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ORNITHOLOGICAL LITERATURE

NATURE IN ART: A CELEBRATION OF 300 YEARS OF WILDLIFE PAINTING. By David Trapnell. David & Charles, Newton Abbot and London. 1991: 160 pp., 110 color plates (some with preliminary sketches), 8 black-and-white plates. £35.00.—Among the numerous illustrated books on the history of wildlife art in general or bird art in particular, this contribution has a number of unique qualities. In spite of its title, it is not a survey of the history of wildlife paintings of the past three centuries. It is based *entirely* on the works owned by or loaned to the International Centre for Wildlife Art (ICWA) near Gloucester, England. This means that many of the outstanding figures among wildlife artists are not mentioned at all, much less their works reproduced. It also means that for some of the artists that *are* included, the reproduced pieces do not represent their best or most typical work. This is carried to an extreme in the case of Mark Catesby, whose career is briefly but adequately summarized. But the ICWA owns no Catesby original, so the Catesby account is illustrated by a reproduction of a *copy,* admittedly quite faithful, by a German named Johann Mark Seligmann (1720–1762), whose work published between 1749 and 1776 also included copies taken from George Edwards. Among the historical bird artists not mentioned are Abbot, Barraband, Cassin, Elliot, Grayson, Gronvold, Knip, Smit, and Swainson. Many later excellent British bird painters are missing, but twentieth century American and Canadian artists are particularly conspicuous by their absence, most notably Fuertes, but also Brooks, Horsfall, Sutton, and many living artists, including (to name only a few) Clem, Eckelberry, Gilbert, Lansdowne, O'Neill, Tudor, and (believe it or not) Roger Tory Peterson!

The author was a prominent British radiologist who gave up his career to found (in 1982) the Society for Wildlife Art of the Nations, which established the ICWA (also called by the shorter name "Nature in Art") in 1988. In his introduction (called "Celebration"), the author states: "Other than NATURE IN ART, at present there does not appear, anywhere in the world, to be even one comprehensive public collection of fine, decorative and applied art depicting any living (or previously living) wild thing in any medium, from any part of the world and any period of history." He makes the same point at least twice more in his "Celebration." Although the Leigh Yawkey Woodson Museum in Wausau, Wisconsin, is mentioned on pp. 67 and 82, Trapnell apparently has no idea of the scope of the Woodson Museum's collections, which are far superior to those of the ICWA, at least for twentieth century artists.

The author construes both "wildlife" and "painting" broadly. He includes wood engravings and block prints as well as etchings, but these occupy but a small part of the book. However, 11 artists are represented only by botanical works, a genre usually excluded from the definition of "wildlife painting."

When books like this one are compiled by persons with little or no training in ornithology, misidentifications are virtually inevitable. I have found only two, probably because in almost all instances the *artist* identified the subject of the painting. On p. 89, the "Egyptian Goose" head appears to be that of a male Muscovy Duck (*Cairina moschata*), the only waterfowl with the kind of knobbed bill in the drawing; the knob of the Spur-winged Goose (*Plectropterus gambensis*), is much higher on the forehead and the bill is much longer than in the picture. On p. 122, the caption to an illustration of the "Blue Jay" by George Edwards reads "This blue jay, from the West Indies, is not meant to be the same as that from North America." The species portrayed is actually the Indian Roller (*Coracias benghalensis*), widely known in English-speaking Asia as "Blue Jay."

Trapnell had no hesitation in pointing out what he felt to be faults in composition; in no

fewer than 7 plate captions, he tells us that the picture "would have been better if . . ." Only twice does he comment on ornithological errors, and these are both in crude 18th Century paintings whose faults are blatantly obvious: the Atkinson Grey Heron (*Ardea cinerea*) on p. 10 and the Albin Great Horned Owl (*Bubo virginianus*) on p. 120. His ornithological expertise was probably not sufficient for him to point out the too-long bill and too-small eye of the Black-crowned Night-Herons (*Nycticorax nycticorax*) on p. 61, the red iris of the Peregrine Falcon (*Falco peregrinus*) on p. 71, or the many faults in color and proportion in Japanese Waxwings (*Bombycilla japonica*—identified only as "waxwings") on p. 144. Lear's painting of *Ara ararauna* on p. 135 is identified as "Blue and Yellow Mackaw;" the misspelling is Trapnell's, as the spelling on Lear's lithograph is "Maccaw." The author misplaces the hyphen in "Greater-spotted Woodpeckers" (*Dendrocopos major*) (p. 96), apparently not knowing that the species derives its name from being the largest of the European spotted woodpeckers, not from its having the largest spots!

So far this has been a rather negative review. What positive things can we say about this book other than such clichés as "the color reproduction appears to be excellent." Its major contribution for American readers, I believe, is in introducing us to a number of European wildlife artists, both living and dead, many of whom should obviously be better known to us than they have been in the past. Among the living artists (excluding those specializing in botany), I confess to having been unfamiliar with the work of *Norbertine von Bresslern-Roth, *Jim Channell, *Don Cordery, *Michael Dumas, *Beth Erlund, *Anthony Gibbs, Vadim Gorbatov, *Robert Hainard, Rodger McPhail, Peter Partington, Colin Paynton, Lennart Sand, and *John Wilder; this may be owing, in part, to the fact that those artists whose names are starred (*) are represented by, and possibly specialize in, non-ornithological subjects.

Other than for collectors of *all* books on wildlife art, £35 (at this writing, about $54 US) may seem a steep price to pay for a text by a highly opinionated author-editor and a chance to meet a few unfamiliar artists, although the author is donating all royalties to the Society for Wildlife Art of the Nations. In a spirit of brotherhood, perhaps some of the many North American artists unrepresented in the ICWA collection may wish to donate one of their works in order to improve the coverage of what is apparently the best collection of wildlife art *in Europe.*—KENNETH C. PARKES.

BIRDS IN KANSAS. Vol. II. By Max C. Thompson and Charles Ely. Univ. Kansas Mus. Natural History, Lawrence, Kansas. Public Educ. Ser., No 12 (J. T. Collins, ed.), distributed by The Univ. Press of Kansas, Lawrence, Kansas. 1992: xvi + 424 pp., 167 black-and-white photos, 206 distribution maps. $25.00 (cloth), $14.95 (paper).—The first volume of this work was published in 1989 and dealt with the non-passerines (see review, Wilson Bull., 1990. 102:361–362). The recent volume covers the 207 passerine species recorded in the state, including three on the hypothetical list (Black Phoebe [*Sayornis nigricans*], Fish Crow [*Corvus ossifragus*], and Western Bluebird [*Sialia mexicana*], two extirpated species (Common Raven [*C. corax*] and Black-capped Vireo [*Vireo atricapillus*]), and one that is none-of-the-above (Hooded Oriole [*Icterus cucullatus*]). The format in this volume follows that of the initial volume with paragraphs on Status, Period of Occurrence, Breeding (if appropriate), Habitats and Habitat, Field Marks, and Food. These sections are dictated by the Univ. of Kansas Museum series of which these volumes are a part, and are used for most but not all of the species, the treatment being the most variable for field marks and food. I sympathize with the authors in their less than enthusiastic inclusion of these two latter categories since these topics are better covered in other sources. Yet, if it must be done, it ought to be done well. Some provincial Bostonian, for example, might actually believe that

there are pinyon pines in Kansas from reading the account of the Scrub Jay's (*Aphelocoma coerulescens*) food. The set of species for which field marks are not provided follows no pattern. Some are common (American Robin [*Turdus migratorius*]); some are rare (Hermit Warbler [*Dendroica occidentalis*]). Some are easy to identify (Green-tailed Towhee [*Pipilo chlorurus*]); some are difficult (Hammond's Flycatcher [*Empidonax hammondii*]).

The primary value of the book is its providing the definitive list of species in Kansas and their distribution across the 105 counties in the state. Each documented species has a map with the county(ies) of occurrence indicated. The distributions of the Alder and Willow flycatchers (*E. alnorum* and *E. traillii*) have been combined in one map, and there is no map for the Fish Crow or Western Bluebird (the other hypothetical species, the Black Phoebe, has a map). Recognizable forms like Audubon's and Myrtle Warblers (*D. coronata*), Bullock's and Baltimore Orioles (*Icterus galbula*), and Slate-colored, Oregon, White-winged, and Gray-headed Juncos (*Junco hyemalis*) have separate maps. But Red-eyed and Spotted Towhees (*Pipilo erythrophthalmus*) were not similarly treated. The map for the House Finch (*Carpodacus mexicanus*) includes dates of first record for counties beyond the western tier which clearly indicates expansion eastward through 1988, although a subsequent analysis suggests that most recent records in the east were birds invading from Missouri (Podrebarac and Finck, 1991. Kansas Ornithol. Soc. Bull. 42:33–36). A valuable improvement over the maps in volume I is the indication of breeding records by a different symbol.

The presentation of the black-and-white photographs is also considerably improved over volume I, both in quality and editing of the captions. Although there are major contributions of photos by the Cornell Laboratory of Ornithology and Dale and Marian Zimmerman (New Mexico), Kansas photographers, notably Bob Gress, David Rintoul, Gerald Wiens, Roger Boyd, Frank Shipley, and Calvin Cink, provide over half of the illustrations.

Kansas lies under the cross-hairs of the hundredth meridian and fortieth parallel. Hence, the status and distributions of the state's birds are important for interpreting the avian biogeography of North America. After a hiatus of a quarter of a century in the treatment of the region, Thompson and Ely have provided a valuable contribution to this understanding through the compilation presented in these volumes.—JOHN L. ZIMMERMAN.

THE BIRDS OF CYPRUS, 2nd Edition. By Peter R. Flint and Peter R. Stewart. British Ornith. Union Check-list No. 6, Dorchester, Dorset, England. 1992: 234 pp., 24 black-and-white and 16 color plates (plus color cover), 11 maps, 3 tables, 1 graph, and a line-drawing frontispiece. £18.00 in the United Kingdom and £20.00 overseas (prices include postage).—This is the second edition of a B.O.U. checklist first published in 1983, as well as the fifth significant compendium on the avifauna of Cyprus in the last 34 years. Such attention results from several factors, the most significant probably being the island's diverse and seasonally abundant birdlife. In addition, as a former British colony (1878–1960) and continued host to two of that country's military bases, its avifauna has long been studied by English and other foreigners—as well as increasingly by the people of Cyprus themselves. Finally, on the negative side, the widespread exploitation of birds for sport and food has focused increasing attention on Cyprus, as concerned Cypriots and others seek ways to deal with this matter.

At 9250 km^2, Cyprus is the third largest of the Mediterranean islands—after Sicily and Sardinia. It lies in the easternmost part of that sea, as close to Turkey and Syria (visible on clear days) as 72 and 105 km, respectively (plus about 370 km from Egypt). Elevations reach 1961 m in the Troodos Mountains of the southwest and 1024 m in the northern Kyrenia Range. Another of the island's prominent features is the central plain (Mesaoria), with a maximum span of 92 × 38 km and elevations generally below 100 m. Avian habitats

in Cyprus are varied, many being the product of, and probably all altered by, the thousands of years of human occupancy. Typical are extensive grain fields and other croplands, vineyards, orchards of olive (*Olea europea*), carob (*Ceratonia siliqua*), and citrus (*Citrus* spp.), and pastures of grasses, forbs, and shrubs. Significant areas of Cyprus have been reforested, notably in the Troodos Mountains—where native forests of conifers and broadleaf trees also persist. Mediterranean shrublands (maquis and garigue) are relatively widespread on the island, mainly on non-arable sites. Other avian habitats include exotic plantings (e.g., *Eucalyptus* and *Acacia* spp.), halophytic communities (e.g., *Salicornia*), cliffs, and coastal islets, plus salt lakes near Larnaca and Limassol. The climate features generally cool, wet winters and hot, dry summers, with autumn and spring periods tending to be variable.

In this work, the birds of Cyprus and their habitats are treated under 25 separate sections. Most important are those on the history of ornithological study; descriptions of the geography, geology, climate, and vegetation; summation of the avifauna; discussion of bird exploitation and conservation; annotated list of accepted species (grouped into non-passerine and passerine sections); bibliography; indices to birds by scientific and English names; and appendices on rejected species, ringing (banding) and recoveries, bird finding, and a table that depicts the seasonal occurrences of migratory species.

These authors accept 347 species of birds as confirmed in Cyprus, with 42 others rejected for a variety of reasons. Of the accepted species, the largest segment consists of 220 (ca 200 occurring regularly) that are migrants between Eurasia and Africa, followed by 110 (90 regular) that winter on the island. The smallest segment consists of the 98 species that have bred on Cyprus, of which 46 are residents, 27 migrants, and 25 occasional or former breeders. Twelve endemic and four near-endemic taxa have been described among the breeding birds, all but two usually considered subspecies. The two exceptions are the Cyprus Pied Wheatear (*Oenanthe* [*pleschanka*] *cypiaca*) and the Cyprus Warbler (*Sylvia* [*melanocephala*] *melanothorax*), treated here as full species. These two are widespread and common in Cyprus, while six others of these taxa are known to breed only in the Troodos Mountains—with the Dipper (*Cinclus cinclus olympicus*) now extinct. Other notable breeders among Cyprus birds are Eleanora's Falcon (*Falco eleonorae*), Audouin's Gull (*Larus audouinii*), Masked Shrike (*Lanius nubicus*), and recently the Dead Sea Sparrow (*Passer moabiticus*).

In general, this book does a laudable job in its treatment of the birdlife of Cyprus. The tome itself is a well-produced, although I suspect the flimsy binding will soon deteriorate—even with its hard cover. I noted few typographical or similar errors, but one involving fact appears on page 43: mist nets were used by bird banders in Cyprus as early as 1967, not 1969. In terms of omissions, I am disappointed that Cypriot names for birds are not included in this work—as these certainly exist and are useful in dealing with local people. In fact, one would hope that Greek and Turkish versions of this checklist might eventually be produced, which could be facilitated by the expanded involvement of Cypriots in the production of the next edition.

As a final point, I commend the authors for their attempts to deal objectively and constructively with the problem of bird exploitation in Cyprus. Millions of birds are killed there every year for sport or food, with the toll heaviest among species not generally regarded as game in Europe and America. Such exploitation is ingrained not only among Cypriots but other people in the Mediterranean region, and it has been practiced for centuries if not millennia. It will not be controlled, much less eliminated, by outsiders approaching its practioners in largely negative ways, such as by leveling unremitting criticism at them. Furthermore, Cypriots can rightly counter by pointing out the "sins" of others, including habitat destruction by the industrialized world. While charges and counter-charges may score points in debates, they do little to help wildlife and its habitat. Given this, I urge the adoption and expansion of positive approaches espoused in this book (e.g., education), not only in Cyprus

but for related problems throughout the world. Finally, conservationists should be prepared to accept compromise rather than no solution at all, such as an agreement that Cyprus will work to control the exploitation of nongame birds for now and toward its elimination in the future.—JOHN P. HUBBARD.

WILDLIFE HABITAT RELATIONSHIP CONCEPTS AND APPLICATION. By Michael Morrison, Bruce G. Marcot, and R. William Mannan. The Univ. of Wisconsin Press, Madison, Wisconsin. 1992: 33 pp., 11 black-and-white pictures, 55 captioned figures, 31 tables. $26.95 cloth.—In the preface the authors target their audience as ". . . advanced undergraduate and graduate students with a background in general wildlife biology and principles of ecology . . ." and ". . . the practicing wildlife biologist." The reader is recommended but not required to have completed "A course in statistics through analysis of variance, including correlation, regression, and inferential statistics. . . ." The latter recommendation may exclude most of those who fit the former (see below).

This long-awaited and well-written book is divided unevenly into seven chapters, the longest being the "Multivariate Assessment of Wildlife Habitat" (61 pages). Apparently, each chapter is designed to stand alone and has its own Literature Cited. Perhaps this is so the reader may pick and choose the topics that are of interest, without having to read the entire book?

Chapter One spends 14 pages, presenting a brief history of the concept of habitat and a list of the many topics that the book will cover. Table 1.1 lists important legislation in the a United States affecting animal habitat. Included are many of the major acts, but omitted is the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) which, in terms of dollars expended, has had the greatest effect on the suitability of wildlife habitat. The section of Ethical Concerns is excellent and should be read by all.

Chapter Two covers the concept of habitat from an ecological and evolutionary perspective and, thus, rehashes much of the same material covered in an Introductory Ecology text, e.g., Mengel's time-honored model of warbler speciation by reproductive isolation (glacial advances). Chapters one and two should probably be skipped, or at least skimmed, by all but the most recent adventurers into the wildlife field.

Chapter Three effectively summarizes the relatively recent idea about habitat fragmentation. The old adage of "good wildlife management creates more edge" is happily put to rest in this chapter. Topics such as Landscape Ecology, Patch Dynamics, Role of Corridors, Island Ecology, and the Dynamics of Metapopulations are explained in such detail as not to scare off the neophyte but still to capture the interest of the experienced professional. To me, this was the strongest chapter in the book.

Chapter Four deals with both the positive and negative aspects of measuring wildlife habitat. The authors cover five main topics; whom, what, how, when, and where to measure, stating that ". . . a failure of any one of these five factors will likely result in a critical weakness in the data set and place severe limitations upon the applicability of results to various management situations." Excellent guidelines are given for the selection of species phase of a study. The difficulty of getting a true count of individuals is summarized and references are given for more intense review. Diversity measures (i.e., Shannon and Weaver) are resurrected.

Chapter Five gives a very (overly?) long review of foraging behavior as it relates to wildlife-habitat relationships. Certainly the topic is of interest, there has been a great deal of work on the subject, and the authors are well-known in this area of research. But, it seems to me that 43 pages are a bit too much, given the title of the book. The first four chapters, taken together, and a greatly reduced version of Chapter Five would provide a very strong framework for a "senior-level" wildlife habitat ecology course.

Chapters Six and Seven are probably beyond the reach of the typical undergraduate wildlife management major and probably most masters degree students. Chapter Six deals with the development of predictive models which refer to ". . . estimating the presence, distribution, or abundance of a wildlife species, or group of species given information on actual or possible habitat condition." Table 6.3 provides the reader with an excellent definition of useful criteria needed when validating a wildlife-habitat relationship. Chapter Seven covers multivariate assessment of wildlife habitat. I found the coverage to be more than adequate, the literature citations comprehensive, and the strengths and weaknesses of the various techniques explained in as a non-technical manner as possible. I learned from reading it. But, again, I wonder if the intended audience would really grasp the topic. Perhaps, getting a brief overview is all that a manager really needs?

The book has few editorial flaws, including a misspelling here and there and some missing lines of figures (e.g., Fig 4.2). On page 71, the authors apparently mis-classify a short-tailed shrew (*Blarina brevicauda*) as a vole. But these are relatively minor when compared to other first printings and do not detract from the overall appeal of the book.

In sum, this is an excellent book and well worth the $26.95 suggested price. The math is non-scary, the layout appealing, and the coverage is more than adequate. The authors should be complemented for providing us with such a fine book. Finding the appropriate audience is going to be a challenge.—ROBERT C. WHITMORE.

MOLT OF THE GENUS *SPIZELLA* (PASSERIFORMES, EMBERIZIDAE) IN RELATION TO ECOLOGICAL FACTORS AFFECTING PLUMAGE WEAR. By Ernest J. Willoughby. Proc. West. Found. Vert. Zool. 1991, 4:247–286. 15 numbered text figs., 9 tables. $5.00.—Devoid of the excitement and adventure that accompany many areas of ornithology, the study of molt in birds requires uncommon dedication. Hours must be spent squinting at feather bases exposed with a long needle under a magnifying lamp or dissecting microscope. Vapors of carcinogenic fumigants from the skins being inspected waft up and burn the eyes. Handling older specimens, which frequently were dusted with arsenic, can cause persistent rashes. Dried bodies of lice and dander sift onto the data sheets. Worst of all, students of molt are branded as unimaginative practitioners of 19th century descriptive biology and find scant support for their work even within the profession. Not surprisingly, this is an uncrowded field. Willoughby's new publication is thus a welcome sign of continued interest in this important but often neglected branch of avian biology.

Willoughby hypothesizes that three broad factors presumably affect plumage wear—total solar radiation, relative exposure to abrasive vegetation, and relative dryness of habitat. Because the seven species of *Spizella* occupy a spectrum of habitats that vary with regard to the aforementioned factors, the molts of these sparrows are eminently suitable for comparative study. The author painstakingly examined hundreds of specimens of each of the six common species of the genus, the Field Sparrow (*S. pusilla*), Chipping Sparrow (*S. passerina*), American Tree Sparrow (*S. arborea*), Clay-colored Sparrow (*S. pallida*), Brewer's Sparrow (*S. breweri*), and Black-chinned Sparrow (*S. atrogularis*). Specimen data were supplemented by information from captive Chipping and Field sparrows. The resulting data allowed description of fundamental aspects of the timing, extent, and variation of molt. Scores for molt condition and relative amount of wear permitted quantitative assessment of these variables. Insufficient material of the seventh *Spizella*, the rare Worthen's Sparrow [*S. wortheni*], was available to justify its inclusion. However, existing data on this species, gathered decades ago by J. D. Webster, suggest that its molts are unusual for the genus and need further investigation.

Willoughby's hypotheses enabled the testing of explicit predictions. For example, possible effects of solar radiation were tested through comparison of molts of species wintering in

similar habitats but at different average latitudes because lower latitudes are associated with higher radiation. Similarly, the effects of abrasive vegetation were studied by comparing molts of species encountering differing levels of abrasion in their habitats. Finally, Willoughby predicted greater frequency of molting and increased rate of plumage wear in arid regions typified by high levels of solar radiation and abrasion from windblown particles and rough desert vegetation. This prediction was examined by determining the relative aridity of both breeding and wintering ranges of subspecies, through comparisons with mapped climatic provinces, and then ranking the taxa accordingly.

Extent and patterns of molt were strongly idiosyncratic among species. Field, Chipping, and Black-chinned sparrows undergo a prebreeding molt that results in a distinctive breeding plumage which is lacking in their congeners. The same three species protract this molt throughout the nesting period by repeatedly replacing face, chin, and throat feathers, a pattern not shown by the other species with shorter breeding seasons. A major finding of the paper is that the extent of prebreeding molt is correlated with rate of plumage wear and that the latter is correlated with probable level of exposure to abrasive vegetation during the nesting season. Willoughby concludes from this result that "the primary action of increased molting is to protect against plumage degradation, rather than to change plumage coloration for signaling." The potential generality of these findings beyond *Spizella* would be worth exploring.

Typically, both postbreeding and postjuvenal molts are completed on the nesting grounds in all species. However, many individual Clay-colored and Brewer's sparrows, and a few American Tree Sparrows, interrupt the fall molts for purposes of migration and finish the molt on the wintering grounds. Postjuvenal molt varied from complete replacement of flight feathers in some Field Sparrows, molt of only secondaries 7–9 and a few rectrices in the Clay-colored and Brewer's sparrows, to retention of all juvenal flight feathers in the American Tree and Black-chinned sparrows.

Population differences also were noted, although these were incompletely studied. Northernmost breeding populations of the Chipping Sparrow have the most extensive prebreeding molt. Different geographic components of the Black-chinned Sparrow showed pronounced variation in molt. Many individuals of the nominate form, for example, replaced most of the body plumage through the breeding season, a pattern not seen in other subspecies. Overall, extensive interspecific and intraspecific variability occurs both in the timing and progression of molt within local plumage areas.

As limited previous work with other taxa has demonstrated, the research on *Spizella* underscores the generalization that molting patterns of birds are remarkably variable. Although this variability has not been convincingly explained in any species of bird, Willoughby's approach of testing the predictions of specific hypotheses can be recommended as an especially promising methodology.

A welcome contribution of this paper is its scholarly critique of the Humphrey-Parkes (H-P) system of molt-plumage terminology. This system poorly accommodates molt patterns in *Spizella*. Furthermore, its several major weaknesses also extend to other taxa of birds. The author concludes that "the H-P system is not useful in the ways its authors intended" and recommends a reversion to more traditional terminology with its "superior adaptability, heuristic value, and information content." Willoughby's persuasive arguments should be weighed carefully, not only by students of molts and plumages generally but also by those editors who persist in requiring authors to use a system of nomenclature which has little to recommend it beyond current popularity.—NED K. JOHNSON.

BIRDS OF PREY OF THE BRITISH ISLES. By Brian Martin. Illus. by Alastair Proud. David & Charles (Publ.), distributed by Trafalgar Square, North Pomfret Vermont. 1992: 192 pp.,

24 color printings with captions, 39 plates with captions, flight silhouettes, numerous vignettes. $39.95.—The number of books treating birds of prey continues to increase, and the author of this book has attempted to come up with something a bit different. He has brought together information on 17 regularly occurring or breeding diurnal raptors, and six nocturnal raptors plus 20 vagrant raptors of the British Isles. The leading 17 pages are somewhat of the style of some of Leslie Brown's books on raptors. Those pages treat the raptor's Design for Living, Special Adaptations (e.g., plumage, vision, hearing, feet, digestion, etc.), and Relations with Man (e.g., legends, falconry, shooting, pesticides, habitat loss, etc.). Thereafter, the book is a typical species account of each species in which the author marches through each with a clearly defined format.

The species accounts differ from many texts in the topics covered. A particularly delightful aspect to me were aspects covered in the beginning topic in which the author treated a brief History and Conservation. He starts with the fossil record, where known, and works up to current times, presenting many interesting facts. Did you know, for example, that 11 of the regularly occurring species had Pleistocene/Holocene fossils from deposits in Derbyshire or Devon or both? While those locations must be rich in fossil beds it turns out that most of the 23 main species were represented by Pleistocene fossils. Other topics within each chapter are Distribution and Population; Field Characters and Anatomy; Breeding; Diet; and Migration, Movement and Roosting. Overall, each species account is a timely and light discussion with enough new information or "meat" to keep the interest of everyone from the novice to the professional. He has used over 112 references in collecting information.

One mildly annoying item is the treatments of vagrants. I was left wondering for some species just how often they do occur. For example, for the Red-footed Falcon (*Falco vespertinus*) there is little question as to its status since a fairly good overview is presented. On the other hand, the American Kestrel (*F. sparvarius*) and Eleonorae's Falcon (*F. eleonorae*) are mentioned in such a way as to indicate that there are but single records, but this is not made clear. Might there have been two specimens of each? Furthermore, the author indicates that the record for the Red-shouldered Hawk (*Buteo lineatus*) was not acceptable for the national list but at the same time the even more unacceptable record of a pair of Neotropical Mottled Owls (*Strix virgata*) was mentioned, seemingly accepted by the national list, without comment.

The paintings are very well done and for the most part accurate. The female Merlin (*F. columbarius*) however is too long and stretched out while the Kestrel (*F. tinnunculus*) is a bit too short winged. Some, for example the Kestrel, are reminiscent of George E. Lodge's paintings but Proud does maintain a seeming uniform style of his own. The Long-eared Owl (*Asio otus*) is to me particularly pleasant and well done, especially because of its posture and habitat setting.

With so many books available on birds of prey, this one is particular appealing, for a limited geographic range, because of the interesting data not often seen, and the accompanying modest price. It would make a good gift item and is tailored to a wide audience.—CLAYTON M. WHITE.

ANNOTATED LIST OF THE BIRDS OF PENNSYLVANIA. By Steven J. Santner, Daniel W. Brauning, Glenna Schwalbe, and Paul W. Schwalbe. Pennsylvania Biological Survey Contribution Number Four. (Available from Pennsylvania Birds, 2469 Hammertown Road, Narvon Pennsylvania 17555.) 1992: 57 pp., color plate on cover. $4.72 (+$1 postage + $0.28 state tax).—While a very thorough Breeding Bird Atlas is currently in press, there has been no full scale treatment of all the birds of Pennsylvania for many years. The attractive publication at hand does not totally rectify that situation, but it does serve to provide a useful summary of the seasonal and distributional status of the 368 species on the official state list. An

additional 48 species are included in a "Supplemental List" of extinct and extirpated species, as well as those for which the evidence of occurrence in the state is uncertain.

The core of the book is the familar set of bar graphs indicating not only which time periods of occurrence but also the status in each of the seven "Ornithological Regions" recognized for the state. A short, four- or five-line paragraph summarizes each species. Dates, locations, and references are given for the rarer species.—G.A.H.

IDENTIFICATION GUIDE TO EUROPEAN PASSERINES. By Lars Svensson. Available from The British Trust for Ornithology, The Nunnery, Nunnery Place, Thetford, Norfolk, IP24 2PU, England. 1992: 368 pp., many black and white drawings. £25.—This is the fourth English-language edition of what has become an important and useful tool for European banders. Detailed descriptions aid not only in the identification of species but also determination of age and sex classes. Approximately 20 North American species are discussed.—G.A.H.

REPRINTS OF OLD CLASSICS

A NATURALIST IN COSTA RICA. By Alexander F. Skutch. Univ. Press of Florida, Gainesville. 1992: ix + 382 pp., 69 black-and-white photographs. $16.95 (paper).—An unrevised reprint of the original 1971 publication. See review: Wilson Bull., 84:358–359 (1971).—G.A.H.

THE IMPERATIVE CALL. A Naturalist's Quest in Temperate and Tropical America. By Alexander F. Skutch. University Press of Florida, Gainesville. 1992: x + 331 pp., 48 black-and-white photographs. $16.95 (paper).—An unrevised reprint of the original 1979 publication. See review: Wilson Bull., 93:425 (1981).—G.A.H.

BORN TO SING. By Charles Hartshorne. Indana University Press, Bloomington, Indiana. 1992: xvi + 304 pp., $35 (cloth), $12.95 (paper).—An unrevised reprint of the original 1973 publication. See review: Wilson Bull., 85:517–519 (1973).—G.A.H.

NORTH AMERICAN LOON FUND GRANTS

The North American Loon Fund (NALF) announces availability of 1994 grants in support of management, research, and educational projects directly related to the conservation of the family Gaviidae. Proposals in the range of $500.00 to $3000.00 are most likely to be considered for funding. Further guidelines for prospective applicants are available upon request from the NALF Grants Committee. Deadline for submission of proposal is December 15, 1993. Funding awards will be announced by March 30, 1994.

Please submit guideline request to: North American Loon Fund, 6 Lily Pond Rd., Gilford, New Hampshire 03246.

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