

RECENT LITERATURE

The Cowbirds: A Study in the Biology of Social Parasitism. By Herbert Friedmann. Published by Chas. C. Thomas, Springfield, Illinois.

This excellent monograph is the result of five years' research. Three breeding seasons were spent in New York State, one in Argentina, and another on the border between Texas and Mexico. All but two of the seven species of true Cowbirds of the genera *Agelaioides*, *Molothrus*, and *Tangavivus* were studied in the field. The literature was thoroughly explored, and museum specimens were critically examined. The life-histories of the different species are exhaustively treated under numerous special headings, and the volume summarizes the latest and most complete information available.

As the result of his investigations Dr. Friedmann advances some very interesting theories regarding "The Evolution of the Present Cowbirds" and "The Origin and Evolution of the Parasitic Habit." His theory that "the loss of the protecting instinct of the male" was the cause of the development of the parasitic habit, is based partly upon the "territorial relations" of the various species, and he describes the different stages, from the Bay-winged Cowbird of South America, which he considers the most primitive type and which, while non-parasitic, usually lays its eggs in abandoned nests of other species or in nests taken by force from their rightful owners, to the North American Cowbird, which is entirely parasitic, and which marks the greatest divergence geographically and genealogically from the parent stock.

Dr. Friedmann concludes his interesting contribution with the statement that "there is still much to be learned about the Cowbirds" and that the explanation which he offers "is by no means the last word to be said upon the subject." We suggest that bird-banders make an especial effort to gather additional data on the sexual relations, the territorial habits, and other details of the life-histories of our native Cowbird species and races. Very little has been published regarding banded Cowbirds, although the second issue of the *Bulletin of the Northeastern Bird-Banding Association* (Vol. I. pp. 22-24, 1925) contained a suggestive article by Laurence B. Fletcher on "A Cowbird's Maternal Instinct" which is not mentioned in the bibliography of the volume here reviewed.—J. B. M.

The Condor. Volume XXXI, 1929. During the past year the official organ of the Cooper Ornithological Club has contained several articles contributed by bird-banders and recording observations on banded birds. In the May-June issue Mr. E. L. Sumner, Jr. reported "Comparative Studies in the Growth of Young Raptors." The species considered were Cooper's, Western Red-tailed, and Desert Sparrow Hawks, Golden Eagles, Barn, Long-eared, Southern California Screech, and Pacific Horned Owls. Weighing commenced in many instances with the egg and was continued at regular intervals until the banded young left the nest. Detailed tables are printed, with graphs which exhibit the fluctuations in weight, and in some cases records of feather-growth are also given. Where it was possible to make a complete record of the weights the graphs show "a marked loss toward the end of the nest life. After the first abrupt rise there is a gradual flattening of the curve and then a period of fluctuation and decline, usually without any marked increase thereafter."

Joseph Mailliard contributes two articles of interest, "Gleanings from Recent Bird Banding" in the September-October issue, and "Reaction toward Capture among Certain Sparrows" in the November-December number. In the first article he reports that, of 189 Nuttall's Sparrows banded, with 270 recaptures, only nine were retaken at another station than

that where they were originally banded, though the several stations were separated only by 90 to 150 yards. "The constant return of the great majority of the Nuttall Sparrows to the spot in which they were banded, some individuals doing so over twenty times, seems to prove beyond doubt that each flock or association of individuals occupies an area from which it seldom strays, and that the range of each flock is only in certain directions from its roosting place." In his second article Mr. Mailliard states "there is a noticeable variation in the reactions of different genera toward the realization of confinement in a trap, and also a great difference noticeable between individuals of any one species." There was a marked difference in behavior between the Marin Song Sparrow, a *Melospiza*, and the Golden-crowned and Nuttall's Sparrows, both of the genus *Zonotrichia*. The latter "run more or less around the trap, trying to find some opening through which to escape, but they do this in a heedless, haphazard manner, blindly as it were," and they almost invariably overlooked the small funnel-shaped entrance of the trap. The Song Sparrows, on the other hand, "travel around much more rapidly inside the trap, but ever with a keen eye for an opening and with a brain ready to take instant advantage of any possibility that may attract the eye. . . . The sharp eyes and active brain of at least some members of the genus *Melospiza* are extremely apt to find that small opening and the birds to dart through it to liberty."

In the September-October issue Mr. J. Eugene Law discusses "The Spring Molt in *Zonotrichia*" at some length. Anyone who has attempted to study molts from a series of "museum skins" realizes that only part of the story can be learned in that way. Mr. Law has supplemented his study of dried skins and of freshly collected specimens with detailed records of trapped and banded birds. From this material he draws some rather interesting deductions and throws light upon a subject which has been rather neglected by many ornithologists. Both Dwight and Chapman state that there is a first prenuptial molt restricted mainly to the head, neck, and anterior parts of the body and that in older birds this molt is even more restricted. Mr. Law found that his Western *Zonotrichia* at their first prenuptial molt passed through "a rather complete molt of the body or contour feathers, and . . . most, perhaps all, of the coverts of the wing, above and below, which are proximal to the carpal joint, and probably all the coverts of the tail, above and below. It also involves the three tertiary remiges of the wings and, as well, the deck or middle pair of tail feathers." Apparently the dorsal saddle and rump have no spring molt. Mr. Law believes that older birds have a similarly complete spring molt. He brings out the suggestive fact that when a bird's wings are folded, as they are much of the time when it is not flying, all the areas which are not renewed in the spring molt are covered and that "it appears, therefore, that only the tracts of the body directly exposed to abrasion and sunlight are renewed in the spring molt. One can but marvel at this subtle adjustment." He concludes: "in the genus *Zonotrichia* we find a whole group of species whose pattern of plumage, about the head at least, has undergone widely divergent modifications. And yet, this whole group is still perfectly tied together by a similar and somewhat unique habit of spring molt. Is there any other one character among the species of this genus which provides better evidence of genetic relationships than does this rare character of spring molt?"

Mr. John McB. Robertson contributes "Some Results of Bird Banding in 1928" to the November-December issue, with five maps, the first of which shows the locations of some seventy-four banding stations in the western United States and Canada. The reports from sixty-six banders totalled 23,091 birds, of 164 species or subspecies, banded by members of the Western Bird Banding Association during 1928. Two of the maps are of returns of gulls banded by Mr. Frank L. Farley at Camrose, Alberta, in

1927 and 1928 respectively. It is interesting to note that no banded birds were observed about the breeding place a year after banding, strengthening our theory that gulls and terns do not breed until they are more than one year old. Another map shows returns of Mallards banded in Alberta in 1928, ten birds having been recovered, which indicated a decided southeastern migration route, in marked contrast to an earlier map of returns of banded Mallards from Moiese, Montana, in 1927, which showed a very marked southwestern dispersal. The fifth map gives recoveries of hawks and owls banded in southern California by E. L. Sumner, Jr. Five Barn Owls, recovered from two and one-half to nine months after banding, were taken within twenty miles of their birthplaces; a Long-eared Owl had traveled fifty miles in eight months; a Western Red-tailed Hawk, banded May 4, 1928, was taken on July 5, 1928, about 250 miles northwest of the place of banding.—J. B. M.

Manual for Bird Banders. By Frederick C. Lincoln and S. Prentiss Paldwin. United States Department of Agriculture, Miscellaneous Publication No. 58. Washington, November, 1929.

This much-desired instruction book will meet a long-felt want among bird-banders and it is filled with a wealth of valuable material. After a brief historical review of banding in America, the subject is treated under the various headings of traps for small-bird stations, nest traps, special traps and methods, traps for waterfowl, other trapping equipment, bait, operation of traps, handling captured birds, bands, records, problems that trapping-station operators may solve, literature, and ornithological organizations. There are many excellent illustrations of traps, etc., though we are sorry to see that Figure 63 advocates the "head-hold" in changing a bird's position while banding. Although many birds remain quiescent when so handled, woodpeckers and some other species struggle violently, in our experience.

Under the heading of "problems" many suggestions are made as to studies of migration, territorial habits, dispersal of young, ecological preferences, family groups, "permanent residents" of a locality, mating activities, plumage changes, weights and measurements, temperature studies, diseases and parasites, length of life, and individual peculiarities or personalities. Other phases of bird-study by banding and related methods will undoubtedly develop as the work progresses, but every bander should read carefully this excellent little manual.—J. B. M.