

REVIEWS

EDITED BY KENNETH C. PARKES

The birds of Costa Rica. Distribution and ecology.—Paul Slud. 1964. *Bull. Amer. Mus. Nat. Hist.*, 128: 1-430, 3 maps. Paper, \$10.00.—This large work is certain to be of considerable interest to anyone concerned with Neotropical ornithology and the ecology of tropical areas. "Costa Rica" connotes many things to ornithologists of several generations—some will think of Zeledón and Alfaro, early representatives of the still-small group of resident Middle American naturalists; others will recall Carriker, Cherrie, Lankester, Underwood, and A. P. Smith, whose collections and observations were made in the days when field work in the American tropics was largely a pioneer effort; most will be reminded of Robert Ridgway, whose visits to Costa Rica apparently constituted his only extensive field experience in Middle America; among all contemporary readers, the remarkable life history studies of Skutch will surely come to mind. The attraction of Costa Rica for ornithologists is not hard to understand. Although a small country, it includes humid lowland forests where both striking and obscure species of South American origin find their northern limits; it includes the southern limit of the arid tropical Pacific slope habitat and its associated avifauna that is continuous from México to the Guanacaste region; and it also includes mountain ranges and volcanic peaks that have fulfilled the expectations of systematists seeking endemic forms of both Neotropical and Nearctic origin. There is the added appeal of a relatively stable and democratic government and the charm and comfort of population centers at elevations with a temperate climate. It is hardly necessary to point out that, today, modern transportation and the affluence of granting agencies make it possible to visit with ease and within hours many of those regions that could formerly be reached only after months of considerable effort and frustrating delay. The contemporary graduate student may now realize during a well-paid summer what for Ridgway was the fulfillment of a lifetime ambition. Well, that is progress, and suffering will not make science greater; furthermore, there are still plenty of seldom-visited places sufficiently difficult of access to tax those of pioneer stock.

The many familiar names associated with Costa Rican ornithology and the large series of specimens that have been obtained there suggest a well-worked area, and it is startling to realize that Carriker's annotated list (*Ann. Carnegie Mus.*, 6: 314-915, 1910), published 54 years ago, is the only previous source that provides a unified and relatively comprehensive account of the birds of Costa Rica. This new book arouses expectations, then, for several reasons. First, the author is not a fair-weather, fly-by-night visitor to Costa Rica, but has spent seven years there; he seems to have visited every geographic region and every habitat type, and to have had some personal experience with virtually all of the 758 species known to occur in Costa Rica. It is clear, too, that he has not limited his investigations to areas reached by paved road and with comfortable accommodations; a great deal of hardship and privation has gone into this work. Secondly, a vast body of data on the avifauna of Costa Rica and of Middle America in general has been accumulated in the interval of over half a century since Carriker's publication. Finally, the advances in biology over the years should allow more sophisticated insights into problems of systematics, ecology, and distribution than were possible in the past.

Dr. Slud has subtitled his work "Distribution and Ecology," and his approach is best described by his "Remarks" on p. 22. "This report is an annotated check list, with distribution viewed from an ecologic perspective. It has no pretensions to being a taxonomic treatise . . . My aim was to distill the essence of the day-to-day activi-

ties of the birds." The nature of the book is further suggested by its plan of organization. An introduction of about eight pages includes: lists of the species recorded since Carriker's work, of unrecorded species "to be expected," of those found north and south of Costa Rica but absent from within its borders, and of species and subspecies apparently confined to Costa Rica; a division of the country into "four principal avifaunal zones"—the northern half of the Pacific slope (the relatively dry Guanacaste region), the southern half of the Pacific slope (humid to very wet), the Caribbean slope (also very wet), and the Costa Rica-Chiriquí highlands; and lists of all the forms (including migrants) that are characteristic of these four zones. Most of the space in these eight pages is taken up by the lists of names, and only a few sentences are devoted to the possible or probable geographic derivation and affinities of the birds of each zone. Next there is a ten-page section describing the life-zones of Costa Rica according to the system of L. R. Holdridge (*Science*, 105: 367-368, 1947), followed by four pages of discussion of bird distribution in relation to the climate, geography, and vegetation of Costa Rica. The physiography and life-zones are illustrated by maps. Species accounts occupy pp. 27 to 390, and there follows a key to localities given on the life-zone map at which collections or observations have been made, comments on uncertain localities, a list of references, and an index.

Each species account includes a scientific binomen, an English vernacular name, a brief statement of the species' range, one or more trinomina if the species is polytypic, and then the range of the subspecies. Next, the distribution in Costa Rica of each bird is given (when the data permit) in terms of the avifaunal zone(s), the Holdridge life-zone(s), the altitudinal range, and the general climatic-vegetational association. For example, a species might be said to occupy the northwestern Pacific quadrant, inhabiting primarily the Tropical Dry Forest but extending slightly into the Tropical Moist Forest, from sea level to 3,000 feet, most abundant in dense thickets and bushy growth along streams in dry areas. Reference to more or less specific localities (e.g., Gulf of Nicoya region) is often provided. Usually, more detailed localities and specific dates are given only when the bird in question is a seldom-recorded form. Then there is a description of the habits and activities of the bird, and usually a description, with phonetic approximations, of all the vocalizations known to the author.

In these accounts, the author follows the policy expressed in his paper on the birds of Finca "La Selva," Costa Rica (*Bull. Amer. Mus. Nat. Hist.*, 121: 49-148, 1960): "The way to classify birds ecologically, I believe, is to place them in their habitat and describe what they do, so that habitat plus behavior add up to niche for the birds discussed" (p. 77). The "Ecology" of this book's subtitle is interpreted according to that view. Dr. Slud is an enthusiastic advocate of the Holdridge system of designating vegetational life zones according to mean annual temperature, elevation above sea level, and mean annual precipitation, with associations and subassociations based on local edaphic and climatic factors; his views on the system are more fully discussed in his previous (1960) work. Locality records for each species were plotted on a Holdridge life-zone map of Costa Rica, and the author states (p. 22) that by "evaluating this information strictly in the light of my own experience, I broadened the ranges of many species, altered or refined them for others, and gave them point by indicating centers of abundance." This suggests that the system has a predictive value in determining bird distribution, and this is certainly true to some extent. Slud's data and comments, however, make it clear that there is no certainty in any prediction of the occurrence of a particular species in a given life zone or habitat. Repeatedly, the species accounts mention that this or that form is "unaccountably absent" from an apparently suitable habitat, or that another form is surprisingly present throughout

a varied geographical, altitudinal, and climatic range. This unpredictability is especially evident in comparing the Caribbean slope and the southwest quadrant of Costa Rica, which fall in the same life zone on the basis of temperature, elevation, and annual precipitation. Some forms range over both areas, perhaps being more common in one than the other; some are found only in one or the other region; and some are represented by different subspecies (or sibling species) in each. Slud is clearly intrigued by these ecological and distributional problems, but he does not analyze them in the present work.

The material on behavior is largely confined to descriptions of "day-to-day activities," by which the author evidently means the bird's routines of foraging, feeding, resting, vocalizing, and interacting at low intensity with its own and other species. Slud has often succeeded brilliantly in depicting the characteristic attitudes and appearance of the bird as it goes about these activities, and the reader can often recognize a familiar species from Slud's descriptions as readily as from a photograph. Occasionally there are lapses involving peculiarities (p. 142) or minor inaccuracies (p. 222; *Phaenostictus* is not "several times larger than *Hylophylax*"), but these are decidedly uncommon to rare.

The above summary will, I hope, give a reasonable indication of the kinds of information provided in this book. It is largely successful in achieving its stated purposes, although some criticism on practical grounds is in order. The arrangement of the names and ranges at the beginning of each species account is decidedly uneconomical of space; with 864 forms included in this expensive publication, the matter was worth considering. In my opinion, the author's choice of vernacular names (despite the acknowledged aid of E. Eisenmann) is frequently unfortunate. He uses patronyms at almost every opportunity, including obscurities such as Mondetour's Dove (p. 111) and Lavinia's Calliste (p. 353), and sometimes employs inappropriate toponyms (Bugaba Woodpecker for *Piculus simplex*) although more useful and informative names are available. The excellent descriptions of the behavior of little-known species are welcome, but why were long sections devoted to the habits of familiar birds such as the Ruddy Turnstone or the meadowlark? The descriptions of vocalizations may be skillful, but I seriously doubt if these phonetic renditions are worth the amount of space devoted to them. For example, is any useful information provided by six approximations ("dzeep, tseep, dzpeet, zpweet, djeeep, or cheep") of the call note of the Western Sandpiper? Or is there value in listing "'ook' (as in 'look'), 'uk', 'kwuk', 'kluk', or 'kuok'" as variations in the call of *Aramides cajanea*? No doubt Slud's ear is sufficiently well attuned to make such distinctions, but recourse to sound spectrographs is probably indicated for really precise comparisons by a reader. Although taxonomic pretensions are disclaimed, subspecific names are given for every polytypic form. No general statement of the procedure followed is given, and only rarely is there even a brief explanation for these assignments. In most instances, one cannot be sure if the subspecific designation represents a critical determination by Dr. Slud or if another authority or simply geographical probability has been followed. The author mentions that the first phase of his seven-year study was devoted to synoptic collecting, but there is no indication of the location(s) of his collection and very seldom is an actual specimen (his or another's) cited in the species accounts. In a regional study on a significant area such as Costa Rica, I feel that more space on systematics and less, say, on phonetic descriptions of call notes would have been desirable.

Finally, I must regretfully confess to some disappointment with regard to the expectations expressed in the opening paragraphs of this review, for I feel that the author has limited his objectives to the extent that information and insights that he is

uniquely qualified to provide have not been included. Each species is placed in a skillfully designated habitat and the bird's general habits and daily behavior routines are evocatively described, but surely there is more to be said (even preliminarily) about distribution and ecology than this. Presumably the author could have provided and interpreted considerable data on seasonal changes in habitat, in food sources, and in population density; on breeding periods, reproductive behavior, and nesting habits; on territoriality and various kinds of competition; and on the historical factors that have unquestionably influenced the avifauna of Costa Rica in many ways. Much information of this kind was given by Slud in his "Birds of Finca 'La Selva,'" which utilized a refreshing approach to a regional account and offered some stimulating views on distributional and ecological problems. Perhaps the author felt that the data are not yet sufficient to attempt a synthesis on the distribution and ecology of the varied avifauna of the entire country, or perhaps he is reserving this for a subsequent publication. The present one tells us where to expect to find each species and what to expect to see and hear it doing, and this permits some inferences about its requirements. For other kinds of information about the birds of Costa Rica, the reader must search elsewhere.—THOMAS R. HOWELL.

The House Sparrow.—J. D. Summers-Smith. 1963. London, Collins, New Naturalist Monograph 19, xvi + 269 pp., 36 figs., 25 photos. 5½ × 8 in. 25 shillings. —This fine monograph is a welcome addition to the literature of ornithology for several reasons: it is a careful, well-considered study of the life history, ecology, and distribution of a species; it assembles and puts into perspective a large, scattered literature; but perhaps most important, it deals with a member of that relatively neglected group of birds, the "common species." The House or English Sparrow, *Passer domesticus*, is one of the most ubiquitous and successful birds in the world. It occurs, either naturally or introduced, on all six continents and is usually found in association with man. It is probably just this omnipresence that has led most ornithologists to assume either that the bird was well-known biologically or that it wasn't worth studying because it was too common. As a result of these attitudes, many basic aspects of the sparrow's life history have remained unrecorded. This reviewer can testify through personal experience that it takes a certain amount of bravado to spend years of one's life investigating what sometimes is referred to as "the gamin of the streets" or "the feathered rat." Although a large literature exists on the species, the treatment of details of the breeding behavior, population dynamics, etc., has been largely fragmental, incidental, or anecdotal. Most of the formal studies have dealt with an almost legendary documentation of introductions and range extensions, economic importance and means of control, or with the use of the sparrow as a laboratory animal. I would venture to guess that more has been written on "how to kill an English Sparrow" than on "how an English Sparrow lives," and certainly its wide availability to workers in city laboratories has led to the voluminous literature on its physiology, histology, etc., with the subject identified in many medical papers simply as "the bird" or at most "the sparrow." It is indeed satisfying to have, at last, a study of the House Sparrow as a species rather than as a source of annoyance or a source of tissue.

The first few chapters of the monograph are devoted to an excellent description of the species' life history. The author spent approximately 11 years studying natural sparrow colonies in both suburban and rural habitats in England. He also kept several aviary birds for analysis of those aspects of behavior difficult to observe in free-living birds. With this experience, the author was able to discuss the everyday life of juveniles and adults, as well as the usual details of the breeding cycle. The particular at-

tention paid to behavior at all stages of the life history is a feature not often found in works of this type.

The succeeding chapters are of special interest as they deal with the ecology and population dynamics of what is a widespread yet sedentary and colonial species. The author describes the physical and social structure of a colony, some of the genetic problems attendant on a sedentary species, and the methods of dispersal into new areas. In this section wide use is made of the literature and banding data and the author goes beyond a simple reiteration of the birds' colonization of new areas; he also includes an interesting and thought-provoking discussion of the biological and ecological implications of range extensions. Of particular interest to this reviewer were the comments on the interaction between *Passer domesticus* and *P. montanus* where these two species have become sympatric, either naturally or through introduction.

The final chapters contain a discussion of all 15 species of *Passer*, a comparison of their ranges (with maps), habitats, and behavior, and an interesting, often amusing commentary on the extraordinary success of *P. domesticus* in its relationships with man. As a whole, the book is extremely well written, edited, and illustrated. The author achieves a readable and entertaining style while maintaining a high degree of accuracy throughout. I noticed just a single slip; the "American whip-poor-will" (*Caprimulgus vociferus*) is confused with the Poor-will (*Phalaenoptilus nuttallii*) in a discussion of hibernation. The photographs are excellent in quality and were selected, in a few instances, with a delightful sense of humor. The only complaint a reader might have would be that the author is overmodest, both about his own work and about the interest in his subject matter; the bibliography is very short and omits reference to any of his many fine papers published in British journals. Although the author states in the Preface that he has deposited a complete bibliography in the British Museum, one wishes there were a fuller list of references readily available in the book itself. This small omission, however, does not detract from the fact that Summers-Smith has given us an able and thoughtful account of an extraordinary species.—MARY A. HEIMERDINGER.

Les oiseaux du nord de l'Afrique de la Mer Rouge aux Canaries.—R. D. Etchécopar and François Hüe. 1964. Paris, Boubée et Cie. Pp. 1-606, 27 pls., 24 in color and 3 in sepia, 281 maps, and 166 line drawings. Price, 120 French francs.—This fine book on Palearctic Africa seems, at first, to provide an embarrassment of riches, because it appears so soon after another book of high quality on the birds of north-western Africa, *Les oiseaux du nord-ouest de l'Afrique* by Heim de Balsac and Mayaud and published in 1962 (see review in *The Auk*, 81: 98, 1964). One could fear that the two books would duplicate one another but this is not the case, since the book by Etchécopar and Hüe is more comprehensive and deals with a much greater region, stretching from the Canaries east to the Sinai Peninsula and the west coast of the Red Sea, while the one by Heim de Balsac and Mayaud is restricted to Morocco, Algeria, and Tunisia, and its emphasis is on ecology, migration, and ethology.

The book by Etchécopar and Hüe lists 490 species, arranged in the general sequence of Wetmore, and, although its emphasis is on identification and distribution, it does not neglect ecology, migration, nidification, and geographical variation with treatment of subspecies if any. Separate sections under each species discuss these subjects and, under the heading "In natura," the salient field characters are mentioned also. The text is concise but informative, authoritative, and clearly written. References or citations in synonymy are not given, and there is no bibliography, but the reader is referred

to works which supply this information and a good bibliography, such as the book by Heim de Balsac and Mayaud mentioned above. These omissions, perhaps, result from the fact that the first intention of the authors, as they tell us, was to prepare a "field guide"—and their book will certainly be indispensable for this purpose—but the book soon grew beyond this and happily so, I may say, for Palearctic ornithology.

The "field guide" approach probably accounts also for the special attention given to vernacular names. Besides the French, these are supplied in English, German, Italian, and Spanish, in Arabic where appropriate (Morocco, Algeria, Tunisia, Libya, Egypt, northern parts of Mauretania, Rio de Oro, and Sudan), and in Berber for the Kabylie and Aurès. The Arab and Berber names form a separate index written by F. Viré which is quite a scholarly feat and worthy of comment as it is perhaps unmatched in any other book on birds. This index must have required a lot of work because Viré decided to go to the "field" to glean his names rather than to adopt any of the Arabic literary names which, he says, are unknown to the country people or nomads. He had to avoid purely local terms and, in the case of the Berber, had moreover to devise a phonetic transcription because this language is not written. The Berber names are printed in the Roman alphabet and the Arab names in Arabic script.

The illustrations are abundant, superb, and one of the great merits of the book. All species are illustrated by color plates or line cuts excellently painted or drawn by Paul Barruel, who has had the advantage of observing birds in North Africa. The color plates are devoted to the breeding birds and, in some instances, even include subspecies with a distinct pattern. The line cuts illustrate the more familiar visitors from Europe and some African species. The maps are well made and show the breeding range of the species in North Africa and its migratory routes when relevant. The book is well designed and bound and its typography is above reproach.

This book by Etchécopar and Hiie is outstanding in every way and, when combined with that by Heim de Balsac and Mayaud, above-mentioned, which has a different slant, supplies up-to-date coverage such as very few other countries or regions possess. All of these French authors deserve the congratulations of all ornithologists; it is ironical that their works should appear at a time when Frenchmen and other Europeans, who would be most likely to use them in the field, are gradually being eliminated from the region concerned by the pressure of political events.—CHARLES VAURIE.

China's economic fauna: birds.—1964. Washington. U. S. Dept. Commerce, Joint Publications Research Service. Pp. 1-946 (mimeographed), 64 pls., 35 in color. Price, \$11.50 (an English translation of "Chung-kuo Ching-chi Tung-wu Chih-Niao Lei," Tso-Hsin Cheng, ed., 1963, Peking, Science Publishing Society).—Our modern knowledge of the rich avifauna of China, or about 1,140 species, was acquired chiefly through the work of such European ornithologists as Swinhoe, Père David, Oustalet, Rothschild, and La Touche. But the work of these men, which Dr. Cheng tells us was designed to serve imperialist aggression, was perforce mainly descriptive and neither directly nor properly relevant to present-day economic values.

The present book is an attempt to redress this "deficiency" but deals with only 241 species of "economic significance" representing 18 orders and 56 families. It seems to me that the "economic significance" of some of these species is very dubious but Dr. Cheng has anticipated this criticism by granting that it "is not very marked" in some cases but that, nevertheless, he decided to include "a representative species or two . . . from all the important families." The orders and families are characterized and there are keys to all the genera and species which occur in China. Separate sections are

supplied also which discuss a broad variety of subjects such as classification, zoogeography, migration, ecological associations, hunting, trapping, aviculture, bird protection, and also control and destruction of undesirable species. The result is a general survey of Chinese ornithology, although separate accounts are supplied for only a little less than one quarter of the birds of China. Those individual species accounts that do occur are very full and supply much information on life history, most of it gathered within the last 15 years. Other praiseworthy features are many distributional maps and data on weights for virtually all the species treated.

The sections on "economic significance" vary greatly in emphasis. Sometimes only a few words are said, such as "to be enjoyed and appreciated" in the case of the Black Stork, or "the meat may be eaten" in the case of the Long-billed Curlew. In other cases there are long discussions of food habits, domestication, or commercial use, such as the feather trade. Ancient China speaks when we are told that the economic significance of a bird requires that it possess "beautiful feathers and be lovely," or that it be "a very nice cage-bird with a beautiful, extended, and extremely moving song," or a bird that "people like to have [and give] as a wedding present." But another China speaks when we are told that "two tons of white swan's down for export is sufficient exchange for one tractor."

The most fascinating remarks, however, concern medical properties of birds purported to cover a very wide assortment of ills. A typical example concerns the White Pelican (*Pelecanus onocrotalus*), the fat of which is said to cure "abscesses, rheumatism; stimulate circulation, clear the ears of deafness; the bill to treat chronic diarrhea and sores; tongue to treat boils; feathers and skin to treat vomiting." Many of these medical properties are quoted from the Great Herbal of the Ming Dynasty but the author engagingly cautions that "there is need for more study."

I have not seen the Chinese original but this English translation, although very bulky and not attractive in appearance, contains much information that is not available or readily available elsewhere and it should find a place on the shelves of anyone interested in Chinese ornithology. It should be of value also to persons who are not ornithologists but who are interested in Chinese culture, medical folklore, traditional methods of fowling and trapping, cage birds, or in the feather trade. The interests of such people, however, would be better served by an abstract of this subject matter published separately in a booklet which also included the sections on "economic significance."—CHARLES VAURIE.

Chung-ku Niew-li Shi-tung Cheng-zou [Systematic keys to the birds of China].—Tso-Hsin Cheng. Institute of Zoology, Academia Sinica, Peking. 1964. Pp. i-vi, 1-374, 51 figs., 1 map (a condensed and revised edition of *A distributional list of Chinese birds* published in 1955 and 1958 by the same author; see *The Auk*, 76: 248, 1959).—New forms that have been described from China and new distributional records have been brought up to the end of October, 1963. The text is in Chinese with the exceptions of the scientific names and an English glossary to colors and anatomical or structural terms. It is in two sections, the first one consisting of keys with suitable illustrations and the second of tables setting forth the distribution and status of the included species in the various zoological regions of China, by means of appropriate symbols standing for breeding birds, migrants, or stragglers. The regions in the tables are numbered in Arabic numerals from 1 to 16 and their boundaries are shown on a map. An index of scientific names is supplied. In other words, it is easy with this work to get a thoroughly up-to-date summary of the distribution and status of the birds of China, which now number more than 1,140 species, without a knowledge of Chinese.—CHARLES VAURIE.

Lista y distribución de las aves Argentinas.—C. C. Olog. 1963. *Opera Lilloana*, 9: 377 pp., maps. Instituto Miguel Lillo, Universidad Nacional de Tucumán, Tucumán, Argentina.—This is the most recent check-list of Argentine birds; 902 full species are admitted. Many species and subspecies have been added since the last formal check-list was published in 1936–44. Several forms included in previous lists are rejected as not substantiated by specimens. A Spanish common name for each species is provided; in most cases these are the same as those in the author's 1959 field guide, *Las aves Argentinas, una guía de campo*, but there are many changes, which seem improvements.

The 50 pages of introduction are especially interesting, because they discuss the avifaunal zones and subzones in Argentina, with lists of species characteristic of the various major habitats or ecological communities in each division, illustrated by schematic maps. There is also a valuable discussion of migration and migration routes in Argentina. This is a field whose study is at an early stage in South America, but which merits the attention of ornithologists. The systematic list cites the original description, gives the distribution both within and without Argentina, and often contains footnotes calling attention to taxonomic problems or giving the basis for the nomenclature adopted. A short English abstract is included. There are separate indexes of scientific and common names.

Argentina is mainly in the temperate zone, but it has small areas of subtropical country in the northeast and northwest. Avifaunally, these regions are the richest in variety of bird life. Many tropical species, some ranging all the way from Mexico, reach their southern limit in Misiones, well south of the Tropic of Capricorn. These species are predominantly nonpasserine and nonoscine, although a relatively few songbirds occur as breeding species from Mexico to Argentina. The following oscine species (depending in some cases on the adoption of a rather broad species concept) are listed as breeding in Argentina and also breed more or less continuously north into temperate North America: Rough-winged Swallow, Short-billed Marsh Wren, House Wren, Red-eyed Vireo, and Hepatic Tanager. One can also add a few southwestern tyrannids and a number of nonpasserines. As migrants many North American birds winter in Argentina; shorebirds are the most numerous, but a few passerines have been recorded: Eastern Kingbird (once), Traill's Flycatcher (once), Cliff Swallow (two subspecies), Barn Swallow, Bank Swallow, Swainson's Thrush, Bobolink, and Blackpoll Warbler (once).

The productive and energetic author and the Instituto Miguel Lillo have supplied a needed and substantial contribution to Neotropical ornithology, which will serve to stimulate further studies in Argentina and adjacent countries.—E. EISENMANN.

Las aves del Departamento de Lima.—Maria Koepcke. 1964. Published by the author, 117 pp. + index, numerous text-figs., maps. Available from Libreria Horst Dickudt, Pasaje Santiago Acuña no. 115, Casilla 1981, Lima, Peru. Price: 90 soles in Peru; U. S. \$3.80 abroad (including mailing cost).—It is a satisfaction to be able to recommend wholeheartedly a field guide to the avifauna of one of the most distinctive areas in South America, the Department of Lima, Peru. This Department includes vastly more than the city of Lima. Judging by the map on the inside cover (with an inset placing the area in South America), the region extends for over 200 miles along the Pacific coast and inland to the summits of the western Andes. As indicated in the introduction and the diagrammatic transect showing the ecological zones, the area,

despite relative aridity, has considerable variety, ranging from coastal deserts to snow-capped peaks. There is nothing like "tropical rain forest," because the heaviest tree growth is in limited areas of evergreen temperate woodland on the Andean slopes. Yet 313 species are known to occur. Each is briefly described under a Spanish and scientific name, and accompanied by a pen-and-ink drawing of the bird in characteristic posture. The text indicates habitat, local status, and also extralimital range of all species—thus adding to the general usefulness of the book. In many cases information, often unpublished, is given in regard to voice and even habits. Size is shown only by comparison with one of several species familiar to Peruvians, whose total lengths are stated in the introduction—a method more convenient to local readers, for whom the work was primarily designed, than to foreign students, who would have appreciated the addition in the text of body length. The illustrations are exceptionally effective for their purpose. Few ornithologists with Dr. Koepcke's scientific attainments and field experience are as skillful in drawing birds for field identification. When needed, the plumages of both sexes, including nonbreeding as well as nuptial dress, are shown. Many species are depicted in flight as well as at rest. The albatrosses, shearwaters, and larger petrels are drawn so as to illustrate the under-wing surface in addition to the upperparts. The diurnal birds of prey appear both perched and in flight; of these I would question only *Chondrohierax uncinatus* (known in the Lima area from but one specimen), which, as seen soaring in Panama, appeared to me more slender, with longer and narrower tail and narrower wings. In general the field marks, shapes, and postures are so well indicated, that lack of color in the book should prove no obstacle to identification. A good bibliography and an index close this remarkably fine guide. Written in simple Spanish, it should be useful not only to bird students in Peru, but to all persons interested in South American birds.—E. EISENMANN.

Checklist of birds of Puerto Rico and the Virgin Islands.—N. F. Leopold. 1963. Bull. 168. Agricultural Experiment Station, University of Puerto Rico, Río Piedras, Puerto Rico, 119 pp., 1 color photo.—The author states: "The major purpose of the Checklist was to search the literature for the many common names, especially in Spanish, applied locally for one and the same species of bird; and to select, on the basis of priority, generality of usage, and appositeness, that single name which appeared most appropriate, and to list all other names as synonyms. A secondary purpose was to bring up to date the species and subspecies recorded . . ." For each included subspecies or species this list gives, in tabular form, a preferred English name followed by synonyms, a preferred Spanish name followed by synonyms, the scientific name, and a general statement of local status and habitat.

This paper is unquestionably useful both as the most up-to-date avifaunal list for its area and as an attempt to bring order and uniformity to the Spanish common names. As is true throughout most of Latin America, the majority of species have no true vernacular designation at all and those that have are likely to possess a variety, depending on locality. Increasing popular interest in birds and communication of ornithological information requires some standardization of vernacular names. The problem in Latin America is far more difficult than in English-speaking North America, because of proliferation of names resulting from subdivision into so many independent states—even though bird species do not observe political boundaries. Unfortunately, in searching for Spanish names from which to make a single selection the author seems not to have looked beyond the West Indies. Yet establishment of a good species name would seem to require consideration of the species as a whole and some attention to the name used for the group outside the local area. There is no

indication that the author was acquainted with the *Prontuario de la avifauna Española* (the "official" check-list for Spain), which was followed in the Spanish edition of the Peterson European field guide. Many genera, especially of "water birds," and not a few species, found in Puerto Rico also occur in Spain. Of the many recent bird lists in Spanish, the *Prontuario*, from the viewpoint of vernacular nomenclature, seems the most consistent and idiomatic. This is not surprising, because in most Latin American lists the emphasis, properly enough, has been on distribution and taxonomy, and many of them have been prepared by authors whose native language was not Spanish. At this stage, when common names for birds are not yet crystallized in Hispanic America, it seems regrettable to ignore a name established for the same species or group in Spain, unless the name would be misleading on this side of the ocean or a different name is really well established. For example, that recent immigrant to the New World, the Cattle Egret, called in Spain "Garcilla Bueyera," is designated in this list by the somewhat pompous-sounding "Garza del Ganado," evidently a translation of the English name. The group name favored for the pelicans, instead of the unmistakable "pelicano" of the Spanish *Prontuario*, is the ambiguous "alcatraz," a name often applied not only to pelicans but also to other genera of totipalmates, and which the *Prontuario* restricts to the Gannet. One wonders why for the word falcon this list adopts "falcón," when modern Spanish, both in Spain and Latin America, employs "halcón." For descriptive specific names the *Prontuario* invariably uses the idiomatic, adjectival form, which is shorter and more informal than the prepositional form often used in this list; e.g., the Blue-faced Booby would be "Boba Cariazul" rather than "de cara azul." I think it unfortunate that for the quail-doves the name "perdiz" (meaning partridge) was selected, when there were other local alternates available.

English species names selected are drawn from A.O.U. Check-list or from Bond's *Birds of the West Indies*, but the author has prefixed subspecific modifiers in smaller type. While the question is certainly arguable, there seems to me little value in supplying subspecific common names. These make bird names longer and tend to be misleading to the amateur, by overemphasizing the distinctiveness of subspecies, most of which are quite indistinguishable without museum comparison.—E. EISENMANN.

Birds of Wisconsin.—Owen J. Gromme. 1963. Madison, Wisconsin, Univ. of Wisconsin Press, xvi + 220 pp., 105 color pls., with accompanying silhouettes and maps. $12\frac{1}{4} \times 9\frac{1}{4}$ in. \$22.50.—It is always gratifying to note the appearance of another up-to-date state distributional work. This volume, published under the auspices of the Milwaukee Public Museum, is expected eventually to be supplemented by a detailed text, still in preparation. By itself, it constitutes a lavishly illustrated popular check-list, wherein text has been reduced to a few pages of foreword and introduction. Some 328 species are illustrated, and 44 others (hypothetical, accidental, and extinct) listed. Subspecies are not dealt with at all, except where well marked ones are distinguished in the plates. Time and place of occurrence, and abundance, are concisely stated on pages facing the plates, with the aid of colored maps and date lines, identification of the species being effected by pleasing little silhouettes taken from the plate figures themselves.

The basic question, of course, would concern the value of yet another full series of color plates, very much in the traditional style, of birds of this region. The argument that they serve for "immediate identification" of the species is weakened by the indisputable fact that any good standard field guide would serve this purpose better. The statement that they have local ecological significance may in some cases have

validity. They remain, at any rate, a handsome series, and a credit to the artist who devoted 20 years to their completion.

Critical examination of the 89 plates of "formal portraits" reveals considerable unevenness of quality. Most are very good, and some are excellent; a number, however, are merely adequate (e.g., the swallows on Plate 55, which appear very wooden, some of the woodpeckers on 47, 49, and 50, which are badly drawn in places, and various of the icterids, fringillids, and warblers); an occasional one (notably Plate 51 of flycatchers) is poor. Allowance must be made for defects of reproduction; but in general the quality seems high. In the review copy, colors are good, and only one or two plates are seriously out of register. In general, Gromme shows more feeling for such large birds as hawks, owls, and ducks than for the small passerines. Various special problems are inevitable in composite plates, as pointed out in the introduction. Results have not been uniformly satisfactory: some plates (e.g., warblers) are unpleasantly crowded, certain figures (e.g., woodcock on Plate 30) appear, through perspective, badly out of scale, and varied bits of background sometimes run together incongruously.

The painting of the Turkey, done in oil, and most of the supplementary series of 16 oils of birds in full natural habitats, reproduced through the courtesy of various owners, are by all odds the finest things, artistically, in the book. They show the artist's capabilities to best advantage, as they successfully capture the feel of the countryside, and are well worth having in themselves.

The descriptions of status are simple and consistent. The color-designations for seasonal ranges are easy to understand at a glance. I would have preferred that the stylized arrows (to indicate migratory movements) be more extensively used, even if superimposed upon colored areas, because a great many species most common as transients have no arrows at all in the present scheme. Since the diagrams are of necessity generalized, and since this part of the book is entirely undocumented, it is difficult to examine statements critically. I wonder, for example, why the Bay-breasted Warbler, listed only as a transient, has a date line extending solidly through the summer.

Let us hope that the volume of text will not be unduly delayed, and that it will deal fully with the details of taxonomy and distribution. Together, these books may well be something "every bird lover . . . will want in his library." Unfortunately, the high price of this first part places it beyond the reach of many.—WILLIAM A. LUNK.

Die Vögel Deutschlands.—G. Niethammer, H. Kramer, and H. E. Wolters. 1964. Akademische Verlagsgesellschaft, Frankfurt, xv + 138 pp. text. Price DM 14,80, bd. —This is an authoritative check-list of the birds of Germany. It lists 434 species, giving subspecies, occurrence in Germany, migratory status, and numerous references to the literature. This is a detailed and most useful compendium incorporating the literature up to early 1964.—E. MAYR.

Aves de la Isla de Fernando Poo.—Aurelio Basilio (foreword by F. Bernis). 1963. Madrid, Editorial Coculsa, Victor Pradera 65, 190 pp.—Father Basilio has resided for many years on Fernando Poo where he has assiduously studied the birds and mammals, adding many species to those known from the island. Here he briefly describes the island, its ornithological history, and its literature. He then treats in detail each species known from the island, giving a description and notes on range and habits. This is an important addition to the ornithology of West Africa. Another edition by the same publisher, 1963, is in hard cover with 206 pp., a map, 74 valuable photographs, and 11 composite plates (5 in color) by A. Boué.—DEAN AMADON.

Identification for ringers. 3. The genus *Sylvia*.—Kenneth Williamson. 1964. British Trust for Ornithology Field Guide No. 9, 71 pp., 4 pls. $8\frac{1}{2} \times 5\frac{1}{2}$ in. 6 shillings (paper); 9 shillings 6 pence (stiff boards).—This publication, and in fact the series of which it is the third, surely deserves some sort of prize for the most misleading title in current ornithological literature. It and its two predecessors constitute nos. 1–3 of a subseries within the B.T.O.'s "Field Guide" series, collectively entitled "Identification Guides." All deal with the old world warblers, a notoriously difficult group. No. 1 (revised edition, 1963) covered the genera *Cettia*, *Locustella*, *Acrocephalus*, and *Hippolais*, and no. 2 (1962) the genus *Phylloscopus*. One would expect from the title some sort of concise manual for British banders for identification, and aging and sexing of birds in the hand, of the type issued from time to time for American banders by the Fish and Wildlife Service. Instead, the three numbers taken together constitute virtually a monograph of most (not all, as implied in the Introduction to the present number) of the Palearctic Sylviidae, whether or not recorded from the British Isles. Although much of the material has been summarized from previous literature, much is also original. Williamson presents measurements, soft-part colors, wing formulas, and notes on molt taken from specimens in the British Museum. He disclaims any pretensions of having written taxonomic reviews, yet he does not hesitate to evaluate the validity of subspecies or the limits of species, often differing from the opinions of Vaurie and other authors. There is, in all, a remarkable amount of information included in these handy and inexpensive publications, and any student of Palearctic passerines should certainly have them available.

Both the author and the British Trust for Ornithology, I believe, deserve a reprimand for having inserted in an identification guide for ringers, however thorough, the formal taxonomic description of a new subspecies. Short of a recent description in a British Guiana newspaper, I know of no less appropriately placed publication of a new name in many years. It will undoubtedly be overlooked by many taxonomists, so I give pertinent details herewith for those who may regularly card newly introduced names, but do not have access to the present publication.

[*Sylvia*]. *atricapilla atlantis* Williamson. Brit. Trust Orn. Field Guide 9 (Ident. Guide 3), May, 1964: 14. Type, ♂, Ponta Delgada, San Miguel, Azores (Brit. Mus. reg. no. 1904/12.31.134). Distribution, Azores and Cape Verde Islands. Males are said to differ from *S. a. heineken* of Madeira and the Canary Islands by being "not nearly so dark on the upper parts," while females "show a brighter suffusion of buff on breast and flanks."

Potential purchasers of these guides are warned that the "stiff boards" warp badly, and do not appear to be worth the extra cost.—KENNETH C. PARKES.

Audubon's wildlife.—Edwin Way Teale. 1964. New York, The Viking Press, viii + 256 pp., illus., $11\frac{1}{4} \times 9$ in. \$15.00.—Called "A new look at the birds and animals [= mammals] with selections from the writings of John James Audubon," this book is not a detailed appraisal of Audubon and his work. Teale's contribution is a fast-paced biography of Audubon, a few pages of rather sketchy legends for the plates, and chapter introductions in the form of a conservationist's overview of a century and a half of wasted resources. As editor, he has chosen 96 widely-margined pages worth of bite-sized nibbles from Audubon's 10 large volumes of writings and he has highlighted and deftly cropped details from Audubon's vast and uneven artistic output. Illustrations consist of 96 pages (plus a portrait of Audubon) in black-and-white and another 31 pages in color. There is a short index but no bibliography.

Published in large format in the "Studio Book" series, this work will probably please anyone whose library lacks a short, sound biography of a man whose name is symbolic of so much that his real life was not, and by anyone who desires a varied sampling of both Audubon's artistic and literary efforts.

Although its paper quality is superb and its typography a delight and nearly flawless technically, this book has some faults. Modern color work on glossy paper does not flatter the hand-colored aquatints of the "Elephant Folio," and some of the bird plates look almost like paper cut-outs. The detail taken from a painting of the cottontail rabbit (page 36) indicates that copies made from originals can give admirable results. However, color work on mammals in this volume tends to be more attractive than that depicting birds. Black-and-white reproductions of both birds and mammals are uniformly excellent.

Among minor points, I should suggest that more than "a score or so" of bison survived the great slaughter; the Carolina Parakeet was not quite the only U. S. parrot; the mammal shown on page 178 is a *striped*, not a hooded, skunk; and the lovely plate on page 245 shows Richardson's *red* (not ground!) squirrel.—DANIEL MCKINLEY.

I went to the woods.—Ronald Austing. 1964. New York, Coward-McCann, Inc. 144 pp., 9 colored pls., 48 black-and-white pls. \$5.00.—One of the outstanding features of Carl Welty's *The life of birds* is its remarkable illustrations of birds photographed in flight by G. Ronald Austing. Now we have a book by this talented young naturalist-photographer that contains more of his unusual photographs together with the stories behind many of them. Subtitled "The Autobiography of A Bird Photographer," the volume is divided into 12 chapters centering chiefly on the author's experiences with raptorial birds and his determination to become a bird photographer.

Ron Austing grew up with birds. As a school boy he climbed up to hawk and owl nests and took the young raptors home for pets. As he grew older, his love and admiration for these birds grew also. Three full chapters recount some of his experiences. These are suggestively titled: "Danger—flying raptors," "The White Lady," and "Peregrines on Assateague."

Mr. Austing made many of the mistakes and misjudgments of aspiring photographers in his progression from the "family Kodak" to a Hasselblad and electronic flash, and he is not afraid to admit them. Chapters 4 and 5 contain many helpful pointers for beginning photographers. He explains his techniques of flight photography, up to but not including the point of revealing how he manages to get a bird to fly in precisely the direction required for a good picture. While one should perhaps forgive him for retaining a professional secret, I cannot accept his statement that he is withholding the information in order to safeguard our birds.

In general his ornithological facts are correct. Although he refers to himself as an ornithologist, professionals who read his interpretation of hummingbird behavior at his feeding vials will not be quick to take Mr. Austing to their bosoms. His tendency to humanize the birds he knew intimately crops up in other places, too. When a hummingbird came within inches of a pet goshawk, ". . . Mother Gos only cocked her *ear* in curiosity" (*italics mine*).

These comments should not obscure the fact that the book contains a large amount of good, interesting material. For instance, this nugget: "Perhaps the most interesting, as well as fascinating, aspect of the [Saw-whet Owl's] behaviour on winter territory is the consistent way different individuals choose the very same roosting tree in an extensive area of the same type."

I went to the woods is lavishly illustrated in black and white and color, but the pictures certainly do not do Mr. Austing's artistry justice. Except for the Goshawk photo, the publishers made all picture selections. Color reproduction is generally wretched; not only are the plates too blue, but there was evidently no attempt to improve composition through judicious cropping. Furthermore, the improvident use of color pushed the price up; the book is not worth the \$5.00 that might be reasonable with good reproduction. Black and white photos include pictures of flying birds, bird portraits, and details of photographic setups. A disproportionate number portray the author or his family with assorted wildlife. The color frontispiece of a Saw-whet Owl catching a white-footed mouse is a gem.

The book is not distinguished by its prose, and a good editor could have brightened the text considerably. There are too many disagreements between subjects and verbs, rapid shifts in tense, misplaced commas, misspelled words, and dangling phrases. But the author's style will improve with experience. In the meantime, we look forward to seeing more of Ronald Austing's illustrations as he takes his place among the world's leading bird photographers.—RICHARD B. FISCHER.