

Sedge Anatomy

Produced by JORGE BOGANTES MONTERO and PRU FOSTER

Match the **name of the structure** (A-E) to the **photo of the structure** (1-5). Answers are at the bottom of the page.

A. Female inflorescence (pistillate spike). Spikes are arranged in solitary or grouped clusters, develop either at the top of the stem (terminal) or along the stem (axillary), vary in shape, and range from green to brown, darkening with maturity.

B. Perigynium. A sac-like structure surrounding the female flower that distinguishes *Carex* from other members of the sedge family (Cyperaceae). Each perigynium contains a single fruit (achene). The perigynium ranges in color from green when immature to brown or yellowish, occasionally reddish, when mature. Perigynia (plural) are typically smooth but may be distinctly nerved (ribbed) in some species.



1. Three examples of this feature, as seen in False Hop Sedge (*Carex lupuliformis*), Sallow Sedge (*C. lurida*), and Hop Sedge (*C. lupulina*). Photo by N. DeBarros.

C. Male inflorescence (staminate spike).

The male spike is composed of several individual staminate (male) flowers, typically elongated to oval in shape, and occurring in the upper part of the stem. Male spikes are lighter colored and more conspicuous than female spikes, and range from greenish to white or yellowish, due to the presence of pollen-bearing anthers.

D. Achene (fruit). An achene is a dry, one-seeded fruit. After pollination, each female flower produces one achene per perigynium. Typically lenticular (two-sided) or trigonous (three-sided) and ovoid in shape. The surface is usually smooth, sometimes slightly glossy. Color changes from green when immature to brown or grayish at maturity.

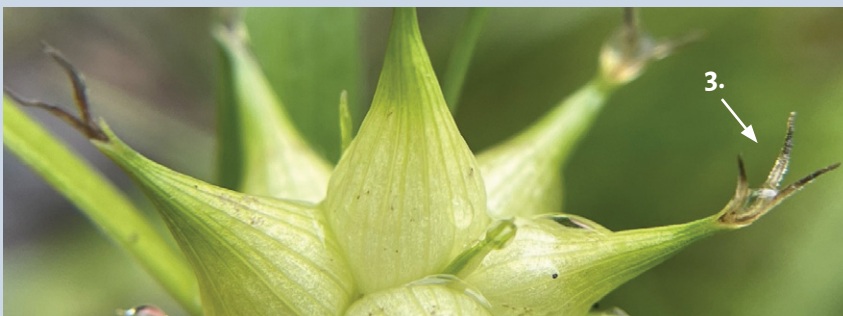


2. A collection of this feature on Wood Gray Sedge (*Carex grisea*). Photo by R. H. Simmons.

E. Beak, style, and stigma lobes. The tiny pointy bits at the tip of each perigynium are best viewed with magnification. The style (slender structure that connects the ovary to the stigma) arises from the top of the ovary, and extends through the beak (tip) of the perigynium, dividing into 2 or 3 slender stigmas (pollen receiving structures). Two stigma branches produce lenticular achenes; three stigma branches produce trigonous achenes.



4 and 5. Lake Sedge (*Carex lacustris*). Photo by N. DeBarros.



3. Bladder Sedge (*Carex intumescens*). Photo by J. B. Montero.

Answers: A.5; B.2; C.4; D.1; E.3.