overlooked, some misrepresentation—but I can't report that I discovered any. The text was proofread to the degree that I discovered no caption goofs and, indeed, *no* typos—do the authors know where a few are yet hidden? Sentences with no apparent reason to exist failed to come to my notice. I will relate that I encountered the words "beloved," "fugacious," and "metaphysically" once each.

The endpapers together comprise two maps of California, split north and south, each conforming to the two long-established regions by which are packaged the quarterly summaries in *North American Birds*. Counties are named with their 2- or 3-letter codes. White numerals, easily discerned against neat black boxes, draw one's eye to 273 numbered locations from which reports reviewed by the committee have come. By benefit of two inset maps magnifying heavily birded coastal southern California, that portion has been marked with 140 such sites, while northern California hosts 133. Sizable swaths of California unmarked by symbols betray regions that are sparsely populated, lightly birded, not strategic places to look for rarities—or, just as likely, all three. The endpapers in my copy were firmly glued and are evenly framed against the inside tuck of the covers. The book seems well bound and sturdy.

The looks, plan, and layout of *Rare Birds of California* work well. While the sheer glut of historic information cannot avoid appearing ponderous, that density by itself will not discourage reading. Throughout the book, it is apparent that a balance between tedium and liveliness has been met. The editors have welcomed the reader, enlivening a great deal of rare bird data with erudite analyses, questions, footnotes, and supporting references.

Dull bird books are promptly relegated to vertically aligned storage. It is safe to say that *Rare Birds of California* likely will lay on an exposed horizontal surface within easy reach for some days after the reader acquires it.

I thank Steve Mlodinow and Alan Contreras for their helpful suggestions.

David Fix

Gulls of the Americas, by Steve N. G. Howell and Jon Dunn. 2007. Houghton Mifflin, Boston. 516 pp., 1160 color photographs. Hardcover $35.00 (ISBN-10: 0618726411).

This book constitutes a superb reference guide for the identification and plumages of the 36 gulls that occur in the western hemisphere (22 breeding in North America, 10 in South America, 4 visitors), and it surely constitutes the best comparative and comprehensive reference book on gull plumages published to this date. The authors' profuse use and adequate selection of photos provide the reader with rich comparative visual material.

The book is divided into five main sections: How to use this book, Introduction, Plates, Species Accounts, and Glossary. The section "How to use this book" explains how the information is organized and the way maps should be interpreted. In this section, however, the authors already warn the reader that "citations are provided only for some specific distributional information and for specific statements and information that we consider not to be general knowledge." It is hard to assess what they consider "general knowledge" in relation to gulls, and the reader is left to wonder where much of the information included in the book is coming from. Furthermore, they later go on to state that "most gulls are relatively little studied. Recent observations have brought into question some time-honored beliefs about gull molts and plumage."

It is easy to imagine that the "little studied" statement applies to all aspects of gull biology. Also, most of our "general knowledge" about gulls is based on the species that tend to associate with people and behave commensally when around people, as around fishing operations or in marine animal parks. When not associated with people many of these gulls behave very differently, and this needs to be acknowledged.

The introduction definitely should not be skipped, as is commonly done, for it is rich in information concerning taxonomy, field-identification methods, variation in the

plumages of gulls in relation to age, sex, geography, and environmental factors, and hybridization. It also gives excellent information on gull topography and appearance, including size and structure as well as body, wing, and tail topography and patterns, with a thorough explanation of the color variations and scales for the various feather groups and individual feathers. The authors explain head and bill size, color, shape and patterns, eye and orbital-ring colors, leg length and color, molts and plumages, age terminology, and plumage cycles comprehensively.

The last and molt process are explained at length for each group of gulls, and this detailed information is one of the greatest contributions of this guide. It categorizes American gulls into four groups by molt strategy and addresses the distinctive characteristics of each group. At the end of the Introduction, however, the subsection on habitat and behavior is too vague, contrasting with the rest of the otherwise very precise and detailed introduction. There is some inconsistency, such as when the authors mention that "from one to four cycles are required for plumage to attain adult (or definitive) appearance" (page 9), while a few pages later (page 13) they state that "most large species attain adult plumage in the fourth or fifth plumage cycle."

The plates are the highlight of the book, with detailed descriptions and over 1100 photographs of the multitudinous plumages of all the hemisphere's gulls. The rich and excellent photographic material provides the reader with the right example of the precise plumage and molt stage it is intended to illustrate. A critical aspect of the photos is the captions that give exact date and location, as well as short informative descriptions, and references to other photos for comparison, when appropriate. The species accounts include expertly written identification summaries for each species, addressing taxonomy, status, and distribution, followed by field identification with subsections on similar species, description, and molt. The subsection on habitat and behavior, however, shows flaws in the information given for some species, and a lack of the exhaustive and comprehensive work so characteristic of the rest of the book.

For example, in relation to ranges of colony sizes and food and feeding methods the information throughout is either incomplete or inconsistent; for some species feeding methods are mentioned but actual diet is not reported. For some others, some food items are mentioned but the diet is not discussed comprehensively. For some species, some statements are quite misleading. Probably the worst problem in this respect is that too many species are reported to feed "commonly" by scavenging. This is very likely the result of observing the species away from their natural habitat and in close contact with human beings, where they act as commensals.

There is considerable evidence that some of the species reported in this work as commonly scavenging actually feed mainly by catching small fish in open waters, or by kleptoparasitizing other seabirds, usually well away from people. For almost half of the North American species the synopsis of feeding and food habits is either incomplete or biased. This could be the result of the authors relying on sources of information that are too summarized and a lack of exhaustive review of the relevant literature related to these topics. It is unfortunate that such an important landmark work with respects to molts and plumages includes a section not based on a thorough literature review and logical development of the system—at least providing citations of primary literature. For example, the authors mention that Heermann's Gull "feeds commonly by scavenging, also forages in intertidal and surface waters for marine invertebrates." There is ample evidence, however, that Heermann's Gull feeds mostly on small pelagic fish and, therefore, finds its food mostly in open waters; although it may scavenge from fishing boats dumping refuse after a catch, and steals fish from other seabirds, these are not its "common" ways of feeding. And, although Heermann's Gull may occasionally be observed by landlubbers foraging on stranded or otherwise healthy marine invertebrates, this again is not its main feeding method (Cassin 1856, Anthony 1906, Dawson 1909, Jewett et al. 1953, Velarde et al. 1994, Velarde et al. 2004).

The authors state that the Yellow-footed Gull nests in small colonies of up to 40 pairs. It has, however, been reported to nest in colonies of between 80 and several hundred pairs (Hand et al. 1981, Spear and Anderson 1989, Velarde and Anderson 1994, Velarde et al. 2005). The account continues with "it feeds commonly by scavenging; also forages in intertidal and surface waters for marine invertebrates and preys on eggs and young birds, also on small adult seabirds at their colonies." While this species does scavenge sometimes, it also takes fish in oceanic and coastal waters by plunging, feeds on shellfish and decapods it captures among boulders along shores, and preys on seabirds such as storm-petrels and the Eared Grebe over open waters (Hand et al. 1981, Dunning 1988, Baird 1996). Similar errors and omissions related to diet and feeding habits affect the accounts of various other species.

I detected just one typographical error: on pages 71 and 72 photo 7.2 refers the reader to photo 7.9 whereas it should refer to 7.10.

The guide's inclusion of hybrids, and treating them as independent "species," providing field-identification characteristics, is an additional excellent point, particularly because these hybrids are quite common in some of the parent species' ranges and are frequently encountered by observers in these areas.

In summary, this great book would have been even better if the authors had confined themselves to their own areas of real interest, identification, distribution, plumages, and molt. This is definitely a book to have in your library if you are seriously interested in gull and gull age-class identification.

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Enriqueta Velarde

Bird Voices of Northern California: An Audio Guide to Bird Identification, by Ron LeValley and David Fix. 2007. Mad River Biologists, Arcata, California (ordering information at www.madriverbio.com). Double CD set, $27.95.

Bird sounds are an important component of field identification, and these days numerous compilations of recordings are available, usually for families of birds or for geographic regions. This pair of CDs (hereafter *Bird Voices*) includes the voices and other sounds of 190 species found in northern California, ranging from the Marbled Murrelet to the House Sparrow, from the Sandhill Crane to the Wrentit. The region covered is not defined but appears to be truly northern California (north of Sonoma county), rather than including central California. The species covered are listed on a simple insert (adorned with some nice color photos), which notes that the recordings were made primarily by LeValley, with help from the California Department of Fish and Game, Sean McAllister, Mark Higley, and Seth Bunnell. The insert also informs us that most recordings were made in Humboldt, Trinity, and Siskiyou counties, and that Fix wrote and spoke the accompanying narration.

Bird Voices is essentially a greatly expanded version of a tape cassette produced some years ago by the same team, which was a tool aimed to help field biologists recognize bird vocalizations for censusing purposes (hence the long samples of species such as the Marbled Murrelet and Spotted Owl). The emphasis on real-life sounds means that some recordings are deemed of "marginal quality" by the authors, but these are included because they aid in identification. The species are "arranged following the American Ornithologists' Union checklist" (version not specified), starting with geese, although the California Towhee is misplaced between the Lazuli Bunting and Red-winged Blackbird. Also, the names Aleutian Cackling Goose, Red-shafted Flicker, and Audubon's Warbler are used, rather than Cackling Goose, Northern Flicker, and Yellow-rumped Warbler, but no scientific names are provided. As well as giving scientific names, the insert could have benefited from giving the date (even just month) and location of the recordings (at least those made outside of the three main counties). Other than a skimpy insert, my main gripe is "I want more," and I hope the authors expand upon this invaluable compliation and produce another version before too many years pass.

The typical format on bird CDs, of a neutered voice announcing, say, "number 98, the Warbling Vireo," can stifle one's ability to learn sounds. LeValley and Fix eschew this format so that the sounds come first, followed by the narration and species' identity (set your CD player to "shuffle" and see if you can identify every sound before you are told!). At least on my CD player, the narration sounded a little distorted if listened to at the volume at which the bird sounds were best heard, and I found it distracting to have constantly to increase and decrease volume.

The selection of species is somewhat eclectic. Surprising omissions include the American Kestrel, Peregrine Falcon (but the Prairie Falcon is included), Allen's Hummingbird, and Say's Phoebe, and the range of calls given for the Acorn Woodpecker is rather limited. Perhaps inevitably, the emphasis is on songs rather than calls, and an expanded version could include many commonly heard calls that can be confusing in the field, as well as the song of Black-capped Chickadee. In particular, more calls of swallows, vireos, and sparrows (such as the White-crowned and Golden-crowned) would be nice. On the other hand, it is great that there are numerous examples of species with variable songs, such as the Nashville, Wilson's, Black-throated Gray,