

## BOOK REVIEW

*Sedges and Rushes of Minnesota: The Complete Guide to Species Identification* by Welby R. Smith. 2018. 667 pp. ISBN 978-1-5179-0275-9, \$39.85 (paperback). University of Minnesota Press, Minneapolis, Minnesota.

This book was created as a project of the Minnesota Biological Survey, drawing on the extensive field experience of Welby Smith, the Minnesota State Botanist, and is intended as a reference for Minnesota field biologists. Well-written, well-designed, clear, and with exceptional illustrations, it is a superb guide to these two families in Minnesota and will be useful throughout the northeastern US and Canada. The photographer, Richard Haug, has created incredibly clear and accurate photos for each species – not just of habit and inflorescences, but also of spikelets, perigynia, achenes and seeds. The book covers 15 genera and 216 species in the Cyperaceae, and 2 genera and 27 species in the Juncaceae. Even species with only a single historical record are fully treated. Smith does not include common names. As he notes in the introduction, the practice of inventing common names based on English translations of the Latin is more confusing than helpful and does not communicate information well. I thoroughly agree with him on this point.

An introductory section of the book, entitled “What You Need to Know About Minnesota”, focuses on the vegetation ecology of Minnesota with outstanding maps and descriptions of the major substrate types, vegetation zones pre-1907, and the three current major vegetation zones, with detailed descriptions. Perhaps the only flaw of the book appears in the up-front material. Detailed definitions and descriptions of the morphological characters of the Cyperaceae or Juncaceae (culms, rhizomes, sheaths, ligules, inflorescences, bracts, flowers, scales, and achenes) appear later under the genus *Carex*, rather than in advance of the key to the genera. It would be helpful to have this information available to the reader to facilitate using the key to the genera. This key may be difficult for field biologists who are unfamiliar with the genera in the Cyperaceae, as the key relies heavily on characteristics of the bristles – which require dissection and high magnification – rather than on more obvious field characteristics. Keys to the species within each genus, however, are clear and work very well.

The treatment of each genus includes a brief description, discussion of diversity and ecology, excluded species, tips on identification, and a