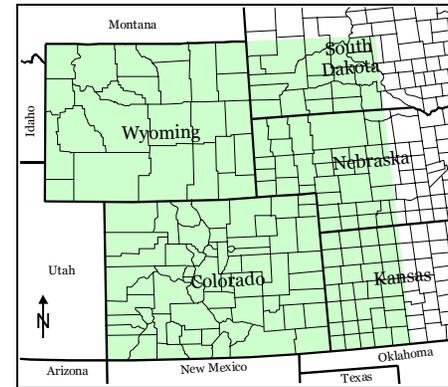


## Chapter 1. Introduction

This book describes the sedge species (*Carex* species) of Wyoming, Colorado, and western parts of South Dakota, Nebraska, and Kansas. The purpose of the book is to provide field people with information in one book that is sufficient for identification and description of all sedge species of the Region.



*The area covered by this guide is shaded.*

Sedges are important components of many ecosystems of the Rocky Mountains and Great Plains. There are a number of wet<sup>1</sup> sedges whose identification and understanding is critical to correctly inventory, evaluate, and assess riparian areas and wetlands. Their functions in these water-dominated ecosystems include water holding, bank binding, and soil binding – and so these sedges are economically valuable way beyond their mere scientific research potentials. Maintenance of key populations of wet sedges is, in turn, a very important part of maintenance and protection of water sources.

Dry sedges and moist sedges are important components of forests, grasslands, and alpine tundra. They often act as soil binders and slope holders. Alpine ecosystems – that will come under increased pressure in years to come – are often dominated by sedges. In this Region, grasses tend to have less cover under shade of trees, and sedges can be among the only plants in those situations.

You cannot understand the function of sedges in ecosystems, or their ecosystem values, or economic values, without correct identification and research study. The botanical community has a critical part to play – local experts, scientists, professional and research organizations. College and university herbaria desperately need our support, for they are the principal data sources for identification.

Two trends will make these concerns more important in future years: increased population pressures on public and private land, and warming of the climate. Managers and land owners alike will have to pay much more attention to sedge identification – and other similar concerns – as we move ahead.

Some of the most important people in this endeavor are the interested volunteer “non-professionals” – they often are more committed and professional than the “professionals!” Two of the major scientists working on sedges, without whom this work would be considerably poorer, were from the honored ranks of volunteers: Kenneth K. Mackenzie, who was a banker, and Miriam Colson Fritts, who was a school teacher. These all deserve our support, for without them we would know much less about sedges.

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<sup>1</sup> Terminology described in the Glossary, Chapter 2.

## References Used

- Albee, Beverly J., Leila M. Schulz, and Sherel Goodrich. 1988. Atlas of the vascular plants of Utah. Salt Lake City, UT: Utah Museum of Natural History. <http://www.nr.usu.edu/Geography-Department/utgeog/utvatlas>, accessed March 9, 1999.
- Cayouette, J., and P. M. Catling. 1992. Hybridization in the genus *Carex* with special reference to North America. *Botanical Review* 58(4):351-440.
- Creutzburg, Harry C. 1940. Illustrations, in Mackenzie's North American Cariceae. <http://www.csdl.tamu.edu/FLORA/carex/carexout.htm>, last updated October 30, 1997, downloaded May-August, 2000.
- Correll, Donavan S., and Helen B. Correll. 1972. Aquatic and wetland plants of southwestern United States. Publication 16030-DNL-01/72, 1777 pp. Washington, DC: Environmental Protection Agency, Research and Monitoring.
- Cronquist, Arthur. 1969. Cyperaceae. Pp. 219-383 in Hitchcock, C. Leo, Arthur Cronquist, and Marion Ownbey. Vascular plants of the Pacific Northwest, Part I: Vascular cryptogams, gymnosperms, and monocotyledons. Seattle, WA: University of Washington Press, 914 pp.
- Cronquist, Arthur. 1977. Cyperaceae. Pp. 67-175 in Cronquist, Arthur, Arthur H. Holmgren, Noel H. Holmgren, James L. Reveal, and Patricia K. Holmgren. Intermountain flora: Vascular plants of the intermountain west, U. S. A., Volume 6: The Monocotyledons. New York, NY: New York Botanical Garden and Columbia University Press. 584 pp.
- Dayton, W. A. 1950. Glossary of botanical terms commonly used in range research, Revised Edition. Miscellaneous Publication No. 110, 41 pp. Washington, DC: U. S. Department of Agriculture.
- Dorn, Robert D. 1977. Flora of the Black Hills. Cheyenne, WY: Authors, 377 pp.
- Dorn, Robert D. 1992. Vascular plants of Wyoming, Second Edition. Cheyenne, WY: Mountain West Publishing, 340 pp.
- Dorn, Robert D. 1997. Rocky Mountain Region willow identification field guide. R2-RR-97-01, 107 pp. Denver, CO: USDA Forest Service, Renewable Resources.
- Egorova, T. V. [Егорова, Т. В.]. 1999. The sedges (*Carex* L.) of Russia and adjacent states (within the limits of the former USSR). Осоки (*Carex* L.) России и сопредельных государств (в пределах бывшего СССР). St. Louis, MO: Missouri Botanical Garden. Санкт-Петербург: Санкт-Петербургская государственная академия. 772 pp. Parts translated into English.
- Fritts, Miriam Colson. 1996. *Carex* L. Pp. 155-167 in Weber, William A., and Ronald C. Wittmann. Colorado flora: Western Slope, Second Edition. Niwot, CO: University Press of Colorado, 496 pp.
- Fritts, Miriam Colson and Harold C. Fritts. 1998. Program Carex: A random access key for the genus *Carex* in 11 western U. S. states. Version 4.1, 1 floppy disk, dated September 13, 1998.
- Great Plains Flora Association. 1977. Atlas of the flora of the Great Plains. Ames, IA: Iowa State University Press, 600 pp.
- Great Plains Flora Association. 1986. Flora of the Great Plains. Lawrence, KS: University Press of Kansas, 1392 pp.

- Hermann, Frederick J. 1970. Manual of the Carices of the Rocky Mountains and Colorado Basin. Agriculture Handbook No. 374, 397 pp. Washington, DC: USDA Forest Service.
- Hitchcock, C. Leo, and Arthur Cronquist. 1973. Flora of the Pacific Northwest: An illustrated manual. Seattle, WA: University of Washington Press, 730 pp.
- Hultén, Eric. 1968. Flora of Alaska and neighboring territories. Stanford, CA; Stanford University Press. 1008 pp.
- Hurd, Emerenciana G., Nancy L. Shaw, Joy Mastroguseppe, Lynda C. Smithman, and Sherel Goodrich. 1998. Field guide to intermountain sedges. General Technical Report RMRS-GTR-10, 283 pp. Ogden, UT: USDA Forest Service, Rocky Mountain Research Station.
- Johnson, W. M. 1964. Field key to the sedges of Wyoming. Bulletin [No.] 419, 239 pp. Laramie, WY: University of Wyoming, Agricultural Experiment Station.
- Lewis, Mont E. 1958. *Carex* – Its distribution and importance in Utah. Science Bulletin, Biological Series 1(2):1-43 + foldout page. Provo, UT: Brigham Young University.
- Löve, Áskell, and Doris Löve. 1965. Taxonomic remarks on some North American alpine plants. University of Colorado Studies, Series in Biology 17:1-43.
- Mackenzie, Kenneth K. 1940. North American Cariceae. New York, NY: New York Botanical Garden, 2 volumes, 547 pp.
- Nickerson, Mona F., Glen E. Brink, and Charles Feddema. 1976. Principal range plants of the Central and Southern Rocky Mountains: Names and symbols. General Technical Report RM-20, 122 pp. Fort Collins, CO: USDA Forest Service, Rocky Mountain Forest and Range Experiment Station.
- Stacey, J. W. 1937. Notes on *Carex* – VIII. Leaflets of Western Botany 11(1):13-15.
- Starr, Julian R., Randall J. Bayer, and Bruce A. Ford. 1999. The phylogenetic position of *Carex* section *Phyllostachys* and its implications for phylogeny and subgeneric circumscription in *Carex* (Cyperaceae). American Journal of Botany 86(4):563-577.
- USDA, NRCS. 1999. The PLANTS database. (<http://plants.usda.gov>). Baton Rouge, LA: U. S. Department of Agriculture, National Resources Conservation Service, National Plant Data Center (NPDC). Mail to USDA NRCS, NPDC, Baton Rouge, LA 70874-4490. Downloaded May 24, 1999.
- Weber, William A., and Ronald C. Wittmann. 1996a. Colorado flora: Western Slope, Second Edition. Niwot, CO: University Press of Colorado, 496 pp.
- Weber, William A., and Ronald C. Wittmann. 1996b. Colorado flora: Eastern Slope, Second Edition. Niwot, CO: University Press of Colorado, 524 pp.
- Weber, William A., and Ronald C. Wittmann. 2000. Catalog of the Colorado flora: A biodiversity baseline. <http://www.colorado.edu/CUMUSEUM/research/botany/Catalog/Vascular%20Plants.PDF>, version of March 11, 2000, downloaded April 17, 2000.
- Welsh, Stanley L., N. Duane Atwood, Sherel Goodrich, and Larry C. Higgins, Editors. 1993. A Utah flora, Second Edition. Provo, UT: Brigham Young University. 986 pp.