

BOOK REVIEW

PAUL E. ROTHROCK. 2021. **Sedges of Indiana and the Adjacent States. The *Carex* species. Vol. 2** (ISBN-13: 978-0-912456-00-3, hbk., laminated w/o dust jacket). Indiana Academy of Science (**Orders:** <https://www.indianaacademyofscience.org/publications/books-and-special-publications?page=2>). \$55 (non-members of IAS); \$45 (members) US, 376 pp, 385 color plates, 12 tables, keys, shaded county maps for Indiana and color designation for adjacent states, 5 appendices, illustrated endsheets w/take scale, glossary, extensive index, and 3 2-sided color laminated inserts (one, a novel synopsis of the species by section and subspecies), 6.25" × 9.25".

Having reviewed Rothrock's masterpiece, Vol. 1 of *Sedges in Indiana and the Adjacent States. The non-Carex species* (McKenzie 2009), I looked forward with great anticipation to his coverage of the *Carex* species in Vol.11. Not only was I as excited as I was with the first volume, but this book is so fantastic that it is hard to voice my amazement with mere words but a few come to mind: WOW! Incredible! Stupendous! Bravo! Great perigynia in the morning! This is such a masterful treatment that it is hard to know what to compliment first! The book is an outstanding treatment of the 158 different species of *Carex* documented in Indiana as well as coverage of other species found in adjacent states. The scholarly excellence of this book should be evident by the author's collaboration with some of the top *Carex* experts in the Midwest, and some who I know personally. Foremost collaborators include Tony Reznicek and Andrew Hipp who provided guest essays on the evolution and origin of *Carex* (Reznicek) and how chromosome evolution in the genus contributed to genetic variation and diversification (Hipp). Caricologists such as Bruce Ford, Mike Homoya, Paul Marcum, Scot Namestnik, Rob Nazci, and others contributed to the masterpiece. The volume includes detailed treatments of species; excellent keys that include species that occur in adjacent states; incredible glossy photographs on habit and plant parts that are helpful in species identification (roots, culm leaves, sheaths, inflorescences, perigynia, achenes); references; coefficients of conservatism for each species; taxonomic changes since Deam's (1940) early treatment of the genus; glossary; and an index. A novel contribution to the book is the discussion by Laura Anchor on the symbiotic relationship between the genus and ants (Appendix D).

As in similar treatments, species are grouped and discussed by Section and the following are included in each species description: scientific and common name; U.S. Fish and Wildlife Service wetness category designation; short but thorough discussion of habit and main characters necessary for identification; coefficient of conservatism (C value) based on Swink and Wilhelm (1994); likely associates and known habitats; abundance or rarity in Indiana and adjacent states; photographic images of important identifying characters; distribution county color code depicting native or non-native status (specific designation for frequent to common natives), state-listed status (if state species of conservation concern: endangered, threatened, or extirpated); observations of unique attributes, taxonomic status. Similar taxa, or interesting information on etymology, ecology, distribution, or history. The book includes a thorough review of the most important pertinent references with no less than 136 separate publications cited.

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If the scientific excellence of the book was not enough, there are tidbits here and there that will bring a smile or chuckle to every *Carex* enthusiast such as lines from Shakespeare in the introduction (pg. 2), a note on the palatability of the achenes of *Carex aurea* (p. 69), and my favorite- a fitting poem by Bruce Newhouse (p. 215) regarding the need to cry when trying to identify members of Section *Cyperoideae* (using the old sectional name *Ovales*). Anyone trying to learn *Carex* can relate to the need to shed a tear over the inability to identify some species in this section!

The book is such a stellar accomplishment that it is difficult to find anything to quibble about but perhaps a few minor points should be mentioned. I agree with the author's comment that the likely parents of the rare hybrid *Carex* × *deamii* F.J. Herm. is *C. shortiana* and *C. squarrosa* and we have suggestive evidence in Missouri to support this conclusion (McKenzie & Henry 2018). Species that occur in other states are distinguished from Indiana taxa in the appropriate keys but it would have been helpful to provide a few distinguishing characteristics in the text, especially for species that are often confused with another species (e.g., *C. striatula* for *C. laxiflora*; pp. 131–132). Additional color plates of habit would have been useful for species where only dried specimens were photographed (e.g., *C. crus-corvi*, *C. kraliana*, *C. limosa*, *C. pseudocyperus*) but there are already 385 color photos in the book!

Despite the fact that many of the species discussed in this book do not occur in states away from the Great Lakes, there is such a degree of overlap for the Ozarks, Appalachians, and Great Plains, that the book clearly warrants being on the shelf of every *Carex* loving enthusiast in the eastern United States! And given the quality of the book, the price is a steal!

REFERENCES

- DEAM, C.C. 1940. Flora of Indiana. Wm. B. Burford Printing Co., Indianapolis, Indiana, U.S.A. 1236 pp.
- McKENZIE, P.M. 2009. Book review- Sedges of Indiana and the adjacent states- the non-*Carex* species. J. Bot. Res. Inst. Texas 3(2):962, 968.
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- SWINK, F.A. & G.S. WILHELM. 1994. Plants of the Chicago region (4th ed.). Indiana, Indiana Academy of Science, Indianapolis, U.S.A. 921 pp.

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