The Bird Page . . .

SOCIAL PARASITES AMONG BIRDS

By AUSTIN L. RAND
CURATOR OF BIRDS

THE MOTHER who would leave her infant on a stranger's doorstep to be brought up an orphan, never to know its own parents, is a despicable character in human society. But when we leave man-made society we must leave man-made rules of behavior and man-made prejudices behind. Morals are human. The rest of the animal world is not immoral; it is amoral. It cannot afford criteria beyond survival and reproduction. So when we call certain birds "social parasites," we attach no stigma to them. They represent several groups: the cowbirds; the weavers; the cuckoos; the honey guides; and the ducks.

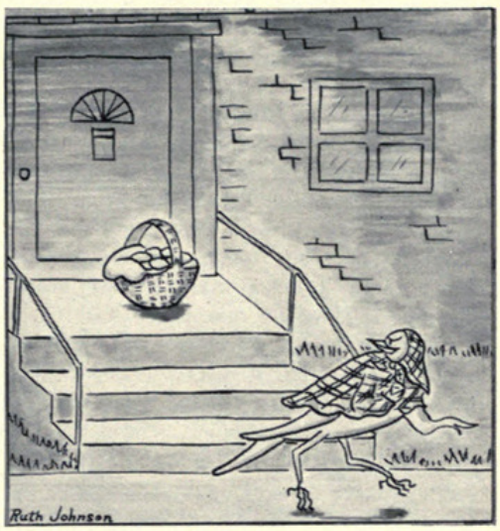
Carelessness in egg-laying is common even in birds that ordinarily lay their eggs in their own nests and care for them themselves. This accounts for the robins' eggs that you may find on your lawn (which of course are wasted, addling and rotting). Perhaps the fate of the eggs of pheasants and ruffed grouse that are found in the same nest is happier. Ducks usually make their own nests, but many species occasionally lay eggs in the nest of another species, and one South American duck no longer makes any nest of its own but is a social parasite not only on other kinds of ducks but also on coots and some other birds.

The small, well-marked family of honey-guides, of Africa, notable in other ways, is also remarkable for social parasitism. The favorite host species, chosen to look after the eggs and young, are the close relatives of the honey-guides, the barbets (which themselves are most closely related to our woodpeckers). The nesting of certain African weaver-birds was long a puzzle to ornithologists until it was found they, too, were social parasites on other weaver-birds.

VARIED NESTING HABITS

The cowbirds, numbering several species in North and South America, belong to a family notable for variation in nesting habits. Their nests vary from the elaborate purse-shaped structures of the oropendola and orioles to the meadowlark's dome-shaped nest on the ground and the simple cup of the bobolink and red-wing—while the cowbird makes none. The cowbirds' eggs are laid in the nests of a wide variety of other species and left for the foster parents to care for. Here those who discuss the relative importance of heredity versus environment can profit by considering these social parasites. The young cowbird, hatched and brought up by, say, a yellow warbler remains a cowbird. As soon as it no longer needs its foster parents' care it flocks with other cowbirds, with all their mannerisms and characteristics, and next season it mates with another cowbird. There is nothing left of its early environment.

The cuckoos of the United States and some of those of the Old World make their own nests in normal avian fashion. But a number of Old World species are social parasites, and their behavior has long been a subject of study and discussion. Specializations indicate that here perhaps we have the highest stages of social parasitism. Whereas the cowbird may grow up with nestmates that are the young of the foster parent, unless by chance it crowds them out or starves them if it is larger, the young



cuckoo gets the rightful occupants of the nest on its back and throws them out of the nest to perish.

EGGS LOOK ALIKE

Another refinement in social parasitism by the European cuckoo is that apparently certain individuals, and apparently certain strains, lay their eggs only in the nests of certain host species. And these cuckoos' eggs resemble the eggs of the particular species in which the cuckoos' eggs are laid. For example, if certain cuckoos lay their eggs only in the nests of meadow pipits these cuckoos' eggs would resemble those of meadow pipits, while another group of cuckoos specializing in hedge-sparrows would have eggs resembling those of hedge-sparrows.

Another Oriental cuckoo has a color adaptation in the young. In southern Asia these cuckoos parasitize crows, and the nestling cuckoos have black feathers like the young crows. In the Australian area, where the same species of cuckoo occurs, it parasitizes grayish-brown honey eaters and the young are brown, more like the rightful nestlings. Both these resemblances apparently reduce the chances of the cuckoos' offspring being rejected by the foster parents.

Your vacation photographs may be suitable for the coming Nature Photo Contest.

A 'MYSTERY' PEACOCK FROM THE CONGO

A specimen of the rare African or Congo peacock has been received by the Museum as a gift from the New York Zoological Society. Although we sympathize with the New York Zoo in the loss by death of one of its prize birds, we cannot help but be delighted to have this specimen in our study collections.

Its interest lies partly in the recency of the discovery of such a large and showy "new" game bird. The African peacock is the only true pheasant in Africa and is perhaps most nearly related to the Oriental peacocks, as its name implies. The account of its discovery and description reads like a detective story. Of course, there is the added satisfaction of filling a gap in the already fine collection of game birds in the Museum.

The African peacock is a large and beautiful bird of the pheasant tribe. Somewhat smaller than the Oriental peacock, it lacks the long train of that bird but is handsome in its own right. It is blackish, glossed with green on the back and with purple on the lower neck and chest. The sides of the neck are red, and a stiff upright tuft springs from the top of the head.

CLUE IN NATIVE'S HAT

The real-life detective story surrounding the bird's first discovery began when Dr. J. P. Chapin of the American Museum of Natural History was in the Congo in 1913 and found in a native's hat a wing feather of a bird he could not identify. He labeled the feather and saved it. One never knows when such a datum will serve a purpose.

For twenty-four years the feather lay unidentified in New York's museum. Then in 1936 Dr. Chapin was in Europe, continuing his study of African birds in the Congo Museum near Brussels. In passing through a corridor there he saw two mounted pheasants the like of which he had never seen. They were new to science but lacked any indication of origin. Remembering the unidentified feather he had collected in 1913, he compared the feathers. They were the same. This established that they came from the Belgian Congo, and Chapin described the bird as a new genus and species, *Afropavo congensis*.

On a flying trip to Africa, with the clue of the 1913 feather indicating the forest of the Congo as locality, Chapin was able to get specimens and to show that the bird was fairly numerous in one of the little-frequented areas of the Upper Congo forests. Chapin's account of the discovery appeared in 1937 in *Natural History*, magazine of the American Museum.

When Charles Cordier, well-known live-bird collector, was in the Congo for the New York Zoological Society, early in 1949 he collected the male bird that has just come

to us. Along with several others of its kind, it went to the Bronx Zoo in New York. On its death, Lee S. Crandall of that institution recalled the desire of Robert Bean, director of Chicago Zoological Park, that one or more of these rare birds might eventually come to Chicago, and forwarded the bird to this Museum. The American Museum already had specimens of its own.

And yet, wonders do not cease—only by good fortune was it received here in good condition. I was away from the Museum at the time and on my return found ten papers, memos, letters, and telegrams on my desk concerning it. The bird in the flesh, packed in dry ice, had been sent to Chicago by mail, returned by postal authorities to New York for some unknown reason, and then reconsigned to Chicago. Letters and telegrams had passed back and forth. The bird was finally received at the Museum after several days. Fortunately, the long stay in the mails had not advanced decomposition too far. The bird, a male, made a splendid specimen. As soon as it was dry it took its place in our trays of study skins, available to any serious student of African birds or of game birds.

—A.L.R.

FLOOD-CONTROL PROBLEM IN ANCIENT BABYLONIA

As the national conventions of both the Republican and Democratic parties are about to assemble in Chicago this month, it is interesting to find that some political issues persist not only from campaign to campaign but had parallels in history for thousands of years back. Certain to be argued pro and con in the 1952 contest for the presidency and domination of Congress is the subject of flood control.

Flood control was an issue as far back as 2500 B.C. in ancient Babylonia. Efforts to solve the problem seem to have resulted in some successes and some failures. Among exhibits from the Babylonian city of Kish in Hall K (Peoples of Ancient Babylonia) is a flood-stratum deposit of a type found in dwellings of the Early Dynastic period (3000–2500 B.C.). It was found 36 feet below the surface of a mound excavated some years ago by the joint Mesopotamian Expedition of Chicago Natural History Museum (then Field Museum of Natural History) and Oxford University. The slab on exhibition was 10 feet above the present water table. On the surface of this clay deposit there still may be seen the remains of fresh-water fish left behind when the water receded.

The following information, furnished by Richard A. Martin, Near East archaeologist who participated in the surveys and excavations of the Kish area, accompanies the exhibits on this subject in Hall K (Mr. Martin is now Curator of the N. W. Harris Public School Extension Department):

"In Babylonia high water came in the spring during the growing season when flooding the fields would be disastrous. This led to the development of perennial irrigation with a complicated network of canals both to supply arable land with water when needed and to divert the high-water season runoff into nonproductive areas. The canals served also as waterways for the transport of goods. The canals were state operated and taxes were imposed for their maintenance.

"Remains of some of the main canals that supplied the Kish area have been found. Today, in the same area, modern irrigation canals follow the courses of the ancient ones. That many of the canals closely paralleled each other is due to their constant silting. When piles on either bank become too high conveniently to shovel out the silt, it is easier to dig a new canal alongside utilizing one bank of the old.

"To control the floods of the Euphrates and Tigris and still supply the irrigation canals with water, barrages were constructed in the river channel or at advantageous spots, and sections were opened and closed by earth locks and dams.

"During times of political upheaval these control points were left unattended, the natural silting of the river blocked the restricted openings, and a new channel would be cut by the river. . . . Any unusually heavy precipitation at the headwaters of the Euphrates would readily account for the overflowing of the banks of the lower river and adjoining canals."

FIFTY YEARS AGO AT THE MUSEUM

Compiled by MARGARET J. BAUER

From the *Annual Report of the Director* for the year 1902:

"The chief additions to the Department of Ornithology were obtained by Mr. [George F.] Breninger in the field [in Mexico], consisting of 1,500 bird skins, many of which were new to the collections, and 163 eggs. Some minor gaps in the exhibition series were filled by purchase in the local market from time to time. . . . The condition of the specimens obtained by Mr. [Edmund] Heller in the field justifies the great importance which should be attached to this method of obtaining additions to the Zoological collections. This collector's itinerary ranged from Oregon to California and from California to Mexico, and the conscientious manner in which he covered this territory is a matter on which the Museum should be congratulated . . . Mr. [William J.] Gerhard, Assistant Curator of the Division of Entomology, added over 2,500 specimens of insects to the collections."

LOOP STORE TO DISPLAY PRIZE-WINNING GEMS

The prize-winning entries in the Second Annual Amateur Handcrafted Gem and Jewelry Competitive Exhibition, which attracted large numbers of visitors to the Museum in June, are going to the Loop for a second display in July. They will be shown for three weeks beginning July 7 in the jewelry department of Marshall Field and Company.

PRIZE GEM CREATIONS

Mary Oddo, Patricia Stevens model, wears earrings and pin made by Knuth Larson, first-prize winner in the advanced jewelry division of the Chicago Lapidary Club's contest and exhibit. Jewelry in display trays was created by Athalie Young, novice division first-prize winner. Exhibited at the Museum during June, the lapidarists' work moves to Marshall Field and Company to be shown there July 7-31.

The show is sponsored by the Chicago Lapidary Club and includes several hundred pieces fashioned by amateur gem cutters and jewelry makers of Chicago and suburbs. There is a wide variety in the objects submitted by these "rock hounds," as the participants in this craft call themselves. The objects range from polished slabs of gem materials and single cabochon-cut gems to collections of several hundred specimens. Included are many elaborately fabricated jewelry pieces and jewelry sets, and there are even sculptured cups and saucers, bookends, and other household articles carved from blocks of jade and other materials.

A third special exhibit is planned for the early summer of 1953, with the principal showing again in Stanley Field Hall of the Museum. Many of the rock hounds will be working most of the intervening year upon pieces to be entered in that contest. A cordial invitation to submit gem and jewelry creations is extended by the Chicago Lapidary Club to residents of the Chicago area who are interested in this avocation and who have not heretofore participated in these events. They may also join the organized groups now active in this art throughout the year.