

## ZOOLOGICAL COLLECTION RECEIVED FROM CHINA

In spite of the warlike conditions existing in China, and the ravages of the Yangtze river floods, the Marshall Field Zoological Expedition to China has forwarded a collection of approximately 1,200 specimens from Shanghai to Field Museum. The collection arrived safely at the Museum in March.

The expedition consists of Floyd T. Smith, formerly of New York, the leader and only white man in the party, and a corps of Chinese whom he has trained to collect and prepare zoological specimens.

Only with the utmost difficulty has it been possible for the expedition to carry out its mission successfully. Menaced by bandits who in one instance robbed and burned their camp, and subjected to long delays after arrival in Shanghai due to the war and extraordinary official requirements in regard to inspection and release of their collections, the members of the expedition were able after many obstacles to have the material placed aboard an America-bound ship which sailed on January 22. Later, word was received from Mr. Smith that seventeen more packing cases of specimens were on the way, and these are expected soon.

Mr. Smith and his men have again plunged into the interior for further zoological collecting. They are now believed to be in south central China, about 2,000 miles inland from Shanghai, and are not expected to return to the coast until summer.

The shipment received at the Museum includes about 600 small mammals, 300 birds, 200 fishes, and 100 reptilian creatures of various kinds, mainly from the northern part of the province of Szechwan. Among these are a number of extremely rare species, according to Dr. Wilfred H. Osgood, Curator of Zoology. There are four specimens of a shrew-like mole of which only one other specimen, in the Paris Museum of Natural History, has ever been collected. For Field Museum's Department of Botany the expedition sent two large tea bushes. Collections of large mammals are temporarily stored with an American resident in Shanghai, awaiting drying of the skins before they can be shipped.

## GOLIATH OF THE BEETLES

By WILLIAM J. GERHARD  
Associate Curator of Insects

Of the 100,000 and more different species of beetles known from various parts of the world, the largest is the attractive Goliath beetle, which is found in equatorial Africa. An excellent series of twenty specimens of this huge beetle has recently been received at the Museum as a gift from Mrs. H. A. Hoisington, of the Presbyterian Church Board of Foreign Missions, Olama, Cameroon (French Mandate), West Africa.

The Goliath beetle is of interest not only on account of its large size, but also because of the velvet-like, reddish brown down of its anterior wing covers, its blackish brown thorax with white longitudinal stripes, and its oddly shaped head, all of which make it a very pretty insect. It is a worthy member of the family Cetoniidae, to which belong a number of smaller African beetles that rival opals in the brilliancy and translucency of their colors. In North America the members of this family of beetles are limited in size and number of species, as well as in color, the largest rarely exceeding an inch in length.

Little is known about the early stages of the Goliath beetle and its duration of life. It is believed that, like most members of

the family, the larva or grub lives in the ground and subsists on decomposed vegetable matter.

The adult beetle is diurnal in its habits and feeds upon the exuding sap of bushes, vines and trees. In southern Cameroon it appears to prefer the sap of the large-leaved veronia bush growing at the edge of the jungle. During the morning these beetles gather in varying numbers on their food plant, but as the day advances they become more active, and they fly away quickly when disturbed. Notwithstanding their



Giant African Beetle

Illustration is two-thirds actual size of the Goliath beetle. Despite their bulk, the specimens weigh only about one-half ounce. In life, with the moisture in their bodies, they probably weigh double that.

large size, they are adept though noisy flyers. The sound produced by their wings when flying has been compared to the humming of the propeller of an airship.

As the food habits of either the larva or the adult insect are not of a destructive or harmful nature, the Goliath beetle is not of any economic importance.

## K. P. Schmidt Awarded Fellowship

In recognition of many valuable contributions to herpetology resulting from his researches for Field Museum, Karl Patterson Schmidt, Assistant Curator of Reptiles, has been appointed to a fellowship of the John Simon Guggenheim Foundation, the first award from this foundation to a natural history museum staff member. The fellowship carries with it a substantial grant of money with which Mr. Schmidt will travel for six months in Europe, pursuing his studies at principal museums in association with leading foreign herpetologists. The Museum has granted him a leave of absence for this purpose, and he will sail in July. Mr. Schmidt is the discoverer of many new species of reptiles, and the author of a large number of scientific publications. In 1928-29 he was scientific leader of the Cornelius Crane Pacific Expedition of Field Museum.

## CHEMICAL TESTS ON FOSSILS REVEAL ORGANIC MATTER

By HENRY W. NICHOLS  
Associate Curator of Geology

Most people regard fossils as remains of animals or plants which have been converted entirely into stone. The fact is that fossils may and often do retain some of the organic matter of the living animal or plant. This may be detected by chemical means. For instance, the great dinosaur skeleton from Fruita, Colorado, which occupies the center of Ernest R. Graham Hall (Hall 38) appears to be composed wholly of chalcedony. Nevertheless, a chemical test conducted during recent researches of the Department of Geology revealed the presence of nitrogenous organic matter which has remained with the skeleton during the ninety-five million years since the animal died.

Two fossil eggs of nearly as great antiquity, which may be seen in another part of the hall, also appear to be wholly converted into chalcedony, but tests showed them to contain readily detected quantities of organic nitrogen. These eggs resemble duck eggs, but a long study has failed to disclose exactly what kind of bird laid them. A fossil worm which lived about forty million years ago, recently collected for the Museum, has had so much of its original organic matter preserved that the fossil is composed of more than 95 per cent coal. This is interesting because coal is generally derived from vegetable instead of animal matter.

## Standley on International Committee

Associate Curator Paul C. Standley has been appointed a member of the General Committee of Botanical Nomenclature, established by the Fifth International Botanical Congress held at Cambridge, England, in 1930. He is one of three members representing the republic of Mexico, and was designated as a representative of that country because of his publications upon its flora. The purpose of the committee is adjustment of matters relating to Latin names of plants.

## Rare Poisonous Element Exhibited

Due to the interest aroused by a number of cases of thallium poisoning recently reported, Field Museum has placed a specimen of thallium on exhibition in its collection of rare elements in Frederick J. V. Skiff Hall (Hall 37). Thallium is a rare element, so poisonous that it is extensively employed, especially in the west, to exterminate vermin, according to Henry W. Nichols, Associate Curator of Geology.

## Central American Plants Arrive

Field Museum has received a large and important collection of plants gathered in Petén, Guatemala, and in British Honduras by Professor H. H. Bartlett of the University of Michigan. The collection was made in connection with cooperative exploration of the Maya ruins of the region undertaken by the university and the Carnegie Institution. The plants are being determined by Associate Curator Paul C. Standley, and because Petén is almost unknown botanically, it is expected that many new species will be found among them. Economically the region is of chief interest because it is the producing center of chicle, which is one of the principal ingredients in the manufacture of chewing gum.



Nichols, Henry W. 1932. "Chemical Tests on Fossils Reveal Organic Matter."  
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