



EDITED BY CARL D. MARTI

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.

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Handbuch der Vögel Mitteleuropas. Volume 14, Passeriformes.—Urs N. Glutz von Blotzheim (Ed.). 1997. AULA-Verlag GmbH, Wiesbaden, Germany. Vol. 14/I, Passeridae to Vireonidae, pp. 1–303, 18 tables, 66 figures, ISBN 3-89104-609-X; Vol. 14/II, Fringilidae to Parulidae, pp. 304–1,243, 49 tables, 194 figures, 4 color plates, ISBN 3-89104-610-3; Vol. 14/III, Emberizidae to Icteridae, pp. 1,243–1,966, 16 tables, 106 figures, 2 color plates, ISBN 3-89104-611-1. Cloth, DM 684.00 (ca. \$414), subscription price DM 579.00 (ca. \$350); price for all 14 volumes DM 3200.00 (ca. \$1,936).—*Das Handbuch der Vögel Mitteleuropas ist vollendet!* (*The Handbook of the Birds of Central Europe is complete!*). So exclaimed the title of the lead article, by Roland Prinzinger, President of the Deutschen Ornithologen-Gesellschaft (German Ornithologists' Society, DO-G), in the December 1997 issue of *Der Ornithologische Beobachter*, which contained several other articles especially written to celebrate the publishing event of European ornithology in 1997: the appearance of the three books composing Volume 14, the last volume of the *Handbuch der Vögel Mitteleuropas*, and to congratulate Urs N. Glutz von Blotzheim, its principal author, editor, and organizer.

At a time when several excellent multivolume handbooks on the birds of various regions of the world have been or are being published, the *Handbuch der Vögel Mitteleuropas* stands as probably the most remarkable of them all. This accomplishment is the result of the labor, dedication, persistence, and iron will of the Swiss ornithologist Urs N. Glutz von Blotzheim. Glutz was assisted by the Austrian ornithologist and mammalogist Kurt M. Bauer, who co-edited all 14 volumes, although Glutz undertook the lion's share of the task. Each year, Bauer lived for two to four months in the Glutz home where the two men worked 12 to 14 hours a day, day after day, with few distractions from the job. But even with the phenomenal *Arbeitstempo* and discipline displayed by Glutz and Bauer, the publication of the *Handbuch* would not have been possible without the financial assistance of the Swiss National Science Foundation, whose offi-

cers, from 1967 to 1997, never wavered in their belief in the enterprise and kept granting the funds necessary to subsidize its substantial costs. Few national funding agencies have so consistently helped with such a long-term publishing project.

The 14 volumes of the *Handbuch* (which actually include 22 separate books; see below) total 15,332 pages, 2,724 text figures, 57 color plates, and 676 tables. These 22 books occupy nearly one meter of shelf space and weigh about 30 kilos. Of the 534 species treated in the *Handbuch*, the great majority (80%, or 428 accounts) were written by Glutz and Bauer themselves; the other 106 were written by a total of about 90 collaborators. The figures include 1,139 illustrations of behavior patterns, many of which have never been depicted in such detail before, 503 figures of original sonagrams prepared especially for the *Handbuch* by Erwin Tretzel, and more than 475 maps showing geographic distributions and migration patterns.

In the fall of 1958, I spent two months at the Ornithological Station of the Col de Bretolet supervising the activities of ornithologists who came to help in a study of migration over the Alps. One of these visitors was Glutz, who had recently completed his Ph.D. thesis on the phylogeny of the ratites. In constant use during our activities were the three volumes of Günther Niethammer's extremely useful *Handbuch der deutschen Vogelkunde*. I could not have anticipated the role that Glutz would play in bringing out, not a revision of this out-of-print classic work, but a totally new *Handbuch* that would become the *vade mecum* of thousands of European ornithologists.

In 1958, the year Glutz and I shared cramped quarters in our alpine station, Niethammer and Erwin Stresemann suggested to Bauer that he come to Bonn to work on a new edition of the handbook. But Bauer, busy as curator of mammalogy at the Natural History Museum in Vienna, could not be fully involved in the enterprise. Meanwhile, Glutz was preparing a substantial book, *Die Bruttovögel der Schweiz*, which

drew on his extraordinary organizational talents as well as his incredible knowledge of the central European avifauna. The stage was set for the next step.

In 1962, when the 648-page, richly illustrated *Brutvögel der Schweiz* was published, Stresemann and Bauer independently asked Glutz to join the then very small team of editors and writers of the future new *Handbuch*. Glutz accepted, provided that the title and the geographic scope of the handbook be enlarged from Germany to central Europe, and that he be given full responsibility for the organization of the work.

Only four years later, Volume 1 of the totally new *Handbuch der Vögel Mitteleuropas* appeared, covering the Gaviiformes to Phoenicopteriformes, edited by Bauer and Glutz. Even though Niethammer's name appeared below the title as editor and Bauer's name was cited before Glutz's (both being listed as collaborators) it was in fact Glutz who had been in charge of the organization of Volume 1. He would remain in charge until the three books making up the last volume, number 14, appeared in mid-1997. The fruitful Glutz-Bauer collaboration, begun during the initial stages in the early 1960s, continued uninterrupted for about 35 years to the very end of this mammoth project.

Over the years, Glutz and Bauer used the services of an increasing number of collaborators and co-workers. Thus, they enlisted the help of Einhard Bezel as co-editor of Volumes 4 to 7; of Jürgen Haffer as author of systematic and taxonomic sections, starting with Volume 10; and of Erwin Tretzel as author of sonograms, starting with Volume 5. The artists who illustrated the behavior of many species with extremely attractive line drawings and color plates include Jörg Kühn (Volumes 1 to 3), Wilfried Hochuli (Volume 3), Friedhelm Weick (Volumes 4 to 14), and Winfried Daunicht (Volumes 10 to 14). Of the roughly 90 persons who contributed copy to the *Handbuch*, several wrote four or more species accounts, including Peter Becker, Alfred Grüll, Hans Hudde, Paul Isenmann, Erwin Schemer, Friederike Spitzenberger, and Werner Suter. But, no matter how good the collaborators were, Glutz and Bauer, ever careful and vigilant, verified every fact, every detail, and every reference themselves; in many cases they even re-wrote species accounts until the final product was of the uniformly very high standard they had set.

When Glutz agreed to take over the organization of the new *Handbuch*, he insisted that the geographic scope of Germany (as defined in Niethammer's earlier volumes from 1937 to 1942) be considerably enlarged. This was, in part, because in 1962 Germany was divided into West and East, and Glutz did not want to offend Niethammer or to step into delicate political problems. The other reason was that Glutz felt, quite rightly, that it would make much better biological sense to include more than a single political entity, however defined.

Thus, central Europe included The Netherlands, Belgium, Luxemburg, both parts of Germany, Switzerland, Liechtenstein, Austria, Poland, Czechoslovakia, and Hungary. One significant aspect of this enlarged coverage was that the new *Handbuch* treated not only birds occurring in what was then central-western Europe, but also in several countries of the Eastern Block. Remarkably, given the prevailing political climate in the early 1960s, Glutz succeeded not only in finding correspondents and co-workers on both sides of the Iron Curtain, but, most important, he was able to enlist their help, quite an international achievement. In addition, the *Handbuch* included not just the species that breed in central Europe, but also those that occur marginally in this region (even vagrants and accidentals). In the 35 years since the *Handbuch* was started, the borders of several countries in central Europe have changed considerably, and old barriers have been erased. The increased availability and exchange of information and the increased ornithological activity that have followed such developments are clearly reflected in the enlarged coverage of geography, taxa, and references in the *Handbuch*. For all of these reasons, Glutz's *Handbuch* is a tool that can be used far beyond central Europe and even beyond the western Palearctic region.

Although the organization of headings in the species accounts has not changed much during the 31 years of publication of the *Handbuch*, later volumes show two substantial improvements. From Volume 5 onward, Erwin Tretzel prepared the numerous sonograms that illustrate a wide range of vocalizations. These sonograms were produced on the basis of original analyses and have a quality rarely achieved in other publications. The second improvement was the collaboration of Jürgen Haffer as taxonomist from Volume 10 onward. Haffer wrote many introductions and sections dealing with systematic aspects of the taxa treated in the species accounts. These remarkable overviews, which are marvels of concision and yet broad-ranging in scope, place these taxa in a context of evolutionary thought that is either totally lacking in other handbooks or, if present, is not written by an author of Haffer's caliber.

In Volume 14, as in the preceding volumes, many species accounts are truly monographic in scope. This is the case not only because of the number of pages devoted to each species, but because of the amount of detail, the precision of reported information, and the clarity of presentation, which are greatly helped by the excellent choice of several font sizes, each of which (including the smallest ones) is easy to read, even by someone wearing spectacles. Fifty-one species (including eight North American ones) are treated in the 1,900 pages of the three separate books that compose Volume 14, an average of about 37 pages per species. Similar monographic treatments were published in the earlier 13 volumes of the *Handbuch*.

What makes the 14 *Handbuch* volumes such a unique mine of absolutely reliable information on the birds of central Europe, of the western Palearctic, and even beyond is their combination of: (1) absolutely rigorous scholarship and scientific accuracy, (2) extraordinarily tight and consistent editing, and (3) amazingly user-friendly typography and surprisingly readable texts.

Because of the rather confusing numbering system and nomenclature of the 14 volumes (Bände) and various "parts" (two words in German, Teile and Teilbände, with different meanings) that make up the *Handbuch*, and because publishers and their locations were changed during the course of its publication, I believe it useful to list all of the books below, giving the original German nomenclature and indicating the taxa treated in each of the 22 separate books:

(Book 1). Volume (Band) 1. Bauer and Glutz (Eds.). 1966. Gaviiformes to Phoenicopteriformes, 483 pages. Akademische Verlagsgesellschaft (AVG), Frankfurt am Main. ISBN 3-89104-457-7. (Second edition 1987)

(Book 2). Volume (Band) 2. Bauer and Glutz (Eds.). 1968. Anseriformes (First Part, 1. Teil), swans, geese, ducks. 535 pages. AVG, Frankfurt am Main. ISBN 3-89104-501-8. (Second edition 1990)

(Book 3). Volume (Band) 3. Bauer and Glutz (Eds.). 1969. Anseriformes (Second Part, 2. Teil), ducks, mergansers. 504 pages. AVG, Frankfurt am Main. ISBN 3-89104-529-8. (Second edition 1992)

(Book 4). Volume (Band) 4. Glutz, Bauer, and Bezel (Eds.). 1971. Falconiformes. 943 pages. AVG, Frankfurt am Main. ISBN 3-89104-460-7. (Second edition 1989)

(Book 5). Volume (Band) 5. Glutz, Bauer, and Bezel (Eds.). 1973. Galliformes and Gruiformes. 700 pages. AVG, Frankfurt am Main. ISBN 3-89104-013-X. (Second edition 1994)

(Book 6). Volume (Band) 6. Glutz, Bauer, and Bezel (Eds.). 1975. Charadriiformes (First Part, 1. Teil), oystercatchers, plovers, snipe. 840 pages. AVG, Wiesbaden. ISBN 3-89104-014-8. (Second edition 1984)

(Book 7). Volume (Band) 7. Glutz, Bauer, and Bezel (Eds.). 1977. Charadriiformes (Second Part, 2. Teil), snipe, avocet, stilt, coursers, pratincoles, sandgrouse. 895 pages. AVG, Wiesbaden. ISBN 3-89104-445-3. (Second edition 1985)

(Book 8). Volume (Band) 8. Glutz and Bauer (Eds.). 1982. Charadriiformes (Third Part, 3. Teil), Teilband I, Stercorariidae to Laridae, 700 pages. AVG, Wiesbaden. ISBN 3-89104-016-4.

(Book 9). Volume (Band) 8. Glutz and Bauer (Eds.). 1982. Charadriiformes (Third Part, 3. Teil), Teilband II, Sternidae to Alcidae. 572 pages. AVG, Wiesbaden. ISBN 3-89104-017-2.

(Book 10). Volume (Band) 9. Glutz and Bauer (Eds.). 1980. Columbiformes to Piciformes. 1,148

pages. AVG, Wiesbaden. ISBN 3-89104-018-0. (Second edition 1994).

(Book 11). Volume (Band) 10. Glutz and Bauer (Eds.). 1985. Passeriformes (First Part, 1. Teil), Teilband I, Alaudidae to Hirundinidae. 507 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-019-9.

(Book 12). Volume (Band) 10. Glutz and Bauer (Eds.). 1985. Passeriformes (First Part, 1. Teil), Teilband II, Motacillidae to Prunellidae. 676 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-435-6.

(Book 13). Volume (Band) 11. Glutz and Bauer (Eds.). 1988. Passeriformes (Second Part, 2. Teil), Turdidae, Teilband I, wheatears and related Erithacinae. 728 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-020-3.

(Book 14). Volume (Band) 11. Glutz and Bauer (Eds.). 1988. Passeriformes (Second Part, 2. Teil), Turdidae, Teilband II, true thrushes Turdinae. 498 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-486-0.

(Book 15). Volume (Band) 12. Glutz and Bauer (Eds.). 1991. Passeriformes (Third Part, 3. Teil), Sylviidae, Teilband I, *Cisticola* warblers, Cetti's Warbler, *Locustella* warblers, *Acrocephalus* warblers, *Hippolais* warblers. 626 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-021-0.

(Book 16). Volume (Band) 12. Glutz and Bauer (Eds.). 1991. Passeriformes (Third Part, 3. Teil), Sylviidae, Teilband II, *Sylvia* warblers, *Phylloscopus* warblers, kinglets. 834 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-511-5.

(Book 17). Volume (Band) 13. Glutz and Bauer (Eds.). 1993. Passeriformes (Fourth Part, 4. Teil), Teilband I, Muscicapidae to Paridae. 808 pages, 179 text figures. AULA-Verlag, Wiesbaden. ISBN 3-89104-022-9.

(Book 18). Volume (Band) 13. Glutz and Bauer (Eds.). 1993. Passeriformes (Fourth Part, 4. Teil), Teilband II, Sittidae to Laniidae. 560 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-535-2.

(Book 19). Volume (Band) 13. Glutz and Bauer (Eds.). 1993. Passeriformes (Fourth Part, 4. Teil), Teilband III, Corvidae to Sturnidae. 809 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-542-5.

(Book 20). Volume (Band) 14. Glutz and Bauer (Eds.). 1997. Passeriformes (Fifth Part, 5. Teil), Teilband I, Passeridae to Vireonidae. 303 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-609-X.

(Book 21). Volume (Band) 14. Glutz and Bauer (Eds.). 1997. Passeriformes (Fifth Part, 5. Teil), Teilband II, Fringillidae to Parulidae. 938 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-610-3.

(Book 22). Volume (Band) 14. Glutz and Bauer (Eds.). 1997. Passeriformes (Fifth Part, 5. Teil), Teilband III, Emberizidae to Icteridae. 724 pages. AULA-Verlag, Wiesbaden. ISBN 3-89104-611-1.

Many reviewers, myself included (*Auk* 107:809–812, 1990), have compared Glutz's *Handbuch* and Cramp's *The Birds of the Western Palearctic*. In the present review, I have refrained thus far from mak-

ing any further comparisons, but I will do so briefly now. Eight years ago, I concluded that both the Cramp *Handbook* and the Glutz *Handbuch* were quite outstanding, and I still believe that they are. However, after more use and more extensive study of the two works, I have reached the additional conclusion that Glutz's *Handbuch* is superior in scholarship and craftsmanship to Cramp's *Handbook*.

The *Handbuch* is extraordinarily complete in its coverage and amazingly accurate in its citations. As I stated earlier, and as many others have also noted, the species accounts in the *Handbuch* are really monographic treatments, without equal elsewhere. True, Glutz's *Handbuch* lacks the many handsome color plates of the *Handbook* that illustrate the species treated, but because I consider the *Handbuch* to be a more scientific piece of work, I feel that I can always turn to other books for such color illustrations. In Glutz, the color plates illustrate specific biological details. For instance, Plate 4 in Volume 13 (Teilband II) shows the sequence of plumage stages (molt) of *Remiz pendulinus*, and Plate 4 in Volume 14 (Teilband II) shows the sequences of molts and plumages in *Pyrrhula pyrrhula*.

Whenever I need to look up reliable biological information about a given species from the western Palearctic (or nearby areas), I first check Glutz. I turn to the *Handbook* when the species I am interested in is not in Glutz. Thus, contrary to Matthysen, who wrote (*Ibis* 137:122, 1994) that Glutz's *Handbuch* is "a highly useful complement to other handbooks such as BWP [*The Birds of the Western Palearctic*]," I would turn things around and state instead that the BWP is a highly useful complement to Glutz's *Handbuch*.

What can be added after this? Not much, insofar as the *Handbuch* itself is concerned, but quite a lot about Glutz himself, the driving force behind this ornithological *summum opus*. First of all, I am happy to report that Glutz was made an Honorary Fellow of the AOU in 1983 and that the DO-G awarded him their Ornithologists Prize in 1993. But mostly I wish to place on record that during all the years that Glutz was working 12 hours a day or more on his *Handbuch*, he was also carrying a heavy teaching load and advising a group of students at the University of Bern. This intense activity resulted in no fewer than 40 students graduating from his laboratory with university degrees, 17 of them obtaining the equivalent of a doctorate under his supervision. A former student, Christian Marti, is now the editor of *Der Ornithologische Beobachter*. Another, Heinrich Haller, is now Director of the Swiss National Park. This is not all, however. From 1967 to 1997, Glutz organized and led no fewer than 28 summer field courses, each with a specific theme, to many areas and habitats of western Europe (from Finland to the Mediterranean). How lucky these students were to participate in field trips with such a master as Glutz.

The question remains, how could Glutz work full-

time for so long on so demanding a project as the *Handbuch* and still devote so much time for as many years to his teaching and field courses? The mystery is compounded when I reveal that Glutz is also an exemplary family man, someone who does a lot of work around the house, and who knows how to entertain in style, as my daughter and I discovered when we spent two marvelous days in the Glutz household in the spring of 1996, only a year away from the completion of the *Handbuch*.

To close this review, I cannot do better than to quote Ernst Mayr (*Auk* 95:617, 1978), whose remarks are as valid today at the completion of the series as they were then when Volume 7 was published. "One does not like to write in superlatives," wrote Mayr, "but they can hardly be avoided with respect to the *Handbuch*. It is a work which is absolutely unique in its coverage of the literature and in its profound and lucid treatment."—FRANÇOIS VUILLEUMIER, *American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024, USA*.

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The Avian Brood Parasites: Deception at the Nest.—Paul A. Johnsgard, 1997. Oxford University Press, New York. xi + 409 pp., numerous black-and-white drawings. ISBN 0-19-511042-0. Cloth, \$75.00.—Brood parasites lay their eggs in the nests of other species of birds rather than care for their own young. The host parents then rear these strangers, even though such behavior may result in the death of their own chicks. Johnsgard's *The Avian Brood Parasites* is a survey contribution to avian ecology and breeding behavior. As indicated in the Preface, Johnsgard has not conducted fieldwork with brood parasites, and he wrote the book to fill a need in the field of natural history publication. The book omits important work, some old and some so recent that the author would have had to have contacted other biologists to know about the work (I don't think he did). Also, the book avoids engagement in debates that move the biologists who study these birds. In this review, I mention some of the recent works that are not cited in the book, and in shorter form (author and date only) I refer to works that are referenced in the book.

The chapters in Part I give an introduction to avian brood parasitism and provide comparative accounts of morphology and mimicry, behavioral ecology, breeding behavior, and the evolutionary arms race between brood parasites and their hosts. The author's style is to recite the results and conclusions of previous studies without giving critical reviews, new interpretations, comments or reflections on scientific

debates, or tests of ideas. The chapters in Part II provide descriptive species accounts of brood-parasitic birds. The book has 32 tables, a glossary, a list of birds mentioned in the text, and many black-and-white illustrations by the author.

Chapter 1 draws upon Friedmann's canon of publications from the 1920s through the 1980s. No estimates of evolutionary relationships are included, although phylogenetic analyses and estimates are necessary to understand the evolution of this breeding style. Regional variation in brood parasitism is mapped onto the world, but the contributions of ecological causes versus phylogenetic histories are not sorted out. Categories of cooperative and exploitive breeding interactions are listed, as are the known hosts of the brood parasites, and much information in the book is easily found in the many tables.

Chapter 2 surveys the morphology and mimicry of hosts and their brood parasites, including egg size, color and pattern mimicry, nestling mimicry, and vocal mimicry. The comparative analysis of cuckoo egg size is from Lack (*Ecological Adaptations for Breeding in Birds*, 1968), whereas more recent comparative analyses of egg sizes in cuckoos, finches, and honeyguides are not mentioned (e.g. Payne, *Evolution* 28: 169–181, 1974; *Ecology* 58:500–513, 1977; *Tauraco* 1: 201–210, 1989). As throughout the book, the tables are compiled from species accounts in Part II, compounding any errors, and if I looked only in the tables I would find the wrong data. For example, in Table 9 the nestling period is reported as 17 days or longer for 14 species of evicting cuckoos, whereas for two non-evicting cuckoos it is reported as less than 15 days. One with "12–17" days (*Clamator levaillantii*) is described in the species account (p. 152) as 9 to 10 days, citing a paper that did not report fledging and one that described a nestling found dead; the 17-day period may be correct. The other (*C. jacobinus*) in Table 9 is reported as 11 to 15 days, whereas the species account (p. 150) gives 16 to 17 days.

Calls of nestling cuckoos that sound like their host species' young might be acquired by young in copying the calls of their foster parents, or fortuitously they might be similar to the host young. But this would not explain the different begging calls of *Clamator glandarius* with different host species, or of *Tapera naevia* where the nestling cuckoo kills its nest mates within a few days, or that nestlings mimic some hosts but not others. No mention is made of the idea (which is as likely as the others, I think) that begging-call races occur within cuckoo species, similar to the egg-mimicry races in certain cuckoos. Johnsgard states that the nestling calls of the parasitic *Vidua* finches mimic those of their host species the estrildid finches. However, the vocal mimicry is in the song of the adult male *Vidua* (adults mimic the calls and songs of their host species, with calls like the begging calls of the young hosts), not in the begging calls of the *Vidua* nestlings themselves, which

differ from the begging calls of their hosts (e.g. Nicolai 1969; Payne et al., *Animal Behaviour* 55:1537–1553, 1998).

Chapter 3 surveys behavior and reproductive ecology, with tables and descriptions of host selection and the effect of parasites on their hosts' nests and populations. It includes estimates of laying rates and length of breeding seasons (from the species accounts, so it is easy to find the information). Tables are listed for associations of brood parasites and their hosts, and for the proportion of the host nests that are parasitized.

Chapter 4 surveys breeding behavior of the brood parasites, including laying and the behavior of the parasite chicks, especially nestling cuckoos that evict their young foster nest mates. It does not include recent publications on molecular genetics evidence of mating within or outside a pair bond in cowbirds and cuckoos, or the genetic studies of young cowbirds and cuckoos in nests of various hosts in tests for individual female host specificity or host-specific races. Sketches of nestling cuckoos evicting host eggs are from published photographs. Not much is known about the effect of early experience on the development of host selection in cuckoos. Only two field studies have reported Common Cuckoo (*Cuculus canorus*) chicks returning to their natal area. Because cuckoos usually do not return to their natal site to breed, it will be some time before field studies reveal the extent of host imprinting in the development of host selection. Less is known in cowbirds for the same reason, a lack of natal philopatry.

Chapter 5 describes the arms race and evolutionary games that parasites and hosts play on a common ecological stage, the nest of the host. The cost of brood parasitism to the host is estimated by comparing the fledging success of parasitized nests and unparasitized nests, and the proportion of nests that are parasitized. This is an active area of fieldwork, and recent estimates of the effect of parasitism on nesting success are summarized elsewhere (Payne, in Clayton and Moore [Eds.], *Host-Parasite Evolution*, 1996). Johnsgard's chapter cites the coevolutionary accounts of Rothstein on cowbirds and Davies on cuckoos yet does not discuss the competing hypotheses of costs and benefits versus the lack of evolutionary variation and the phylogenetic inertia or lack of genetic variation available for selection that leads to nonoptimal behaviors of the hosts, an idea that Rothstein has developed. The chapter ends with Neal Smith's report (1968) of a supposed mutualistic interaction of Giant Cowbirds (*Scaphidura oryzivora*) and their hosts that is conditional on the local mix of wasps, bees, and botflies, a study that was never published in detail and that did not distinguish the species of hosts in parasitized and unparasitized nests.

The systematics section (Part II) provides information on distribution, maps, subspecies names (but

no plumage descriptions), species descriptions for identification of birds in the field and in the hand, habitats and behavior, lists of host species, eggs, and what is known of their breeding biology. Johnsgard's book lists information from a selected few compiled regional and systematic sources, not from an intensive library search. The author's pen-and-ink illustrations lack all the color glory of the cuckoos and the mouth colors of the live nestling *Vidua* and their hosts, although they are good line work and are visually attractive.

For the one obligate brood-parasitic species of waterfowl, the Black-headed Duck (*Heteronetta atricapilla*), Johnsgard suggests that reversed sexual size dimorphism is related to its brood parasitism, where large body mass allows a female to produce many eggs; however, there are no estimates of the number of eggs actually laid by these ducks.

For honeyguides, the information available is from the accounts in volume 3 of *The Birds of Africa* (C. H. Fry et al. 1988). This is the least well-known group regarding brood parasitism. For cuckoos, the author restricted his search mainly to a few regional accounts, and the information about brood parasitism is mostly accurate as far as it goes. The illustrations of small bronze-cuckoos (*Chrysococcyx*) look more like small finches with drooping bills.

The chapter on the parasitic finches is organized on Friedmann's (1960) systematic review. It does not mention the molecular genetics studies of Sibley and Ahlquist (*Phylogeny and Classification of Birds*, 1990) that show the Viduidae to be related most closely to the Estrildidae, the group that includes their host species. Friedmann's idea that *Vidua* spp. are monogamous is mentioned, but not a field study that outlined the dispersed lek-like promiscuous mating of color-banded Village Indigobirds (*Vidua chalybeata*; Payne and Payne 1977), or one that described similar behavior in color-banded Pin-tailed Whydahs (*V. macroura*; Shaw 1984).

Of the many typographic and repeated spelling errors in the book, "ionestii" for *ignestii*, a synonym on page 285 for *Vidua chalybeata ultramarina*, is the only one likely to stump the reader. The finch species accounts and Table 31 contain errors owing to Johnsgard's lack of digesting recent publications.

The Village Indigobird (*Vidua chalybeata*) account generally is sound. As in the text, the proportion of host eggs that hatch and survive to fledging is nearly equal in parasitized and unparasitized nests, as in Morel (1973). Nevertheless, if one considers the success of nests where a *Vidua* egg hatches and the nestling fledges, the breeding success of hosts is 24% lower in parasitized nests (Payne, *BioScience* 48:377–386, 1998), so the host brood is affected more than Johnsgard's text suggests. This lower success in parasitized broods has a consequence not mentioned, an advantage to foster parents who distinguish their own young, and *Vidua* in turn to have nestlings that

match the mouth colors and patterns of their nest mates. Without this effect, it would be hard to account for the evolution of the mimicry of visual signals in the *Vidua* nestlings. Species accounts of the other indigobirds are hopelessly confused; owing to editorial constraints on the length of this review, I refer the reader to other publications (Payne 1996, 1998).

For whydahs, more recent information is summarized elsewhere (Payne 1997). Adult males in most whydah species mimic the songs of their host species, and the young mimic the mouth colors of their young hosts. Johnsgard shows the audiospectrograms of Nicolai (1964 and 1974, cited "1969") to describe the similarity of songs of Paradise Whydahs (*V. paradisaea*) and their host Melba Finches (*Pytilia melba*). These audiospectrograms are incomplete; the songs last for 10 s, not just the 2 s on a short sonagram. The whydahs mimic this remarkable long, complex full song, as Nicolai has described in words. The range map for *V. togoensis* extends too far eastward (no records exist east of Togo), whereas that for *V. interjecta* should extend 2,400 km farther west through Ghana, Mali, and The Gambia.

The author includes a fanciful sketch to illustrate that Paradise Whydahs (and other species) and their host *Pytilia* species have co-specified, the brood parasites and hosts separating in parallel into distinct species. In fact, molecular genetics studies indicate that these brood-parasitic whydahs and also the indigobirds switched from an old host to new host species and colonized these host species well after the hosts had diverged, then they speciated along lineages that did not parallel the lineages of their host species: the *Vidua* species diverged more recently than did their hosts (Klein and Payne, *Evolution* 52: 299–315, 1998).

The final chapter on the cowbirds draws from Friedmann's (1929) book. Johnsgard mentions that cowbirds lay many eggs, with estimates of a mean of 20 to 46 eggs in a season, but he does not reconcile these divergent estimates or tell us how they compare with the number laid by nesting icterids that rear their own young. To me, the difference between cowbirds and nesting icterids is the more interesting; the different estimates among studies may be due to methods (e.g. captive vs. wild birds, and unbiased vs. biased sampling of birds).

Johnsgard's book gives a broad survey of avian brood parasitism but lacks important ideas and recent observations. Most statements are correct, and the book is a source of information about brood-parasitic birds. Since writing a draft of this review, I read two manuscripts for scientific journals where the authors cited this book as their sole source of information on brood parasitism. Apparently, then, a market exists for something to scan in a community of weak scholars. If you want to know about nestling mimicry and song mimicry of parasitic finches, or

the effect of cowbirds on their hosts, or the life histories of brood-parasitic cuckoos and honeyguides, this book is a good place to start, although you should also look elsewhere (or go into the field and work out these problems yourself). Because it is the only book available on brood-parasitic birds, it should be available in all college and university libraries.—ROBERT B. PAYNE, *Museum of Zoology and Department of Biology, University of Michigan, Ann Arbor, Michigan 48109, USA.*

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Raptors in Human Landscapes: Adaptations to Built and Cultivated Environments.—David Bird, Daniel Varland, and Juan Negro (Eds.). 1996. Academic Press, London. xx + 396 pp. ISBN 0-12-100130-X. Cloth, \$72.00.—Raptors are symbolic of unspoiled wilderness habitats and are often considered among the most sensitive components of natural ecosystems. Because humans modify natural systems for their own needs, sensitive raptors often begin to disappear and represent the harbinger of the undesirable changes caused by the human presence. Examples quickly come to mind to any avian conservationist: Bald Eagle (*Haliaeetus leucocephalus*), Peregrine Falcon (*Falco peregrinus*), Spotted Owl (*Strix occidentalis*), and many others. This volume's purpose is to compile available information to explore a somewhat contrary view: How has human presence and related development benefitted populations of raptors? Some of the raptor species featured in this book, indeed, are the same species (i.e. Bald Eagle and Peregrine Falcon) mentioned above that represent symbols of unspoiled wilderness untouched by the presence of humans. The editors state in the Preface that "The vast majority of the papers . . . provide evidence of successful coexistence between humans and raptors." After thoroughly reviewing the 34 contributed papers in the book, I am not sure that the majority of the authors would agree with this statement. The volume provides an excellent assortment of studies and reviews that will allow interested readers to begin to appreciate the types of ongoing work and data available on raptor populations that are using human-altered landscapes. Many of the authors also explored the issue of which raptors may benefit or suffer in the face of increasing amounts of human modification of our environment.

The volume is based on 24 papers that were presented in 1993 at a symposium, *Raptors Adapting to Human-Altered Environments*, in conjunction with the annual meeting of the Raptor Research Foundation

in Charlotte, North Carolina. Twenty papers from this symposium are included in the volume, plus 14 that were solicited from additional scientists known to be working on some aspect of raptor biology in human-altered landscapes. The 34 papers are arranged into five sections: (1) Raptors in Urban Landscapes, (2) Raptors and Artificial Nest Sites, (3) Raptors in Cultivated Landscapes, (4) Raptors in Industrial Landscapes, and (5) Raptors at Large. Papers in the last two sections include a potpourri of raptor studies related to the human environment.

The quality of the individual papers varies immensely. The volume could have benefitted by more rigorous acceptance standards, and the editors would have done well to reject some of the weaker manuscripts. Apparently, only three manuscripts (8%) of 37 submitted papers were rejected, and these standards show. However, the weak papers do not take away from some of the more insightful and substantive contributions included in the volume.

Unfortunately, the first six or so papers in the book are relatively unexciting and could turn away readers looking for more substantive scientific contributions. Many in the first batch of papers suffer from pitiful sample sizes, unsupported conclusions and speculations, or are based on a few anecdotes. Tom Cade and associates lead off the volume with a review of Peregrine Falcon use of urban habitats. Although in some respects this paper is informative, I was distracted by repeated discrepancies in the sample sizes reported. In various places, Cade et al. report information from a total of 60, 61, and 62 (my count from Table 2, pp. 6 and 7) urban locations where peregrines were documented nesting. The paper fails to answer, in any satisfactory manner, the key question concerning urban-nesting Peregrine Falcons; i.e. are these populations viable, or do they represent population "sinks"? The paper by Douglas Bell and colleagues provides data on urban Peregrine Falcons in California that suggest extremely poor reproductive success; however, their information was essentially from three pairs. I would advise most readers to skip to paper seven by J. L. Tella and associates, whose excellent analysis of Lesser Kestrels (*Falco naumanni*) in urban and rural habitats in Spain suggests that the birds benefit from and are doing well in human-modified environments. I also found the remaining papers in this section to be informative: Botelho and Arrowood offer convincing evidence that Burrowing Owls (*Athene cunicularia*) are doing well in at least one urban habitat, and Frederick Gehlbach presents a reasonable and interesting hypothetical model on the urbanization of raptors based on his experience with Eastern Screech-Owls (*Otus asio*).

I enjoyed and learned from most of the contributions included in the section "Raptors and Artificial Nest Sites." Authors presented a variety of information, papers were well written, and conclusions

were supported by the data presented. Several authors effectively document that reproductive success of Ospreys (*Pandion haliaetus*), Red-tailed Hawks (*Buteo jamaicensis*), Ferruginous Hawks (*B. regalis*), and American Kestrels (*Falco sparverius*) was enhanced by nesting on artificial structures at the locations where the studies were carried out. However, the paper on Peregrine Falcons nesting on power plant structures was somewhat lacking and unconvincing. After reading the paper, I came to the opinion that power plants played only a minimal role in the dynamics of the Peregrine Falcon population in the Midwest, contrary to the conclusion of the authors.

Papers in "Raptors in Cultivated Landscapes" were mostly good to excellent contributions. I was mildly disappointed in the small number of papers (only two, both from the same study area in California) that dealt with raptors in farmlands. These agricultural landscapes are probably key human-altered habitats for many raptors around the world, but they receive only minimal coverage in this volume. This may be due, in part, to the lack of raptor research being done in agricultural landscapes, but I think the editors could have worked a little harder to find contributions that would have covered raptors in farmlands. The two papers contributed by A. Erichsen, S. Smallwood, and coworkers describe some interesting analytical techniques and data related to White-tailed Kites (*Elanus leucurus*) and other raptors using a California farming landscape. Ian Newton does a splendid job describing population dynamics of Eurasian Sparrowhawks (*Accipiter nisus*) in conifer plantations in Britain, and Steve Petty contributes an outstanding comprehensive paper on the influence of forest management on 16 species of raptors in Britain. Scott Horton provides a thoughtful review on how timber-producing forests in the Pacific Northwest might be managed to benefit the Spotted Owl; however, it was unclear whether this management could be successful. Robert Kenward offers an insightful discussion and hypotheses to explain why Northern Goshawks (*Accipiter gentilis*) apparently require areas of continuous woodland in North America but not in Europe. The paper by Jean-Marc Thiollay describes an outstanding effort to quantify the raptor communities using different types of managed forests in Sumatra. Thiollay's data strongly suggest that at least six of 12 raptors species sampled depend primarily upon relatively undisturbed primary forest. The conclusions of this paper, which was one of the better papers in the volume, ran somewhat counter to the implied theme of the book.

Most of the papers in the latter two sections of the book were relatively mundane. The more interesting contributions included an analysis by A. L. Bryan on the use of impoundments by Bald Eagles in South Carolina. This paper documents that eagles are rapidly increasing their use of reservoirs and that nesting success is significantly higher at these sites than in non-reser-

voir habitats. Ron Rohrbaugh and Richard Yahner contribute an interesting analysis of breeding-bird atlas data and demonstrate a probable correlation of breeding Northern Harriers (*Circus cyaneus*) with reclaimed surface mines in Pennsylvania. David Houston provides an excellent review of how human-altered environments influence vulture populations worldwide. His important conclusion is that many vultures have not fared well in the face of human modification of habitats, but that vultures are very responsive to a variety of feasible management approaches, such as the establishment of feeding stations ("vulture restaurants"). The final contribution in the volume, by Chuck Preston and Ron Beane, provides a very interesting analysis of road-transect data collected at the Rocky Mountain Arsenal in Colorado.

Despite a couple of minor editorial lapses and their willingness to accept almost every manuscript submitted, the editors did a good job of making sure that all of the papers were (for the most part) readable. A good number of papers included figures illustrating study areas, which is a dying practice but a convention that I think adds immensely to the presentation and understanding of any ecological study. I found about 20 or so typos scattered throughout the text. One habit that I found annoying was the occasional placement of figure captions or footnotes on the page preceding the actual figure. It took me a while to find the caption or the explanatory footnote for some figures. I encountered a few faux pas, such as the abbreviated title "Airports: A New Home for Raptors" for a paper describing the dangers to aircraft of raptors near airports and recommending management approaches to deter raptor use of such habitats.

Overall, I felt that the weaknesses were minor and that this volume had much to offer raptor biologists and ornithologists. The topic of raptor use of human-altered environments is timely, and this book represents a beginning in an area of conservation science that will be active and exciting for many decades to come. The papers collectively document that some raptors do well in highly modified human environments. However, astute readers should glean that we still do not understand the effects of moderately altered habitats on the viability of most populations of raptors. The book provides an important reference for scientists and students interested in research and conservation of ecological processes (such as predation) in human-disturbed ecosystems. The volume should be available to all ecologists, and I strongly recommend it for university, research, and museum libraries. Raptor biologists and conservation-minded ornithologists will benefit greatly by reviewing selected papers in the volume. I recommend it highly for all serious raptor conservationists.—
JAMES C. BEDNARZ, *Department of Biological Sciences, P.O. Box 599, Arkansas State University, State University, Arkansas 72467, USA.*

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The Birds of North America, Volume 8.—A. F. Poole and F. B. Gill (Eds.). 1997. Academy of Natural Sciences, Philadelphia. Accounts 281–320 (12 to 32 pages each), each with 1 color plate, 1 range map, and variable numbers of figures, tables, and appendices. ISBN 1061-5466. \$1,875, or three annual payments of \$850 (library charter price), \$1,690 (ACU members charter price). Order from The Birds of North America, P.O. Box 1897, Lawrence, Kansas 66044.—Avian life histories have remained the lifeblood of ornithological progress for more than 400 years. Initially written by individuals with the help of a network of regional correspondents, the explosive growth of ornithological literature in this century necessitated a new approach in the compilation of such accounts: that of full-time editors working with groups of specialists in production-line fashion to quickly distill and disseminate separately bound, timely summaries of the current and historical ornithological literature. The ambitious and highly successful *Birds of North America* project represents this new approach. The encyclopedic collection, scheduled for completion in 2001, published its first account in 1992. The latest installment in the largest cooperative writing effort ever undertaken by North American ornithologists continues to be impressive. Volume 8 in the 18-volume, 700+ account series, represents the combined labor of 79 authors. Coverage includes the Gaviidae (1 species), Procellariidae (3), Phalacrocoracidae (1), Ardeidae (1), Anatidae (2), Accipitridae (1), Scolopacidae (1), Laridae (2), Psittacidae (1), Cuculidae (1), Caprimulgidae (1), Picidae (2), Tyrannidae (1), Hirundinidae (1), Troglodytidae (2), Regulidae (1), Sylviidae (1), Turdidae (1), Mimidae (1), Bombycillidae (1), Peucedramidae (1), Emberizidae (7), Fringillidae (5), and Estrildidae (1).

To be successful individually, life-history accounts must provide reliable, up-to-date synopses of the institutional knowledge of individual species of birds, as well as gateways to the essential ornithological literature. To be successful in a series, life histories must be written predictably and consistently in a way that enables rapid access to particular aspects of avian biology and ecology in each account for the purpose of cross-species comparisons. *The Birds of North America* excels in both areas. The simple and direct, but not overly telegraphic style makes each account accessible to generalists and valuable to specialists. However, most readers of this review already know the encyclopedic value of avian life histories in general and of *The Birds of North America*, so I will not belabor those virtues here. Rather, I will focus on the impression the series left with me after

I read, cover-to-cover, 40 separate accounts in 14 days.

The most surprising aspect of the task, aside from its humbling nature (there's an ocean of information out there) was the enjoyability of the read, particularly of those accounts for which I knew little of the biology or ornithological history involved. In a very real sense, *The Birds of North America* brings the birds and ornithology of North America to life, complementing and expanding field guides, regional treatments, and technical accounts with a view of the whole organism—skin-side in and skin-side out—together with a history of its study.

In reading Volume 8 cover-to-cover I learned, for example, that Bulwer's Petrel (*Bulweria bulwerii*), which breeds on islands in the Hawaiian archipelago and in the western Pacific, northern Atlantic, and Indian oceans, was named for a Scottish clergyman and conchologist whose singular contribution to ornithology was collecting a specimen of the species on the Desertas Islands off Portugal in 1828; and that the uncharacteristically extreme (for woodpeckers, at least) plumage dimorphism of Williamson's Sapsucker (*Sphyrapicus thyroideus*) initially fooled ornithologists into believing that males and females were separate species. I also learned that a small but apparently naturalized population of Sky Larks (*Alauda arvensis*), a species in serious decline in its native England, exists on southern Vancouver Island, British Columbia, and San Juan Island, Washington; that feral populations of Red-crowned Parrots (*Amazona viridigenalis*), an endangered species in its native Mexico, occur in pockets of southern California, South Texas, and southern Florida; and that in the West, Purple Martins (*Progne subis*) nest almost exclusively in natural cavities, whereas in the East, they nest almost exclusively in nest boxes.

I also discovered that despite the constant avalanche of technical literature, gaping wholes remain in American ornithology. We still do not know why, for example, Bewick's Wren (*Thryomanes bewickii*), the once abundant "house wren" of Appalachia, no longer is common in the region. And although it is not surprising to learn that the secretive and discretely distributed Mangrove Cuckoo (*Coccyzus minor*) remains "among the most poorly known North American birds," I was surprised to learn that only one study has focused on the breeding biology of the Golden-crowned Kinglet (*Regulus satrapa*), and that an unpublished thesis written by Theodora Nelson in 1939 remains an essential reference on the "migration, feeding, breeding, development, and molts and plumages" of the Spotted Sandpiper (*Actitis macularia*), the most widespread sandpiper in North America. There also are intriguing incongruities in the extent of our knowledge *within* species. Take, for example, the Northern Goshawk (*Accipiter gentilis*), whose migration is "poorly understood for North America," but whose meal-to-pellet interval is

known to average $21 \pm \text{SD of } 2.4 \text{ h}$. Some of the gaps in our knowledge may never be filled. We do not know, and probably will never learn, whether North America's first extinct avian endemic, the Labrador Duck (*Camptorhynchus labradorius*), ever bred in Labrador.

The above examples represent the tip of the ornithological iceberg one uncovers upon reading *The Birds of North America*. Series editors Alan Poole and Frank Gill, together with financial supporters The American Ornithologists' Union, The Academy of Natural Sciences of Philadelphia, and the Cornell Laboratory of Ornithology, are to be commended for proposing and carrying out this "impossible" task. The work is far more than an essential encyclopedic reference to our native and not-so-native avifauna to be used selectively by taxon specialists and comparative biologists. I strongly recommend that those who possess or have access to the series begin reading individual accounts now rather than waiting to use them as references, and that those who do not have access to the series either buy it themselves or find a library that will.—KEITH L. BILDSTEIN, *Hawk Mountain Sanctuary, 1700 Hawk Mountain Road, Kempton, Pennsylvania 19529, USA*.

The Auk 116(1):293, 1999

The Auks: Alcidae.—Anthony J. Gaston and Ian L. Jones. 1998. Oxford University Press, Oxford. xx + 350 pages, 8 color plates, 29 black-and-white photographs, 32 maps, 47 tables. ISBN 0-19-854032-9. Cloth, \$75.00.—This fifth Oxford *Bird Families of the World* volume (numbered as the 4th, however) treats the 23 species of alcids that occur worldwide. Although the taxonomy and nomenclature mainly follow Strauch (*Auk* 102:520–539, 1985) and the 1983 AOU check-list (with *snowi*, *perdix*, and *scrippsi* treated as subspecies of *Cepphus columba*, *Brachyramphus marmoratus*, and *Synthliboramphus hypoleucus*, respectively), deviations are hardly explained, and the authors' own opinions often remain obscure.

The seven introductory chapters cover items such as prey location, nocturnality, the fossil record, and nest-departure strategies. The plates (by Ian Lewington and Ian L. Jones) are excellent, showing seasonal variation and some of the subspecies and depicting 135 individuals in total. Unfortunately, the Great Auk (*Pinguinus impennis*) is fully treated in the text but is not illustrated. No eggs or chicks are shown for any species, which is regrettable because they possess such beautiful colors and patterns. The species accounts cover description, measurements and voice, feeding and breeding behavior, and distribution, in-

cluding range maps that show seasonal movements (but no subspecific distribution or political boundaries as in earlier volumes).

Although most of the data presented are referenced throughout the text instead of listed separately within the species accounts, the information included seems to be randomly selected, omitting many interesting details and objective data, e.g. egg measurements for *Uria aalge hyperborea* (range 78.8 to 90.1 × 49.2 to 54.5 mm, with eggs from south Sachalin known to weigh up to 118 g), nests of Marbled Murrelet (*Brachyramphus marmoratus*) discovered only recently (Siberia 1961; California 1974; Barren Islands, Alaska 1978; Canada 1990) and usually adorned with a ring of white guano, Razorbills (*Alca torda*) diving to depths of up to 140 m, and a Japanese Murrelet (*Synthliboramphus wumizusume*) population rediscovered on Eboshi Island.

Furthermore, (sub)generic descriptions are not included (*Endomychura* and *Lunda* are not indexed), and synonyms (e.g. *Brachyramphus brachypterus*, *Phaleris microceros* or *Mergulus/Simorhynchus cassinii*), many extralimital records (e.g. Razorbill in Egypt, Horned Puffin [*Fratercula corniculata*] in Hawaii, Ancient Murrelet [*Synthliboramphus antiquus*] on Lundy, and Tufted Puffin [*Fratercula cirrhata*] in Sweden), and data on mites and other parasites (e.g. *Sternostomum caledonicum* in the Common Murre [*Uria aalge*] and *S. waterstoni* from the Dovekie [*Alle alle*]) are largely omitted.

In addition to the extensive introductory chapters (pp. 3–117) and the 23 species accounts (ca. 180 pages), the volume is enlivened with five sonagrams, 29 black-and-white photographs (birds and habitats), 32 maps, 47 tables (could be improved by listing subspecies' names), 10 line drawings, and 24 graphs.

This volume presents a wealth of information for serious ornithologists, extensively covering the behavior and (breeding) biology of auks, but unfortunately it is rather incomplete on taxonomy and distribution. Nevertheless, the 34-page bibliography points to some 1,000 additional sources (including Steve Kress' successful puffin restoration project on Eastern Egg Rock), and an extensive 12-page index will lead you through most of this tremendous amount of data.—OSCAR VAN ROOTSELAAR, *Eekwal 15, 6871 LT Renkum, The Netherlands*.

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A Guide to the Birds of the Galápagos Islands.—Isabel Castro and Antonia Phillips. 1996. Princeton University Press, Princeton, New Jersey. 144 pp., 32 black-and-white figures, 32 color plates. ISBN 0-691-

01225-3. Cloth, \$24.95.—While packing for a recent trip (July 1998) to the Galapagos Islands, I did something unusual. For the first time in 10 visits over the past 20 years, I did not put a copy of Michael Harris's field guide (1974) in my briefcase. This bold move brought little regret, for as anyone knows who has spent considerable time with birds in the Galapagos, the deficiencies of Harris's small book (20 × 13.5 × 2 cm) are numerous (none of its shortcomings, by the way, was rectified in the virtually identical "revised edition" of 1982). No, on this latest trip the space in my briefcase normally reserved for Harris (1st or 2nd edition; take your pick, but never take both) was occupied by a similarly small (22 × 15.5 × 1.4 cm) but much newer field guide to the birds of the Galapagos, an island group that has been crying out for an excellent field guide ever since binoculars replaced shotguns as the most convenient way to get a good look at a bird.

The new book by Isabel Castro (author) and Antonia Phillips (artist) begins with a foreword by Peter R. Grant, who endorses the birds of the Galapagos enthusiastically but is only lukewarm about the book, which is understandable. Castro's writing is choppy, simplistic, and riddled with confusing, illogical, or inaccurate sentences. Here are some of many such examples: (1) "The characteristics of the bill were genetically handed down from generation to generation, so after a period of time all the birds on the island looked the same" (p. 28); (2) frigatebirds "taking unattended chicks" is predation, not parasitism (p. 77); (3) the Cattle Egret (*Bubulcus ibis*) "at a distance appears all-white, but in breeding season the feathers on the crown, yellow bill, and black legs and feet" (pp. 87–88); (4) "bill shortish" in the Whimbrel (*Numenius phaeopus hudsonicus*; p. 95) and "bill long" in the Wandering Tattler (*Heteroscelus incanus*; p. 97); (5) the Swallow-tailed Gull (*Larus furcatus*) "has webbed feet like the gulls" (supposedly to distinguish it from terns, which, however, also have webbed feet; p. 108); (6) "Mockingbirds . . . have . . . thin bills. . ."; the Hood Mockingbird (*Nesomimus macdonaldi*) has a "distinctive heavy bill" (pp. 120–121); and (7) of the Purple Martin (*Progne subis*), "Females and immatures have been reported from Española and Santa Cruz. As males are easily confused with Galápagos Martin there are no confirmed records" (p. 122).

Of the 10 scientific names misspelled in the "checklist" (pp. 139–142), six are incorrect as well in the text, as are many other words. One wonders who edited this book, and whether from a standpoint of science, word usage, or stylistic consistency? For this we can blame the publisher, not the authors. Even if located in a former British colony, why would Princeton University Press use British rather than American spelling for words such as centre, colour, and grey, or call *Riparia riparia* the Sand Martin instead of the Bank Swallow? Equally puzzling is the rever-

sion to old, seldom-used English island names for the Charles, Hood, and Chatham Mockingbirds (*Nesomimus* spp.). These Loyalist tendencies are not applied uniformly. *Gallinula chloropus*, for example, is called the Common Gallinule rather than the Common Moorhen.

Galapagos birds are renowned for endemism, but Castro and Phillips are inconsistent on this issue as well. Most species accounts mention whether the form is an endemic species or subspecies. For *Sula dactylatra*, the race *granti* is said to be endemic to the Galapagos and to breed on islands off western Mexico. Similarly, *Dendroica petechia aureola* is said to be a Galapagos endemic and to breed on Cocos Island (Costa Rica). Endemism is not mentioned for *Ardea herodias*, represented in the Galapagos by the endemic *A. h. cognata*. A more glaring omission regarding endemism concerns *Pyrocephalus rubinus*, represented in the Galapagos by two distinctive taxa that are variously recognized as endemic subspecies or species (*P. r. nanus* and *P. r. dubius*). Ignoring this inter-island variation is not trivial, especially given the population crash in recent decades by *P. r. dubius*, which is confined to a single island (San Cristóbal).

The lack of detail in describing field marks and distributions is unfortunate. If a nonresident species is known from only one or two records, why not say where (which island) and when (month, year) these records were obtained? Seldom is such information provided. This inadequacy is ironic when you consider that excellent, fact-filled field guides have been produced for very species-rich mainland Neotropical countries such as Venezuela, Colombia, and Panama. These books are packed with biological information that is useful to ornithologists and bird-watchers alike. With slightly smaller print, better formatting, and elimination of the noninformative line drawings, Castro and Phillips could have included similarly useful information in their book without increasing its size. The non-Galapagos field guides just mentioned were also published by Princeton University Press, which indicates that the company is capable of producing a respectable bird book.

The 32 unnumbered color plates in Castro and Phillips must not have been criticized by anyone who knows Galapagos birds well. Most plates include one or more species with blatantly inaccurate depictions of the shape or relative size of the body, wings, tail, or feet. Plumage patterns and coloration are often inaccurate as well, such as the dark endemic Yellow-crowned Night-Heron (*Nyctanassa violacea pauper*), Galapagos Hawk (*Buteo galapagoensis*), female Vermilion Flycatcher (*Pyrocephalus [rubinus] nanus*), and many of Darwin's finches. The biggest problems with the plates, however, are the incorrect shapes and sizes of the bills in so many species, including most of Darwin's finches, all of which are crowded onto just two plates. One of the worst is the Vegetarian Finch (*Platyspiza crassirostris*), whose bill is much too long,

thick, and straight (see Bowman 1961). The bills of the Sharp-beaked Ground-Finch (*Geospiza nebulosa*) and the Common Cactus-Finch (*G. scandens*) are indistinguishable, which simply is not so. Combined with ignoring intra- and interisland variation (a topic lying at the heart of evolutionary studies), the poorly depicted Darwin's finches are sure to promote misidentifications across the archipelago. Other misidentifications are likely to ensue from not illustrating a subadult Yellow Warbler (*D. p. aureola*) and by depicting only one plumage (inaccurately) of the superficially similar but highly variable Warbler Finch (*Certhidea olivacea*). Once again, one wonders how all of this slipped through the editorial process.

Many, perhaps most, of the people buying Castro and Phillips are not scientists but tourists preparing for that once-in-a-lifetime trip to an island group unknowingly made special by Charles Darwin. That the main target for sales is a booming "ecotourism" market is no excuse, however, for sacrificing scientific accuracy. The foundation for modern studies of Galapagos birds, especially of Darwin's finches, was laid by Ridgway (1897, 1901), Swarth (1931), Lack (1947), and Bowman (1961), who accurately depicted bill shapes in pre-computer times using a pencil, pen, ink, dividers, ruler, and relatively freshly collected specimens. (Many of these specimens, by the way, are so foxed, faded, and beat up from 90 years of caliper-wear that it's time to repeat the expedition.) Of these five important works, only Lack (1947) is among the 117 citations listed in Castro and Phillips.

An in-depth appreciation for the evolution and diversity of Galapagos birdlife begs a much better field guide than is currently available. Although the more tame and conspicuous species of birds in the Galapagos often can be identified without a book, many other species are a challenge to identify. A good field guide to the birds of Galapagos still is lacking, needed, and deserved. Until it materializes, we face a big decision about which existing book to carry—a mediocre one written before Cattle Egrets and Smooth-billed Anis (*Crotophaga ani*) took over the islands, or a modern one riddled with omissions and errors.—DAVID W. STEADMAN, *Florida Museum of Natural History, University of Florida, Gainesville, Florida 32611, USA.*

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- Pocket Guide to the Birds of Britain and North-West Europe.**—Chris Kightley and Steve Madge, illustrated by Dave Nurney. 1998. Yale University Press, New Haven, Connecticut. xx + 300 pp., more than 1,400 color illustrations. ISBN 0-300-07455-7. Paper, \$20.00.—At a mere size of 12 × 18 × 2 cm and only 450 g (vs. 550 g for the most recent American field guide), this is indeed a real pocket guide, the ideal size to pack for your next birding trip to Europe. But how useful are the contents, and what is to gain from using it? For a start, this new guide by two expert ornithologists and a skillful artist fully covers 385 species that breed or regularly visit Europe, including France on the south, the Czech Republic on the east, and Norway and Sweden on the north, but excluding Iceland, Iberia, Italy, Greece, and the former Yugoslavia.
- Each species (sizes given in cm and inches) is represented by excellent color illustrations (although the gloss in the Spotless Starling [*Sturnus unicolor*] and the crows [*Corvus* spp.] is too purple) that depict one to eight birds with seasonal, sexual, and age variation where necessary and often a bird in flight. The accompanying text presents useful hints on identification and general information on habitat, habits, breeding, voice, and other appropriate peculiarities. Much care has been taken to place similar birds together, and each two-page spread (combining text and illustrations on each page) presents two to four species. The maps show breeding, resident, and winter ranges at a glance in three different colors and are connected with a short text-block that gives details on status and population estimates (for Britain and Ireland).
- The choice of species to include was determined by the geographic area covered. The selection is very complete and consistent, although the Hoary Redpoll (*Carduelis hornemanni*; breeds in Norway and Sweden) and the Lesser Crested Tern (*Sterna bengalensis*; one female bred in England for many years) seem to have been left out unintentionally. On the other hand, several introduced species are included

as are some Nearctic vagrants (e.g. Pectoral Sandpiper [*Calidris melanotos*] and Ring-billed Gull [*Larus delawarensis*]).

Taxonomic treatment is up-to-date, recognizing *Larus [argentatus] cachinnans*, *Lanius [excubitor] meridionalis* and *Loxia [curvirostra] scotica* as separate species. Within the text, geographic variation is often discussed and occasionally illustrated on the accompanying plates. Nomenclature follows European guidelines, and hence we find "diver" for loon, "buzzard" for hawk, "skua" for jaeger, "guillemot" for murre, and "bunting" for longspur in the index of English names; unfortunately, an index of scientific names and a bibliography are not included.

This handy book contains an extensive introduction with chapters on topography and field craft and a four-page glossary. Although it seems to be aimed at casual or beginning birders, the overall quality certainly meets the expert's requirements at a friendly price.—OSCAR VAN ROOTSELAAR, *Eekwal 15,6871 LT Renkum, The Netherlands*.

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A Birder's Guide to Virginia.—David W. Johnston (compiler). 1997. American Birding Association, Colorado Springs, Colorado. viii + 280 pp., 45 maps, numerous black-and-white photographs and sketches. ISBN 1-878788-12-4. Paper, \$18.95.—This latest addition to the American Birding Association's bird-finding guide series does an excellent job of introducing the wealth of Virginia's avifauna. With elevations ranging from sea level to 5,700 ft, as well as a semi-pelagic area on the Chesapeake Bay Bridge, Virginia has a state bird list of 425 species, of which about 390 are regular and 217 are known to breed.

The 23-page Introduction is a mixture of information about the state and its birds together with advice for the neophyte birder. The core of the book is the detailed description of 70 birding sites grouped in six geophysiographic regions. These are treated in a standardized format: (1) a brief paragraph describing the area, (2) directions and a map for reaching the area, (3) a short description of habitats, (4) some of the birds expected at the site during different seasons (as well as special or unusual species), and (5) a section on special comments (often mentioning any hazards in the area).

The site descriptions are written by local people familiar with the area involved and are very well done. Directions and descriptions are general enough that the inevitable habitat changes will not render the accounts obsolete. Most of the areas are public land of some sort, but a few include much pri-

vate land. It is good to see occasional reminders about obeying any rules or closures on public land and about entering private land without permission. Too often birders feel that such restrictions do not apply to them.

Hawk watching in Virginia merits a separate chapter. A brief essay describes the general picture of the fall migration and the history of organized autumn hawk watching. The autumn migratory time tables for 14 raptors and two vultures are given in familiar bar graphs. Directions are given to four mountain sites and one coastal site that are staffed for full-season coverage. Phone numbers for contacts at each site are given.

Another chapter is "Pelagic Birding in Virginia," which includes a discussion of the species known to occur offshore together with a table showing their seasonal occurrence. A section entitled "How to Get Offshore" includes locations of party fishing boats and charter boats and gives an address of an organizer of pelagic birding trips.

An "Annotated Checklist of Birds" found in Virginia occupies some 40 pages. One or two sentences describe the occurrence of species. Individual records are given for rare species, but most species are described as being "abundant," "common," "uncommon," or "rare" although these terms are nowhere defined. The brief statements about the habitat are too vague to be of much use, and in some cases they are downright erroneous.

A second list, "Specialties of Virginia," gives more specific information about where to find many of the more localized species that birders may need for their life lists. The book closes with lists of butterflies, amphibians, reptiles, and mammals of Virginia.

The intended audience for this book is not immediately apparent. The Virginia resident who is beginning a hobby of birding and the out-of-state visitor will find the book very useful. The experienced Virginia birder will have less use for it.—GEORGE A. HALL, *P.O. Box 6045, West Virginia University, Morgantown, West Virginia 26506, USA*.

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Voices of the Toucans. Order Piciformes, Family Ramphastidae.—John W. Hardy, Theodore A. Parker III, and Terry Taylor. 1996. ARA Records, P.O. Box 12347, Gainesville, Florida. Audio cassette, \$12.50.—This is one of the most recent productions in the series featuring Neotropical avian vocalizations arranged by family. This compilation does not include the New World barbets, now considered a subfamily of the Ramphastidae. However, most of the taxa in-

volved in the controversial species-level taxonomy of the spectacular toucans (*sensu stricto*) are represented. The absence of a few forms, such as those of the Emerald Toucanet (*Aulacorhynchus prasinus*) complex, will not obfuscate taxonomic interpretations, because toucan vocalizations typically vary little among members of the same superspecies groups. As this tape illustrates, in contrast to their plumage and behavior, toucan vocalizations are rather simple and monotonous, ranging from frog-like croaks of the toucanets to the far-carrying "yelps" of the smooth-billed group of *Ramphastos* toucans. Nevertheless, toucan vocalizations are one of the most characteristic sounds of the Neotropical forests, and the absence of the prominent *Ramphastos* vocalizations from lowland rain forest often indicates overhunting by humans or poor productivity of fruits.

As anticipated given the difficulty in recording some of the species, the quality of the recordings varies considerably from a few species that are represented by only a snippet of calls to a couple of species where the recordings are several minutes in length and clean of background noise. The information-rich liner notes begin by giving a half-page overview of toucan characteristics and taxonomy.

This is followed by species accounts that give both English and scientific names, habitat, elevational range, distribution, locality for each cut, date, recordist, and where appropriate, notes on species status and superspecies affinities. This is one of the most typo-free liner notes of the ARA series. The distributional information is generally accurate, but the Black-mandibled Toucan (*Ramphastos ambiguus*) is *not* found in the Guianas and Amazonian Brazil; rather, it occurs in the eastern foothills of Ecuador and Peru and west of the Andes in southwestern Colombia. Identification of other avian species in the background is inconsistent, and very few of the cuts have data on whether the recordings were made under natural conditions or after playback.

This cassette will be valuable for first-time visitor to the Neotropics, especially in western Amazonia where up to seven toucans are sympatric. Individuals and institutions that have other cassettes in this series also will want to add this one to their libraries. Hardy et al. continue to make an invaluable contribution to the Neotropical community through the production of this series.—MARK B. ROBBINS, *Division of Ornithology, Museum of Natural History, University of Kansas, Lawrence, Kansas 66045, USA.*