
Books

IDENTIFICATION GUIDE TO NORTH AMERICAN BIRDS. PART I [:] COLUMBIDAE TO PLOCEIDAE. Peter Pyle, 1997. Slate Creek Press, Bolinas, California. xii + 732 pp. \$39.90 U.S. within U.S.A.; \$42.00 U.S. in all other countries; see *Bander's Marketplace* for discounts on multiple copies and other ordering details.

One of the most significant contributions to banding in North America to date was the publication in 1987 of the **Identification guide to North American passerines** by Pyle et al. (see McNicholl 1989). All serious banders on this continent owe a tremendous debt of gratitude to the four authors of that pioneering effort. A measure of its success is the progress in our ability to determine age and sex of passerine species during the ensuing years to the extent that Pyle felt compelled to produce an update a mere decade after the original. His update is so detailed and thorough that had it been no more than an update, it would have been well worth the considerable effort obviously invested in it and worthy of the praise and gratitude of banders for the amount of information that Pyle has gathered together on age/sex differences, geographic variations, racial differences and molt patterns of North American passerines. However, as its title suggests, this volume also extends its coverage to all native "land bird" species other than "diurnal raptors" that normally occur in North America—adding columbids, cuckoos, owls, caprimulgids, swifts, hummingbirds, trogons, kingfishers and woodpeckers to the groups covered. Two widespread and one localized introduced breeding species (European Starling and House and Eurasian Tree sparrow) are included, but one widespread (Rock Dove) and other localized introductions are not. Species known to be extinct are excluded, as is one (Ivory-billed Woodpecker) of debatable continued existence, whereas another of debatable continuance (Bachman's Warbler) is included.

Other changes incorporated into this edition include the addition of sections within the species accounts on each sub-species/race currently recognized in the species within the North American portion of its range, a list of species

known to have hybridized with a given species, and considerably more detail than previously on molt. Bar graphs also indicate the times at which age/sex criteria for each species are recognized by the Canadian Wildlife Service's banding office and the U.S. Fish and Wildlife Service's Bird Banding Laboratory. Unlike the earlier book (Pyle et al. 1987), the four-letter "alpha codes" to species and subspecies in this volume correspond to those used by the official banding agencies at the time the book was published.

The book consists of a 38-page introduction, followed by species accounts, an extensive literature cited section, and an index. The introduction includes an outline of the history and scope of the book, a brief overview of bird topography with two detailed drawings, a thorough review of age/sex determination techniques including a detailed discussion of molts and plumages, and a complete guide to using the species accounts. The species accounts section includes short introductions to "incomplete molts and ageing" in "near-passerines" generally, in owls and in woodpeckers and to "molt limits" in North American passerines, and one-paragraph introductions to each family covered (three of which were considered sub-families at the time of publication). Species accounts include alpha codes, American Ornithologists' Union species numbers, recommended band size, features that distinguish the species from others, a summary of geographic variation (including geographic distribution and descriptions of sub-species), timing and degree of molts, timing and degree of skull pneumaticization, age/sex differences, a monthly chart of when different sex/age designations are considered acceptable, and a list of references (often including personal communications). Numerous drawings by Steve N. G. Howell aid in the use of age/sex distinction characters discussed.

The introductory reviews of age/sex determination techniques and of molt are comprehensive and worthy of repeated readings. Pyle's compilation of details on molt, plumage variation and age/sex determination in the species covered is also truly

comprehensive. On reading through the various species accounts, I checked on numerous rather obscure notes on plumage variation of one sort or another and found very few references missing, and thus few details lacking. In such a major compendium, a few omissions are inevitable, such as the early references to green-backed male Rufous Hummingbirds noted by McKenzie and Robbins (1999), documentation of hybridization between American Crow and Common Raven (Jefferson 1994), and the possibility of using a combination of different measurements to determine sex in American Dippers in at least part of their range (Ealey 1981). These few omissions will no doubt be corrected in future editions.

As valuable as Pyle's comprehensive compilation of data is, he adds to its usefulness considerably by stressing aspects that need more study. Not only do age/sex criteria of many species require considerably more work, some research suggests that some published criteria may be less reliable than thought previously. For example, in the case of Alder and Willow flycatchers, even in-hand measurements proposed by Stein (1963) and used widely were considered by Pyle et al. (1987) to require extreme caution. New evidence (Seutin 1991) suggests that Stein's formulae are even more problematic than believed before, causing Pyle to suggest in this new book that the two species cannot be separated by measurements alone, a conclusion also reached by the Ontario Bird Records Committee in classifying seven records of Willow Flycatcher identified by these measurements as "identification uncertain" (Dobos 1998). Pyle has also taken the wisely conservative approach of treating several species together (especially recently "split") if age/sex criteria developed for former "species" have not yet been sorted out between/among the split-off species (e.g. Pacific-slope and Cordilleran flycatchers are considered together under "Western Flycatcher," Blue-headed, Cassin's and Plumbeous vireos under "Solitary Vireo," and Oak and Juniper titmice under "Plain Titmouse.")

Pyle repeatedly stresses that a major function of the book and several related papers leading to it is to stimulate further research and publication on the accuracy and/or geographic variation in the molt patterns and age/sex determination criteria

summarized in this compendium. Hussell's (1998, 1999) recent contributions on Snow Bunting molt, McKenzie and Robbins' (1999) examination of dorsal color and hybridization of male Allen's and Rufous hummingbirds, and Michalak's (1998) evaluation of band size appropriate for one race of the White-crowned Sparrow show that Pyle has already achieved that objective. *NABB* readers should follow these examples, which serve as sort of mini-reviews of portions of the book. Of particular value are studies, such as that by Bradley and Morris (1999) comparing plumage criteria with other age or sex determination techniques. Examination of previously banded birds also can be useful in assessing the reliability of age criteria, as exemplified by the three-or-more year-old male American Goldfinches still sporting "very green shoulder patches" when retrapped in spring by McKinney (1997) and Miles (1997), when such wing coverts are normally "uniformly... black" (p. 688 of Pyle). Colwell's (1999) examination of the crowns of known-aged Golden-crowned Sparrows, based partly on returns of banded individuals in subsequent years, provides another excellent example.

In short, Pyle has done an outstanding job of gathering together most of what is known to date about variation in plumages and morphology of North American "land bird" species. Banders should be alert for modifications needed to age criteria, sex criteria, molt schedules, and especially to geographic variation within species and reward Pyle by keeping this work "forever in progress" (Gregoire 1999). Banders should also be mindful that loss of feathers and subsequent regrowth can make a bird seem younger than it is, as exemplified by the male Common Yellowthroat caught by Machell (1999) with partially grown, truncated left rectrices and fully-grown, pointed right rectrices—always at least glance over the whole bird for anomalies. Inevitably, new variants will be described, such as the unusually reddish, large Fox Sparrow observed by Fairfield (1998), and new assessments will alter some details, such as the finding by Wiebe (1995) that most Steller's Jays in the "lower mainland" of southwestern British Columbia are intergrades between two races, the variability documented by Parkes (1999) in the extent of purple on the heads of one race of Common Grackle and the finding by Keith

et al. (1999) that complete prebasic molt occurs at least occasionally in Gray Catbird. Publication of such new findings will help Pyle to revise this superb compendium even further.

As an aid to banders in the field, the book's success is somewhat mixed. Its greatest strengths are found in its thoroughness and in its richness of illustrative aids (mostly drawings, but also some tables). But its volume of detail also can make sorting through the detail with a bird in the hand somewhat problematical. Many readers will find some sections, especially those on molt, rather heavy reading, requiring careful and repetitive study to make them useful for banding operations. The concern expressed by Runkles (1998) over possible stress to birds because of increased handling time while banders learn to use the various age/sex criteria was anticipated by Pyle, who emphasized the importance of giving priority to the welfare of the bird over full determination of age and sex. Judging by our experience in Cuba of using the criteria documented in Pyle *et al.* (1987), banders can learn these criteria relatively quickly on bird species handled frequently, and thus gradually be able to determine age and sex of more individuals as this learning progresses. However, the detail in this new volume is often considerably more, and even experienced banders may at times have trouble sorting through all the possibilities without keeping the bird longer than desirable, especially when processing birds that they do not catch frequently. Several figures are cited frequently without reference to the pages on which they are found even though they are often dozens or hundreds of pages from the species account under consideration. Banders may wish to add some sort of tabs at those used most often. The thickness of the book also makes it hard to keep open at the correct page while working on a bird in the hand. Finally, the organization of the descriptions of various age/sex/race combinations requires the bander to read through considerable material for some species in order to consider all characters that may help narrow the bird down to a particular age and/or sex. For field use, the information would have been easier to use if in key form, as suggested by Newstrom (1999). Banders may find it easier to use Pyle *et al.* (1987), old Western Bird Banding Association worksheets, old banding manuals or

other keys, with the new Pyle on hand to check on the validity of the criteria found in these sources.

The book contains numerous minor grammatical errors, several references cited in the text that do not match the dates and/or spelling in the literature cited and other minor errors (e.g. failure to italicize *Delichon urbica* on p. 327 or use of older species names, such as the briefly used Northern Hawk-Owl instead of Northern Hawk Owl in figure captions [although the correct name appears in the text on the same page as two of those figures]). These are mostly minor annoyances, but a few are more significant. The accounts of Clay-colored, Brewer's and "Timberline" sparrows are on pp. 552-555, not 566-568 as indicated in the caption to Figure 3 (p.3). The figure illustrating roofs of corvid mouths is 195, not 193 as indicated in the caption to Figure 15 (p. 20). Six references to Figure 184 [shrike heads] on p. 316 are clearly intended to refer to Figure 202 on Horned Lark uppertail coverts. The first of two figures labelled 249 (p. 421) should be Figure 247, while Figure 248 cited four times (pp. 421-422) is missing completely. Figure 103 of Pyle *et al.* (1987) appears to have been intended. References to Fig. 3X00 on pp. 558 and 559 appear to refer to Figure 296 and Fig. 3X11 on p. 600 to Figure 307. Four references to Fig. 316 [underparts of grosbeaks] on p. 604 should refer to Figure 312 [inner secondaries of Snow Buntings]. Several references to Fig. 325 (pp. 633-634) should refer to Figure 326.

Some references cited in the text are not included in the literature cited section. The frequent citation of Miller (1955a) or (1955b) even though only one 1955 paper appears in the literature list suggests that another may have been omitted unintentionally. Similarly, I suspect that a 1978 paper by Browning cited under Blue-throated Hummingbird, Acorn Woodpecker, "Solitary" and Yellow-throated vireos, Tree Swallow, Tufted Titmouse, Marsh Wren, American Pipit, Yellow and Yellow-throated warblers, Western Tanager, Song Sparrow and Blue Grosbeak refers to a missing reference, as his only 1978 paper listed is on geographic variation in Ruby-crowned Kinglets, under which it is not cited! A few other references also appear to be cited under the wrong species. Papers cited in the text, but not listed in the literature cited include Baumel (1957) on p. 313, Browning and Banks

(1991) on p. 75, Chapin (1922) on p. 163, Cooper (1996) on p. 335, Palmer (1970) on p. 17, Smith (1983) on p. 466, Webster (1984) on pp. 75, 242, 243 and 250, and Wright and Rising (1993) on p. 566. Two cited apparently missing papers (Dunn and Garrett in press on at least 20 pages and Pyle et al. in press on p. 133) likely refer to 1997 publications that were updated in the literature list between drafts, but only partially updated in the text. Several references in the list are also out of order or lack a date, title or journal, and *Bird-Banding* is spelled four different ways. Dunning's *Birds of North America* Bachman's Sparrow account is listed under both Dunning (correctly) and J. L. Dunn (incorrectly). A paper on Great Horned Owls by Webster and Orr is listed under Wander and Orr.

In spite of its errors, omissions and field impracticalities, this volume exceeds even that of Pyle et al. (1987) as a source of information on identification, plumage variability and age/sex determination of North American land birds. Not only banders, but also anybody interested in plumage variation, molts or hybridization should have a copy as a primary information source, guide to relevant literature and guide to further research needed. Peter Pyle, Slate Creek Press, and the many banders and ornithologists consulted by Pyle all deserve loud applause for a job well done.

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Errata for Pyle's book can be found at:
prbo.org on the web.



OWLS, A GUIDE TO THE OWLS OF THE WORLD. C. Konig, F. Weick and J.-H. Becking, 2000. Yale University Press, New Haven, Connecticut. Hard cover, 462 pp. \$50.00 U.S.

Owls as a group have always intrigued and mystified humans. Symbols of wisdom, evil and death, they are heard calling at night more often than seen. Their mythical influence on human life is typified by the Native American prediction of death, "I heard an owl call my name."

The generally nocturnal habits and lack of striking visual distinctions within the families Tytonidae and Strigidae have often confused taxonomists. Now as if to commemorate the start of a new millennium, Yale and Pica presses have brought us this massive summary of past taxonomic research on this intriguing group of birds.

An important feature in a guide is the accuracy of the illustrations. Multiple images in **Owls** do a fine job of illustrating the plumage variations within geographically widespread species, as well as the similarities in appearance between closely related species. It is interesting to note that some desert populations of owls are almost as white as the Snowy Owl, while tropical forest species tend to dark grays and chocolates.

Owls fits the pattern of the Pica/Yale guides with individual species accounts and a general overview that complements them. Following the overview, a 20-page section with references summarizes the work of the senior author and his colleagues on biochemical taxonomy of owls. Brief species accounts cover identification, vocalizations, distribution (including a map), movements, habitat, plumage description, measurements, geographical variation (including a list of subspecies), habits, food, breeding, status and conservation, remarks and references. The average length of a species account is about 1.1 pages. There are 18 pages of references following the species accounts.

While most guides of this type rely on taxonomic studies by others, this one includes the results of work by the lead author and his colleagues on the DNA of a variety of species as well as recordings of voices. This results in the addition of several species to some genera. The authors recognize 67 species in the genus *Otus*, while Monroe and Sibley (1993) recognized only 46. Some new species from North and Middle America appeared in the 1998 American Ornithologists' Union (A.O.U.) checklist, while Oxaca (*O. lambi*) and Guatemalan (*O. guatemalae*) screech-owls are here elevated from subspecies to species status. The recently discovered *O. petersonii*, honoring the late Roger Tory Peterson, is also included.

Another interesting genus is *Glaucidium*. The authors split the Northern Pygmy-Owl (*G. gnoma*) into three species: Northern (*G. californicum*), Mountain (*G. gnoma*), a primarily Mexican species which just reaches southeastern Arizona and Cape (*G. hoskenii*) of southern Baja California. Based on early reports from the authors and their colleagues, Monroe and Sibley (1993) recognized the first two species and Howell and Webb (1995)

recognized all three, while the A.O.U. (1998) checklist continued to recognize only one. Such differences occur when various authors and committees are dealing with a rapid flow of new data.

Other major genera with additional species (compared with Monroe and Sibley 1993) include *Bubo*, *Strix* and *Ninox*. The total number of species in this guide is 211. Not only have new species emerged, mostly from subspecies, but also some have been moved between genera.

While the authors appear to have an extensive knowledge of the taxonomy of species which they and their colleagues have studied, their knowledge of other species seems less thorough. For example, under Spotted Owl they do not mention the views of some ornithologists that two or three species may be involved. They recommend further study of the biology of this species, apparently unaware of the many Spotted Owl publications in the United States in recent years. Unfortunately, the authors have relied on secondary sources as the basis for most of their descriptions of the biology of the owls. They seem unaware of the **Birds of North America** series (Poole et al. 1992--), which started with the account for Barn Owl and has covered at least 14 owl species to date.

The authors' knowledge of North American geography is weak: e.g., the area of New Mexico where Boreal (Tengmalm's) Owl is resident is the south end of the Rocky Mountains, not east of them. The range of the Flammulated (Scops) Owl is reported as "from w North America (British Columbia) along Rocky Mountains to Mexico, Guatemala, and El Salvador." The map is somewhat more accurate, but both are far too vague to be helpful. An unidentified line on this map may be intended to represent the boundary between summer and permanent ranges, but if so it is much too far north. Furthermore, Howell and Webb (1995) do not indicate El Salvador as part of the range. The maps in Howell and Webb (1995) and Dickinson (1999) show more detail.

We noted a variety of editorial problems, including references cited in the text but not listed in the reference section, and listed references not cited

in the species account. The introduction promised that all known species of owls were illustrated, but at least one species account is labelled "Not illustrated."

Describing the vocalizations of birds is always a difficult task; to maximize the value of this book, the reader should order the accompanying double CD (ISBN 0-300-07947-8), \$37.50 U.S.

The taxonomic work based primarily on study of DNA and vocalizations is obviously the major focus of the first author and the strong point of the book. The plates were done by a single artist, eliminating the variability that multiple artists introduce. Coverage of North and Middle American literature should have been stronger. The use of secondary sources for the life history information in this book is a real weakness; it not only deprives the readers of the most recent data on each species, but also raises the possibility of passing on errors in these sources, which are often written from other secondary sources. This book appears to be strong as an identification guide, but if you are looking for the most thorough coverage of North American owls, go to the **Birds of North America** accounts.

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