

## SEARCH FOR FOSSIL FISH UNDERTAKEN IN EAST

By ROBERT H. DENISON  
CURATOR OF FOSSIL FISHES

IN THE SUMMER of 1951 while on a reconnaissance of the Silurian and Devonian rocks in the eastern states I visited, among other places, Erie County, New York. Lying as it does along Lake Erie south of Buffalo, this region has been visited from time to time by amateur and professional fossil-collectors from the nearby city. Over a period of years they have found a number of Devonian fishes in the different formations that are exposed in creeks and in cliffs along the lake shore. Most of the finds have been fragmentary, although, rarely a nearly complete fish has been obtained.

In my short visit in 1951 I concentrated on the black shales that make up a good part of the Late Devonian deposits, and I found them to be barren almost everywhere. Fortunately that year a large excavation had been made in the black shales for the foundations of a seminary, and in the rocks removed from the excavation I found three well-preserved fishes, two of them belonging to the arthroires, an extinct group of armored fishes in which I am particularly interested.

This find encouraged me to think that a more thorough investigation might be profitable, and so I returned last year accompanied by Bruce Erickson, Preparator, and for a short while by Dr. Rainer Zangerl, Curator of Fossil Reptiles, whose experience with black shales has been extensive, both in Europe and in this country. We hoped to find some layer or locality where fossil fishes occurred in sufficient abundance so that quarrying for them would be profitable. We did not expect to find anything as rich as the quarry at Mecca, Indiana, but if we could unearth one or two good specimens a week, that would be enough. In this hope we were disappointed, for we were unable to find even this small concentration.

Black shales are often excellent places to hunt for fossils because the foul waters in which they were formed may lead to excellent preservation. But the waters may be so foul that little or no life can exist in them, and this seems to be the situation in Erie County, New York. The commonest fossils in these black shales are pieces of plant stems and tree trunks that were drifted into the sea from land, perhaps a hundred miles away. In places there are invertebrates, such as cephalopods, that may have floated into this sea either before or after death. The occasional fishes are probably strays that blundered into this unfavorable habitat and died, or perhaps drifted in after death.

However, we did not leave this region empty-handed. Almost every day we returned to camp with a few specimens of fossil fish, perhaps with only an isolated jaw

## COLORFUL BIRD STABLE MAKES DEBUT AT MUSEUM

By AUSTIN L. RAND  
CHIEF CURATOR OF ZOOLOGY

A thirteen-foot wire sculpture bedecked with birds is the latest addition to the Museum's bird exhibits. The openness, the airiness, and the liveliness of the twisting and turning strands of metal as they swirl upward make the wire sculpture a particularly appropriate place for birds to perch and accentuate the beauty and grace of these creatures of the air. As the elephants in Stanley Field Hall have become a sort of symbol or trademark of the Museum, so it may be that this arrangement of gay birds will become a trademark of our bird halls.

The concept of this exhibit, which towers 16 feet in its entirety, is modern, as new as abstract design, free form, mobiles, and stabiles. But we expect the exhibit to last a long time, and, as with many enduring things, it has a familiar quality. It has a hint of a cage full of birds in an aviary or a zoo and of a tree loaded with brightly-colored fowl. Our artists strove for these effects, realizing that any overemphasis of decoration this way or that could have cluttered the clear basic design of the exhibit, making it as dated as the artificial flowers in a Victorian parlor.

The message of this exhibit is that birds are beautiful, gay creatures of air and light. In Hall 21 (Birds in Systematic Arrangement), which is otherwise devoted to the enlightenment and edification of the Museum visitor interested in birds, we present this exhibit for its beauty and its aesthetic appeal. One doesn't have to know the name of a single bird to appreciate it.

Beauty need not be labeled to be appreciated, but knowing the names of things and something about them adds to and deepens our interest in them. So we did

provide a label, a guide to the names of the birds and where they live. Many of the birds can be found in adjacent exhibits along with their relatives and a general account of the group to which they belong.

In their central position in Hall 21 these colorful birds can be seen from far off in the Museum. We hope that people seeing this bird stable will be attracted into the bird hall; that art students will sketch the twirling wires with their vivid birds; that visitors, attracted by the new exhibit, will stay to browse among the related exhibits and discover new things for themselves.

Just what bird merits the title of most beautiful in the world is debatable. Certainly we have many contenders here. There is a scarlet ibis, sometimes called a flame bird, at the bottom of the exhibit. At the top are two giant macaws, blue and red, and a long-tailed quetzal with emerald green back. Between are yellow birds, red birds, blue birds, green birds, and, for accents, here and there, dull-colored ones, like the black rifle bird and a tiny brown wren. In all there are 56 birds in the exhibit.

The exhibit was designed and executed by E. John Pffner, Staff Artist, and Carl W. Cotton, Taxidermist, along with the Division of Birds.



or plate, or perhaps on a lucky day with several plates of a spectacularly large arthrodire. During three weeks we had accumulated quite a varied collection of early fishes, which will make, I hope, an important addition to the fish fauna of this region.

When it became apparent that we were not going to find a place where we could quarry profitably, we moved our operations into the central part of Pennsylvania. Perry County, northwest of Harrisburg, the region where Silurian vertebrates were first found in North America, is one of the few places in the world where they occur in abundance. The problem here was not to find them but to obtain them in a good state of preservation. They occur in the Landisburg Sandstone, which forms low, rounded ridges in the valleys but which is soft enough so that it has few or no natural outcrops.

It is possible to go into a cornfield on

a Landisburg Sandstone ridge and pick up pieces of rock containing these early vertebrates, but they are always weathered so badly that they do not reveal the characters necessary for identification. To obtain better material we made two excavations, both in places where the preservation on the surface was better than usual. When this material is prepared we will have for the first time a collection permitting a satisfactory description and classification of these primitive vertebrates. This is of particular importance because Perry County is a classic locality, yet one from which the original material, first described in 1884, is lost.

Etruscan archaeological exhibits in Edward E. and Emma B. Ayer Hall (Hall 2) range from the 8th to the 2nd centuries B.C.





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