

stances, as when he refers to the superabundant Herring Gulls as "white thieves." It is well to remember that with most birds their economic status is more a result of abundance than of significant differences in food habits. If there were a reversal of the numerical strength of the cormorants and the gulls along the coast of Maine, it is quite probable that there would also be a reversal in the present economic relationships of the two species. When a species is overabundant, it draws attention to itself, and prejudice nearly always is in evidence. This condition of prejudice and condemnation is at present all too evident in the concentrated wintering area of coastal North Carolina, where the cormorants often cause annoyance and loss to gill- or pound-net fishermen.

As the author undoubtedly meant to extend full credit to all persons and organizations who aided him in furthering his researches, it would seem an oversight that no acknowledgment is made for the use of the data so frequently quoted from the files or reports in the Biological Survey, although credit is given to some of its members individually. Likewise, no acknowledgment is made of Mr. F. M. Uhler, although he is repeatedly quoted.—CLARENCE COTTAM.

Rand on Madagascar Birds.—This interesting work¹ is among the first efforts of one of the younger American, or perhaps we should say, Canadian ornithologists, for Mr. Rand was born and had his early education in Wolfville, Nova Scotia. Later he studied under Dr. A. A. Allen, at the Graduate School of Cornell University, leaving there before his course was completed to go to Madagascar.

This summary of his notes comprises the result of two years of observation and collecting on the 'great island.' It is, of course, a good deal more of an accomplishment than the modest "summary of field notes" implies. Besides a short preface by Monsieur Jean Delacour, leader, and an introduction with the usual acknowledgments, there is a section outlining the field work of the varied personnel, with a map to show the routes travelled. This section is necessarily complicated for at one time or another there were nine men collecting zoological, palaeontological and botanical specimens under the auspices of the expedition and these men never were all together, but, wisely enough we think, went alone to collect their specialties in the localities that seemed best. Rand has arranged information about these matters into sections with a running description of the country traversed and the collecting stations. These paragraphs are admirably restrained; it is easy to imagine the temptation to flights of descriptive prose and personal anecdote. But at the same time it makes one wish that more space had been allowed for the great, dark trees with the small red flowers where parrots fed, the tortured *Pandanus* and bizarre *Dideiria*, the strange popping and shrieks of the night in those jungles. It will be seen from this section that the island was covered very thoroughly and that the only locality of any importance that was omitted, is the forest of Sianaka from which came the great rarities, *Cochlothraustes*, *Heliophilus* and *Mesoenas unicolor*. Methods of travel, of which there is little mention, are probably very difficult in the country north of the capital and it is likely that porters (light loads are carried fast there) were expensive.

The following sections deal with the topography of Madagascar, the climate, distribution of forested areas, and the faunal regions or districts, with adequate maps. The author, basing his findings solely upon the avifauna, divides the island into three provinces: the oriental, with three districts or subprovinces; the occidental,

¹ Rand, A(ustin) L(oomer). The distribution and habits of Madagascar birds. Summary of the field notes of the Mission Zoologique Franco-Anglo-Américain à Madagascar. Bull. Amer. Mus. Nat. Hist., vol. 72, art. 5, pp. 143-499, 48 text-figs., Dec. 30, 1936.

with two districts; and the subdesert. In this the author says, "Our study of the bird life . . . largely bears out Humbert's divisions based on plant distribution, though it gives different extents and values to some of them." Grandidier (1879) recognized a central province which Rand does not, for, he says, ". . . the differences between the central and eastern provinces are those due to habitat . . ." It appears then that there are no great changes to be made in our notions of the faunal areas as outlined by Perrier de la Bathie (1921), and Humbert (1927), though Rand divides the central province among subprovinces or districts in either the eastern or western provinces. These provinces are thoroughly discussed in the following pages; the distribution of peculiar Mascarene genera within them is considered and the affinities, migrations and breeding seasons are expounded.

Considering the affinities of the birds, Rand agrees rather with later authors who hold that Madagascar and the Comoros should be considered as a region rather than a subregion of the Ethiopian region. He lists nine families and thirty-six genera which are peculiar to Madagascar and eight families of the Ethiopian region which do not occur on the islands in support of this view. Furthermore, he finds the greater part of the avifauna "so distinct that at the present time it is impossible to say whether it is more closely allied to the Indian or the oriental region." He lists only four genera that occur in the Indian and Malagay regions but not in Africa. These are *Amaurornis*, *Ninox*, *Collocalia*, *Copsychus*. He mentions, however, that *Izocincla* is very close to the Asiatic *Microscelis* and that certain species have definitely Asiatic affinities. In summarizing he says: "The African element, consisting largely of open ground and marsh birds could have arrived without a closer land connection. The Asiatic affinities seem to indicate a closer land connection, probably by a series of islands. . . . A land bridge undoubtedly existed by which some of the older endemic birds arrived, but evolved in Madagascar until now they do not indicate their origin." From this it will appear that, as one might expect, no conclusion as to the origin of the avifauna of the island can safely be reached on the evidence of the avifauna alone and older theories of an ancient African or Afro-European origin remain unchallenged.

Of migration it is observed that five species nest in Madagascar and spend the austral winter in Africa. No evidence was found of the migration of any species on the island (with the possible exception of Flamingoes) but "there may be local changes in the abundance of various species within limited areas."

Anyone who has made such a trip will realize how difficult it is to secure and prepare his quota of skins and at the same time obtain valuable life-history data. Rand finds that in general the breeding season corresponds with the rainy season but that a few birds breed throughout the year.

The latter half of the work deals with the birds in detail, their behavior, habitat and habits, as noted by members of the expedition and others. Most of the work is original. There are only a few taxonomic notes since, as the author observes, Delacour (1931-32) and others have published upon the collections. The rejection of the majority of Finn Solomonsen's subspecies is to be applauded for these are based on unstable and insufficient characters. We feel that the retention of what has been called *Canirallus kiolooides* in that genus is, however, a mistake.

It fell to the lot of the author to observe some of the great rarities. His notes on *Monias*, an astonishing bird, are absorbing. To read them is to be transported to the time when the Dodo and *Aepyornis* still lived. Both species of *Mesoemas* were secured, though only the rarer *M. variegata* was seen and there are fascinating notes on the Couas. Curiously enough it was the botanist, M. Decary, who secured *Anas*

bernieri, the rare little teal; *Eutriorchis* was found to have lunched on a huge chameleon; *Dromoeocercus seebohmi* and *Sarothura watersi*, both names to make collectors shiver, were discovered in extremely localized areas in the mountains and are considered to be the only truly mountain forms.

Unfortunately no botanical names are associated with the food habits or habitat of the birds. It seems a pity that M. Decary could not have been with the ornithological party for a time so that such notes might have been made, but give us an inch and we want a mile. Mr. Rand has done a very good piece of work.—J. C. GREENWAY.

Priest's 'Birds of Southern Rhodesia.'—This¹ is the fourth volume, concluding the general account of the birds of Southern Rhodesia, of which the three other volumes have already been noticed in 'The Auk.' It treats of the remaining groups of Passeriformes, including fifteen families: cuckoo-shrikes, drongos, helmet-shrikes, shrikes, tits, orioles, ravens and crows, starlings, white-eyes, sunbirds, sugarbirds, tree-creepers, weavers, fringilline sparrows, and buntings. An index to the volume includes both English and Latin names. The treatment is uniform with that of the other volumes, giving first the English and current Latin name, with citation of the original description and type locality, followed by paragraphs on Distribution in Africa and in Rhodesia, then Habits and General Notes, concluding with a careful description of each of the 134 species treated. The subject matter is well arranged under these heads, and includes brief accounts of the nesting habits, eggs, food, display, with quotations from various published sources. The effort to provide each species with a vernacular name will help to crystallize usage as well as to render the subject more intelligible to the layman. The volume contains much that is of general interest. While the avifauna of Rhodesia includes few types familiar to American ornithologists, there are three species of titmice, a tree-creeper (*Salpormis*) allied to *Certhia*, crows and a few sparrows recalling our House Sparrow. Two of the tits are parasitized by a honey-guide, while the common Pied Crow, which haunts the neighborhood of man, is parasitized by the Great Spotted Cuckoo. The Wattled Starling specializes on locusts as food, feeding its young on these pests and at other seasons pursuing their swarms in flocks. The interesting relations of the two oxpeckers with large game mammals are described. These birds clamber about on their hosts in search of ticks and by their sudden departure or sharp notes, give warning of the approach of danger. The white-eyes here as elsewhere, in their fondness for sweet juices, do a certain amount of damage to soft-skinned fruits. Some of the sunbirds are found to puncture the corollas of large flowers to secure nectar at the base, but apparently never drink water. The many weaverbirds, in which a wide variety of habits obtains, are of special interest. The polygamous species such as the Red-headed Weaver (*Anaplectes*) and the Red Bishop (*Pyromelana*) stand in contrast to those that live in solitary pairs. In *Pyromelana* it is stated that female nestlings outnumber the males in significant proportion, a fact that seems correlated with polygamous habits. The striking way in which noisy colonial weavers (*Hyphantornis*) suddenly cease their racket altogether for a brief period is recalled. An interesting type of nest is described for *Plocepasser*, consisting of a rough tunnel of grass built in a thorn bush, and then the nest-end blocked up. The display flights of *Coliuspasser* and *Pyromelana* are described. The Pin-tailed Wydah (*Vidua macrura*) is definitely shown to be parasitic on its relative the waxbill, but the young bird on hatching does not eject the rightful young as do the cuckoos and others, although

¹ Priest, Capt. Cecil. *The Birds of Southern Rhodesia*, vol. 4. 8vo, London and Beccles, ix + 420 pp., 10 color plates, 122 text-figs., 1936. Published by William Clowes & Sons, Ltd., 94 Jermyn St., London, S.W. 1.