MISSIONARY-ORNITHOLOGIST'S AFRICA COLLECTION

Army officers and administrators, as well as explorers and scientists, have played a large part in the study of African birds. This is also true of the other branches of zoology covered by the Museum. But as one reads the history of bird study, the names of missionaries also appear with frequency. Some of these naturalist-missionaries gave life-history details, such as the accounts of the habits of the honey-guides and the seasonal moults of bishop-birds by Father Jerome Merolle da Sorrento. Notes on birds were made by that great African traveler, David Livingstone, and collections of specimens have been made by such people as Rev. Father R. Callewaert, Rev. Father Goossens, Rev. H. M. Whiteside, Father Moons, and Rev. J. A. Reis.

BUSY DAY IN THE BIRD DIVISION

Unpacking bird skins. The specimens come from the field wrapped in paper or cotton, or between layers of cotton, lying side by side, row on row, in packing cases. They are unpacked, sorted, and arranged in trays; then they are filed in receiving cases, seen in the background, until identified, catalogued, and incorporated in the collection. The workers are (left to right): Emmet R. Blake, Associate Curator of Birds; Mary Jane Allen, assistant; Melvin A. Traylor, Jr., Research Associate, Birds, and Dr. Austin L. Rand, Curator of Birds.

Another name that will always have an important place in the study of Cameroon birds is that of Rev. A. I. Good. Good has just returned to this country after some 30 years spent in West Africa at Cameroon as one of the principal members of the Presbyterian Mission there. In Africa he found time, between multitudes of other tasks, to conduct extensive field studies of birds and to make large bird collections. His bird work is so well known that the French government has commissioned him to prepare a volume on the birds of Cameroon.

Recently, when Good returned from Africa on his retirement, he brought with him a collection of about 800 birds, representing more than 260 species. This the Museum has been fortunate enough to acquire. We have some West African birds, but this new collection fills some of the many gaps and adds many species to our collections.

Cameroon is a strategic area in African bird study. It is on the east side of the Gulf of Guinea in the northwest corner of the great block of tropical rain forest that centers about the Congo River basin and is called the Lower Guinea forest. The one other, much smaller, block of rain forest is on the north coast of the Gulf of Guinea. In studying the avifauna of either, Cameroon birds are important.

The collection is well prepared and well labeled, and the wonderful assortment of species in it makes it a delight to handle. One of the noteworthy additions to our collection in this acquisition represents an endemic West African subfamily, the Picathartinae. There are only two species of these strange-looking birds, both about as large as a small crow, gray above and white below, with black, blue, and yellow heads and strong feet and bills. They used to be called bald-headed crows; but recently they've been shown to be related to starlings, and Bannerman has rechristened them, by way of a common name, bald-headed rock-fowl. They live in rocky forest country, hopping about on the ground and low shrubs, but they are so rare and local that few white men have seen them alive. So intriguing are they that in 1937 Dr. G. R. Walker made a special trip from England to Sierra Leone to study them and was successful in being able to watch a number of them.

When the collection was laid out in the Museum trays, the tray of bulbuls was particularly interesting. Bulbuls get their name from the Arabic through the Persian "in the poetry of which language it plays a great part," and there it is apparently synonymous with songster, as is nightingale in ours. While bulbuls may be noteworthy for their voice, there is little of distinction in their appearance. Small or medium-sized birds, they are mostly clothed in somber olives and grays and yellows.

To look at the tray of bulbul specimens from the Good collection the uninitiated might think there were possibly three or four rather variable species. But there are actually seventeen species in the tray. Several are almost identical in color; but small differences in proportions, bill size and shape, and foot and wing structure separate them sharply, so that biologically they are quite distinct species. Apparently the birds can recognize the differences between the species more easily than man can recognize them.

A NATURAL ISOLATIONIST

Guinea fowl are known to many people as the speckled fowl sometimes kept by farmers because their noisy cries are thought to keep away hawks. Other people know them as a game bird running in bands on the grassy African savannas. But this new collection contains a black guinea fowl, a bird restricted to the forests of the Cameroon area and so rare and shy that little is known about it except that unlike other guinea fowl it is usually solitary or in twos or threes.

A most remarkable bird in the collection is the finfoot. In appearance it is rather grebe-like, but its head is more like that of a rail, its tail long and stiff like that of an anhinga, and its feet lobed like those of a coot. Though really related to the rails, it swims well, sometimes with only its head out of the water; it flies readily; on land it runs like a rail and climbs into bushes. It belongs to an old, circum-tropical group, with relatives in the American tropics and in southern Asia.

Tailor birds are usually thought of as the Asiatic warblers that sew together leaves for nests. Less generally known is the fact that many African species do the same. The collection contains a grayish African tailor bird. It sews the edges of leaves together with cobwebs and puts a few strands of fiber in the bottom of the chamber thus formed for the nest. So light is the nest that it hardly depresses the leaf in which it is placed.

IMPRISON THEIR FEMALES

There are few birds in the collection that would look familiar to an American bird student. There are hornbills, notable for their huge bills and their habit of sealing the female into the nesting hole during the incubation and brooding period; emerald cuckoos, which some people consider the most beautiful of African birds; plantain-eaters; mouse-birds; rollers; barbets; broadbills; various relatives of cuckoos; and woodpeckers not unlike those of North America.

Among the song birds the paradise flycatchers are striking, with the long streamers in their tails; the many sunbirds with their iridescent plumage, their long bills, and their habits of feeding at flowers recall the quite different hummingbirds; the array of weaver birds, some beautifully colored in yellows,

reds, blues, and blacks, is bewildering. It is this group of birds, with thick bills, the seed eaters of Africa, that replaces the sparrows of America. There are only two species of sparrows in the collection as compared with forty-seven found around Chicago.

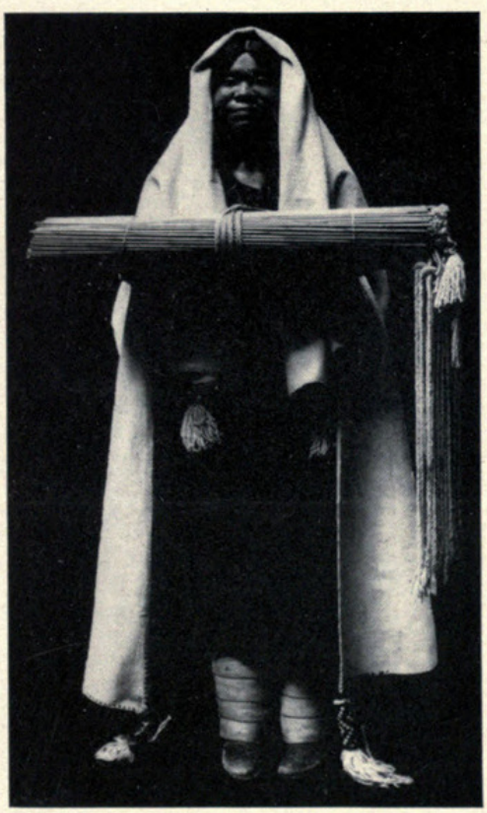
This representative collection, coming as it does from a comparatively well-known area in West Africa, will serve as an essential basis of comparison for the study of other African material in our collection.

AUSTIN L. RAND
Curator of Birds

FIFTY YEARS AGO AT THE MUSEUM

Compiled by MARGARET J. BAUER

Among the acquisitions of more than ordinary interest received by the Field Columbian Museum during 1899 were 1,600 specimens of pottery, stones, ceremonial objects, clothing, etc., illustrating the past and present of the Hopi Indians. This



HOPI BRIDE

Part of the Stanley McCormick Hopi Indian Collection. The model was cast from life and sculptured by F. B. Melville. It is now exhibited in Hall 7.

generous gift of Mr. Stanley McCormick added to the growing collection of Hopi Indian material collected by Mr. George A. Dorsey, Curator of Anthropology, and purchases from Rev. H. R. Voth. Many of these ceremonial objects and fetishes are now unobtainable. A large portion of the McCormick collection was immediately installed.

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The American Indian material acquired by the active field program of the Museum in its early years is in general quite irreplaceable. This, of course, is the case with the material culture of all native peoples who have come into contact with civilization in recent decades.

SUMMER LECTURE TOURS GIVEN TWICE A DAY

During July and August, conducted tours of the exhibits, under the guidance of staff lecturers, will be given on a special schedule, as follows:

Mondays: 11 A.M., Story of Plants—Basis of All Life (general survey of the plant exhibits); 2 P.M., General Tour (exhibition halls, all departments).

Tuesdays: 11 A.M., Places and Peoples (general survey of the anthropology exhibits); 2 P.M., General Tour.

Wednesdays: 11 A.M., Records from the Rocks (general survey of the geology exhibits); 2 P.M., General Tour.

Thursdays: 11 A.M. and 2 P.M., General Tours.

Fridays: 11 A.M., The World of Animals (general survey of the animal exhibits); 2 P.M., General Tour.

There are no tours given on Saturdays and Sundays, or on Monday, July 4.

Plastic Techniques Illustrated

A special exhibit on "Plastics and Other Media in Museum Exhibits," prepared by Mr. Emil Sella, Curator of Exhibits in the Department of Botany, is now on view in Stanley Field Hall. The material was used in May in a demonstration for the annual meeting of the American Association of Museums.

Technical Publications Issued

The following technical publications were issued by Chicago Natural History Museum during the last month:

Fieldiana: Geology, Vol. 10, No. 7. *A New Silurian Trilobite, Dalmanites Oklahomae.* By Eugene S. Richardson, Jr. June 6, 1949. 3 pages, 2 text figures.

Fieldiana: Zoology, Vol. 31, No. 29. *Notes on Growth and Reproduction of the Slimy Salamander, Plethodon Glutinosus.* By Clifford H. Pope and Sarah H. Pope. June 6, 1941. 12 pages, 6 text figures.

BOTANY RESEARCH WIDENED BY SOUTHWEST EXPEDITION

By HUGH C. CUTLER
CURATOR OF ECONOMIC BOTANY

No question is more familiar to the staff of the Department of Botany than "What is the name of this plant?" The botanists of the Museum spend the greater part of their time in studying and naming the thousands of plant collections brought back by expeditions of the Museum and of other institutions. As a result, our study collections and publications on the floras of the Latin-American countries are outstanding.

By comparison, the research of the Museum's Southwestern Botanical Expedition of 1949, sponsored by Mr. Joseph Desloge, of St. Louis, was planned to secure information and materials on how certain species of plants differ from each other and how these different plants might have originated. These studies were conducted principally on the joint-firs or Mormon tea plants of the Ephedra family. Chinese species of Ephedra were for many years the only source of ephedrine, a drug used in treating nasal and sinus infections until a few years ago when synthetic ephedrine and later benzedrine were manufactured for the same purpose.

The Ephedras are of especial interest to botanists because they occupy a position midway between the Gymnosperms or cone-bearing plants and the Angiosperms or plants with enclosed seeds. The wood of Ephedra, too, is intermediate between the softwoods and the hardwoods. One of them, *Ephedra trifurca*, is shown in Case 821 of Martin A. and Carrie Ryerson Hall (Plant Life—Hall 29) in connection with models of related plants.

CHROMOSOME STUDY

In addition to the botanical interest in Ephedra as a possible connecting link in the plant kingdom, there was a practical reason for choosing to study this group:

Within the cell, which is the basic unit of a plant, are the chromosomes, linear structures that can be deeply colored by some common biological stains like carmine. The number of chromosomes in a cell is usually constant throughout a plant. By studying the changes and actions of the chromosomes at certain stages of development we can tell much about the past history and evolution of the plant. As many chromosomes are small and difficult to see even under powerful magnification, the most intensive research has been done on plants and animals that have a low number of large and easily observable chromosomes. It is partly for this reason that we know more about the mechanics of inheritance in the fruit fly (with four pairs of chromosomes) and in corn (with ten pairs of chromosomes) than we do in man (with twenty-four pairs of chromosomes).

(*Continued on page 8, column 1*)