

MAN'S OLDEST "LIVING ANCESTOR"

By D. DWIGHT DAVIS

Assistant Curator of Anatomy and Osteology

A group of squirrel-like mammals living in Malaysia has long attracted the attention of students of man's ancestry. These animals, the treeshrews, are squirrel-like only in general appearance, for examination of their teeth shows that they really are insectivores, related to moles, shrews, and hedgehogs. When anatomists studied their structure carefully, it became apparent that they represent an ancient group of "living fossils" that has survived relatively unchanged down to the present. They seem to represent the root of the primate line, and in a limited sense they are the oldest living relatives of the human race.

Some types of treeshrews have advanced farther than others, however, and so have become less like the original great-grandfather (many generations removed) of the human race. For many years it was believed that the rare pen-tailed treeshrew had changed least, and so it had the distinction of being considered man's oldest living relative. Last year, on his trip around the world, however, Dr. Wilfred H. Osgood, Chief Curator of Zoology, collected specimens of another treeshrew in French Indo-China. This rare animal, the pigmy treeshrew (*Dendrogale*), had been known only from conventional museum study skins until Dr. Osgood brought back a skeleton and a complete specimen preserved in liquid.

Study of this material has now been completed, with the result that *Dendrogale* has usurped the pen-tailed treeshrew's position, held for so many years, as the oldest extant precursor of humanity, because *Dendrogale* was found to be even less specialized.

The results of this anatomical study are incorporated in a paper recently issued in the Museum's technical series. A skeleton of a treeshrew is exhibited in the case of insectivore skeletons in Hall 19.

PRESIDENT FIELD PROVIDES NEW STORAGE EQUIPMENT

In a large and growing museum the provision of space and equipment for storage is an ever present problem. The Divisions of Mammals, Birds, and Reptiles have been seeking a solution to their storage difficulties for some years. The situation was partly alleviated by making the two third-floor storage rooms used for mammals and birds into one, and by increasing the size of the cases. The west side of the fourth floor has been used for the storage of large mammal skulls for some years. An additional row of steel cases on this floor gave temporary relief for the storage of the rapidly growing reptile collection.

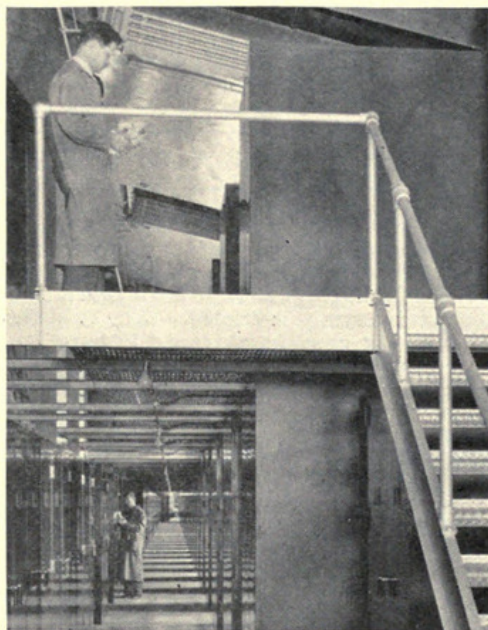
Through the generosity of President Stanley Field the problem has recently been very adequately solved by building a mezzanine on the west side of the fourth floor. The skull storage cases have been placed on this mezzanine, and two larger cases have been added at each end.

The space under the mezzanine has been equipped with 100 taller cases. These are to be used mainly for storage of mammals, birds and shells, and will allow expansion of the collections without crowding for at least ten normal years.

On the east wall of the west side of the fourth floor nineteen additional cases have been installed for the future growth of the reptile and amphibian collections, filling a long felt need in that Division. As soon as

the trays and runners for all these cases can be built, the collections will be moved and rearranged.

The length of this storage hall is 280 feet and the mezzanine is 13½ feet wide. The construction and the cases are all of steel and represent the best type of storage



Photograph by De Lacy, Chicago

Solution to Pressing Problem

A new mezzanine, lined with the most modern type of steel storage cases, has been erected on the fourth floor of the Museum. Part of this is shown in the accompanying photograph. The Department of Zoology estimates that this will meet its needs for storage facilities during at least the next ten years.

equipment to be found in any museum in the world. With the additions just installed the total number of storage cases on the fourth floor is now 249. —C.C.S.

A GEOLOGICAL MYSTERY

By HENRY W. NICHOLS

Chief Curator, Department of Geology

Among the greater geological mysteries of the world are tectites—nodules and fragments of natural glass scattered abundantly over certain limited areas of the earth's surface. It is not known where they came from or how they were made. They are found in Czechoslovakia, Indo-China, Australia and neighboring islands, the Dutch East Indies, the Philippines, the Ivory Coast of Africa, and the Libyan Desert.

Tectites are siliceous glasses much like the volcanic glass, obsidian. They have been melted and their shapes indicate that they were cooled while whirling in the air. Peculiar etched patterns which appear on the surfaces present another puzzling feature which geologists have been unable to interpret. Most tectites are black, like most volcanic glass, but those from Moravia in Czechoslovakia, and those from the Libyan Desert, are clear glass suitable for gems.

Many ingenious theories have been propounded to account for tectites, but there seem to be insuperable objections to all of them. Unable to account for their origin by any terrestrial process, many geologists have concluded that they are meteorites.

Objections to a meteoritic origin, however, are fully as grave as those adduced against a terrestrial source, and the nature and origin of the tectites remain a mystery. A collection of these curious little objects has been placed with the meteorite collection in Hall 34.

THE FRILLED SHARK

By ALFRED C. WEED

Curator of Fishes

Japanese fishermen bring to light many strange creatures when they set their long lines at depths of two thousand feet or more where the great oceanic current, flowing to the northeast, comes close to the shores of their islands. Sharks of many kinds, ghost-fishes, strange eels, and other odd fishes are caught on these lines.

One of the strangest of these creatures is that which the Japanese fishermen call by names that mean silk-shark, because of the unusual silky smoothness of the skin with its covering of shagreen, or lizard-shark because of the peculiar shape of the mouth with its rows of strange teeth. In English it is usually called frilled shark, referring to the peculiar collar about its throat, formed by the flap over the first gill-opening.

A specimen of this species of shark, about five feet long, was recently presented to the Museum by Professor H. W. Norris, of Grinnell College, Grinnell, Iowa. It is hoped that it may be used in preparing a reproduction for exhibition in the series of mounted fishes.

Although its structure shows it to be a shark, this fish looks more like a thick-bodied eel in its general form. It is quite as slender as some of the great morays that may be seen at the John G. Shedd Aquarium. Its mouth is at the end of the head, instead of underneath, as one expects to find it in a shark. The jaws are so long that the mouth opens the whole length of the head.

The teeth are in rows across the jaws. Each of them has three sharp points as slender as needles, and curved like the fangs of a serpent. Under the skin they are braced by long roots. The roots of each tooth extend back under the next one in the row so that it cannot be tipped over or pulled loose by the struggles of a captive. These rows of teeth and the peculiar shape of the jaws make the head of this shark look very much like that of a lizard-fish.

The frilled shark has very large fins, set far back, and an exceedingly flexible body. It can turn as easily as an eel to seize an active fish that may try to dodge. The sharp teeth prevent the victim's escape.

In most sharks the gill openings are simply slits with one free edge that acts as a valve to prevent water from moving in the wrong direction when the fish breathes. The frilled shark has these flaps strengthened by rods of cartilage. The first flap extends entirely around the "neck," except for a narrow space on the back. It is so wide that it covers the second one and seems to form a ruffle or frill just behind the head.

Most specimens of this shark have been caught near the southeast coast of Japan, but a few have been taken as far away as Madeira and the coast of Norway.

Mrs. Edith Almy Adams Honored

In recognition of her generous bequest, amounting to more than \$30,000 in value, the Board of Trustees of Field Museum has posthumously elected Mrs. Edith Almy Adams as a Contributor to the Museum (Contributors are those whose gifts to the Museum range between \$1,000 and \$100,000).

Practically the entire field of petroleum products is illustrated by a synoptic collection in Hall 36.



Nichols, Henry W. 1938. "A Geological Mystery." *Field Museum news* 9(7), 3–3.

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