

ORNITHOLOGICAL LITERATURE

ALDO LEOPOLD/*THE PROFESSOR*. By Robert A. McCabe. Forward by Luna B. Leopold. Robert A. McCabe, 207 Russell Labs., Madison, Wisconsin 53706, 1987:172 pp., 69 black-and-white photos with captions, drawings by Charles W. Schwartz, maps, and 5 appendices. ISBN: 0-910122-98-9, \$29.95 hardcover + \$2.00 shipping.

ALDO LEOPOLD/*HIS LIFE AND WORK*. By Curt Meine. Univ. of Wisconsin Press, Madison, Wisconsin, 1988: 638 pp. Illustrated. ISBN 0-299-11490-2. \$29.50 hardcover.—There has been an outpouring from the American heartland of books about the most celebrated of American ecologists, Aldo Leopold. This may seem excessive but not for a man with his breadth of contributions to society and his profession. Leopold has long been celebrated by foresters, and in particular by wildlife managers who grew up with his classic textbook, “*Game Management*” (1933). When the environmental movement blossomed in the late 1960s it didn’t take long for a much larger audience to discover Leopold’s essays in “*A Sand County Almanac*” (1949), including his famous essay, “*Land Ethic*.” Both of the books have been reprinted numerous times. As long ago as 1972–73, Susan Flader published two books about Leopold, “*The Sand County of Aldo Leopold*” (Steinhacker and Flader 1972) and “*Thinking Like a Mountain/Aldo Leopold and the Evolution of an Ecological Attitude Toward Deer, Wolves, and Forests*” (Flader 1973).

The occasion of the most recent publications, of which there are six, is the centennial in 1987 of the birth of Leopold. A symposium regarding Leopold was held by Iowa State University at Ames in October 1986 (Tanner, T., ed. 1987. “*Aldo Leopold/The Man and His Legacy*,” Soil Conservation Society of America). The University of Wisconsin Press has published a recent commemorative edition of “*Game Management*,” and Oxford has published a commemorative edition of “*A Sand County Almanac*.” Two additional volumes, including one of those reviewed here, have been published by the University of Wisconsin Press. (plus “*Companion to A Sand County Almanac*,” J. B. Callicott, ed., 1987) A two-day symposium called by Robert McCabe was presented by 17 of Leopold’s students in Madison in April 1987 (“*Aldo Leopold: Mentor*,” Richard E. McCabe, ed., 1988). Wisconsin Natural Resources magazine (Wisconsin Department of Natural Resources) has published Leopold articles in each issue of the commemorative year. Wisconsin Academy Review devoted an entire issue (34:Dec. 1987) to articles by those who knew him.

“*Aldo Leopold/The Professor*” was written and published by McCabe under the aegis of The Rusty Rock Press which McCabe named after his farm west of Madison. He has generously donated the proceeds to the Department of Wildlife Ecology at the University of Wisconsin, the department started by Leopold and later chaired for many years by McCabe.

One might think that such an outpouring of print about a single individual might lead to a great deal of redundancy but, for the most part, this does not appear to be the case. These two volumes are a good example; McCabe presents a highly personal statement of his experiences with Leopold for a period of ten years at the end of Leopold’s life, and Meine offers an objective, scholarly piece of research. Both authors write with clear love and respect for the man and his works.

McCabe’s intimate treatment of Leopold jumps from the pages from the beginning. For example, immediately under the covers, one finds facsimile copies of Leopold’s handwritten manuscripts of two of his essays which McCabe had rescued from oblivion and saved all these years. Leopold often signed memoranda and letters with his initials which are found, enlarged, on the title page. Among the excellent black-and-white photographs I counted 37 by Leopold and 4 others by members of his family. If this book has value as a historical

record, certainly these photographs will be one of the main reasons it does. Another personal touch is the photographic treatment of the old frame house at 424 University Farm Place in which the wildlife department at the University of Wisconsin was housed, including a floor plan and two photos of the final demise of the building at the hands of the wrecker. One I particularly like is a close-up of the iron numbers, 424, on the wooden pillar supporting the porch of the building with McCabe's keys hanging below.

Both McCabe's and Meine's accounts have their historical beginning and ending, but in between they differ substantially. McCabe starts with a brief background sketch of A.L. and of himself when he arrived on the Madison campus of the University of Wisconsin seeking graduate study. In between there and his account of Leopold's death in a grass fire near the family shack, McCabe deals with the activities in which he and A.L. engaged, or which McCabe observed; the department and its staff, including a notable and lengthy account by Alice Harper Stokes, A.L.'s secretary during World War II; A.L.'s management of the graduate program, his teaching, his personal and professional activities, the family shack where Leopold applied his ideas of land use and where many of his essays were born, as a scientist, A.L.'s friends, his role as a state conservation commissioner, as a hunter, and as a writer.

Meine, on the other hand, takes Leopold's roots from his grandparents' emigration from Germany, fitting their entrepreneurial experience into the settlement of the West during the period of resource exploitation and national social responses leading to the conservation movement at the turn of the century. Leopold, of course, was a leader and source of inspiration and ideas for much of the movement. To understand McCabe's account of the final decade of A.L.'s life, the reader will do well to read Meine's sensitive and more extensive account first.

Because I shared enough of McCabe's experience to understand his portrayal easily, I found few surprises. It is a portrait of a bust, not of a full length statue, largely because it covers only one decade of a six-decade life and is mainly first-hand history. Meine, on the other hand, presents us with a complete portrait, nearly all of it from astonishingly rich second-hand sources, including fascinating vignettes from both A.L.'s family and his wife Estella's family. For me there were many surprises, but more importantly, he provided me with a detailed background of the Leopold I knew first hand and that McCabe describes. The three major professional phases of Leopold's life described by Meine are the 18 years in District 3 of the U.S. Forest Service (Arizona and New Mexico, starting when they were still territories) and at the Forest Products Laboratory in Madison, Wisconsin; four important transitional years working on the Game Survey of the North Central States and, while unemployed, writing "Game Management"; and lastly, his years on the faculty at the University of Wisconsin. Meine follows him through each of these, providing continuity by tracing the development of his ecological ideas and the course of his family life.

The format of these two books is plain with few frills. The photographs in McCabe, many by himself, are a significant contribution, and those in Meine are particularly well chosen to illustrate significant aspects of Leopold's life. Both authors present their objectives in a preface and conclude with an epilogue. The books both contain errors of fact and of typography. I was bemused to find Aldo spelled "Also" twice within a few pages in Meine—modern word processing doesn't find all the errors. Both authors had difficulty keeping track of the cast of characters and sometimes disagreed with each other on where they were and when. There may be more errors of this nature than my records show; none that I found detracts from the story. Professional historians of the future will have to check the facts for themselves, especially in McCabe, who deliberately avoided documentation as much as he could, relying on what he calls "cue words" to jog his memory.

The most unfortunate aspect of either of these books that I find is McCabe's entry into

the polemics of whether or not Leopold was the first recognized university faculty appointee designated in wildlife management; Leopold routinely kept thoughts of this nature out of print and McCabe, who candidly proclaims his hero worship, would have done well to follow his role model.

Both of these books are worthy contributions to the commemorative celebration of the 100th anniversary of the birth of America's most celebrated conservationist and ecologist. Students of natural resource management, conservation, the environmental movement, and indeed the history of the country, will find these two books well worth their time. As we enter the era "beyond oil" we are going to need the kind of faith in ourselves and in the future that the words of men like Leopold provide. These two books will give us a fuller understanding of how he arrived at his deep commitment to a better relationship between man and the rest of the living community.—FRED GREELEY.

THE SKUAS. By Robert W. Furness, illus. by John Busby. T & A D Poyser, Calton, England, 1987:363 pp., 30 black-and-white photos, 100 text figs., 65 tables. (Distributed in the U.S. by Buteo Books, Vermillion, South Dakota.) \$45.00.—This attractive volume attempts to outline our knowledge of the skuas and jaegers. Although the "American Ornithologists' Union Check-list of North American Birds," Sixth Edition, places the skuas and jaegers within the Laridae, the author retains the six species as the Stercorariidae. Members of the family are probably poorly known to most North American ornithologists. This is because they are pelagic seabirds in the nonbreeding season and because they breed in polar and subpolar latitudes. The jaegers (or small skuas as they are called in this volume) of the genus *Stercorarius* have circumarctic and subarctic breeding ranges, although the Parasitic Jaeger (*S. parasiticus*) breeds south in the North Atlantic to Iceland and the northern British Isles. Most of the large skuas (*Catharacta* sp.) are distributed in a series of populations on Antarctica, subantarctic islands, and southern South America, but one northern hemisphere population, the Great Skua (*C. skua skua*) breeds in the eastern North Atlantic.

The taxonomy of *Catharacta* has been contentious. The author recognizes three species within the genus: the South Polar Skua (*C. maccormicki*), the Chilean Skua (*C. chilenses*), and *C. skua*, which includes the Great Skua of the North Atlantic, the Tristan Skua (*C. s. hamiltoni*), the Brown Skua (*C. s. lonnbergii*) and the Falkland Skua (*C. s. antarctica*). Hybridization is occurring between the South Polar Skua and the Brown Skua on the Antarctic Peninsula, and between the Chilean Skua and the Falkland Skua along the coast of Patagonia, but the amount of gene flow is not considered sufficient to alter the present taxonomy. The author considers that the Falkland Skua is the most likely source population of the northern race.

These species are attractive subjects for the study of evolutionary adaptation. All have strong hooked bills and show reversed sexual size dimorphism. Plumage polymorphism occurs in all members of *Stercorarius* (although very rarely in adult Long-tailed Jaegers [*S. longicaudus*]) and has recently been recognized in the South Polar Skua. Some of the jaegers and skuas are specialized kleptoparasites, particularly in the nonbreeding season. All the jaegers are predators in tundra ecosystems when breeding, except the maritime population of the Parasitic Jaeger, and feed on birds, bird eggs, rodents, insects, berries and carrion. The species show considerable opportunism in their feeding but one can generalize by saying that the Pomarine Jaeger (*S. pomarinus*) is an obligate lemming predator, the Parasitic Jaeger preys on small birds, including small shorebirds, and the Long-tailed Jaeger preys on rodents, small birds, mostly passerines, and insects.

The feeding ecology and territory systems of the large skuas (*Catharacta*) are remarkable for the variation between races and species. The South Polar Skua, the Chilean Skua and the Great Skua feed at sea away from small colonial territories. The three southern hemisphere races of the Great Skua (the Brown, Tristan and Falkland skuas) feed mostly on seabirds on large territories. The Brown and Falkland skuas forage by walking about at night and pouncing on any seabird they encounter.

This then is the rather unique group for which Furness has attempted to compile all our knowledge. His book contains 16 chapters headed: Early History and Classifications, Distributions and Populations, Migration Pattern, Reversed Sexual Size Dimorphism, Behaviour, Food and Feeding, Kleptoparasitism, Plumage Polymorphism, Breeding Systems and Social Organization, Breeding—Laying to Hatching, Breeding—Hatching to Fledging, Population Dynamics, Pollutants, Skuas and Agriculture, Skuas and Conservation.

The book reads well, although at times I thought the author's arguments moved too slowly. It is written for an informed general audience. Topics such as kleptoparasitism and reversed sexual size dimorphism are developed in a broad context which will appeal to undergraduates and graduate students in ornithology and ecology. John Bushy's drawings scattered through the text convey a good feel for the spirit of these birds.

The most obvious shortcoming of this work is that it does not live up to its inclusive title. The treatment actually given the several species is very uneven. This is in part because the species are not equally well known and in part because the North American jaeger literature is not well covered. The information presented on the Pomarine Jaeger and on the Parasitic Jaeger on its arctic breeding ground is largely from the work of Pitelka and Maher, although Pitelka's important paper on these two jaegers (Pitelka, Tomich and Treichel, *Ecol. Monogr.* 25:85–117, 1955) is not referred to. The information included on the Long-tailed Jaeger is largely from Northern Europe and northeastern Greenland, and a paper by Maher (*Arctic* 23:112–129, 1970) which would have added some important perspective to the discussion of the jaeger's territorial system and site fidelity is also not cited.

The author concludes that all the jaegers except the Pomarine Jaeger show mate and site fidelity from year to year. Yet populations of the Long-tailed Jaeger in northern Alaska and on Ellesmere Island, NWT, Canada, have showed dramatic increases in breeding density in response to increased microtine rodent populations, suggesting that this species is adapted to exploiting high microtine rodent population in a manner analogous to its larger congener, the Pomarine Jaeger.

Not all the available information from the North American arctic in the papers cited is used or consistently integrated into the text. For example, the chapter on egg laying and hatching is devoted to the Parasitic Jaeger in Britain, the Great Skua and some of the southern large skua populations, and a brief mention of work on the Long-tailed Jaeger from Scandinavia. There is good published information on egg-laying synchrony, egg loss, and hatching of the Pomarine Jaeger, which is not mentioned at all. The same focus occurs in the following chapter on hatching to fledging; again, relevant information from North America is lacking.

The author has worked intensively on the Parasitic Jaeger and Great Skua in Britain and in the southern hemisphere. The book appears to have been initially devoted to those two species and later expanded to include all members of the family. Indeed, the last three chapters of the book are concerned entirely with population histories and problems of conservation of the Parasitic Jaeger and Great Skua in the British Isles.

Despite the above I do recommend the book. It is a good and well-written compendium of much of our present knowledge of a fascinating family of seabirds. It will be of interest to informed laymen, and students in behaviour, population biology, and general ornithology as well as a useful reference for specialists. I just wish it came closer to being the comprehensive work that the title suggests.—WILLIAM J. MAHER.

NEOGENE AVIAN LOCALITIES OF NORTH AMERICA. By Jonathan J. Becker. Smithsonian Institution Press, Washington, D.C., 1987:171 pp., 3 figs. \$14.95.—This book is a compilation of the fossil birds recorded from any Miocene or Pliocene locality in southern Canada, the United States, and northern Mexico. Following a brief introduction and checklist of species, the main section of the book is a list of fossil localities organized chronologically by land mammal ages, from the Late Arikareean through the Blancan. For each locality, Becker provides information in the following categories: geological formation, political state, land mammal age, radiometric dates, general references, avian references, avian taxa, and comments. This enormous amount of information is presented clearly and consistently. The index is indispensable.

This is a landmark study for several reasons. First, it is the first monographic treatment of the Neogene birds of North America. Second, it incorporates the latest information on biochronology and geochronology of the fossil sites. Third, it includes brief comments on previously unstudied material, especially that in the Frick Collection of the American Museum of Natural History. In the last two categories, Becker's book complements, corrects, or updates the standard references in avian paleontology (Brodkorb, P. 1963, 1964, 1967, 1971, 1978, Catalogue of fossil birds, *Bull. Florida State Mus.* 7:180–293; 8:195–335; 11:99–220; 15:163–266; 23:139–228; Olson, S. L. 1985, The fossil record of birds, *Avian Biology* 8:76–252).

Becker makes no attempt to discuss the relationships of Neogene avifaunas to those of the Paleogene or the Quaternary. Although much taxonomic revision remains to be done, Becker has compiled so much information that the lack of a concluding section on the evolution and biogeography of Neogene avifaunas is disappointing. Regardless, anyone interested in the fossil record of North American birds will find Becker's book to be extremely useful. It is a major step in the movement to modernize the chronology of fossil birds.—DAVID W. STEADMAN.

BIRDS OF NEW GUINEA. By Bruce M. Beehler, Thane K. Pratt, and Dale A. Zimmerman; illus. by Dale A. Zimmerman and James Coe. Princeton Univ. Press, Princeton, New Jersey, 1986:xiii + 293 pp., 55 pls., 21 text figs. Paper \$37.50, hardcover \$65.00.

SPECIES-CHECKLIST OF THE BIRDS OF NEW GUINEA. By Bruce M. Beehler and Brian W. Finch. Australasian Ornithological Monographs, No. 1, Royal Australasian Ornithologists Union, Moonee Ponds, Vic., Australia, 1985:127 pp. No price given.—The appearance of this field guide is welcomed by all those studying the avifauna of New Guinea, and it is a boon to those who wish to visit the island. The two previous synthetic volumes on the New Guinea avifauna, Mayr's "List of New Guinea Birds" (1941) and the Rand and Gilliard "Handbook of New Guinea Birds" (RG), have each served to summarize the scattered literature. The Mayr volume provided the strong taxonomic background necessary for further meaningful studies and was the outgrowth of the numerous pre-World War II expeditions to the area. RG, using Mayr's list as its starting point, incorporated post-war taxonomic studies and produced the first comprehensive volume including the natural history of the avifauna.

Since 1967, many additional studies, both taxonomic and field oriented, have been made of New Guinea birds. In addition, the area has become accessible to birdwatchers and interested tourists. The need for an illustrated field guide has been felt for some years. "Birds of New Guinea" is such a guide. It has incorporated in its brief text much of the information gained in the last twenty years, both as the result of expeditions and long-term studies and of the valuable observations over the years by members of the Papua New Guinea Bird

Society, most of whom have been resident in Papua New Guinea (PNG) for varying amounts of time. (Most of these observations refer to birds occurring in PNG, the eastern half of New Guinea; West Irian, the western half of New Guinea and now a province of Indonesia, has had less recent field work and the birds are less well known.) These observations provide a perspective on seasonal variation in distribution and abundance. The authors and their text contributors (the late Harry Bell, Brian Finch, and Jared Diamond) have had extensive personal field experience in New Guinea; they are to be commended for packing so much information into so little space. The artists, Dale Zimmerman and James Coe, have also done a tremendous job of illustrating most of the 708 species described in the text, usually showing both male and female, when they differ, and sometimes immature plumages as well. Previous reliable illustrations did not exist for a large proportion of the species. Both artists have meticulously researched their birds, using museum specimens, field notes and labels, and the published literature to accurately depict colors of soft parts and details of plumage. The result is an up-to-date and reliable field guide, reasonably free of error. Color reproduction is, in general, good. The book is well made and my paperback copy has held up well during three field seasons.

The volume treats 725 species, 708 of which are known to occur (although some of these are "difficult" species known only from sight records). By way of comparison, RG listed 649 known species. Much of this increase is in the number of species of seabirds, shorebirds, and other migrants reported in the last 20 years by resident observers.

The introductory section, although necessarily brief, is good. The section on Nomenclature (p. 6) refers to English names, not scientific nomenclature, and discusses the difficulties of arriving at satisfactory English names, given the large number of sources. In general, the authors have followed a conservative course; and, while no-one will agree with all their choices, decisions were necessary and other names that have been used are given in the text. One ridiculous anomaly is that English names of birds follow Australian spelling, while the text uses North American spelling! For example, the "Blue-grey Robin" is "Uniformly blue-gray." Surely, in the few cases where this is a problem, the spelling could have been made uniform without injury to regional sensibilities.

The chapter on Papuan natural history is an excellent short summary; however, I feel that Lord Walter Rothschild's name and that of his curator, Ernst Hartert, should have been mentioned in the historical notes. It was Rothschild who hired and directed many of the collectors who are mentioned, and the taxonomic studies of the collections by Hartert and Rothschild, and of other early collections by Stresemann, formed a solid foundation for subsequent work.

On pp. 25–26 there is some confusion as to the boundary between the Northwest region and the Sepik-Ramu region, as the Torricelli Mountains are included in both. More properly, the Torricellis belong with the Northwest region. The In the Field section (pp. 37–42) is excellent and required reading for anyone planning to visit New Guinea for the first time.

Figure 21 is a map of New Guinea. In the paperback edition, it fills one page, follows the Gazetteer and is hard to find and practically unreadable without a magnifying glass. The hard-cover edition uses this same map as endpapers, and its larger size makes it much more usable. The information on where to acquire maps is useful. The Gazetteer is of more limited usefulness. Whereas, the Gazetteer in Mayr's List primarily identified collecting localities, this one concentrates on birdwatching localities and recent Indonesian names, appropriate for a field guide. However, the cross-referencing of place names is incomplete and may cause the novice difficulties when referring to older literature. For example, Hollandia is the same place as Sukarnapura-Jayapura (=Djajapura), but it is not cross-referenced to the other three names. Sukarnapura is cross-referenced to Jayapura, but not vice-versa and Djajapura is only cross-referenced to Jayapura. If one looked up Jayapura, the present name, one would

be unaware of any of the others. The Snow Mountains are omitted although they are on the map on p. 243, and the Nassau and Oranje Ranges (the western and eastern parts of the Snows, respectively) are listed. In general, old names are cross-referenced to newer ones, but not vice-versa. This is particularly true where there is a newer Indonesian name. Most mountains are alphabetized under "Mt.," but there are inconsistencies. Mt. Carstenz, the highest mountain in New Guinea, is listed under Carstenz Toppen, its Dutch name, and two mountains are listed under the Indonesia "Puncak."

The bibliography is very spotty. A quick check revealed that reports on four Gilliard expeditions were omitted (three of these were post-RG) as were most papers by the Dutch on West Irian birds. None of Junge's papers are listed, and only one by Mees, many of whose papers are post-RG. Filewood and Peckover (1978, "Scientific names used in Birds of New Guinea and Tropical Australia, Peckover & Filewood and Handbook of New Guinea Birds, Rand & Gilliard") is omitted.

It is an enormous task to produce a first field guide, devising descriptions that both identify the species and give characters for differentiating it in the field from other species, not necessarily closely related. That the authors have succeeded so well is a measure of their own familiarity with the avifauna. And the plates almost always agree in detail with the descriptions. I would have found it handier to have the range given immediately following the description. Most of the errors are minor and will not interfere with identification.

The descriptions of the Green and the White pygmy-geese (*Nettapus pulchellus* and *N. coromandelianus*) could cause confusion. Presumably the lack of a "white leading edge to wing" is in contrast to the White-headed Shelduck (*Tadorna radjah*) in which the shoulder patch is white. The Green Pygmy-Goose male and female have a broad white terminal band on the secondaries (most of each secondary is white) and no white in the primaries. The White Pygmy-Goose has a narrow white terminal band on the secondaries. The large white patch in the primaries may be present or lacking in both male and female, adult and immature. The male and female of the Snow Mountain Quail (*Anurophasis monorhonyx*) are said to be similar, but Pl. 1 correctly shows the female to be more heavily marked.

The user of the guide should be aware that subspecies differences do occur that may not be noted; it would be impossible to do so in a field guide. For example, plumage of male Brown Quail (*Coturnix australis*) varies geographically and altitudinally, with the female either similar to or *more* (not less) heavily marked than the male. Pl. 1 correctly shows these differences, although *plumbeus* males may also be grayish.

On Pl. 21, 14a, the male and female symbols are reversed for the Painted Tiger Parrot (*Psittacella picta*). The descriptions of young Chestnut-breasted and Fan-tailed cuckoos (*Cacomantis castaneiventris* and *C. flabelliformis*) are correct, but under "Similar species" the young Fan-tail Cuckoo should be described as plain *above*. It usually does have a pale to yellowish eyering, but so may the immature Chestnut-breasted Cuckoo. All of the Bronze-cuckoos of the genus *Chrysococcyx* have iridescent bronze-green to green upperparts. This is mentioned only for *C. lucidus* and *C. meyeri*.

The confusion surrounding scrub-wrens of the species *Sericornis beccarii* and *S. virgatus* has been increased. While Diamond accepts the RG division of the populations into three species (including *S. nouhuysi*), his allocation of subspecies in the three is very different and also differs from the plate; i.e., *S. beccarii weylandi* and *S. b. wondiwoi* of Pl. 36 are included by Diamond in *S. virgatus*. *S. b. randi* is the only bird illustrated that Diamond includes in *S. beccarii*. I have examined the Lake Kutubu specimen and it is *S. b. randi*. Reference should be made to Diamond (1969, AMNH Novitates no. 2362) for a complete description of his subspecies allocations. Differing interpretations may be found in RG and in Gilliard and LeCroy (1970, AMNH Novitates no. 2420). Field studies of these populations are much needed.

The Biak race of Dusky Myzomela (*Myzomela obscura*) is washed overall with a brownish red and no throat streak, red or dusky, is visible. *Conopophila albogularis* is also known from the Sepik (RG).

In the Species-checklist, Beehler and Finch have published a list of New Guinea birds used as the basis of the field guide. They have essentially chosen to follow the Peters' "Checklist of Birds of the World" sequence with "crows last," and have discussed how their list differs from those of Mayr, Rand, and Gilliard, and Peckover and Filewood. While no one working on the taxonomy of New Guinea birds will agree with all of their choices, a list was necessary in order to produce the field guide. Decisions and choices were unavoidable, and we should thank the authors for bringing together in one place the information on which their choices were based. It is a very useful summary for anyone working with birds in the Australasian region.

The following brief comments may perhaps be helpful. The first record of the Sanderling (*Calidris alba*) was in Hoogerwerf (1964, Bull. Brit. Ornithol. Club 84:144). The following were already listed in RG, and the record noted in the Species-checklist is the first for the eastern half of New Guinea only: Silver Gull (*Larus novaehollandiae*) and Gray's Grasshopper-Warbler (*Locustella fasciolata*). *Hydroprogne caspia* has been known as *H. tschegrava strenua*; *Sterna bengalensis* as *Thalasseus bengalensis*; *Eclectus roratus* as *Lorius* as well as *Larius*; *Ptilorrhoa castanonotus* as *Eupetes castanonotus*; *Acrocephalus stentoreus* as *A. arundinaceus sumbae*; *A. arundinaceus* as *A. a. orientalis*; *Lichenostomus versicolor* as *Meliphaga virescens*; *L. chrysogenys* as *Oreornis chrysogenys*. The family Acanthizidae includes scrubwrens, thornbills, Australian warblers and allies, but *Phylloscopus trivirgatus* is included in the Sylviidae with the grassbirds and reed-warblers! *Eugerygone* is in the Eopsaltridae; *Peltops* is in the Cracticidae; the Timaliidae has disappeared. *Meliphaga montana* and *albonotata* populations have undergone yet another rearrangement as have *Sericornis beccarii*, *S. virgatus*, *S. nouhuysi* (see above). The specimen of *Grallina cyanoleuca* that I mentioned as having been collected by the Dentons in 1883 is in the Carnegie Museum, Pittsburgh, not AMNH. This record was called to my attention by K. C. Parkes some years ago.

It is in the nature of a book review to concentrate on errors and inconsistencies. I hope that the reader will realize that there are relatively few in this case and that the authors may find my comments helpful when a revision is produced. The field guide is necessary for anyone visiting New Guinea or studying the birds and while the species-checklist does not replace either of the two earlier volumes, it is a handy reference and a starting point for more detailed taxonomic studies, given the current state of flux of the taxonomy of birds in the region. —MARY LECROY.

ON WATCHING BIRDS. By Lawrence Kilham. Chelsea Green Pub. Co., Chelsea, Vermont, 1988: xvii + 187 pp., 7 pencil drawings by Joan Waltermire. \$17.95.—One of the most delightful books I encountered during my formative years was "Footnotes on Nature" by John Kieran. The book's low-key tone had the effect of assuring me that there was nothing at all unusual about having an interest in birds, flowers, and the rest of the natural world. The people who watched birds were interesting for other reasons and not at all eccentric (or if eccentric, at least in a way that encouraged emulation). Kilham's book is another in that same style. I thoroughly enjoyed his enthusiasm for bird behavior, his indefatigable attitude, and his descriptive technique. I'm sure that we are kindred souls in our world view. One of his comments, "The way to keep alive, whether as a scientist or an amateur, is to maintain interests in many things," speaks for many investigators.

Dr. Kilham's scientific background as a virologist shows through in the care with which he uses proper scientific names and terminology. He may be a bit too specific when he tells us exact dates on which he observed certain things. I doubt that professional ornithologists will find more in this book than some light reading (I finished the book in slightly over an hour). Beginning biologists and interested amateurs will find that this book offers rich descriptions of avian behavior and (often) insightful observations of the basis for the birds' activities.

However, some of Dr. Kilham's observations are not the sort of thing I would like young ornithologists to take too seriously. His hypothesis that Barred Owls (*Strix varia*) are not powerful enough to kill gray squirrels (*Sciurus carolinensis*) and that they sometimes scare the squirrels to death by caterwauling seems a bit far-fetched. His statement, "Although I used to find professional journals informative, I find almost nothing that I can use in the chart- and table-studded articles on behavior in the leading journals of today," might lead one to think that scientific ornithology does not deserve the same quantitative approach that sciences such as virology enjoy. Another comment, "Reading is a poor way to start yourself on a scientific project, if you want to be original and a discoverer," strikes me as an outrageous view. Finally, his statement, "When I think of all the tortured, complicated, and expensive experiments on animal intelligence that have been performed in laboratories, mostly with dubious result, I reflect on how much easier, simpler, and seemingly more meaningful were Davis' experiments with his free-living birds." (The Davis work cited consisted of teaching siskins to come into the house and get into the bed clothes.) This sort of careless comparison perpetuates a myth and implies that all of the work of the likes of Lorenz, Tinbergen, Skinner, Harlow, and dozens of other students counts for little and seems to be based on lack of knowledge of the field of comparative animal psychology. Such comments detract from an otherwise thoroughly enjoyable account of the natural behavior of birds.—C. R. BLEM.

STUDIES OF MASCARENE ISLAND BIRDS. Edited by A. W. Diamond. Cambridge Univ. Press, Cambridge, England, 1987:6 unnumbered introductory pages (including foreword) + 458 pp., 64 numbered text figs., 38 maps, 59 numbered text tables, 9 unnumbered text tables, and 3 appendices (including 3 tables). 53.25 pounds-sterling (approximately \$100.00 U.S.).—Like all vertebrate faunas on islands devoid of native mammalian land predators, the avifauna of the Mascarene Islands was decimated after the arrival of humans and the animals they transported. To document the biology of what remains of this distinctive bird assemblage, the British Ornithologists' Union (BOU) announced plans in 1972 for an expedition to the Mascarenes, three islands separated by several hundred km in the Indian Ocean east of Madagascar. This long-delayed volume reports the results of the 1974–1975 BOU expedition and chronicles the history, biology, and conservation of the Mascarene avifauna. Based on a large body of information from historical accounts, the BOU-sponsored field studies, reports of previous workers, and interviews with island residents, it provides a detailed summary of what we know and can reasonably infer about the Recent history of the Mascarene vertebrate fauna. In addition, it documents the population status, ecology, nesting, vocalizations, and measurements of the surviving endemic birds. Thus, the volume offers not only a useful guide for those charged with conserving what remains of the birds of Mauritius, Réunion, and Rodrigues, but a source of basic information for researchers interested in the ecology and evolution of island forms as well.

In the first chapter, Anthony Cheke recounts the history of the extinct, surviving, and introduced vertebrates and infers the time course of destruction and alteration of the islands'

habitats subsequent to the arrival of humans. Because so much information is discussed, readers will be grateful for the figures depicting the chronological history of Mascarene extinctions and the appendix listing the mammals, birds, and reptiles indigenous to the islands. In the subsequent chapter, Graham Cowles analyzes subfossil remains and presents the only unequivocal evidence for the existence of several endemics about which historical accounts are ambiguous.

The remainder of the volume concerns the surviving avifauna. Jennifer Horne discusses the vocalizations of the endemic landbirds and provides sonograms for each. She describes her methods fully and compares the vocalizations of the Mascarene forms with those of related, non-Mascarene taxa. The next chapters consist of detailed accounts of the population biology of the extant endemics of Mauritius and Rodrigues and of the complete indigenous avifauna of Réunion. Most were written by Cheke, but Carl Jones contributed prodigious sections on the Mauritius Kestrel (*Falco punctatus*, 39 pp.), the Pink Pigeon (*Nesoenas [Columba] mayeri*, 29 pp.), and the Echo Parakeet (*Psittacula echo*, 29 pp.), while Christian Jouanin provided brief accounts of the breeding of four species of shearwaters and petrels on Réunion. The accounts vary in quality, but each provides useful, basic data.

Characteristic of the text is the attention it gives to the claims of previous workers. For example, the date of extinction of the Mauritius Dodo (*Raphus cucullatus*) has usually been placed between 1681 and 1693. However, Cheke's review of the original accounts indicates that the last Dodo on Mauritius was seen in the early 1660s, and that subsequent references to "Dodos" in fact pertain to the flightless Red Rail (*Aphanapteryx bonasia*), which died out several decades later. Captive Dodos probably expired in the 1660s as well. Cheke also identifies serious problems with the idea that the endemic tree *Sideroxylon graniflorum* has become rare because its seeds require passage through a Dodo's digestive tract to germinate.

The book ends with annotated tables of measurements and weights for the extant endemic birds and a list of the almost 1000 references cited in the text. I was glad to see a table summarizing the locations of museum specimens of Mascarene birds, including, among other items, the locations of two alcoholic specimens of the extinct Réunion "starling" (*Fregilupus varius*). However, for the Dodo, the same table inexplicably omits the foot in the British Museum and the head in Copenhagen and fails to spell out the abbreviation for the University Museum at Oxford, which also has a head and a foot. I found the appendix rather scant, considering the wealth of information contained in the text. Nonetheless, there are few such problems overall and almost no typographical errors. It is unfortunate that the steep price of the volume will discourage all but institutional buyers from purchasing it.

Reading between the lines of the foreword by Guy Mountford and the introduction by A. Diamond and Cheke, one gathers that this volume's production was as threatened by limited funds as are the remaining birds by the factors that have obliterated over 60% of the archipelago's endemic avifauna. Biologists and conservationists alike will be grateful both for the survival of the BOU effort and for the prospects it raises for the conservation of the 18 endemic species of birds remaining on the Mascarene Islands.—ANTHONY H. BLEDSOE.

THE BIRDER'S HANDBOOK: A FIELD GUIDE TO THE NATURAL HISTORY OF NORTH AMERICAN BIRDS. By Paul R. Ehrlich, David S. Dobkin, and Darryl Wheye. Simon & Schuster Inc., New York, New York, 1988:xxx + 785 pp., numerous illustrations by Shahid Naeem. \$14.95.—Readers familiar with other books by Paul Ehrlich will wonder about his participation in the production of a book on birds. Never fear, this book is of the same quality

as other Ehrlich books; it is authoritative, exhaustive, and a real contribution to the education of bird students everywhere.

This is an unusual book; the left facing pages are devoted to summarizing behavioral, nesting, diet, and conservation information regarding each of the species of North American birds. (Most rarities are not included.) Illustrations are provided that tell one at a glance what type of nest is built, the normal clutch size, the role of each sex in care of the nest and young, composition of the nest, food items, habitat, and more. Recent references that discuss the species in question are cited.

On right facing pages essays are provided that discuss just about anything imaginable. Anatomy, physiology, advanced taxonomy, and the like are given thin or no coverage. However, most of the "hot" topics in ornithology are given authoritative, often exciting descriptions. I was impressed with the detail and quality of the information provided. In some instances the essay was essentially the same as papers I had heard by authorities at recent scientific meetings. Topics as diverse as salt glands, feathers, birds and the law, polyandry, fossil birds, urban birds, vocal development, and island biogeography are discussed. These are only a few of the essays; the total must be over 200. The authors also saw fit to give biographies of famous ornithologists, living and dead. The result is that an interested reader, professional or amateur, can quickly get an overview of the subject or person in the essay. The editorial treatment given the book was also of high quality. I found virtually no typographical errors. The typesetting and quality of illustrative materials are all first rate and the illustrations generally are relevant.

I thoroughly recommend this book to bird-watchers or listers who are considering learning more about ornithology. The presentations are given in such a clear and engaging fashion that I believe many will find themselves reading about subjects far from their previous interests. The net result will be that they will find themselves caught up in the developments of scientific ornithology and interested in how birds function at all levels. The fact that the book also provides the best summary of the life history statistics of North American species is simply a big bonus. The relatively low price for a really substantial paperback book is frosting on the cake.—C. R. BLEM.

EXTINCT BIRDS. By Errol Fuller. Facts on File Publications, New York, 1988:256 pp., 59 color plates, 81 black-and-white figs. \$35.—With the rate of extinction (or potential extinction) of birds increasing sharply in recent years some ornithologists have wondered if there will be anything left to study by the time their scientific careers have ended. Over the years there have been several attempts to catalog the depressing story of the extinctions. In 1907 Walter Rothschild published a sumptuous, copiously illustrated work entitled "Extinct Birds." This long-out-of-print, and now long-outdated, book was hardly intended to be a popular account. Since that time Greenway's "Extinct and Vanishing Birds of the World" (1958) and King's "Endangered Birds of the World: the ICBP Bird Red Data Book" (1981) have outlined in a technical way the details of the disappearance of species. The present author has attempted to produce a popular, yet factual, successor to the Rothschild work. He has been quite successful in the attempt and has come up with a "coffee table" book that is more than that.

The book discusses in detail and gives a colored illustration of 74 species that have become extinct since 1600. The selection of that starting date eliminates the necessity of dealing with countless fossil and subfossil forms whose status is uncertain, but does lead to the inclusion of *Aepyornis* and three species of moa, as well as three didine species from the Mascarene Islands. The selection of this starting date is certainly defensible, but it does

allow the author to ignore the results of Olson and Steadman who have shown that the arrival of primitive man on many of the islands of the world resulted in wholesale extinctions of the avifauna.

The selection of species follows the list of Birds Known or Thought to Have Become Extinct Since 1600 given by King (op. cit.), except that the various extinct subspecies are not included if other races still exist. The extinct races are, however, listed in tables and occasionally mentioned in the family accounts. In a few cases Fuller is more optimistic than King in considering the possibility that a night-bird or a bird of the deep forest which has not been reported for 50 years or is known only from one specimen might still be extant.

The text is arranged with the species grouped in 17 orders. For each order there is an introductory account that gives in tabular form a listing of the rare, endangered, or little known forms of that order. Many of these are then discussed briefly in the introductory text. There follows a detailed account of each extinct species together with a colored illustration. A final chapter discusses several Hypothetical Species and Mystery Birds. This list includes Cooper's Sandpiper (*Calidris ? cooperi*).

The Rallidae, with 11 species, lead the list of extinctions, with the Psittacidae following with 9 and the Columbidae with 6. There is also a list of 13 hypothetical extinct parrots. Twenty-four passerines are listed including 6 drepanidids. Fifty-three passerine subspecies are considered to be extinct and 18 passerines are listed as being known only from museum specimens.

The text of the species account is a mixture of interesting anecdote and the factual details about the species. There are occasional asides about the personalities of the people involved. Of interest is the account of the disputes between Lord Rothschild and Sir Walter Buller, particularly about the naming of the celebrated Stephen Island Wren (*Xenicus lyalli*).

The colored plates are selected from many publications of the past and are by 14 artists including Audubon, Lodge, Fuertes, and Gould. Twenty three of the plates are by J. G. Keulemans, many taken from the Rothschild book. Introducing the modern audience to the talents of this excellent, but almost forgotten, bird-artist is one of the major contributions of this book. The author has contributed his own paintings for 6 species.

While the classic cases, such as the Passenger Pigeon (*Ectopistes migratorius*) are covered in detail, the author has not really consulted the recent literature, and thus has not kept up with the exponential increase in extinctions. The bibliography lists only three papers published after the Red Data Book in 1981. In particular the author seems to be unaware of some of the American literature. How can anyone write an account of the Carolina Parakeet (*Conuropsis carolinensis*) without referring to the numerous publications of Daniel McKinley? Bachman's Warbler (*Vermivora bachmanii*), Kirtland's Warbler (*Dendroica kirtlandii*) and the Hawaiian Crow (*Corvus hawaiiensis*) are listed as being rare or endangered; they are not discussed further. While the Culebra race of the Puerto Rican Parrot (*Amazona vittata*) is listed as extinct no mention is made of the dire straits of the nominate race. Seventeen corvids are listed as endangered but no additional comment is given for any of them, although some of these are close to the brink, e.g., the Guam (Marianas) Crow (*C. kubaryi*).

Despite these shortcomings the book is recommended for those interested in this gloomy subject.—GEORGE A. HALL.

BIBLIOGRAPHIE ORNITHOLOGISCHER BIBLIOGRAPHIEN II. AVES. BIBLIOGRAPHY OF ORNITHOLOGICAL BIBLIOGRAPHIES II. By Helga Brassler. Courier Forschungsinstitut Senckenberg., Vol 99. Frankfurt a.M., Germany, 1987:214 pp. Price not given.—This bilingual publication should be of help in making a literature search. Included are references to about

900 ornithological publications, each containing at least 100 references. Entries are arranged alphabetically by first author and include "key word" notations as to the general subject of the work. There is also a list of personal bibliographies that have been published. There are three indices: Co-authors, Biosystematic, and Subject. The publication should be available in most research libraries.—GEORGE A. HALL.

BRIEFLY NOTED

OILED BIRDS: HOW TO SEARCH FOR AND CAPTURE OILED BIRDS AT OREGON INTERTIDAL AREAS. By Range D. Bayer. Studies in Oregon Ornithology No. 5, Gahmken Press, P.O. Box 1467, Newport, Oregon 97365, 1988:29 pp. 10 black-and-white photos. \$3.50 (paperback).

The following books are unrevised American reprintings of Collins' Field Guides published in England some years ago. They are distributed by Viking Penguin, Inc., 40 West 23rd St., New York, New York 10010.

THE COLLINS GUIDE TO THE BIRDS OF BRITAIN AND EUROPE. By Hermann Heinzel, Richard Fitter, and John Parslow. The Stephen Greene Press, Lexington, Massachusetts, 1988:320 pp., unnumbered maps, many colored plates. \$15.95 (paper).—Originally published in 1972 with revision 1984. See review, *Wilson Bull.* 86:91–94 (1974).—G.A.H.

THE COLLINS FIELD GUIDE TO THE BIRDS OF EAST AFRICA. By John G. Williams, illustrated by Norman Arlott. The Stephen Greene Press, Lexington, Massachusetts, 1988:415 pp., 48 colored plates. \$21.95.—Originally published in 1980.—G.A.H.

THE COLLINS FIELD GUIDE TO THE BIRDS OF WEST AFRICA. By William Serle and Gérard J. Morel, col. plates by Wolfgang Hartwig. The Stephen Greene Press, Lexington, Massachusetts, 1988:351 pp., 44 colored and black-and-white plates. \$21.95.—Originally published in 1977. See review, *Auk* 96:436 (1979).—G.A.H.

THE COLLINS FIELD GUIDE TO THE BIRDS OF SOUTH-EAST ASIA. By Ben F. King and Edward C. Dickinson, plates by Martin Woodcock. The Stephen Greene Press, Lexington, Massachusetts, 1988:480 pp., 64 colored and black-and-white plates. \$19.95 (paper).—Originally published in 1975. See review, *Auk* 93:862–864 (1976).—G.A.H.

The following publications are available from the Publications Unit, U.S. Fish and Wildlife Service, Room 148 Matomic Building, Washington, D.C. 20240.

SAND AND GRAVEL PITS AS FISH AND WILDLIFE HABITAT IN THE SOUTHWEST. By William J. Matter and R. William Mannan. U.S. Fish and Wildlife Service Resource Publication 171, Washington, D.C., 1988:11 pp.

WATERFOWL DAMAGE AND CONTROL METHODS IN RIPENING GRAIN: AN OVERVIEW. By C. Edward Knittle and Richard D. Porter. U.S. Fish and Wildlife Service Technical Report 14, Washington, D.C., 1988:17 pp.

BIRD DAMAGE TO SUNFLOWERS IN NORTH DAKOTA, SOUTH DAKOTA, AND MINNESOTA, 1979–1981. By Roger L. Hothem and Richard W. DeHaven. U.S. Fish and Wildlife Service Technical Report 15, Washington, D.C., 1988:11 pp. and **INFLUENCE OF ENVIRONMENTAL**

FACTORS ON BLACKBIRD DAMAGE TO SUNFLOWER. By David L. Otis and Catherine M. Kilburn. U.S. Fish and Wildlife Service Technical Report 15, Washington, D.C., 1988:11 pp.

APPLICATIONS OF A SIMULATION MODEL TO DECISIONS IN MALLARD MANAGEMENT. By Lewis Cowardin, Douglas H. Johnson, Terry L. Shaffer, and Donald W. Sparling. U.S. Fish and Wildlife Service Technical Report 16, Washington, D.C., 1988:28 pp.

RESPONSE TO SIEGEL-CAUSEY (*Wilson Bull.* 100:708, 1988). "A Bibliography of Ornithological Translations, Current Ornithology, Vol. 4" performs a valuable service. My review of it (*Wilson Bull.* 100:149-150, 1988) was in no way designed to imply otherwise. However, its utility is reduced by indexing errors, some caused perhaps by mistakes in translation of common names or by back-formation of binomials. Yet it would seem difficult to explain most indexing errors in those ways. For example, 20 citations fall under "Recurvirostridae." Three include the names "stilt" or "avocet." The others refer to "woodcock" (11, 4 accompanied by "*Scolopax rusticola*"), "snipe" (3, one joined by "*Gallinago*"), "painted snipe" (one), "dowitcher" (one, joined by "*Limnodromas griseus*"), and "whimbrel" (one). Of these, only the latter two are listed elsewhere under an appropriate taxonomic heading; nowhere else are the others indexed taxonomically.

If the subject/taxonomic indices instead of the citations were meant to reflect the actual nature of the articles, then one would presume a fair bit of inaccuracy in translation. Perhaps a novel taxonomic classification was used instead. Perhaps there were actual mistakes in allocating citations to taxonomic headings. Regardless, the utility of the Bibliography is somewhat reduced, because most users will not find citations where one might expect them. Without scanning the full list of citations, users may miss pertinent papers. It was merely my intent to point out this problem so that readers can use the Bibliography to full benefit.—
ANTHONY H. BLEDSOE.

INFORMATION FOR AUTHORS

The Wilson Bulletin publishes significant research and review articles in the field of ornithology. Mss are accepted for review with the understanding that the same or similar work has not been and will not be published nor is presently submitted elsewhere, that all persons listed as authors have given their approval for submission of the ms, and that any person cited as a personal communication has approved such citation. All mss should be submitted directly to the Editor.

Text.—Manuscripts should be prepared carefully in the format of this issue of *The Wilson Bulletin*. Mss will be returned without review if they are not properly prepared. They should be neatly typed, double-spaced throughout (including tables, figure legends, and "Literature cited"), with at least 3 cm margins all around, and on one side of good quality paper. Do not use erasable bond. **Mss typed on low-quality dot-matrix printers are not acceptable.** The ms should include a cover sheet (unnumbered) with the following: (1) Title, (2) Authors, their institutions, and addresses, (3) Name, address, and phone number of author to receive proof, (4) A brief title for use as a running head. All pages of the text through the "Literature cited" should be numbered, and the name of the author should appear in the upper right-hand corner of each. The text should begin in the middle of the first numbered page. For