Book review: Breeding Birds of Washington State

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Breeding Birds of Washington State.-- M. R. Smith, P. W. Mattocks, Jr., and K. M. Cassidy. 1997. Volume 4 in Washington State Gap Analysis Final Report (K. M. Cassidy, C. E. Grue, M. R. Smith, and K. M.Dvornich, Eds). Seattle Audubon Society Publications in Zoology No. 1, Seattle. xi + 538 pp. 3 color plates, 6 tables, 10 figures, 244 maps. ISBN0-914516-09-4. Paper, $30.00.--This comprehensive book will serve as a useful addition to the library of every professional and amateur ornithologist who is interested in the status and distribution of North American birds. It covers all species currently known to breed in Washington, including species that have been extirpated since the time of European settlement. Introduced species that nest in the wild but have not reached long-term sustainability in the state are excluded.

The volume begins with a thorough discussion of how to use the book and strong reminders of its limitations. The report fills two important gaps in our knowledge. First, it was written as volume 4 of the Washington State Gap Analysis Project final report, and as such, it includes predictive models of habitat distribution for each species. Second, the volume serves as an anthology of the Seattle Audubon Society's Breeding Bird Atlas data. Thus, each of the 244 species maps provides apredicted distribution for most species as well as shows the general location and status determination for each species based on atlas records. Where little or no recorded data exist for a given species, predicted distributions are based on a combination of expected habitat associations and expert opinion. In light of these constraints, the authors carefully stress how each model should be viewed as a hypothesized determination of distribution and that limitations exist for all models and maps in the volume.

The bulk of the book is devoted to the individual species accounts. These are divided into three parts including a brief summary of status and breeding distribution of each species, a section on the major components of each habitat model, and an annotated section on miscellaneous aspects of each species' biology, status, and predicted distribution. Data from the atlas project were collected via a township/range system, which covers the state with a grid of 6 6-mile blocks and are reported on the distribution maps. Within each block, data on breeding birds were recorded and categorized as observed, possible, probable, or confirmed breeders based on the level of breeding behavior observed. Strictly observational data (no additional evidence of breeding) were not reported on the individual species maps. Colonial seabirds were afforded special treatment given the difficulty in mapping and modeling breeding habitats for these species.

Predicted breeding distributions were mapped by selecting appropriate habitats (based on the Washington Gap Analysis land cover map) within each species' range. Habitat associations were formed via literature review, location records, and expert opinion. It is important for readers to understand how information was translated from the scale at which it was reported and described into something that could be mapped at a much coarser scale. An example of the mapping limitations was given where a species might be associated with small openings in conifer forests but not with clearcuts. As such, this species would be mapped in association with the distribution of conifer forest and not nonforest cover, because small forest openings were below

the minimum mapping unit of 100 ha for terrestrial cover types and 40-ha minimum mapping unit for wetlands. For the actual modeling of breeding distributions, habitat was coded for eight different levels of quality ranging from not suitable to peripheral or contingently suitable. Descriptions for each code are provided.

I have only one negative comment regarding this publication. In keeping the distribution maps uncluttered, I found myself, a non-Washingtonian, a bit frustrated by reading text references to specific counties or towns and having little knowledge about where those locations were on the map without digging through the volume back to the reference figures. I would have preferred to see a few major highways identified on each map as well as some of the major towns referred to in the text.

Overall, this is a well-organized compendium of where birds breed in Washington. It takes atlas data one step further by outlining potential distributions for birders to grab hold of and use to explore the fine state of Washington, and it likely will be of greatest interest to ornithologists in the Pacific Northwest.--Patricia J. Heglund, Department of Biological Sciences, University of Idaho, Moscow, Idaho 83844, USA.