



EDITED BY ROBERT M. ZINK

The following critiques express the opinions of the individual evaluators regarding the strengths, weaknesses, and value of the books they review. As such, the appraisals are subjective assessments and do not necessarily reflect the opinions of the editors or any official policy of the American Ornithologists' Union.

The Auk 113(2):517-518, 1996

Science in the Subarctic: Trappers, Traders and the Smithsonian Institution.—Debra Lindsay. 1993. Smithsonian Institution Press, Washington, D.C. xvii + 176 pp. \$34.00.—Debra Lindsay's research for her Ph.D. thesis in history has unearthed valuable background information of interest to ornithologists. She dug deeply in the treasure trove of the Smithsonian Institution to tell the fascinating story of Robert Kennicott, who was sent by Spencer Fullerton Baird into the remote Mackenzie River area of northwestern Canada in 1859-1862. It was Baird's good fortune, as Lindsay says, that Kennicott was able to recruit a highly motivated group of Hudson's Bay Company (HBC) fur traders to collect natural-history and ethnographic materials. The most productive collectors were: Roderick Ross MacFarlane, who amassed 5,715 specimens; Bernard Rogan Ross (>2,259); James Lockhart (>1,131); and Strachan Jones (>601). Kennicott himself sent back 1,370 specimens to the Smithsonian.

This small nucleus of HBC men had the qualities of intuition and ingenuity that Baird desired. However, most of the collectors soon dropped out, "unwilling to persevere as unpaid volunteers . . . Collecting and processing specimens was simply too demanding." Kennicott himself worked without pay, but the HBC generously donated food and lodging, worth £25 a year. Bernard Rogan Ross, with whom Kennicott stayed at Fort Simpson on the Mackenzie River, gave Kennicott free transportation for himself and his specimens, but Ross was overly generous and his personal account was consequently debited £27.63 by the HBC.

As social history, this is scholarly and thorough. Footnotes provide excellent biographical vignettes of the fur-trader collectors, and complete bibliographies for the few whose research was published. Lindsay admits a personal bias, recognizing that her study is "as much an excursion into labor history as an exercise in the history of science." She wonders why employees of a fur-trading company would spend so much time collecting for the Smithsonian Institution; she

feels it is misleading to suggest that amateurs took up collecting as a recreational pastime, an intellectual avocation, or their Christian duty. Fieldwork, she recognizes, "was more than a genteel hobby. It was indeed work." Native collectors performed most of the tasks. "Formal recognition through publication, acknowledgements in scientific monographs, and membership in learned societies, as well as Baird's friendship, encouragement and praise," Lindsay thinks, may have repaid their efforts. Yet, surely she overstates the case (with the possible exception of Bernard Rogan Ross), when she says that "status-hungry traders looked to science as a route for bettering their social position."

Kennicott's second subarctic expedition, to Alaska on a telegraph survey in 1865-1866, was a failure. He was found dead in the snow, presumed to have committed suicide.

This book sadly lacks the natural-history perspective one might expect. Lindsay did familiarize herself with a few topics, such as evolution and subspeciation, the applications of Bergmann's and Gloger's rules, and the naming of the goose for Bernard R. Ross, but it is painfully apparent that she failed to consult ornithologists. Bird species are mentioned only in an occasional footnote and are not indexed. Her statement that "an entire volume of the *Proceedings of the United States National Museum* (Volume 14)" was devoted to the ornithological collections of the fur traders is patently false; a paper by MacFarlane occupied pages 413 to 446 only. She does not understand type specimens or rules of priority, has not consulted any edition of the *AOU Check-list*, and uncritically repeats an erroneous reference to the AOU as the American Ornithological Society. She cites Baird, Brewer, and Ridgway's *North American Birds* (1884) as her authority for the name of Ross' Goose, rather than Cassin, *Proc. Acad. Nat. Sci* 13:73, 1861. In speaking of what was once a subspecies, *Otus asio macfarlanei*, named by Brewster in the *Auk* 8:140 in 1891, Lindsay fails to realize that this taxon has since been elevated to a full species, the Western Screech-Owl. Her lack of understanding is compounded by her statement "it

is difficult to determine whether Baird or some more recent ornithologist bestowed this honor on MacFarlane."

Her unfamiliarity with the 1986 book, *Eskimo Curlew: A Vanishing Species?* by Gollop, Barry, and Iversen, has prevented Lindsay from mentioning other important achievements. Roderick Ross MacFarlane recorded 38 nests of the Eskimo Curlew; 28 of the curlew egg sets, the world's known supply, reached the Smithsonian. Readers might also wish to know that MacFarlane collected the first-ever egg sets of the Stilt Sandpiper.

In summary, while I find it difficult to praise a book about bird collectors that overlooks the birds they collected, I do commend it as well-researched biography. This work and Lindsay's earlier *The Modern Beginnings of Subarctic Ornithology: Northern Correspondence with the Smithsonian Institution, 1856-68* (Manitoba Record Society, Winnipeg, 1991), together add a great deal to our knowledge of Baird, Kennicott, the HBC fur traders, and the relationship between the Hudson's Bay Company and the Smithsonian Institution. Both books will be worthwhile additions to any collection in ornithological history, and essential to University and museum libraries.—C. STUART HOUSTON, 863 University Drive, Saskatoon, Saskatchewan S7N 0J8, Canada.

The Auk 113(2):518-519, 1996

Handbook of the Birds of the World, Volume 2.—Josep del Hoyo, Andrew Elliott, and Jordi Sargatal, (Eds.). 1994. Lynx Edicions, Barcelona. 640 pp., 60 color plates, 302 photographs, 590 distribution maps. ISBN 84-87334-15-6. \$165.00.—Covering all living species of the orders Falconiformes and Galliformes, volume 2 attains the lofty standards established in 1992 with the inauguration of the series. The stated goals—economy of space and concentration of information—were again achieved. In this volume, the plan of treatment has evolved in pace with changing needs. Thus, the complete series is now projected at 12 instead of 10 volumes. A team of authors and illustrators, more international than heretofore, has been engaged. Walter Bock served as Consultant for Systematics and Nomenclature. The two large families of diurnal raptors, Accipitridae and Falconidae, totalling approximately 300 species, were divided among members of a team of eight regional authors. Otherwise, the text for each family and its species accounts were prepared by a single author, as in volume 1. Despite these innovations, the accounts are consistent in style, breadth, and content, reflecting careful editorial coordination and judgment.

Because few ornithologists have firsthand knowledge of more than a relative handful of the world's bird species, either as living creatures or as specimens, a major advantage of these books is the vicarious experience they offer. For the clinically-committed student of birds, no finer hour can be spent than with this book, following its splendid procession of taxa in a visual and intellectual feast. Tightly-woven species writeups, positioned either adjacent to or at most a couple of pages away from excellent plates, allow quick cross-checking of text and illustrations. All living species of the particular group being studied are represented. The avian geographer similarly can be gratified. Sharp maps quickly convey the basic facts of world occurrence and enable rapid appraisal of similarities and differences among species. In addition to the scientific binomial, species accounts are headed by vernacular names in English, French, German, and Spanish. In dense, fine print, these accounts summarize knowledge under separate sections for taxonomy, subspecies and distribution, habitat, food and feeding, breeding, movements and status, and conservation. Although packed with information, the accounts are not intended to be more than sparse synopses for each species; for the vast majority of taxa more complete treatment would be impossible in the space allotted. For more expanded coverage, a bibliography at the end of each account invites the reader to pertinent literature. The book terminates with a list of references to taxonomic descriptions for all taxa and a bibliography of over 7,000 entries.

The abundant color photographs often are stunning in clarity and imaginative in context. Falconiform birds are shown tending eggs or young at nests, capturing food in flight, dismembering prey, bathing, preening, and in aggressive postures; various galliform species are portrayed with eggs or young, feeding, loafing, and in dramatic courtship display. A handheld live Udzungwa Forest-partridge (*Xenoperdix udzungwensis*), discovered in southern Tanzania in 1991 and described scientifically in early 1994, is one of the more remarkable portraits. Routinely, substantial captions filled with natural-history gems accompany the photographs.

In view of the taxa treated, conservation is deservedly a major theme. In addition to IUCN threat-category designations for each species, Mace-Lande criteria based on population estimates (where available) and, hence, on probability of extinction are often used to bypass some of the subjectivity of the former system. One is continually impressed with how little is known about the numbers of most species. Data on habitat destruction, which are usually more readily available, were therefore occasionally used as an approximate surrogate. Specific current threats often are identified. Population figures for some species surely are gross overestimates, particularly for New World quails (Odontophoridae) in the genera *Odontophorus* and *Dactylortyx*, whose restricted ranges in the Neo-

tropics and succulent, toothsome qualities render them exceptionally vulnerable in a region of exploding human population.

The editors state their indebtedness to, and dependence upon, museums and live-bird collections as major sources of information. Such acknowledgments underscore the indispensable roles of scientific collecting, taxonomy, and avian systematics in building the foundation upon which rests all subsequent knowledge of avian biodiversity.

As the most significant books on world birds ever published, this volume and its predecessor deserve to be widely accessible in both personal and reference libraries. Furthermore, as a cooperative international enterprise, the series can be acclaimed for its elegant portrayal of ornithology as a grand unifying discipline of global biology.—NED K. JOHNSON, *Museum of Vertebrate Zoology and Department of Integrative Biology, University of California, Berkeley, California 94720, USA.*

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Evolutionary Differentiation in Morphology, Vocalizations, and Allozymes Among Nomadic Sibling Species in the North American Red Crossbill (*Loxia curvirostra*) Complex.—Jeffrey G. Groth. 1993. University of California Publications in Zoology No. 127, University of California. Berkeley, California. xii + 143 pp., 34 text figures. ISBN 0-520-09782-3. \$xx.xx (paper).—The long tradition of avian systematics has led ornithologists to expect certain phenomena. Complex patterns of geographic variation exist in some taxa in most regions, including contact zones, hybrid zones, distinctive isolated populations, ring species, and interrupted clines. These situations have challenged ornithologists for centuries, and have traditionally been the phenomena that have most complicated avian taxonomy and systematics.

The crossbills, however, seem to be a completely different matter. Older treatments attempted to make geographic patterns in the group fit into the usual avian model of geographic variation and differentiation, which resulted in an enormous confusion of names, synonymies, and uncertain geographic ranges. The first hint of the true nature of the situation came from a series of studies by A. R. Phillips (e.g. *Emu* 74:282, 1975), but its importance was lost in Phillips' confusion among geographic races and sympatric species. Now, with the publication of Groth's monograph, ornithology has for the first time some basis for understanding this group, which may be the most complicated of all North American bird species or species complexes.

Understanding such an odd and unexpected situation constitutes a serious challenge: preconceptions regarding what is likely to be the "truth" can easily carry an investigator far from that truth. Groth, however, developed this study in the form of a series of hypothesis tests, and this approach is key in making the study convincing. For each character set, he asked whether character variation is more pronounced among regions or among local call types. Only by this approach could such surprising results be made believable.

Groth's conclusion was that the "Red Crossbill" actually consists of eight sympatric, nomadic species. Referring to them as "types," Groth showed that four types (1, 2, 3, and 4) are widespread, with records from the Pacific Northwest east to the eastern United States; type 5 is to date known only from the Rocky Mountains west, type 6 from southeastern Arizona, type 7 from the Pacific Northwest, and type 8 from Newfoundland. Each type should probably best be accorded full species status, given the multiple data sets presented by Groth.

One question burns bright as a result of this study: How many additional species are there in the remainder of the genus? The genus *Loxia* is found throughout the Holarctic, with populations of three species presently recognized for Eurasia, two of which occur in North America; isolated populations are found in the Philippines, on the island of Dominica, and south to Nicaragua in the mountains of Central America. If Groth or some other systematic ornithologist were to study carefully those populations, how many species would make up the genus? I urge Groth to apply his understanding of this group to providing ornithology with a preliminary taxonomy as soon as is feasible, especially when peripheral populations can be included. These questions should be accorded high priority, because the nature of this genus so challenges the norm that they might lead ornithology to a new breadth of understanding of avian diversity.

More generally, Groth is to be congratulated warmly for his work. The monograph is well written and organized, and clearly illustrated with useful figures. I strongly recommend this monograph to all interested in bird systematics and diversity.—A. TOWNSEND PETERSON, *Natural History Museum, The University of Kansas, Lawrence, Kansas 66045, USA.*

The Auk 113(2):519-520, 1996

The Penguins.—Tony D. Williams. 1995. Oxford University Press, Oxford. xiv + 295 pp., 8 color plates (paintings by J. N. Davis), 110 text figures (including drawings by John Busby), 17 maps. ISBN 0-19-854667-

X. \$60.00 (cloth).—As in others in the series, *Bird Families of the World*, this volume begins with a description of layout, followed by eight general chapters and then 7- to 10-page accounts of each of the 17 species of penguin. The Introduction reviews the general biology of penguins. The classification of islands south of the Antarctic Convergence as "sub-Antarctic" is confusing. The author apparently views zoogeographic zones on the basis of geographic and celestial measures (i.e. the Antarctic is that part of the southern continent that is south of the Antarctic Circle). I have not seen such a treatment in a zoological text—normally the Antarctic Convergence is used, on a climatic and ecological basis, to designate the northern limit of the Antarctic Zone.

Chapter 2 discusses the origins and evolution of penguins. The material discussed relies heavily on the work of G. G. Simpson, not surprisingly, but also incorporates new writings, especially by E. Fordyce. Beyond what Simpson has already summarized in various writings, there is little new that can be said about the evolution of penguins. Many times in the present volume, in spite of genetic and anatomical evidence to the contrary, the evolution of penguins is compared to an "auk-like ancestor" or it is indicated that the penguins are closely related to albatrosses. There is, in fact, no shortage of procellariid species, not closely related to albatrosses, that fly and swim like an auk. Another point that is in danger of misinterpretation is the authors' questioning of whether penguins have not always been associated with cool waters. Considering food availability in cool versus subtropical waters, which likely has remained that way forever, and the energetic inability of penguins to search widely for dispersed food (characteristic of tropical and subtropical waters), I do not think that many other persons would question this point.

Chapter 3 discusses breeding biology and molt. Williams reviews much information and derives interesting new relationships not heretofore published on the basis of the summarized data. However, there are a surprising number of inaccurate statements. Although virtually every penguin paper ever written is cited, some published points have been missed (even in papers cited). Chapter 4 discusses in much better fashion the population structure and dynamics of penguins. This is an important chapter in general, because penguin studies have led the way in long-term investigations of avian demography. Chapter 5, Williams' forte, is a very nice summary of penguin behavior.

Chapter 6, on foraging ecology, was written by Rory Wilson, one of the pioneers in the use of gadgets to investigate the biology of birds. Not surprisingly, the chapter, which is well written, concentrates on those aspects of penguin foraging that can be determined by the clever telemetry and similar apparatus that land-lubbers have used to uncover the secrets of penguin foraging. Not treated well at all is the actual

sea ecology of penguins, which are marine organisms, although this subject has been investigated intensively by several salty researchers.

Chapter 7, on physiology, is a gem. It is the first that I know of summarizing the myriad of studies that have been conducted on the physiology and anatomy of penguins. Moreover, these aspects of penguin biology are placed in an ecological context. This and the previous chapter alone are almost worth the publication price. The last chapter (8) on conservation, I suppose, has to be included in almost any book of this nature these days. Little new information is presented. The discussion, on the response of penguins to short- and long-term climate change—which dominates the chapter—is misplaced. Other than that, this material is well written (by P. D. Boersma and D. L. Stokes), but might have been better situated in the chapter on foraging ecology, which as noted should have included more discussion on the marine ecology of penguins.

The remainder of the book is presented in "handbook" fashion, with the following items included for each species: nomenclature, description, measurements, weights, range, status, field characters, voice, diet, habitat, displays, and breeding cycle. Much information is presented and cited in these accounts, each illustrated by a map and color plate. The book ends with an 18-page, two-columned bibliography. This, too, will be of value to penguin affectionados. It must be that the present volume is the result of Williams (with coauthors) preparation in 1985 of a book entitled, "Penguins of the World: A Bibliography" (British Antarc. Survey, Cambridge).

A great deal of old and new information is presented in this volume, and it will be of great use to knowledgeable persons who seek summaries or sources of information on penguins. The unquestioning and those unfamiliar with biology of penguins, however, should beware.—DAVID G. AINLEY, *H. T. Harvey & Associates, P. O. Box 1180, Alviso California 95002, USA.*

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Crows and Jays: A Guide to the Crows, Jays and Magpies of the World.—Steve Madge and Hilary Burn. 1994. Houghton Mifflin Co., Boston. xxiii + 191 pp., 30 color plates, 123 maps, 7 text figures, 13 unnumbered tables. ISBN 0-395-67171-X. FPT \$40.00 (cloth).—Written by Steve Madge and illustrated by Hilary Burn, this book is touted as an identification guide and scientifically accurate compendium that "will be a standard work of reference for many years to come." I hope not.

The table of contents includes a systematic list of the Corvini, which gives page references to the two major sections of the book (pp. 1-183), the color plates (and accompanying range maps and brief captions), and the systematic section (i.e. the species accounts). Two-page sections entitled Introduction, Conservation, and Relationships and Origins provide little information.

Relationships and Origins includes comments on the classification of the Corvidae as proposed by Sibley and Monroe (1990, *Distribution and taxonomy of birds of the world*, Yale Univ. Press, New Haven; Connecticut), which are imbued with denunciations of systematic research. These comments include the interrogative non sequitur "Are such monumental changes in the sequence of standard ornithological literature necessary?" Despite these protestations, Madge adopts the sequence and number of genera used by Sibley and Monroe, except that *Psilorhinus* and *Calocitta* are reversed, inexplicably.

The portion of Relationships and Origins titled "Structure" describes the bill of the Corvini as "stout or slim." Not a useful description in my opinion. "Plumage" claims "tremendous variation in colouration." Assuming this comment is based on comparing color variation in the Corvini with that in other taxa of comparable size, I disagree. A portion titled "Variation and Origins of the Corvini" claims the tribe is "amongst the most varied of all passerine families." Again, I disagree. What about the tyrannids and icterids? A table follows that assigns the corvid (sic) genera to the faunal regions to which they are chiefly confined. *Cyanocitta* and *Aphelocoma* are excluded; are they not chiefly confined to the Nearctic? I think most biogeographers would say yes.

In the section Format of the Book under "Sequence," Madge states "opinions on the classification sequence and number of genera of corvids [sic] differ considerably," and "this treatment is quite controversial but the corvid [sic] sequence is remarkably similar. . . ." Indeed, the classification of the Corvini is nearly identical in recent references. At the generic level the only change made by Sibley and Monroe from Blake and Vaurie (*in* Peters 1962, *Check-list of birds of the world*, Museum of Comparative Zoology, Cambridge, Massachusetts) was the lumping of *Cis-solopha* into *Cyanolyca*. The treatment in Goodwin (1986, *Crows of the world*, Cornell Univ. Press, Ithaca, New York) also is very similar. So where's the beef? I find none.

Madge recognizes 122 species of "corvids" (not 121 as stated on p. ix), Sibley and Monroe 115 species, and Blake and Vaurie 103. Elevating four populations of *Corvus*, one of *Nucifraga*, one of *Dendrocitta*, and one of *Cissa* to full species accounts for the differences between Madge and Sibley-Monroe. Even at the species level the differences between the major references seem minor.

Under "Measurements," the ankle joint is referred

to as the "knee." The use of quotes does not excuse this antiquated error.

The section Topography and Plumages includes a line drawing of *Corvus* on which body parts are labeled. The label for the thigh points to the shank (drumstick in common parlance). Certain other labels are ambiguous (e.g. tertials, wing coverts). Under "Nestling," it reads "altricial or nidicolous." These terms are not synonymous, and it is not appropriate to contrast them.

The section Colour Plates and Maps (pp. 1-61) includes illustrations of all species and numerous additional races and plumages of all the Corvini. I like the illustrations. For the species I know, virtually all capture their jizz. The Pinyon Jay and nutcrackers may be exceptions, in part because the bills as depicted seem too short and stout. Illustrating 47 species of *Corvus*, almost all of which are entirely black, must be a daunting task. As a test of the artist's stamina, I attempted to pick out the American Crow among her 90 illustrations of *Corvus*. I succeeded! I applaud Burns for her dedication to the project.

The introductory statement for the section Colour Plates and Maps reads "The text follows a recent classification review." What does that mean? I do know the sequence of plates and facing-page text does not follow the classification listed on p. v and used as the table of contents for the two main parts of the book. *Zavattariornis* and *Ptilostomus* are inserted between some species of *Corvus*. No explanation is given for this surprising situation.

I scanned a few pages of the text that faces the plates, focussing on species I know best. I list a sample of errors: (Steller's Jay) *carlottae* not *carlotta*; (Florida Jay) shorter-winged not longer-tailed is a feature of the Florida population; (Pp. 6 and 8) *Cyanolyca* not *Cyanoluca*; (Azure-winged Magpie) Japan, where some of the best work on the species is being conducted, is omitted as part of the range; (Fish Crow) shorter-legged not longer-legged than sympatric American Crow, as shown by the measurements listed in the tables on pp. 152-153.

The Systematic Section (pp. 65-183) consists of the species accounts, which include in a page or less per species the topics of identification, description, measurements, geographical variation, habits, habitat, distribution, and references. Here too, I found many errors. As examples, the distributions of the races of the Blue Jay are unintelligible. "Digging" is not a feeding tactic of Scrub Jays. Hardy's (1961) *Studies in the Behavior and Phylogeny of Certain New World Jays (Garrulinae)*, the primary reference on Blue Jay behavior, and Heinrich's (1989) *Ravens in Winter*, an excellent book on the social behavior of Northern Ravens, are omitted.

The Bibliography, which occupies only two pages, and is organized into four columns of tiny type, is a mess. The type is so small the letters sometimes run together. The indentations are wrong on many of the

entries in the first row, and some of the other rows. A. T. Peterson, spelled correctly in text, is misspelled. The Ligon reference incorrectly lists coauthor Sandra Ligon. The Woolfenden and Fitzpatrick (1984) reference, which is mentioned in the text, is omitted.

The concept for the series of which *Crows and Jays* is one volume is sound: in one inexpensive book illustrate all the species in the group and summarize the literature regarding their appearance, distribution, and natural history. However, this concept succeeds or fails on the accuracy of transcribing the information. *Crows and Jays* has more errors of commission and omission than should appear in such a book.

Perhaps *Crows and Jays* can serve the purpose of identification, although if you know where in the world you are it would seem a geographically oriented field guide would be more useful. *Crows and Jays* can be used to gain a superficial overview of the Corvini, especially because of the plates and range maps. It should not be used as a "scientifically accurate" reference. And that is where the danger lies. Assuming I have detected only a few of the existing errors, persons who use this book instead of classic references such as Peters, Sibley and Monroe, and Goodwin, are likely to copy something wrong. Sadly, using this book might be forced upon them by public libraries, which with their tight budgets, might purchase *Crows and Jays* instead of its more scholarly predecessors.—GLEN E. WOOLFENDEN, *Department of Biology, University of South Florida, Tampa, Florida 33620, USA.*

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Declining Scientific Standards in Studies of Avian Distribution

California Birds: Their Status and Distribution.—Arnold Small. 1994. Ibis Publishing Co., 3420 Freda's Hill Road, Vista, California. xiv + 342 pp., 56 color plates, 2 maps. ISBN 0-934797-09-9. \$55.00 (hardbound) + \$5.00 shipping and handling.—California offers a special place for the ornithologist, birder, and naturalist. Huge in land area, with enormous fertile valleys, dense woodlands and forests, lofty peaks, expansive deserts, and a vast seacoast with large offshore islands, the state hosts a tantalizingly rich avifauna, surpassing those of all other areas of equivalent size in the contiguous United States. Not surprisingly, an army of bird enthusiasts has stalked this territory for over a century.

This attractive volume attempts to update our knowledge of California birds, which last received book-length coverage 50 years ago in a treatise by

Joseph Grinnell and Alden H. Miller (*Distribution of the birds of California, Pac. Coast Avifauna* 27, 1944). The new book falls short of its goal. Patten (*Condor* 1995, 97:608-611), in his thorough review, discusses a sampling of the numerous inaccuracies. Our analysis will dwell on more general issues, in particular, Small's disregard for proper scientific standards when discriminating among reports accepted for the accounts. Unfortunately, his treatment reinforces the incorrect view that characterizes many modern compilations of avian distribution, namely, that sight reports provided by birders have supplanted specimen-based ornithology.

In the Preface, the author highlights what he perceives as major trends in the study of California birds. Early workers are viewed as having been overwhelmingly preoccupied with shooting birds and amassing collections, as if these activities were ends in themselves. Old-timers are purported to have been unskilled in field identification, with little knowledge of, or interest in, living birds (if this were true, we are forced to conclude that Grinnell conceived two of the most influential concepts in ecology and evolution—that of competitive exclusion and the niche—as a result of staring at dead birds). In the late 1950s, skilled birders armed with binoculars instead of fowling pieces supposedly began to displace the majority of shotgun jockeys, exposing their sins and dramatically elevating the quality of California ornithology. With the arrival of these crusaders, the sea parted and a flood of knowledge filled the intellectual vacuum that had preceded them.

Small overlooks several significant facts: that early collectors were explorers in every sense of the word, struggling to comprehend a large, variable avifauna in a huge region of almost overwhelming ecologic complexity; that their collections established a lasting foundation for avian systematics and distribution in western North America; that this foundation eventually permitted the preparation of field guides, enabling the hobby of birding; and that the publication of primary taxonomic and distributional literature, based on properly identified specimens, allowed the publication of his own book. One could quickly forgive his self-righteous claims were it not for the tiresome, incorrect, and damaging message they convey—that collecting is no longer necessary because birders can provide all the information needed for progress in scientific ornithology.

Although no one will dispute the importance of reports gathered by serious amateurs, the issue is one of quality control. Even the most skilled birder cannot identify every individual of all species in the field. Too often, reports accepted by bird-records committees rest on the reputation of the birder, and improperly substantiated observations are routinely published. Without specimens, clear photographs, or identifiable sound recordings, such material has no place in the scientific literature. Admittedly, the vol-

ume of reports now confronting regional editors and compilers has probably become unmanageable. Nonetheless, screening at a level far more stringent than is currently practiced is mandatory to meet minimal scientific standards. Again, it is time to underscore the time-honored truth that the contributions of birders, valuable as they can be, typically *supplement*, rather than replace, the work of professional ornithologists, especially those involved in serious systematic and distributional research.

The birding mentality established in the Preface sets the standards for the remainder of the book. Notably lacking are the well-documented records and meticulous maps that characterized Grinnell and Miller's authoritative work. Thus, we found no evidence that the author consulted specimens taken in California over the past half-century. The species accounts largely ignore subspecies, a major omission in a state with repeated examples of striking geographic variation. Furthermore, Small's accounts typically are filled with unsubstantiated generalizations, leaving to the reader the task of determining the basis for most statements. This is especially true for routine species, which typically get short shrift by birders because of their preoccupation with vagrants. For example, in Small's account of the Black-chinned Sparrow (*Spizella atrogularis*), a species previously known to breed locally south of the San Francisco Bay area, we find reports of occurrence northward to southern Trinity and Tehama counties. For a potential breeding range extension of approximately 150 miles, the reader is entitled to detailed information on dates, numbers observed, breeding evidence, subspecies, and names of observers.

Information on rare vagrants is emphasized in this book well beyond its importance. The author attri-

butes the striking increase in detection of vagrants to the large number of birders afield with skills supposedly lacking in their predecessors. While this source of records is undoubtedly significant, it is also likely that absolute numbers of vagrant birds have increased dramatically in California in recent decades as a consequence of continentwide habitat destruction and coincident climatic change.

Recreational birders will find this book of interest because of its plethora of superb color photographs, three useful maps, and fundamental information on seasonal status, habitats, and distribution in the state. Serious amateurs and professionals, on the other hand, should continue to rely on specimen-based distributional data provided by Grinnell and Miller, supplemented with well-substantiated records in other compilations (e.g. for northern California, see G. McCaskie, P. DeBenedictis, R. Erickson, and J. Morlan. 1979. *Birds of northern California*. Golden Gate Audubon Soc., Berkeley, California, plus its supplement; for southern California, see K. Garrett, and J. Dunn. 1981. *Birds of southern California: Status and distribution*. Los Angeles Audubon Society, Los Angeles, California). Information on particular species from these dependable general works should be updated by searches through journals and, especially, by personal fieldwork. The continued importance of proper documentation to the study of avian distribution cannot be underscored more effectively than by inspection of quasiscientific compilations intended for recreational birders, such as Small's new book.—CARLA CICERO AND NED K. JOHNSON, *Museum of Vertebrate Zoology, and (N.K.J.) Department of Integrative Biology, University of California, Berkeley, California 94720, USA.*



Announcements

AOU Student Awards for the 114th Meeting, Boise State University, Boise, Idaho, 13-17 August 1996.—The American Ornithologists' Union will offer Marcia Brady Tucker Travel Awards to help defray transportation expenses of students wishing to present a lecture or poster paper at the annual meeting. Students applying for a travel award may have coauthors (not true for presentation awards), but the student's name must be first and the student must present the poster/paper. Marcia Brady Tucker Travel Awards have a limit of two per lifetime. If no more than five poster applications are received, authors of poster papers will be asked to give an oral presentation (as no

poster awards will be given). The number of travel awards is limited, and applicants are expected to present their poster/paper regardless of whether they receive an award. Applications for travel awards do not guarantee a place on the Scientific Program, and awards will be issued only after the paper/poster has been accepted on the program. See the meeting *Circular of Information* for more detailed instructions. To apply for a travel award, send the following materials to the AOU Student Awards Committee by **8 May 1996**: (1) eight copies of an expanded abstract (typed, double-spaced, three pages maximum, including references, tables and figures) stating objectives, meth-