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Book review

H. Lahring (Ed.), Water and Wetland Plants of the Prairie Provinces, Canadian Plains Research Center, University of Regina, Regina, Sask., Canada, 2003, x + 326 pp., US\$ 29.95, CDN\$ 34.95 (paper), ISBN 0-88977-162-6.

As the subtitle of this book ("A field guide for Alberta, Saskatchewan, Manitoba and the northern United States") indicates, it is intended to serve as a manual for the identification of aquatic and wetland plants in the region specified. Because the level of the book is directed at both "amateur and professional botanists", one would expect to find taxonomic keys, descriptions, illustrations and other information for a representative portion of the aquatic flora that might be encountered within the region defined in the subtitle. Happily, the author satisfies these expectations by preparing a treatment of more than 400 species of aquatic and wetland plants that includes not only keys and over 600 line drawings and color photographs, but also is embellished by an informative introduction and useful comments on the biology of the species included. This book nicely fills a vacant niche, which expands the taxonomic coverage of Canadian aquatic plants from British Columbia (Warrington, 1994) to Ontario (Newmaster et al., 1997). Although several previous treatments exist for the region covered (Burland, 1994; Caldwell, 1960; Carmichael, n.d.), none of these has been very comprehensive or highly technical taxonomically.

The first seven pages provide a succint overview of the geography and climate of the region. Five pages are devoted to a brief description of wetland communities and aquatic plant life-forms. A comparable amount of text summarizes pertinent ecological topics including aspects of water quality, invasive species and management. Two pages introduce taxonomic concepts and offer identification tips. Although I found the content of information presented in these introductory sections to be uniformly competent, they were far too brief to provide much "depth" (sorry, I just could not avoid this one). However, because the main focus of the book is identification, the cursory treatment of these topics is understandable.

To facilitate identification, the reader first is provided with a strictly dichotomous key to families. In general, the couplets uniformly comprise contrasting character states with only a few of them using "not" statements (e.g., "not as above") in lieu of the specific, contrasting condition. However, I did pick up some problems such as a couplet to distinguish Ranunculaceae from Scrophulariaceae (p. 23) where a simple-leaved plant with somewhat irregular flowers would be accommodated by both

leads. Also there were a number of places where a couplet would not discriminate some groups such as (p. 22) a distinction between "plants monoecious" and "plants dioecious (sometimes monoecious in Myricaceae)". If my unknown was a monoecious Myricaceae, then I would be stumped at that point. I also did not like some of the ambiguous contrasts such as one made between "plants aquatic" and "plants terrestrial/wetland". What would one do with a species such as Gratiola aurea, which grows well under both conditions? Certainly, the keys could use some more work. Other problems arise once a family has been identified. In a number of cases (e.g., Brassicaceae, Lamiaceae and Poaceae), the key directs you to the first of several species in the family without providing a key to genera with which to distinguish them. Here, you just have to thumb through the next few pages looking for a match to your plant. Keys to species are provided for some of the larger genera (Eriophorum, Myriophyllum, Potamogeton and Scirpus), which essentially are adapted from Crow and Hellquist (2000). In most other cases, one or a few species are featured with a section on "related species" to help identify some of the less-frequently encountered taxa. For Carex, a few illustrations are used to compare several different species; however, in this case, the rather simple illustrations do not allow one to identify species with confidence in this technically difficult group. Coverage of some of the larger groups is quite uneven. For example, 10 Eriophorum species are included in a key, whereas only 3 Eleocharis species, 2 *Polygonum* species and no (!) *Cyperus* species are discussed. The overall coverage of the book is good but not great. Although purportedly including "over 400 species", only about 145 species are featured, i.e., include detailed information. Most other species names appear only in the "related species" section at the end of the treatments.

For these reasons, this work does not quite meet the standards of a technical taxonomic manual, although it is a vast improvement over some of the previous works existing for the region as mentioned above. If one really needs to confidently identify aquatic and wetland species in this region (including groups such as Cyperaceae, Poaceae and Polygonaceae) then a standard flora would be more reliable. However, I did find this book to contain much useful information on the featured species that ranged from the etymology of the scientific name, a general description, habitat and "special features" (including remarks on edibility and use by wildlife). Also, the color photographs were generally quite good. The line drawings were not bad for conveying the overall habit of a plant, but often

lacked sufficient detail to assist with identification in the more technically demanding groups. I always make it a point to look through the glossary and found in this case that the definitions provided were pretty good.

In conclusion, I would not recommend this book as a primary identification resource, but do consider it to represent a useful adjunct for identifying Canadian aquatic and wetland plants, especially for those who are unfamiliar with the flora. Here, the photos and illustrations would be particularly useful. Even for professional botanists, the book is a useful reference given that the treatments of the featured species provide much interesting information on their natural history. Certainly, the price is right. This well-designed and nicely produced book is a bargain, especially for the number of color photographs included. It even has a coated cover and glossy paper to help repel the water as you slog through the swamps searching for these waterlogged oddities of the plant kingdom.

References

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