

ORNITHOLOGICAL LITERATURE

PEREGRINE FALCON POPULATIONS: THEIR BIOLOGY AND DECLINE. Edited by Joseph J. Hickey. University of Wisconsin Press, Madison, 1969: 6½ × 9¼ in., xxii + 596 pp., 32 pages of photos. \$10.00.

The difficulty of reviewing this work can be briefly summarized by noting the fact that the book consists of 32 individual articles, nine discussion sections, and 12 brief reports on other raptors. It is the proceedings of an international conference held in the fall of 1965 to discuss the unprecedented decline of the Peregrine during the previous decade. Rapid publication of a conference of this type is difficult, due to the large number of contributors; in this respect this work compares unfavorably with the proceedings of the International Ornithological Congresses. This is to be regretted in such a rapidly developing field as the relationship of wildlife to environmental change. However, some of the most significant findings to 1968 have been added to the discussion.

The first 280 pages are devoted to population studies of the Peregrine. In Alaska and British Columbia no change in the Peregrine population has been found. This is probably true for the northern Canadian population, estimated at 7,500 pairs, although detailed data are lacking. In the western United States the population has been seriously reduced and the species has been extirpated from the eastern United States. In Europe the decline has been most severe in the northern and central areas. The current Finnish population being only a few percent of their former numbers. In West Germany a decrease of 77 percent between 1950 and 1965 was noted. In the British Isles an unprecedented decline started in the mid 1950's but the population has now apparently stabilized at a low level. In France the Peregrine has been extirpated in Normandy and severely reduced elsewhere. The continued success of the species in Spain, only briefly noted in the conference, is the one bright spot in Europe. No information is presented for Russia or southeastern Europe.

The conference discussed a wide range of possible explanations for the decline. This can be divided into two parts, a slow long-term decline due to the encroachment by man and a rapid decline over wide areas starting in the early 1950's. The rapid decline in various areas had at least some of the following characteristics in common: (1) failure to lay eggs, (2) reduced clutch size, (3) egg breaking and eating, (4) failure to re-lay after loss of initial clutch, (5) embryonic mortality, and (6) some nestling mortality. Hickey and Roelle conclude (p. 565) that "The ecological case against the chlorinated hydrocarbon insecticides as the pervasive factor in these phenomena is essentially complete." While this view is a fair summary of the viewpoint of the conference, some of the inconsistencies of the data are discussed at length by Stickel in Chapter 42. Nor are other possible factors neglected. Pathogens, parasites, and predation are discussed but no evidence for these factors causing a serious widespread decline was found.

The plates are well chosen to show nest sites and habitats. Many are, I believe, not previously published although the editor was unable to resist the inclusion of the most famous Peregrine photograph of all—A. A. Allen's Peregrine at Taughannock. Reproduction is adequate but not first class. The figures are well drawn and the index excellent. Typographic errors appear to be few, although I had difficulty in deciding what I had done on elucidating the mechanism of change of calcium metabolism (p. 564). On the subject of style, one can say little since so many contributors are involved. The term "decimating factors" referring to the northern Canadian population is surprising, considering the apparent stability there. Decimating means literally the

killing of every tenth individual. Would that the eastern population of the Peregrine had merely been decimated!

In view of the enormous interest in oil in Alaska, one imagines that there is no prospect of Cade's visionary idea (p. 504) of the setting aside of a wilderness area coming to pass. Future generations will regret that his suggestion for the minimum requirement for preservation, "the setting aside of the entire Arctic Slope of Alaska as a wilderness refuge and the restriction of any permanent human habitation north of the Brooks Range" including the entire upper Yukon drainage system, was not acted on.

Not only ornithologists but all persons interested in conservation are in Hickey's debt for his work on this conference and its proceedings. The value of examining changes of the environment on a greater than national basis are clearly shown.—DAVID B. PEAKALL

A DISTRIBUTIONAL SURVEY OF THE BIRDS OF HONDURAS. By Burt L. Monroe, Jr. Ornithological Monographs No. 7, American Ornithologists' Union, 1968: 458 pp., 2 col. pls., 28 text maps. \$9.00 (\$7.20 to A.O.U. members).

This is the first comprehensive distributional account of Honduran birds. Hitherto Honduras has lacked even an adequate check-list, although zoogeographically the country is one of the most complex and interesting in Central America. The interior is believed to date back to Palaeozoic times, constituting part of "nuclear" Central America, which was separated from South America by water gaps in Nicaragua and Panama during most of the Tertiary. Since then many South American humid forest species have spread northward, but encounter an ecological filter barrier in the arid interior valleys and in the puzzling pine savannas of the Caribbean coast. These pinelands, of uncertain origin, have fostered an extension into the tropical lowlands, south to Nicaragua, of several temperate North American species, which farther north in Middle America inhabit highlands. The last check-list for Honduras (Stone, 1932) listed 410 species. My own Middle American list (1955), based largely on published records, attributed 585 species to Honduras, 11 of which Monroe, very properly, doubts or rejects. He accredits 663 species to Honduras, including the Swan Islands. One may question the inclusion of the avifauna of these islands, some 200 km out in the Caribbean, as an integral part of that of Honduras—considering the fact that the United States has long exercised jurisdiction as sovereign. But the species added consist only of a few West Indian endemics and migrants from the north.

Although not stated, this work is essentially Monroe's doctoral dissertation at Louisiana State University. Judging by literature references to 1966, some subsequent changes were made. Monroe collected in Honduras from 2 August 1962 to 13 May 1963, and from 30 March to 19 April 1964; he also had available specimens obtained by other field parties from his university. The most important material studied consisted of the vast collections made by the professional collector, C. F. Underwood, between 1931–1938, numbering well over nine thousand skins, scattered in various museums. Monroe checked most of Underwood's birds, including those in the United States and in the British Museum, as well as significant collections made by others. With this material, his field experience, and his investigation of the literature, Monroe has been able to provide a better picture of bird distribution in Honduras than is presently in print for the neighboring countries of Guatemala and Nicaragua. He points out that Honduras is still perhaps the least known country in Central America and that several areas have not been worked at all or very superficially. Much of this rugged country is devoid of roads

and accessible only with difficulty. Some taxonomic problems involving distribution will require for their solution detailed field studies concentrated on particular species. But Monroe provides a good start.

The work is carefully organized. Two color plates by his university colleagues, S. A. Gauthreaux, Jr. and J. P. O'Neill, adorn the book. There are many helpful text maps. An introduction emphasizes the zoogeographic importance of Honduras, reviews recent additions to the known avifauna, and indicates areas particularly needing ornithological exploration. Then follows treatment of geology, soils, climate, and habitats. For habitats Monroe adopts essentially the nomenclature of Carr (1950); my only question here is the inclusion under "rain forest" (the wettest forest class) of areas with as little rainfall as 80 inches per year. A section entitled "History of Honduran Ornithology" includes, *inter alia*, not only Monroe's itinerary, but a useful summary of Underwood's travels. The central and major part of the book consists of individual species accounts. Under a species heading, with scientific binomen and English name (based on Eisenmann, 1955, or the A.O.U. Check-List, 1957), are listed Honduran specimens examined, giving number, locality, sex, date, and institution where housed; then additional published locality records. A paragraph or two summarizes Honduran distribution, habitat, and status. Where appropriate this may be followed by a comment on taxonomy at the species or genus level. A final paragraph "Geographic Variation" discusses the subspecies to which Honduran specimens should be attributed, not infrequently rejecting a described race. At the end of the book are interesting accounts of migration, an analysis of the avifauna by habitat and by presumed origin, a gazetteer, a bibliography, and an index.

Monroe intentionally has restricted this book to systematics and distribution, giving very little data on behavior, life history, or details of ecology. He has thus been able to devote considerable space to discussion of taxonomy at the species and subspecies level. I do not feel competent to appraise the question of Honduran subspecies; but, on the species level, generally I find myself in agreement, and where my present opinion may differ, the case admittedly is a controversially uncertain one.

As Monroe has been exceptionally careful in regard to nomenclature, it may be appropriate to call attention to a few such matters. The original spelling of the subspecific name of *Cypseloides rutilus brunnetorques* (Lafresnaye), which is used by Peters and Zimmer, should be maintained; the emendation, "*brunneitorques*," formerly often seen, is not warranted by the Code. I share Monroe's objection to the recently suggested transfer of this name from the Colombian form to the west Mexican race (long known as *griseifrons*), on the basis of re-identification of an ancient, faded, mounted specimen. Monroe's rejection on the ground of *nomen oblitum* of the proposal (Deignan, 1961; Phillips, 1962) to supplant the well-known *Chaetura richmondi* Ridgway by "*Chaetura similis* Salvin and Godman," is correct, but "*similis*" can be rejected for a more basic reason, that it is not an "available" name under Code, Art. 11(d), as has been pointed out by Wetmore (1967). Following all authors since Stone (1897), including Ridgway (1902) himself, Monroe has treated the original spelling of the subspecific name *Sturnella magna inexpectata* Ridgway (1888) as a *lapsus* for *inexpectata*. R. W. Dickerman has kindly called to my attention that, according to Latin dictionaries, either spelling was correct, hence no *lapsus* justifying emendation could be assumed. Nevertheless, the fact that Ridgway himself in his major work (1902) intentionally adopted Stone's emendation is evidence that the original spelling was in fact inadvertent; the same uniform usage by others for seventy years justifies its maintenance by Monroe. Monroe accepts Stein's specific division of the *Empidonax trillii* complex, and (following Stein) uses the name *E. brewsteri* Oberholser for the populations which

call "*fitz-bew*." For reasons to be detailed elsewhere, I believe that (regardless of specific or subspecific status) Audubon's name *trallii* belongs to the Arkansas prairie population, which is a "*fitz-bew*" vocalizer, and *alorum* Brewster to the northern "*fee-bee-o*" singers.

On many controversial matters of taxonomy, Monroe has not hesitated to express his opinion, sometimes in unequivocal terms, but at least he has given his reasons. He explains his philosophy, which he states will cause him to be regarded as a "splitter" at the generic and specific levels and a "lumper" at the subspecific level. Actually he has done no new splitting in this book, but merely rejected some recent proposals for lumping genera and species. His conservative approach will not endear him to those ornithologists who are sensitive about the sinking of their subspecies or who feel strongly about their taxonomic views. As an author of a distributional work has to select the scientific name to use, he is forced, at least to that extent, to make a taxonomic decision in controversial cases. The systematic investigation necessary to determine local subspecies usually is feasible in a regional study, but when it comes to taxonomic problems at the generic or species levels whose determination may require going far beyond the area treated, most authors dealing with local distribution feel it the safer course to rely on some published authority. Monroe not infrequently indicates that he has exercised a personal judgment; one cannot help wondering in certain cases how he had the time to investigate adequately the extra-Honduran material during the course of a Ph.D. study. Nevertheless, it should be said that his treatment of controversial genera and species is almost always in accord with that of the major neotropical taxonomists, Hellmayr, Peters, or Zimmer, and usually of all three. However, two cases are worth mentioning where, *while Monroe may well prove to be right in his conclusions*, he seems to me to oversimplify a problem whose satisfactory solution requires further fieldwork outside of Honduras. These cases warrant discussion, because Monroe's treatment, while deviating from that of most recent authors, is adopted in the recent Volume 14 of the "Check-list of Birds of the World" (1968), of whose section on Parulidae, Lowery and Monroe are authors. In agreement with Slud (1964), Monroe has removed the Buff-rumped Warbler, *fulvicauda* group, from the genus *Basileuterus* to *Phaeothlypis*, a genus erected by Todd (1929). In appearance, song, general behavior, and habitat, as Monroe indicates, this complex differs strikingly from other Middle American species assigned to *Basileuterus*. But the generic situation in South America, not here discussed, makes more dubious the recognition of *Phaeothlypis*. The South American *rivularis* group, found east of the Andes, which Todd expressly kept in *Basileuterus*, and excluded from his genus *Phaeothlypis* by the diagnosis provided, is so like the *fulvicauda* group in appearance and habits that all current authors regard the two as strictly congeneric, and many as conspecific. At most they are allopatric semispecies. As Monroe includes *rivularis* in *Phaeothlypis*, should not a new diagnosis be supplied of the enlarged genus that will separate it from *Basileuterus*? But the case is still more difficult. There are one or two other South American species that seem in appearance, and, judging from the literature, in behavior, and style of song, to bridge the gap between the *rivularis-fulvicauda* super-species and the more "typical" members of the genus *Basileuterus*. This is frankly indicated in footnotes in the Check-list of Birds of the World (1968, vol. 14, p. 75); so what are the distinguishing characters of *Phaeothlypis*?

Monroe merges *Basileuterus delatirii* with its more northern ally *B. rufifrons*, suggesting that they intergrade through *salvini* (which most authors have regarded as a race of *B. rufifrons*). On morphology this seems an acceptable treatment, and was adopted by Ridgway, but subsequently both Todd (1929) and Griscom (1932), with more material, insisted that the distribution in Guatemala showed overlap without intergradation. As

Monroe attributes all Honduran specimens to nominate *delatirii*, they contribute little to solution of the problem. Admittedly (as earlier pointed out by Dickey and van Rossem), Todd's supposed "generic" character of wing/tail ratio does not hold, but there are color differences that distinguish *B. delatirii* from the *B. rufifrons* group and may serve as specific characters if there is sympatry. Quite possibly the seeming overlap in Guatemala may be explicable by something other than sympatry, but that will require fieldwork there. The statement that the allied forms "are essentially allopatric and intergrade over a wide area in eastern Guatemala" imports a demonstrated fact, rather than an opinion as to probabilities. In this connection it should be noted that the traces of white below the auriculars reported in a few Honduran *delatirii* do not necessarily indicate introgression of *salvini* genes, for the same traces are often found in the distant subspecies *B. d. mesochrysus*, all the way to Colombia. These comments are not intended to discourage expression of opinion (a keen mind like Monroe's may have sound insights even on scanty data), but rather to encourage additional investigation of an open problem that might otherwise seem to be solved.

Anyone interested in the distribution and taxonomy of neotropical birds will find this a useful and stimulating (and sometimes controversial) book. If we had as conscientiously and competently prepared works for all countries of Middle America, the task of those preparing the next A.O.U. Check-List of North American Birds would be greatly facilitated.—EUGENE EISENMANN.

THE AUDUBON ILLUSTRATED HANDBOOK OF AMERICAN BIRDS. By Edgar M. Reilly, Jr. O. S. Pettingill, Jr., Editor in Chief. Sponsored by the National Audubon Society; published by McGraw-Hill Book Company, New York, 1968: 8¾ × 11¼ in., xvii + 524 pp., 31 col. pls., c. 400 bl. and wh. photos, 100 drawings. \$25.00.

This "handbook," which weighs almost five pounds, hardly fits my dictionary's definition, "a small book . . . for guidance." It is, instead, a heavy compendium covering all the birds that regularly occur in the United States and Canada, including Greenland, Alaska, and Hawaii. It also treats, but usually in less detail, extinct birds, introduced species, and accidentals for which specimen records exist: a grand total of nearly 875 species.

After a brief introduction, the book takes up each family in A.O.U. Check-list order, the Hawaiian forms interspersed with the North American. The families are introduced by a brief summary of their characteristics: body sizes, general plumage types, geographical ranges, breeding data, interesting extralimital forms, etc. This general summary is then followed by a separate account of each species in that family. Some birds are covered by a short paragraph or two, but most are given a more thorough treatment, organized by seven topic headings: appearance, voice, range and status, habitat, seasonal movements, biology, and suggested reading. Well over 500 of the species are illustrated by photographs or drawings.

When an author sets out to discuss some 875 species in 505 pages, approximately one-half of which are filled by illustrations, his text must necessarily be written in a very condensed style. In most instances Reilly has done this very well. The least successful cases are in the plumage descriptions; they are very uneven, some too short (the Common Loon is given only five lines, and the adult breeding plumage is not described) and others overly long (McCown's Longspur rates 20 lines of painstaking description). A few are simply poor or confusingly worded (Brown Pelican) but the majority are

probably adequate for the space available. The voice descriptions are also spotty, some good, others inadequate in light of present knowledge. Reilly often fails to identify the behavioral implications of sounds, although they are generally available in recent literature: which vocalizations are territorial song, which alarm notes or distress calls, etc. Range (including extralimital) and status are described in considerable detail, much more than in most field guides. In places the very condensed geographical shorthand ("P.E.I." and "c.Mack.," for example) may be confusing to readers not used to this sort of thing, but it usually can be deciphered through adjacent, more familiar, abbreviations. The remarks on status are often very useful, but not always current; the figure given for Whooping Cranes is 33 in 1963.

By far the most valuable aspects of the book are the sections on seasonal movement, habitat, and biology. These contain information that is not usually in field guides and may be difficult to find without a sizeable reference library. Even if a reader has extensive library facilities available, it is extremely convenient to have migration times, habitat preferences, and such aspects of basic biology as number and color of eggs, incubation periods, fledging ages, and number of annual broods for all North American birds brought together in one volume. In the weeks I have had this book, I have used it often for this kind of information.

Reilly has been very careful in his compilation of data not to gloss over those aspects of avian biology that are not known. He clearly points out gaps in our knowledge of American birds and it is hoped that readers may fill these in as opportunities arise. I am sure that many facts, particularly incubation periods and fledging ages of some of our commonest birds, remain unrecorded simply because few people realize they are yet to be determined.

Overall, it is clear that this book has been painstakingly researched and compiled. It is a monumental collection of information, and as such, the author may be justly proud of the almost complete lack of factual errors therein. One of the few mistakes I spotted was the statement that only (adult) male Cedar Waxwings bear "the waxy scarlet tips on the smaller feathers of the wing"; adult females also occasionally have well-developed "wax" tips, and I have even seen small bits of red in the juvenal plumage.

Probably the greatest fault of the book lies in its writing style. Although it is encyclopedic in nature, and perhaps not meant to be read through like a book with a narrative, it is nevertheless exceedingly dull reading. Time after time I noted the omission of an interesting bit of information or mention of current exciting research that might have given the book some life. People study birds because they find them interesting; this compilation will offer facts about birds, but very little of what is fascinating about them.

The book also contains a large number of inconsistencies and small annoyances. Reilly lists the (editorial office) addresses of the three main American bird journals, but with no indication that these are temporary; indeed, two were out of date when the book was published (the A.O.U. in Lawrence, Kansas, and the Cooper Society in Berkeley, California). The Introduction states that the ranges will be given from west to east, and then the first one (Common Loon) is given east to west. Some of Reilly's discussions of family affinities are puzzling and need explanation, particularly such statements as "[swallows] are probably most closely related anatomically to the larks, thrushes, and weaver birds." And throughout the sections on Suggested Reading there is a lack of references to modern literature. Surely something more recent than John Burroughs' "Wake-Robin" (1871) could have been found for the Hermit Thrush? Two papers on the mating behavior of the Sage Grouse (Auk, 1940 and 1942) are the only references for

that species, missing the comprehensive monograph by R. L. Patterson in 1952. Obvious (and commendable) effort was made to keep to standard or easily-obtained literature, but exceptions occur (e.g., the title for the Greater Prairie Chicken is a University of Missouri publication) so there is no excuse for not including important references where they are pertinent and comprehensible to the general reader.

Primary among the inconsistencies, however, are the uneven treatments within and among certain species. To my mind there is too much general emphasis on "unusual" birds—accidentals and species with very restricted ranges. This may be an attempt to give better coverage to species that are usually omitted altogether from North American books, but it leaves this book out of balance. I cannot see why the White Ibis, a common enough bird in the southeastern states, is dismissed in only eight lines as "Essentially a white-plumaged Glossy Ibis . . .," which it is *not*; yet the introduced Spotted-breasted Oriole found only in the Miami, Florida region, deserves 29 lines. Sutton's Warbler, be it a hybrid or full species and on the Hypothetical List of the A.O.U. Check-list, is still in many of the field guides and deserves some mention, if only as an ornithological will-o'-the-wisp; both Brewster's Warbler and Lawrence's Warbler are described under one of the parental species. The Red-whiskered Bulbul, the only member of the Pycnonotidae within the range of this book, also occurs only around Miami, yet it has an entire (half-empty) page to itself. If this and the other "exotic" families were to be included in the book, they certainly (perhaps especially) deserved illustration; yet even where there is plenty of room for a photograph, none has been supplied (Pycnonotidae, Timaliidae, Cotingidae, Zosteropidae). It also seems a great shame that when an author has gone to such obvious pains to write in a space-saving style, the composers could not have honored his efforts by adjusting the illustrations and text so as not to leave quite so many half-blank pages.

The photographs are, for the most part, adequate but undistinguished. The Jaçana looks as though it is a mounted specimen, but others (notably passerines at their nests) are quite nice. The printing process, however, is such that the "black and white" illustrations lack crispness, coming out in varying shades of fuzzy gray. They cannot compare with the excellent reproduction quality in Brown and Amadon's "Eagles, Hawks and Falcons of the World" published recently by the same Audubon Society-McGraw-Hill coalition, and selling at a comparable price per volume. The colored photographs are variable, some very poor, but others good. The Black-necked Stilt settling over its eggs with its incubation patch in full view is particularly interesting, but curiously no mention is made of this in the caption or the text. The Cinnamon Teal is dreadful, being apparently of wing-clipped birds, and in garish color. I should have thought that when using only 31 color plates in a book of this price, better photographs could have been selected. Again, in comparison with Brown and Amadon, the present book suffers badly.

In summary, this "handbook" is a compilation of the basic knowledge on North American and Hawaiian birds. Careful attention has been given to accuracy of detail, and therefore it will be a valuable reference book for years to come. It is unfortunately rather dull to read, and has numerous inconsistencies, particularly in balance of treatment between and among species. It is, however, easy to use and should be both comprehensible and useful for the beginning student. Technical terms and jargon have been successfully avoided, and it is adequately indexed. The Handbook seems to have been designed for the bird watcher who wishes to go beyond his Peterson guides, but is not yet ready to invest in a set of Bent's Life Histories or other detailed references. With the low quality of illustration reproduction, however, I question whether it is a bargain for anyone at \$25.

—MARY HEIMERDINGER CLENCH.

HANDBUCH DER VÖGEL MITTELEUROPAS. Volume I. Gaviiformes—Phoenicopteriformes.

By Kurt M. Bauer and Urs N. Glutz von Blotzheim. Edited by Günther Niethammer. Akademische Verlagsgesellschaft, Frankfurt am Main, 1966: 6 × 9¼ in., 483 pp., many bl. and wh. illus., 14 maps. Price not given.

This first book of a proposed eleven-volume series, has grown out of the old German classic, "Handbook of German Ornithology," a three-volume work by Niethammer (1937, 1938, and 1942). The original coverage has been expanded both in terms of geography and content. Now encompassing central Europe, the text has additional headings such as "behavior" and "survey of the population" under each species treated. Completely dropped from the old text is the subject of parasites.

The book is organized in much the same way as Palmer's "Handbook of North American Birds" and this first volume likewise brackets the same taxonomic span: loons through flamingos.

The most obvious shortcoming of this handbook is the paucity of maps. There are only 14 used as aids in summarizing banding returns, distributions and migration routes. Even very small distributional maps as found, for example, in Robbins, et al., "Birds of North America" could have been put to good advantage and saved much verbiage. Even a map of the area covered by this book—i.e., central Europe—would have been most helpful. This area roughly takes in the Netherlands, Belgium, Luxembourg, Germany, Switzerland, Austria, Czechoslovakia, and Hungary.

Another deficiency exists under the heading of vocalizations. The sounds are given in phonetic syllables. The limited value of this method is at once apparent when it is encountered in a language other than one's own. Furthermore, I should think that "quärrärk quärrärk gwo gwo" conveys a limited amount of information even to one who speaks German. This space might better have gone to audiospectrographic representation of the vocalizations.

The sections on behavior are done especially well with generous illustrations. Another valuable feature is the extensive reference material presented both at the beginning of the book and throughout the text. In the introduction is a bibliography of the birds of the world organized by regions, as well as references listed under general avian topics as reproduction, food, migration, etc.

In determining the need for such a book, the authors consulted not only their colleagues but potential laymen users as well, and so they included such items as simplified keys to orders, families, genera, and species.

This concise book is not only an important reference for those interested in European ornithology but it also, at a glance, points out the gaps in our avian *Kenntnis* and thus, as Niethammer observed, this and following volumes will undoubtedly stimulate further research.—SAM E. WEEKS.

ANNOUNCEMENT

The Office of Science and Technology has released a report entitled "Systematic Biology—A Survey of Federal Programs and Needs," obtainable from Superintendent of Documents, Washington, D.C. 20402. Price: \$1.25.

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