early autumn of 1923, Dr. Aleš Hrdlička, curator of the division of physical anthropology, United States National Museum, spent three and a half months in revisiting the numerous important sites of early man in western and central Europe, and the institutions in which the skeletal remains of ancient

man and the fossil European apes are preserved. Acting at the same time as Director of the American School in France for Prehistoric Studies, Dr. Hrdlička was accompanied on his trip by a number of graduate American students to whom the sites and specimens were demonstrated.

One of the principal objects of the trip was the securing of accurate measurements of the teeth, particularly the lower molars, of the larger fossil apes and early man by one observer, a strictly defined method, and accurate instruments; while a second important object was the taking of photographs of the various sites of early man of which good photographic views were not yet available.

The work began with a re-examination of the Piltdown jaw and skulls which are in the care of Professor Smith Woodward in the British Museum of Natural History, London.¹ The Rhodesian, Boskop, Gibraltar and other early remains in London were also seen once more, and then a day was spent in company with Professor Smith Woodward in a visit to the interesting site where the Piltdown remains were uncovered and where further search was to be resumed during this summer. The results, so far as the Piltdown remains are concerned, were merely to accentuate the conviction that the lower jaw and the skulls do not belong together.

The next visit was to the important Ipswich Museum and to the archeological sites in the vicinity, including that of Foxhall, under the guidance of Mr. Guy Maynard, the Curator of the Museum. A trip to Cromer, kindly arranged by Mr. J. Reid Moir, was undertaken on the following day, to examine the famous "Cromer forest beds." Here Mr. Savin showed the party his invaluable paleontological collections from the Cromer forest beds, and under the guidance of Professor Barnes of Oxford the cliffs bearing worked stones were examined, together with the beach accumulations containing many chipped flints, and also a large private collection of what are supposed to be Tertiary implements. It is in the sites about Ipswich, particularly at Foxhall and also on the beach at Cromer, that worked stones of Tertiary man are believed to have been recovered; but after seeing conditions and noting the divergent views of men who are giving close attention to this subject it was felt that a definite answer to this weighty question is not as yet possible.

¹ Grateful acknowledgments for aid rendered on this trip are due to all those mentioned in this report. Their assistance in giving first hand reviews of the knowledge concerning individual specimens and sites, with personal conduct in many instances to the latter, was of the greatest value.

On the following day the party arrived at Jersey and were met by Professor Marett under whose guidance were seen the originals of *Homo brekladensis*, the local archeological collections and the cave of St. Brelade, where work still continues. This site has already given upwards of 20,000 chipped stones of the Mousterian and Aurignacian cultural periods.

Upon his arrival at the British Museum of Natural History, Dr. Hrdlička found awaiting him in care of Professor Smith Woodward a cordial invitation from Professor Eugene Dubois of Haarlem, Holland, to visit him and see the famous remains of the Pithecanthropus as well as the other Java remains in his possession, which for many years were inaccessible. This so far unique privilege, made possible by the fact that Dr. Dubois has at last completed his studies on the precious objects, was taken full advantage of on July 15, Dr. Dubois demonstrating personally and without reserve all the specimens. The remains of, or those attributed to, the Pithecanthropus consist of the now thoroughly cleansed skull-cap, a femur and three teeth, two molars and one premolar. Besides these there is from another locality a piece of a strange primitive lower jaw, and also two skulls with many parts of the skeletons of a later, though yet rather primitive, type of man from consolidated calcareous deposits in still another part of the island.

The examination of the originals belonging to the Pithecanthropus find was in many respects a revelation. It was seen that none of the casts now in various institutions are accurate, and that the same is true of the so far published illustrations, above all those of the teeth and femur. The originals are even more important than held hitherto. The new brain cast shows an organ very close to human. The femur is without question human. When the detailed study of all these specimens is published, which Dr. Dubois expects to occur before the end of the winter, the specimens, though all controversial points may not be settled, will assume even a weightier place in science than they have had up to the present.

In connection with the visit to Haarlem a stop was made in Amsterdam for the purpose of visiting the classic Vrolik Museum, together with the valuable more recent anthropological collections of Professor Louis Bolk, which include a series of the deformed skulls from the Zuyder Zee showing a type that is identical with that of several skulls from the Delaware Valley which at one time were supposed to be very ancient (Bull. 33, Bureau of American Ethnology). The Museum is now directed by Professor Bolk, and in his absence, due

to illness, the collections were demonstrated to the party by his two able assistants.

The next visit was to the two museums at Brussels which contain valuable collections relating to early man, namely, the National Museum and the Cinquantenaire. Both these very profitable visits were made under the guidance and with all possible assistance of Professor A. Rutot, who also arranged an excursion to the but little-



FIG. 58.—Gravel beds yielding ancient paleolithic stone implements in the Low Somme Terrace at Montier, suburb of Amiens. Most of the stones showing work of man are found in the very lowest layers of the gravel, as seen in the pit at the right. (Photograph by A. H., July, 1923.)

known cave of Spy and to the equally little-known paleolithic caves of the Lesse Valley.

The next stopping point was Liège, for the re-examination of the Spy skeletons. In company with Professor Charles Fraipont, Dr. Hrdlička visited the house of Professor Maxime Lohest where the precious specimens had been hidden during the war and where they are temporarily preserved to-day. A visit was also paid with Professor Fraipont to the rich prehistoric collections of M. Hamal-Nandain and a participation in the excavations of an early Neolithic site was ar-

ranged for the next day, but this was made impossible by rainy weather. Instead of this a very stimulating trip was taken along the archeologically important Meuse Valley from Namur to the French boundary.

Upon entering France the first visit paid was that to the St. Acheul and Montier quarries about Amiens. These gravel and sand deposits are still being worked and they are still yielding Acheulean and Chellean and possibly other ancient implements; but since the death of M. Commont, no one is watching the work and the implements recovered by the workmen are being sold by them to tourists or anyone who cares for them. From Amiens a visit was made to Abbeville, where similar conditions were found to exist.

The next stage was Paris, with a visit to the Laboratoire d'Anthropologie (Professor Manouvrier) and to the Institut de Paléontologie humaine; after which Dr. Hrdlička with all the students proceeded to Bordeaux where they attended (Dr. Hrdlička as a foreign guest) the meeting of the Association Française pour l'Avancement des Sciences. The meeting of the anthropological section of the association was almost entirely devoted to man's prehistory in France and Northern Africa and was very interesting, particularly in its discussions. In connection with the meeting an examination was made of the prehistoric collections in the Bordeaux Museum and of the rich private collections of Dr. Lalanne; while excursions were made to various other collections and prehistoric sites (Bourg, cave Pêre-non-Pêre, valley of the Vezère).

On the return trip from Bordeaux, a stop was made at St. Germain where, under the guidance of M. Hubert, the Curator, the richest prehistoric museum of France was examined. This museum belongs to the government. It is located in a large, ancient palace and contains vast prehistoric collections, including most of the precious objects relating to the arts of ancient man that have so far been discovered in France.

The continuation of the journey led to Germany, to the cities of Tübingen, Stuttgart, Frankfurt, Heidelberg, Weimar and Berlin, in the institutions of which are preserved highly valuable remains both of early man and fossil European anthropoid apes, all of which, together with most of the sites from which they were derived, were re-examined. In addition, the occasion was utilized for participating in the Congress of the German Anthropologists at Tübingen. Many favors were received from them and from the paleontologists, particularly from Professors Schmidt and Henig in Tübingen. Martin Schmidt in



FIG. 59.—The Mauer site from a distance. The heaps in front are refuse from the quarry. (Photograph by A. H.)



FIG. 60.—Part of the Mauer sand and gravel quarry as it appears today. (Photograph by A. H.)



FIG. 61.—The Ehringsdorf or Kaempfe's Travertine Quarry. View of place where first human lower jaw was found.



FIG. 62.—The Ebringsdorf Quarry from a greater distance. First fossil human jaw found at place marked by white spot where the two men stand.

Stuttgart, Wegner in Frankfort, Salomon and his first assistant in Heidelberg, Schuchart in Berlin and Herr Lindig in Weimar.

From Germany the trip led to Bohemia where, to facilitate the work, a special representative of the Ministry of Foreign Affairs, Dr. Novák, together with Professor Matiegka, gave personal guidance to various museums as well as to the great ossuary at Mělník and especially to that at Sedlec, where many thousands of crania and bones from the time of the Hussites are tastefully arranged in the form of a most impressive, spacious subterranean chapel. Under the same guidance visits were paid to the great Moravian caves which have yielded and probably still contain remains of early man as well as those of the cave bear (six complete skeletons) and Quaternary beaver (upwards of 20 finely preserved skulls with many bones); to the Provincial Museum at Brno which harbors the valuable remains of the Předmost mammoth hunters, and to the monastery of Mendel, still full of reminders of the student-monk, including his library and garden. A number of interesting details were learned about Mendel from the excellent abbot of the monastery, among them the fact that Mendel was a Moravian and spoke both the languages (Czech and German) of the country.

The following stage of the journey was to Vienna, where the rich prehistoric and anthropologic collections of the former Hoff-Museum were examined under the guidance of Professor Szombathy.

From Vienna Dr. Hrdlička with some of his students proceeded to Zagreb in Croatia, where in company with Professor Gorjanovič-Kramberger they re-examined the very valuable Krapina remains and visited the locality where they were discovered. This is situated at the head of the very beautiful but little-known Krapinica Valley, and indications were seen that there may be additional sites of ancient man in the vicinity of the original discovery.

From Zagreb the journey led over northern Italy to Lyons where the collections of the University were examined in company with Professor Mayet; this was followed by an excursion under the guidance of Professors Arcelin and Mayet to the prehistoric site of Solutré. Here existed some 15,000 years ago a large paleolithic settlement, the duration as well as the size of which may be seen from the fact that its refuse accumulations are estimated to contain, aside from implements and other objects, the bones of approximately 200,000 late Quaternary horses. New explorations have just recommenced at this site, and they led within three days of the visit to the recovery of no less than five prehistoric Solutrean or Upper Aurignacian skeletons, some in a very good state of preservation.

From Solutré the road led to Les Eyzies, in the valley of the Vézère (Dordogne), which is probably archeologically the richest as well as one of the most picturesque regions of the world. Here under the guidance of Abbé Breuil and M. Peyrony, were visited the sites of Le Moustier, La Madeleine, La Ferrassie, Laugerie Haute and Basse and others of importance, as well as numerous caves showing graven, painted, or sculptured prehistoric animals. Here was also examined the very promising new local museum which is under the



FIG. 63.—Part of excavations at La Quina, Charente, France. (Photograph by Dr. G. G. MacCurdy.)

direction of M. Peyrony and which was officially opened a short time subsequently.

After 10 days spent in the district of Les Eyzies the journey was prolonged southward to Toulouse where, with Count Begouen the local museum with its rich Cartailhac and Begouen collections was examined and from which an excursion was made to a vast cave with splendidly preserved paintings of ancient animals in the Pyrenees.

The last portions of the journey included an eight days' stay with Dr. Henri Martin at La Quina, becoming acquainted with its already important museum and assisting in the excavations; this was supplemented by visits to the prehistoric collections of the museums at

Perigueux, Angoulême and Gueret. Then followed a return to Paris and a final trip to Havre where the very interesting and but little-known prehistoric collections from the maritime district of Havre were examined in the local museum.

The trip resulted in an overwhelming sense of the greatness as well as scientific importance of the field of early man in western and central Europe, and in a keen appreciation of the opportunities for cooperation in this field by American students.

ARCHEOLOGICAL INVESTIGATIONS IN SOUTH DAKOTA

Mr. M. W. Stirling, assistant curator of the division of ethnology, U. S. National Museum, spent the month of June, 1923, in the examination of old village sites on the Missouri River. The region investigated was the 12-mile strip between Grand River and Elk Creek, South Dakota. Much of the success of the exploration was due to the able cooperation of Mr. E. S. Petersen of Mobridge, South Dakota.

During the eighteenth and up to the middle of the nineteenth centuries, the upper Missouri River was the scene of a very considerable shifting of native populations. On the one hand there was a south to north movement and a possible reverse tendency; on the other hand a general east to west movement in which such tribes as the Cheyenne, Sutaro, Arapaho, and others, figured. These tribes before leaving the Missouri River for the nomadic life of the plains were, according to tradition, a sedentary agricultural people, living in earth-lodge villages like those of the Arikara, Mandan, and Hidatsa. The Grand River formed the western pathway for these migrations, and we find the point of intersection of these tribal movements in the vicinity of the junction of the Grand River with the Missouri. To establish the identity of the numerous sites in this region is a complex but interesting task.

In all, 10 of these old villages were visited and excavations carried on in four. Three of these, on the west bank of the Missouri, were identified as Arikara; one being the historic upper village of the Arikara visited by Lewis and Clark in 1804 and later by Brackenridge and Bradbury in 1811. The others were all prehistoric, but from the presence of a few objects of European origin found in each, obviously of post-Columbian age. The fourth site excavated is on the east bank near the town of Mobridge and seems most likely to have been Cheyenne.

There is a close similarity existing between the material culture remains of all of the upper Missouri tribes. Because of this fact,