Common Sedges of Wisconsin Lakes and Rivers

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What is a sedge?

Graminoid, monocot with linear leaves, 3-sided stems, 3-ranked leaves, tubular sheaths, flowers associated with one scale, achene fruit.

Diversity – 230 species in Wisconsin; with grasses they compose 20% of the state's flora. Many are wetland species, often of specific kind, but also are in woods and other drier habitats.

The sedge family has 16 genera (clans) in Wisconsin. Note about the word "rush." This generalized term can refer to any graminoid that thrives in wet habitat. So, there are "true rushes" which are not sedges, while spikerushes and bulrushes are.

Leafy bulrushes – husky, tall; much branched inflorescences with long rays, bristles at base of fruit. Examples: dark-green bulrush and wool grass. The latter has long wiry bristles attached to the fruits.

Naked-stem bulrushes – leafy blades much reduced in size and so rely on their stems for photosynthesis. Chair maker's bulrush is used in caning. It also has extensive rhizome systems that stabilize shorelines. Soft-stem bulrush is a second common species.

Spikerushes – includes needles spikerush a species that can grow both underwater as well exposed as water level recedes in late summer. Also, very widespread in North America, Eurasia, and even parts of S. America.

Umbrella sedges – papyrus and yellow-nutsedge are noteworthy. A distinctive Wisconsin species, long-scale nutsedge, forms corms.

Three-way sedge – numerous, 3-ranked leaves and many nodes with flower clusters.

Carex = true sedges. Most species in the sedge family. Unisexual flowers and perigynia (singular = perigynium). Perigynium is a wrapper that encases the fruit. Critical for species identification.

Kinship groups help to visualize the diversity of species:

1. Bottlebrush sedges – single male spike, separate female spikes shaped like a coarse bottlebrush. Porcupine sedge wet limey

soils. Bristly sedge likes shallow water; with a pair of long teeth at the apex of each perigynium. Yellow bottlebrush sedge forms extensive clones and has colorful female spikes.

2. Lake sedges – all form extensive clones, have multiple male spikes, more thick-walled perigynia. Three species to watch for in Wisconsin: common lake sedge, prairie wooly sedge and bog wooly sedge. The latter two have fuzzy perigynia.

3. Hop sedges – large puffy perigynia either in cylindrical spikes (shaped like the inflorescence of a hops plant) or a mace-like cluster.

4. Lens-fruited sedges – some (i.e., tussock sedges) form large stools or tussocks thanks to ants that build nests in the clumps of stems. Some are quite beautiful (e.g., fringed sedge) and should be grown ornamentally in rain gardens and other landscape installations. These species have lens-shaped fruits inside the perigynia.

The remaining Carex kinship groups do not have separate male versus female spikes. Nor are the lateral spikes on a stalk. Instead, the sessile branches include both male flowers (at either the apex or base) and female perigynia.

5. Fox sedges – male flowers at apex of branches, inflorescence stem is broad and spongy rather than hard and fibrous.

6. Multi-flowered fox sedges – perigynia small (ca. 1/8”) and tightly packed; leaf sheath with prominent cross-wrinkling and faint reddish dots on one face.

Both fox sedges and multi-flowered fox sedges are widely used in mitigation or constructed wetlands.

7. Oval sedges – many species that are challenging to tell apart. All have a narrow, translucent wing on the edge of the flattened perigynia. The male flowers are at the base of each branch in the inflorescence.

Resources:

Hipp, A.L. 2008. Field Guide to Wisconsin Sedges: An Introduction to the Genus *Carex* (Cyperaceae).

Sedges (Carex spp.) of the Chicago Region. 2007. Free download: Google *Carex* Guide Chicago.

Rothrock, P.E. 2009-2021. Sedges of Indiana and the Adjacent States. 2 volumes. Available through indianaacademyofscience.org

Smith, W.R. 2019. Sedges and Rushes of Minnesota: The Complete Guide to Species Identification.