AN ANCIENT SKELETON DISCOVERED IN ECUADOR

DURING the month of May, while engaged in archeological work on the Ecuadorian coast, for the Museum of the American Indian Heye Foundation, the writer discovered, *in situ*, a complete human skeleton under conditions which indicate considerable antiquity. The find was made in the province of Esmeraldas, along the beach at a place 40 miles north of the equator called Tomsupa. This was the writer's third visit to the site, which he discovered in 1907. A brief account was published in his paper, "Archeological research on the coast of Esmeraldas, Ecuador," in the proceedings of the XVI. Internationalien Amerikanisten-Kongresses, Wien, 1909. In this paper attention was called to the character of the deposits, accompanied by a photograph of the same.

The skeleton recently uncovered was found in the bank a few hundred yards north of the place shown in the photograph, at a point where the alluvium is considerably deeper. All along the beach in the vicinity for some distance one finds deposits of human artifacts in the bank.

The region here is a plain bounded on the north by low hills which terminate at the sea in a point called Punta Chevele. To the south just below where the Atacames River empties into the sea there are also hills, and at the ocean is a rocky point called Punta Sua. From appearances it would seem that this plain, three or four miles wide, was formerly the dwelling place of numerous people, as we not only find here the Tomsupa deposits, but they are even more extensive at the southern limit along the banks of the Atacames River, and they also extend inland for some distance. It would seem that this plain later became the course of a great river, which gradually deposited gravel and alluvium to a depth of fifteen feet. Then came a washing away of the alluvium, more extensive to the south, as at present more than half of the plain along the beach is only slightly above high water mark.

In the paper above referred to are the following data about the Tomsupa deposits:

> The layer of pottery along the beach varies from 20 to 24 inches, and the measurements are as follows: alluvium and light earth, 16 inches; dark soil, ashes containing pottery and shells, 2 feet; sand to present line of beach, 1 foot.

At other places during our last trip deposits were found covered with 3 feet, and even 5 feet of alluvium. Skeletal remains were discovered nearby at a depth of 4 feet 7 inches under undisturbed alluvium.

Near the northern extremity of the plain is a ridge of alluvium running at right angles to the beach, which abruptly terminates at the north toward Punta Chevele, and from here on to the point the same conditions prevail as at Atacames, the plain being only slightly above high water mark. In this alluvial ridge there is a layer of stratified coarse gravel 12 feet from the surface, and this deposit extends southward for several hundred yards terminating with a covering of alluvium of three or four feet. This gravel deposit averages 2½ feet in thickness.

The skeleton to which attention is called in this communication was discovered at the deepest part of the ridge and under the gravel, being covered by 12 feet of alluvium, and 2½ feet of gravel. It was discovered by the writer's assistant, his son, Winthrop L. Saville, whose attention was drawn to a reddish knob just visible under the undisturbed gravel and alluvium. After the writer and his assistant excavated for a few minutes it was found to be a human leg bone. As night was coming on, a photograph was taken of the locality; the remains were carefully covered to protect them from rain and the carelessness of passers-by, for in this part of Ecuador the beach is the only highway. The next day the excavation was continued with some difficulty due to the extreme fragility of the bones and the nature of the high bank above, for the writer had far too little time at his disposal to permit of first cutting down the bank, and no laborers could be obtained at this place. We finally uncovered the remains of a young man just cutting his wisdom teeth. He had been buried

with the arms and legs bent close to the body, and the skull had been deformed with the frontal depression. The entire skeleton was tinged a bright red by the infiltration of iron, and the inner surface of the skull was covered by a deposit of brownish-black limonite. We were able to take out the skull, which fell into a hundred pieces, and only fragments of the bones. The only relic found was the foot of a pottery vessel with traces of a highly polished red inner surface. This was found near the skeleton above the bones and under the gravel. The skeleton was covered with earth, immediately below the layer of gravel and alluvium, and was not intrusive, there being absolutely no signs of disturbance above. It could not have been intruded from the side as there is rapid erosion going on here. Every year parts of the banks are washed away by the sea during the time of flood tides. The owner of the property assured the writer that the bank now visible is not the surface seen during former visits, as the ocean is slowly washing away the shoreline.

Concerning the age of this skeleton, the archeologist is not competent to pass his opinion. This must be done by the geologist and physiographer. But the writer is of the opinion that this find is the oldest burial thus far found in South America.

Marshall H. Saville

SCIENTIFIC EVENTS

THE MULFORD BIOLOGICAL EXPLORATION OF THE AMAZON BASIN

Further advices received from Dr. H. H. Rusby, director of the Mulford Biological Exploration, report continued favorable progress, and a considerable amount of scientific work already accomplished in quest for medicinal plants and biological specimens.

Members of the expedition left La Paz, Bolivia, about July 9, whence they proceeded by rail to Eucalyptus, the terminus of the railroad. From Eucalyptus to Pongo they traveled by auto truck over the new auto road recently completed by the Guggenheim interests in Bolivia. From Pongo, a three days' journey by mule brought them to Canamina, which will be their temporary headquarters for three or four weeks. From this point certain members of the party will make an ascent of the La Paz river for a considerable distance for the purpose of making special collections, the remainder of the party making detailed studies in the vicinity of Canamina.

Collections have been made in and around Mollendo, Arica, Arequipa, Tiavaya and La Paz. A large quantity of these materials, shipped just before the party left La Paz, has been received in Philadelphia.

The shipment includes among other things botanical specimens of economic products of Peru and Bolivia, such as the green-colored, purple-striped fruit of the "pepino"; the fruit of a species of *Tasconia* which is sold in the markets there under the name of "Tumbo"; also another edible fruit known as "acchocta," and a turnip-shaped root called "rhacache," and many others. These will go to the economic museum of the New York Botanical Garden and the Brooklyn Botanical Garden. A quantity of herbs is also included, which will be sent to Professor Edward Kremers of the University of Wisconsin, who will study the volatile oils contained in them.

In ascending and crossing the mountains from Mollendo to La Paz, Drs. Rusby and Hoffman made systematic observations on blood pressure changes at different altitudes and on the mountain sickness known as "sirroche." They have availed themselves of every opportunity to study tropical diseases and while at Arequipa they visited the fine hospital there to study a form of tropical ulcer known as "uta."

EDUCATIONAL FORESTRY

(*From a correspondent*)

Educational forestry is being carried on by experts at the Alleghany State Park, the new public recreation ground just dedicated in Cattaraugus county. The Buffalo Academy of Science is cooperating with the New York State College of Forestry in this work.

Henry R. Francis, professor of forest