

Neither of us have spent much time chasing after woodpeckers in far-flung parts of the world, so the lovely photos of exotic species such as the Blond-crested Woodpecker (*Ceolus flavescens*) of South America and the Yellow-faced Flameback (*Chrysocolaptes xanthocephalus*) of the Philippines are both striking and even inspirational. This is particularly true when one runs across tidbits about little-studied species such as the photo caption for Buff-rumped Woodpeckers (*Meiglyptes tristis*) indicating that the species is “. . . fairly social, with birds often foraging together in parties and in ‘bird-waves’ with other species,” a statement that makes us suspect that an exploratory trip to Malaysia to find out more about those “bird-waves” might be really interesting. Nearly all species are illustrated, although there are a few exceptions, such as the (nearly or completely extinct) Ivory-billed (*Campephilus principalis*) and Imperial (*C. imperialis*) Woodpeckers; perhaps historic photographs might have been reproduced for consistency, if nothing else?

Another potential reason to buy this book is if you are planning a “big woodpecker year” (identifying as many of the 239 species as you can in one calendar year) and are looking for another book on woodpeckers for your valet to cart around the world for you on your journeys. We admit to never having heard of anyone attempting such a feat, but short of waiting for one of those Buff-rumped Woodpecker waves to show up in your back yard, presumably this would be the way to go about making the most of one’s library of woodpeckers-of-the-world books. In fact, if we had to choose from our collection of woodpecker tomes, we might very well grab Gorman’s version, although, in contrast to Winkler et al. (1995), this volume does not attempt to be a field guide. And why not travel the world in search of woodpeckers, other than it would potentially entail ignoring a rather large number of other interesting (non-woodpecker) species? The *Guinness Book of World Records* awaits, and we’ll personally send a copy of Gorman’s book to the first reader who breaks 200. Be sure to send us the address of your valet.

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#### Rare Birds of North America

Steve N.G. Howell, Ian Lewington, and Will Russell. 2014. Princeton University Press, Princeton, NJ. xx + 428 pages. ISBN: 9780691117966. \$35.00 (Hardback). Also available as an e-book.

Any student of population ecology will likely be familiar with Cohen’s (1969) classic stochastic birth-immigration-death-emigration model to describe natural dynamics of a population. To understand population dynamics, one needs to estimate rates for each of these four pillars of life history theory. Arguably, the most difficult of these parameters to measure are death and emigration, mainly due to the inherent bias associated with field studies wherein observers rarely sample individuals outside of a particular study site (Koenig et al. 1996). Once an organism disappears, its fate is largely unknown and one is left to, in many cases, estimate mortality and emigration rates. As a result of this “black hole” in our understanding of population demography, a recent focus on patterns of dispersal that includes both invasion biology and vagrancy has resulted in a surge of recent attention; thus making Howell et al’s (2014) *Rare Birds of North America* quite timely.

Ornithologists and birders have long held a fascination with vagrants, often referred to as accidentals in birder parlance. Birds are arguably the most likely to exhibit vagrant tendencies because of their propensity for long distance and seasonal movements (Lees and Gilroy 2014), often associated with a breeding and non-breeding location. Why birds may end up off course or outside of their normal range has perplexed ornithologists for at least the last century. In the

short term, vagrancy may be a result of extreme weather events like hurricanes or typhoons, but in the long term it may be a result of a genetic mutation resulting in, for example, reverse migratory tendencies (Thorup 2004), or it could be related to extrinsic factors such as global climate change (Jiguet and Barbet-Massin 2013).

Studying patterns of vagrancy is inherently difficult because of small sample sizes, the erratic and unpredictable nature of movements, and incomplete records of vagrants in underpopulated areas where observers are few. The rarity and pattern of vagrants is therefore difficult to quantify, and relies more on an intuitive understanding than on statistical thresholds for observations. *Rare Birds* attempts to synthesize, for the first time, an exhaustive examination of birds rare to North America (an area defined by the authors as the United States [excluding Hawaii], Canada, and St. Pierre et Miquelon), including patterns and causes of vagrancy in this region.

The book is divided into four unequal parts: a preface section on how to interpret and digest the species accounts, an overall introduction to vagrancy and the identification of vagrant birds, a series of vagrant species accounts, and three appendices. The preface is a necessary inclusion in a book of this type because the species accounts would be incomprehensible without a guide to the shorthand and abbreviations used to discuss regions and sightings. Primarily, this section of the book explains the selection criteria for including or excluding vagrant records and species (excluded species being included in the appendices), and provides a series of maps with regional names to orient the reader, as well as an index of abbreviations and shorthand names used within the main body of the text.

Perhaps the most original contribution within this book, the 41-page introduction to *Rare Birds* opens with a discussion of what constitutes a rare bird, and delves more deeply into the reasoning behind including or excluding vagrant species beyond that first mentioned in the preface. Most impressive was the authors' unpacking of the various mechanisms of vagrancy; including drift, misorientation, overshooting, dispersal, association, disorientation, and false vagrancy. Illustrations of migration routes and possible paths of vagrancy for several of the mechanisms accompany the text, resulting in an informative synthesis of the root causes of this phenomenon.

Unfortunately, the authors then delve into a 16-page commentary on the source of North American vagrants. Although this foray is somewhat interesting, the reader is mired by seven rather large and cumbersome tables (five of which span two pages) outlining various vagrants and their potential source locale. Perhaps we are not real connoisseurs of vagrant nuances, but we found this section to be rather tedious and difficult to plow through. A better presentation would have been to include the tables as appendices at the end to improve the flow of the prose. The final section of the introduction covers topography, molt, and aging and is reminiscent of a 10-page version of Pyle's (2008) classic guide to molt patterns and feathers.

The meat of *Rare Birds* is found in its 262 vagrant species accounts, based largely on the 2008 American Birding Association Checklist in conjunction with the editors and regional editors of *North American Birds*. The exhaustive list of those individuals recognized in the acknowledgments reads like a birders *Hall of Fame* list. The book also illustrates the power of citizen science—without public input, most of the observations recorded in *Rare Birds* would not exist. Each account contains a summary, a brief mention of the taxonomy of the species (particularly any subspecies), the distribution and status (or status and distribution—it is unclear why this heading is not consistent for all species) for the world and for North America with dates and location for each vagrant record, comments that provide an interesting commentary on the nature of movement patterns and vagrancy records interspersed with interesting life history tidbits or tips on where to find such vagrants, and a section on field identification that includes similar North American species, ways to distinguish the sexes, and seasonal changes in plumage. Oddly, a small section on habitat and behavior is included in the field identification section.

Although much of the species account information could be found in a regional field guide appropriate to the species, the comments section for each account is where the authors shine. They discuss not only the possible causes of vagrancy, particularly for extremely rare vagrants, but propose hypotheses to explain changes in vagrancy over time and discuss the potential of captive escapes. Although the comparison of vagrant species to more common North

American species is theoretically helpful, it seems unlikely that any birder will have *Rare Birds* at hand while in the field, unless they have the e-book version on their smartphone. Only when photographic confusion arises does it seem likely that the field identification sections of this book would ever come into play.

Each species account is accompanied by a set of illustrations for the species, including variable plumages and a comparison with confusingly similar species (where applicable). These illustrations by Ian Lewington are the true gem of the book. Gorgeously rendered and beautifully detailed, these depictions of the vagrant birds of North America serve both as excellent guides to the identification of these species, and as stand-alone works of art.

The final portion of the book includes three appendices. As with any species guide, the material included becomes outdated the moment it is published. Appendix A covers the three species new to North America from fall 2011 through summer 2012, including the record itself and brief comments on the record and the habits of the species. Appendix B provides a list of hypothetical occurrences, representing records of potential vagrants that were not accepted by the authors due to questions of origin and identification, including the questionable vagrant record or records, and a short commentary on the plausibility of these vagrants. Appendix C provides a chronological list of vagrants new to North America from 1950 to 2011, including the state or province where the vagrant was first recorded.

Overall, this book is written with a comfortable, conversational, and almost light-hearted tone. It is obvious that the authors are passionate about the topic of vagrant species, and what might have been a dense and impenetrable tome is instead an interesting walkthrough of the many vagrant species of North America.

The real question is, "Who is this book's audience"? Because of its bird focus, we are doubtful that population demographers, or those interested in vagrancy patterns in general will seek out this book. Rather, we envision that *Rare*

*Birds* is likely to garner the attention of "listers" who are trying to increase their North American life list. Is the average student of birds likely to purchase this book? We doubt it, particularly when the odds of sighting any vagrant listed are impenetrably small. Luckily for the authors (and publisher), there are at least 47 million birders in the United States alone (Carver 2013); presumably, there is a sizeable portion of birders that are looking for a new species to add to their continental life list that will find this book most useful. It's quite easy for us to imagine a lister "carrying" his/her *Rare Birds* e-book in the field while they chase down the barking call of a Double-striped Thick-knee (*Burhinus bistriatus*) on a dark Texas night.

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