

MUSEUM ACQUIRES COLLECTION OF 15,000 BEETLES

By RUPERT WENZEL
ASSISTANT CURATOR OF INSECTS

Because of the small size and retiring habits of most beetles, few people realize that they constitute nearly half the known insect species, nor are they aware of the tremendous number of beetles already known to science—between three and four hundred thousand species! This huge aggregate has been divided into nearly two hundred families, many of which are world-wide groups with thousands or tens of thousands of distinct forms. One of the smaller groups, and a very interesting one, is the family Histeridae, commonly known as the hister beetles or histerids.

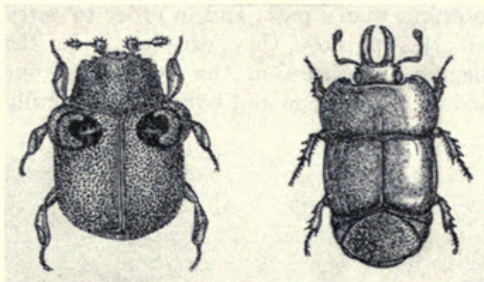
HISTERIDS ARE "INSECT-ACTORS"

The hister beetles are supposedly named after the Latin *histrion*, meaning an actor, because of their habit of assuming a death-like attitude when disturbed. They are distributed throughout the world, with the exception of the very cold regions, and are recognizable by their clubbed and elbowed antennae, their very compact form, and exceedingly hard body surface. On the whole, specific details concerning their biology are lacking, though it is known that most of the species are carnivorous and extremely voracious feeders. They are frequently found in decaying animal and vegetable matter and under bark, where they feed on the larvae of flies and other insects. Because of their role as predators, a few species have been used in biological control work in fighting destructive insects.

While more or less uniform in their feeding habits, the nearly four thousand known species have evolved in adaptation to a number of diverse habitat niches. Certain species are found only in the nests of ants (occasionally of termites), where they are believed to feed almost entirely on the immature stages of their hosts. The beetles are tolerated in the nests because they produce glandular secretions which exude from special structures on the body surface and are eagerly sought after by the ants. The histerids which live under bark are usually very much flattened, in order that they may move with ease in their restricted living quarters. Others are of a cylindrical shape and live in the round burrows of certain wood boring beetles, upon whose young they prey. A few hister beetles are known to occur only in the burrows of particular rodents (a kangaroo rat and a pocket gopher) and even in the burrows of the land-dwelling turtle of Florida. The exact role which these beetles play is not understood, but it is believed that they feed upon the larvae of other insects which are restricted to these burrows. Other distinctive habitats where histerids may be found include birds' nests, caves, fungi, soil, etc.

It is of great entomological interest that Field Museum recently acquired the most

extensive collection of hister beetles in the Americas, a collection which represents an accumulation by purchase and exchange over a period of twenty years by Mr. Charles A. Ballou, Jr., former New York publisher. Mr. Ballou had at one time intended to monograph large sections of the family but was forced to sacrifice his interest because of ill health and lack of time. While the collection is not a large one as compared with general insect collections, nevertheless the 15,000 specimens contained in it represent approximately half the known



HISTER BEETLES

Two of the remarkable types of adaptation found in insects of this group. The species on the left is a bizarre Australian form which lives in the nests of ants. On it may be seen the secreting structures which attract the ants and induce them to tolerate the beetle "guests." On the right, from Burma, is a flattened form which lives under bark. Similarly adapted beetles occur in the Chicago area.

species of hister beetles of the world, as well as many undescribed ones. It is particularly rich in its representation of North American, Indo-Australian, Asiatic, European, and African species. An excellent opportunity for systematic research on this family is thus afforded, and the collection will be still further enriched by field collecting and exchange.

It is perhaps interesting that such private collections tend to gravitate to the larger museums, and it is highly desirable that they should do so. Only in this way can they avoid being dispersed, destroyed, or even lost after the death of the collector. The first collection of this kind acquired by Field Museum was the Strecker collection of butterflies and moths, numbering fifty thousand specimens.

Making Gold "Grow"

An interesting superstition attaches to a group of tektites from the Philippine Islands recently presented to the Museum. These tektites are glassy nodules of mysterious origin believed by many to be meteorites. Dr. R. F. Barton, who presented them, writes, "They were being used by native gold panners of that place (Batobalani, Philippine Islands) to 'increase' their panning. They put the gold away in a dark place with the stone and believed the stone increased it. Down there they call them *binso n di ginto* or *asauwa n di ginto* (wife or companion of the gold)."

The specimens are shown with other tektites in the west end of Hall 34.

EXPEDITION TO MAKE STUDIES ON AGE OF PANAMA ISTHMUS

An expedition which has as one of its objectives the determination of the date at which the Isthmus of Panama emerged from the sea, is to be dispatched to Central America about November 1. The expedition will be led by Mr. Paul O. McGrew, Assistant Curator of Paleontology. He will be accompanied by Mr. Albert Potter, of Chadron, Nebraska, an experienced collector of fossils who has worked in various fields of South Dakota, Nebraska, Wyoming, and Arizona.

"At present the opinions of paleontologists are divided on the question regarding the emergence of the Isthmus of Panama," states Mr. McGrew. "We know that North and South America were separated during most of the Tertiary period (which began about 55,000,000 years ago). There is some indication that the two continents were reconnected, via Central America, near the beginning of Pliocene time (approximately 7,000,000 years ago), but also there is evidence that the land bridge was not present until the end of Pliocene time, some five or six million years later.

"A solution of this problem would help solve other related problems concerning the migration of mammals in the geologic past. It is believed that a study of mammals of Pliocene age from Honduras, rather near the ancient marine portal, would help materially in answering this question."

A second objective is the determination of the significance of homotaxis in the correlation of widely separated faunas. Homotaxis is explained by Mr. McGrew as follows: "There is a rather well founded theory that at least a large part of a geologic epoch was required for faunas to migrate from a center of dispersal, in the north, to the tropics. Thus, if two forms that had reached the same evolutionary level were found, one in Central America and one in the great plains of the United States, the beds in which the former occurs would be later in geologic time than the latter. This is an important hypothesis which may or may not be true. As yet few actual data are available to check it. Study of fossil mammals from Central America might afford enough evidence to clarify this point."

The expedition will sail from New Orleans to Puerto Cortez, whence the members will fly to the capital, Tegucigalpa, and thence to the town of Gracias. From Gracias the explorers will use mules for transportation while doing their field work.

The overland trade routes of ancient and medieval times, and the chief centers of origin of the world's principal food plants, are shown in two large maps included among the series of seventeen mural paintings in Hall 25 illustrating various phases of man's quest of vegetable food.



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