

SCIENCE NEWS

A "SKELETON IN CLOSET"

Science Service

There is a "skeleton in the closet" of man's evolutionary history, and Prof. E. Dubois, former surgeon in the Dutch Army, holds the key. The "closet" is said to be a good stout safe in Haarlem, Holland, and the skeleton is none other than that of *Pithecanthropus erectus*, the famous ape-man who lived in Java over a half million years ago. For thirty years scientists from all over Europe have besieged Dr. Dubois for permission to examine the remains, while eminent anthropologists have crossed the ocean for that purpose only to be turned away at the door.

His locking up of these specimens and holding out on his fellow scientists has become an international scandal, and is credited with causing other scientists to follow the same policy. The Natural History Museum at Paris now has a number of skulls of cave men of the Neanderthal period which were discovered in 1912 which they refuse to allow scientists to examine thoroughly.

The Java ape-man remains were found by Dr. Dubois near Trinil in the central part of the island of Java in 1891. All that has been furnished the scientific world are casts of the top of the skull, and two teeth, and a photograph of the thigh bone in 1894. He concluded that these remains represented a true intermediate form between anthropoid apes and man. Some, however, believe they represent a very primitive man, others that they represent merely an extinct form of ape. To solve more definitely these problems, scientists have sought permission to examine the original petrified fossils themselves, but Dr. Dubois has refused on the excuse that he wished to publish his own findings first.

Scientists recognize that such action is proper if the findings are published within a reasonable time; but to explain the years that he has withheld his work it has been rumored that he was influenced by religious bigotry to which these bones were "a skeleton in the closet" in the general acceptance of that phrase.

The story of an unsuccessful pilgrimage to Dr. Dubois' home in Holland several years ago is told by Dr. Aleš Hrdlička, anthropologist of the Smithsonian Institution. He was simply unable to find Dr. Dubois's home. Dr. Hrdlička praises Dr. Dubois's exploration and early reports on the valuable bones, although he and many other scientists would like to see the originals, make their own measurements and form

their own conclusions. "The final word concerning their exact age and true biological position has not yet been pronounced," said Dr. Hrdlička, in explaining that there was no room for doubt as to the place of discovery of the several bones and their geological relations.

The Java ape-man is the oldest of all the links tending to show man's rise in the world. From the geological strata in which it was found, it is estimated that it must have lived from 500,000 to a million years ago, making it nearly twice as old as the next oldest cave-man. The first human or near-human remains yet found, it was recently shown by Dr. Hrdlička, are those of the so-called Piltdown man found near London, England, and probably dating back over 250,000 to 300,000 years. He believed that modern man may have developed from this western type and that the Java ape-man represents an extinct branch and is not in the direct line of man's ascent.

PUEBLO BONITO

The National Geographic Society

NEIL M. JUDD, director of the Pueblo Bonito Expedition of the National Geographic Society, left Washington on May 5 to resume exploration of the most important prehistoric ruin in the United States at Chaco Canyon, New Mexico.

By May 15, Indians will be swarming over the walls of the ancient village, teams will drag wagon loads of earth and stone away, and steel dump cars will scurry back and forth over a miniature railroad. Almost overnight a canyon which had been deserted since years before Columbus came will become a beehive of industry.

Pueblo Bonito was an aboriginal apartment house of 900 rooms, four stories high, encircled by a single outer wall.

Viewed from the towering north cliff the ancient village is semi-circular, with the greater portion of its dwellings, or suites, grouped along the curved side.

A long row of one-story houses connects the extreme wings of the semi-circle. From the middle of the straight row a cluster of ceremonial chambers extended to meet the curved section, thus dividing the village, and providing for each half an open court. In these courts sacred dances and religious ceremonies were performed.

Some ancient walls still stand more than 30 feet high. Its 400 ground-floor rooms occupy an area almost equal to that of the United States Capitol.

Rooms of Pueblo Bonito are grouped in suites

as in modern apartment houses. If they were all occupied at the same time the resident population of this aboriginal family hotel was between 1,500 and 2,000 persons.

The National Geographic Society has been exploring Pueblo Bonito for three years, but many puzzling problems remain to be solved.

Where was the water supply for this prosperous community? What forests furnished the hundreds of beams used in this colossal village standing now 40 miles from any timber of comparable size? Extensive fields in which our earliest farmers grew corn, beans, squash and other food plants now are buried.

Mr. Judd within the past ten years has organized and directed twelve archeological expeditions.

WEST INDIAN HURRICANES

U. S. Department of Agriculture

Several important points bearing on the origin and course of West Indian hurricanes have been brought out through a series of studies carried on by C. L. Mitchell, meteorologist of the Weather Bureau, United States Department of Agriculture.

The tracks of all tropical storms originating over the Atlantic Ocean, the Caribbean Sea and the Gulf of Mexico from 1887 to 1922 were plotted. Other data bearing on tropical disturbances were obtained from the daily North Atlantic charts of the Weather Bureau. Separate charts were made of the storms for each of the months when hurricanes are prevalent, from June to November, together with a few earlier and later storms. Classification of storms, according to their intensity, was included.

August and the first half of September show by far the greatest frequency of true hurricanes, many of them originating in the vicinity of the Cape Verde Islands. Some moved westward, entering the Caribbean Sea and passing south of Cuba and Haiti. Others turned to the northwest before reaching the Lesser Antilles and so passed north of Haiti and Cuba. The remainder moved northwestward, recurring in about latitude 25° N. to 30° N. and between longitude 50° W. and 70° W.

The most important results developed by the study are: (1) The great majority of tropical cyclones developed either over the western third of the Caribbean Sea or far to the eastward of the Lesser Antilles, especially in the vicinity of the Cape Verde Islands. None developed over the eastern two thirds of the Caribbean Sea. (2) The influence of anti-cyclones over the direction of progress of tropical cyclones is very

marked. (3) Tropical cyclones recurve to the northward and northeastward at the first favorable opportunity, irrespective of longitude or time of year. (4) When the paths of tropical cyclones describe a loop it is always to the left.

ITEMS

Science Service

How insect dairy farms run by imported Argentine ants threaten the sugar supply from plantations of the South is revealed in a bulletin published by the Agricultural Experiment Station of the Louisiana State University. The mealy-bug, a tiny insect pest, feeds upon the tender parts of the sugar cane and kills or weakens the young shoots so that a poor stand of cane is the result. Before the introduction of the Argentine ant this damage was not great, as these insects have parasitic enemies which prey upon them and keep their numbers down. But the mealy-bug, the bulletin states, secretes a sweet, watery liquid or honey-dew, of which the Argentine ants are very fond. In order to protect the supply of this liquid, these ants build mud barns to protect the mealy-bugs from sunlight, rains, storms and predaceous enemies. They carry the young mealy-bugs to the most desirable feeding places on the plant and by collecting the "honey-dew" keep them clean and so prevent parasitic fungi from doing them serious harm. Under this protective regime, the mealy-bugs have multiplied and extended their ravages on the cane crops. To prevent further extension of this damage, the state and federal government are now undertaking a poison campaign to exterminate the Argentine ants which are running the honey-dew dairy farms.

ACTIVITY of bandits in China has delayed an American scientific expedition, it was learned here to-day. Danger of losing equipment and valuable zoological specimens collected for the U. S. National Museum to marauding bands in a disorganized country has led A. de C. Sowerby, animal explorer for Robert S. Clark of New York, to withdraw temporarily from his field work in the region south of the Yangtze.

GRASS grown continuously under apple trees causes a disappearance of the nitrates from the soil and injures the trees' growth, experts of the Cornell University Agricultural Experiment Station have discovered. It has been previously held that the trouble was the moisture under the sod was less than in cultivated soil at certain times of the year. The Cornell men have found that moisture cuts a small figure and that it is the lack of nitrates which has the greatest effect.