

REVIEWS

EDITED BY KENNETH C. PARKES

Host relations of the parasitic cowbirds.—Herbert Friedmann. 1963. *U. S. Natl. Mus., Bull.* 233. ix + 276 pp., 9¼ × 6⅛ in., paper. \$1.25.—After publishing his classic study *The cowbirds* in 1929, Friedmann continued to accumulate information about this group of icterids. He reported some of it in supplemental notes that appeared from time to time down to 1949. Now he has pulled together all of it and much additional published material to prepare a comprehensive report.

Like its forerunners, it is a scholarly work—careful, thorough, well-documented, and fully indexed. The 19-page bibliography should prove to be invaluable to every student of brood parasitism. Since Friedmann's list of hosts of the Brown-headed Cowbird alone includes 206 species, mostly small songbirds, there is scarcely a student of birds in North America who will not find something of interest in it.

The greater part of the work consists of a discussion of each of the species reported to have received in its nests the eggs of the Brown-headed Cowbird, *Molothrus ater*, or Bronzed Cowbird, *Tangavius aeneus*, the North American members of the family. Briefer treatment is accorded the less well known Shiny Cowbird, *Molothrus bonariensis*, and Screaming Cowbird, *Molothrus rufo-axillaris*, of South America and the Giant Cowbird, *Psomocolax oryzivorus*, of Central and South America.

It is much more, however, than an annotated list of host species. It contains also a general discussion of several aspects of the parasitic relationship—frequency of host selection, intensity of parasitism of frequent hosts, breeding success of host and parasite, and other topics. As might be expected, nearly three-fourths of the text is devoted to the Brown-headed Cowbird and its hosts in the United States and Canada, where the greatest amount of field work has been done.

I know of no recent book more likely to stimulate ideas for research in the minds of amateur field students. It is impossible to read through it without seeing, at almost every turn of the page, questions awaiting investigation, some of which might be illuminated in the course of the study of other common species. One could argue convincingly that the Brown-headed Cowbird is the most inviting bird for study in North America. Although it is common in nearly all the populous parts of the continent and has captured the imaginations of ornithologists for more than a century, some of the most elementary facts of its behavior and ecology are still obscure. The number of eggs laid in a season by a cowbird is still uncertain. The effect of the cowbird on the reproductive success of its host has been examined critically for only a handful of host species. Whether individual Brown-headed Cowbirds specialize, except fortuitously, on certain host species is unknown.

Why should the frequency of parasitism of one host vary astonishingly from one locality to another although the cowbird is common in both? In the American Redstart, for example, Friedmann reports an exceedingly wide variation in parasitism, 2 per cent to 70 per cent, in different localities. The inquiring mind will ask if the critical factor here could be the distance of the nest into the depths of a woodland, with the nests near the edge suffering more heavily.

An extreme case of variation is the Red-winged Blackbird, which seems rarely to be molested east of the Mississippi River (parasitized nests often numbering less than one per cent of Red-winged Blackbird nests) but becomes one of the principal hosts in the Great Plains (according to one report "probably 90 per cent"). Friedmann suggests that the eastern Red-winged Blackbirds often nest colonially in cat-tail marshes where they protect each other's nests by "combined aggressiveness and

vigilance"; whereas farther west they do not enjoy this colonial advantage because the "nests are more scattered and in bushes." This suggestion invites further field work, both in parts of the Great Plains where Red-winged Blackbird colonies occur and in the farming country of the Midwest where the bird is often dispersed along roadsides.

For many species of hosts the data are surprisingly scanty, and even small additions to knowledge would be worthy of publication. For example, the Catbird's relation to the cowbird offers a challenging opportunity for study in many a person's backyard. The Catbird is reported to be an infrequent host, and certainly it is so if we use cowbird eggs found or cowbird young fledged as a criterion. But we also know that the Catbird ordinarily throws out a foreign egg promptly. So a human visitor is not likely to find the intruding egg unless he happens along at just the right moment, probably in the first few minutes of daylight, since the cowbird usually lays during the semi-darkness of early dawn and its new egg may be ejected at the time of the Catbird's first visit of the morning. Surely, many such instances escape notice, and, since the cowbird is not implicated, the disappearance of Catbird eggs might not be attributed to the cowbird, and sets of one, two, and three eggs may sometimes pass erroneously as complete clutches. Here the watcher in close attendance at the nest may discover significant facts missed by people visiting the nest only at intervals.

Some of the reported hosts (not successful in rearing cowbirds!) verge on the fantastic, and perhaps illustrate the willingness of the cowbird to drop its egg occasionally into anything resembling a nest; for example, Blue-winged Teal, Ferruginous Hawk, California Gull, Ruby-throated Hummingbird, etc. Even in the instances where skepticism is aroused, I think Friedmann was wise to include them, with an account of the circumstances, as he has done. Strange things do happen.

The text is almost free of typographical errors, but Friedmann has drawn to the attention of the editors of this journal one printing mistake affecting the sense of the account. On page 85 the first line for the Yellow-throated Vireo was accidentally used also for the Gray Vireo, for which the first line should read: "This vireo has been recorded only once in print as a host of the . . ."

Every ornithological library should have this valuable reference. Friedmann's work is a credit to ornithological science not only for its impressive assembly of data but also for the exceptional breadth of scholarship it reflects.—HAROLD MAYFIELD.

Birds of Tikal, Guatemala.—Frank B. Smithe and Raymond A. Paynter, Jr. 1963. *Bull. Mus. Comp. Zool., Harvard Univ.*, 128 (5): 245–324, 1 col. pl. \$1.50.—This is an annotated list of the birds of Tikal, the largest of the ancient Maya centers, in the northern Petén. The study was limited to an area of approximately 100 square kilometers within a National Park, so designated by the government of Guatemala, with a total area of 576 square kilometers. Most of the field work was done by or under the direction of the senior author during a period of some six months spread over four trips between March, 1956, and August, 1959. The junior author visited the area for one month in the spring of 1957, and for five days in late March, 1960. Few observations were made in the autumn and early winter.

The nomenclature of the 231 species listed reveals the authors' preference for a broad species concept. The paper is essentially a report on the specimens collected, and the annotations consist largely of remarks on condition of the gonads and give the weights of most of the specimens. Average-weight comparisons are made at times with geographically adjacent conspecific populations. Observations on habitat and abundance are generally sketchy or sometimes omitted, while those on habits are very

broadly categorized or, for the most part, not mentioned. I have been given to understand, however, that the senior author is preparing a more comprehensive work dealing with the same area.

As to be expected, the report includes a number of new records for the Petén. A sight record of a male *Progne subis* by the junior author does not eliminate the possibility that the bird seen may have been a similarly-plumaged form, such as *cryptoleuca*, previously recorded from Guatemala, or even the South American *modesta*, recently reported from Key West. A better acquaintance with the voices of the birds would no doubt have increased the frequency of a number of species and altered the relative status, say, of *Megarhynchus pitangua* and *Pitangus sulphuratus*. *Contopus cinereus*, as another example, could not be differentiated from *C. virens* during the period of migration, according to the authors, though I think it can be in tone of coloration, proportions, mannerisms, and voice. The statement that 37 forms consist of visitants which are all common Central American winterers should be modified to exclude some 10 species that are uncommon to rare or lacking in southern Central America. These qualifications do not detract from the usefulness of the paper as a check-list.

The concluding Discussion analyzes the area faunally and subregionally, largely in numerical fashion, in relation to the drier Yucatan Peninsula and the wetter eastern Guatemalan lowlands. It indicates how the recent re-creation of cutover habitats and newly-made reservoirs have led to the arrival of some species but not as yet of others and, vice versa, how habitat destruction may be accompanied by the quick disappearance of some species and not of others.—P. SLUD.

Pavo, The Indian Journal of Ornithology.—Published by the Society of Animal Morphologists and Physiologists. 1963. M. S. University Dept. of Zoology, Faculty of Science, Baroda, India, vol. 1, no. 1, March. Published biennially, price \$3.50 per annum.—The appearance of a new journal of ornithology is a signal event. It is especially appropriate that such an one, appearing in Asia, and in India, should be named for the peacock, the newly appointed bird of the Indian Republic. With the exception of *Tori*, this is the only journal in the Asian continent devoted to an elucidation of the sub-branch of biology devoted to the class of birds. The Editorial Board consists of the principal biologists currently associated with ornithology in India; J. C. George, a Professor at Baroda, a cytologist and anatomist; C. J. George of Bombay, a morphologist; B. Biswas of the Zoological Survey, Calcutta, and others. Heretofore ornithology's role in India has been upheld by the over-all natural history organization, The Bombay Natural History Society, and by the Zoological Survey of India.

This first number of some 70 pages strikes a fine note in Indian ornithology and points the way towards future developments. An attempt is made to marry a variety of tastes. The classicist and historian of science will be pleased to note that the lead-off article is a scholarly disquisition on the history of the name of the peacock, *Mayūra*, the National Bird, so designated after a vote sponsored by the International Council for Bird Preservation at its Tokyo meeting in 1960. Following this scholarly exposition of historical and literary tradition there are a number of papers concerned with natural science. Two are on nesting phenomena; one, by Dixit, is on an aberrant case of a bulbul, *Pycnonotus cafer*, nesting indoors on top of an electrical fixture, the other, by Lamba, is on the nidification of the Indian Pond Heron, *Ardeola grayii*. There is an ecological-morphological contribution on the ability of one of the sunbirds, *Nectarinia asiatica*, to obtain nectar from certain plants with

various types of corollas or nectar-containing structures. There is a description of a new lethal gene in the domestic fowl. There is a description of the metabolites of the liver of a starling, a subject of considerable interest to students of the physiology of migration. Finally there are two anatomical papers, by Berlin, and by George (J. C.) and Iype, one on limb musculature, the other on the mechanism of hatching, which fit into current interests in avian anatomy.

There is also a short communication by Dr. Fleming, the distinguished missionary-naturalist resident in Nepal, on the occurrence of the honey-guide in that country, which, however, neglects to relate which subspecies was actually observed there. There is also a book review, on Dorst's recent opus on migration.

This is an ambitious offering. A few minor errors of printing or editing should be passed over in a general sense of enthusiasm that such an ambitious project has been commissioned and attempted on a meager budget. Let all concerned with ornithology rejoice at the appearance of this new journal, *Pavo*, and let us wish it a long life and a happy one.—S. DILLON RIPLEY.

Growing wings.—Sarita Van Vleck. 1963. Garden City, New York, Doubleday and Company, Inc. 128 pp., 35 line drawings. $9\frac{1}{2} \times 6\frac{3}{4}$ in. \$3.95.—As the title indicates, this book is designed for the layman. It differs from most books of this category in being organized around the annual cycle of birds, including chapters on migration, territory, courtship, mating, nest building, fertilization, incubation, hatching, and behavior of young. Even more unusual is the stress throughout on the adaptiveness of behavior, and the detailed treatment of mating and the development of young, topics which are generally given little attention in popular works. The book is written in a lively fashion with vivid imagery and captures the reader's attention as do the author's imaginative line drawings.

It is often difficult to judge by scientific standards books designed for a popular audience. In this case errors of fact are gratifyingly few, but include such unfortunate lapses as descriptions of Golden Plovers leaving the Arctic islands, passing to Newfoundland and flying "from there to Argentina, a nonstop flight of twenty-five hundred miles accomplished in two days" (p. 111) and "Altricial birds hatch in twelve days as half-formed birds who further their development in the nest" (p. 69), a statement contradicted by other more detailed accounts. Even more unfortunate is the introduction of anthropomorphisms such as "irresponsible immatures," "foresighted females," and the description of taking nesting material from a hawk's nest as a "suicidal solution." Other statements are teleological, e.g., experiments in which a Goshawk picked odd-colored pigeons from a flock as "thus carrying out nature's design to eliminate those who are different from the majority" (p. 76). The few misinterpretations are only striking because the book is in general so well-written, unsentimental, and accurate.—MILLICENT S. FICKEN.