

Smooth-fruited Sedge *Carex laeviconica*

Cyperaceae—Sedge family

by Tom Reaume © 2010 Nature Manitoba

Grant:



A colonial **perennial sedge** 30–110 cm tall with scaly tan **rhizomes** 2–15 cm long by 2–4 mm thick; **roots** whitish tan, 2–16 cm long by c. 1 mm wide with fine hairs 0.5–2 cm long; in swampy areas, slough margins, seeps, wet meadows and prairies, ravines, forest openings and along riverbanks.

● **FLOWERS** Yellowish green, blooming May–June; **inflorescence** a unisexual (usually) spike, total length from bottom spike to top spike 15–40 cm; **male spikes** terminal, sessile below, 3 (2–5), ascending, tan, usually imbricate, total length 6 (3.5–12.5) cm, the apical one the longest at 2.8 (1.8–4) cm, each 0.7–4 cm long by 1–2 mm wide, the lowest male spike is 6.7 (2.6–11.5) cm above the base of the top female spike; **subtending bract** of male spikes 0.6–4.1 cm long, shorter and obscure above, filliform, awnlike at tips, each usually not longer than its spike, the base wide with hyaline margins; **male scales** 4.5–5.3 mm long by 1.5–2 mm wide, glabrous, tan, persistent, apices pointed, sometimes awned; **female spikes** 2–4, lateral, remote, ascending to erect, the lowest two 7.2 (4–14.5) cm apart, sessile above, each 15- to 48-flowered and 1.4–6 cm long by 5–10 mm wide; **subtending bracts** 1 from the base of each female spike, 6.5–45 cm long by 1–3.7 mm wide, reduced above, flat, scabrous on margins, ascending at first to spreading to descending with fruit, lowest one may extend past the top male spike; **peduncles** (of spikes) 0.3–6.2 cm long (from node) reduced above; **stigmas** 3; **perigynia** round, slightly shiny, inflated, 6-ranked, ascending, each 4.5–8.4 mm long by 1.8–3.5 mm wide by 1.8–2.4 mm thick, flattish and sometime indented on the ventral (inner) side, 12- to 26-nerved with some nerves incomplete, scabrous to glabrous on the nerves, greenish yellow then turning brown before dropping, walls thin; **beak** 1.7–4 mm long, bidentate; **teeth** 1–2.5 mm long, slightly curved in or out from axis of spike, straight to slightly spreading, smooth to slightly scabrous; **female scales** 3.6–6.2 mm long by 1.7–2.2 mm wide, glabrous, on dorsal side of perigynia, usually shorter and narrower than the perigynia, tip scabrous and revolute giving the appearance of a long awn, or with an awn to 2.5 mm long, margins hyaline, 3 or 5 veins in a central tan area, remain after the perigynia fall; **flower to fruit** 8–10 weeks.

● **FRUIT** an achene, ripe in June–August, one per perigynium, 1-seeded, bluntly triangular, 2–2.5 mm long (including stipe) by 1.3–1.5 mm wide, sides concave below to convex above, filling the lower part of the perigynium; **style** straight.

● **LEAVES** erect to ascending to arching, 5–9 per culm, crowded near the base; **blades** 6–55 cm long by 2–5 mm wide, tapered to a fine tip, reduced above and below, flat, soft, margins scabrous and often revolute as fruit ripens, the upper ones sometimes extending past the top male spike, curled wilted tan blades around the lower stem; **sheaths** closed, glabrous, apices concave, laddering early while still green, tan to dark reddish brown over lowest 3–5 cm, imbricate at base of the stem; **ligules** unremarkable, 2–15 mm long, dark brown, apices blunt and 0.5–0.8 mm long; **vegetative plants** hollow, 50–105 cm tall, with 9–17 leaves and continuous growth over the summer.

● **STEM** a culm, erect to leaning, some nodding at tip, sharply triangular and scabrous above, hollow, blunt corners below, 1.5–3 mm wide across the reddish brown base.

● **RANGE: (CAN)** MB, ON, SK; **(USA)** 10 states; absent in the southern states and along both coasts; a **native**.



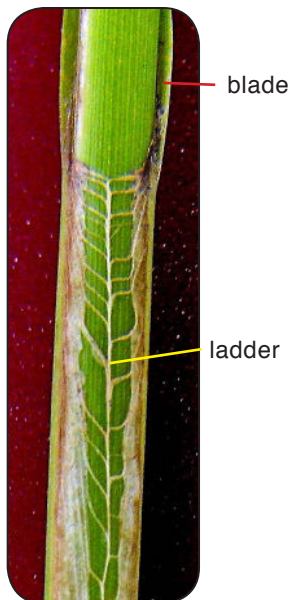
A colony of Smooth-fruited Sedge in a seep at edge of a deciduous woods in Assiniboine Park in Winnipeg, Manitoba



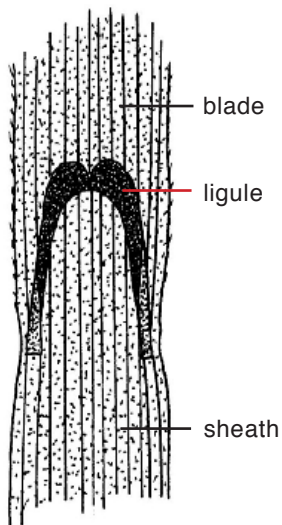
Inflorescence of 2 Male spikes above the 2 Female spikes



Three male spikes at top of wind-pollinated plant



Laddering of sheath on lower leaves; ventral side



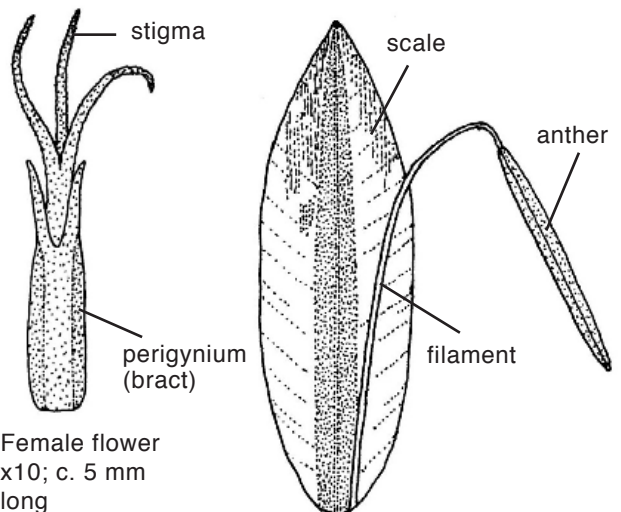
Dark ligule x5; c. 5 mm long with 2 blunt lobes at apex; ventral side of leaf



Smooth-fruited Sedge inflorescence of 3 female spikes together c. 10 cm long; the lower spike on a long peduncle

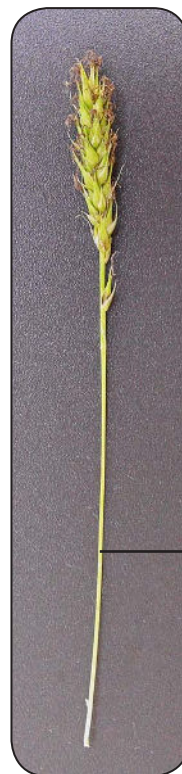


Three Female spikes in bloom with 3 whitish stigmas per flower



Female flower x10; c. 5 mm long

Male flower x10, with 1 of 3 stamens against the 6.5 mm long scale; anther c. 3.2 mm long



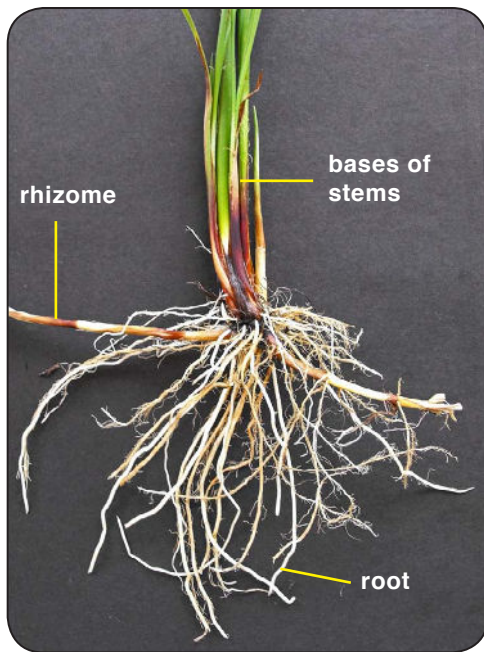
Lower female spike 3.5 cm long on peduncle 6.3 cm long with most of it hidden



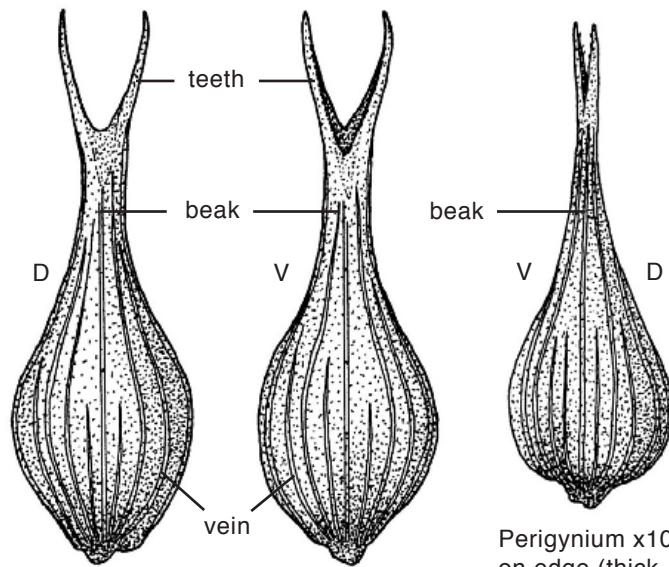
Lower female spike 3.5 cm long

Plant in bloom; 3 Female light green spikes below the upper brown Male spikes



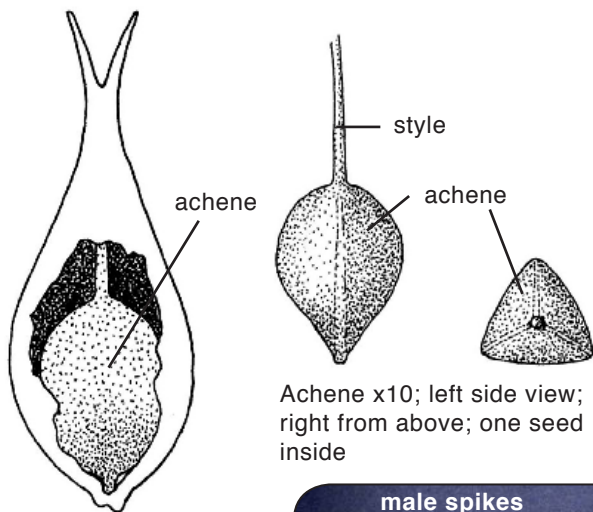


Smooth-fruited Sedge's extensive root system with rhizomes 2–3 mm thick

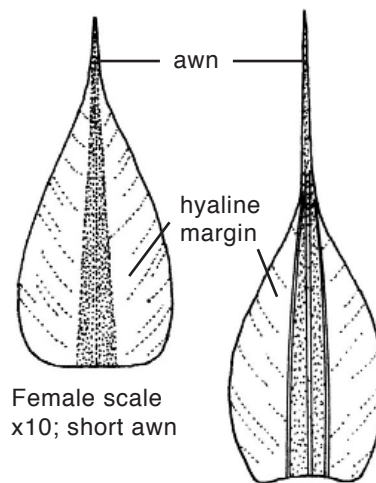


Ripe, veined, hairless perigynium x12;
Dorsal; Ventral view

Perigynium x10;
on edge (thick
view)



Achene x10; left side view;
right from above; one seed
inside



Female scale
x10; short awn

Tan female scale
x10; long awn

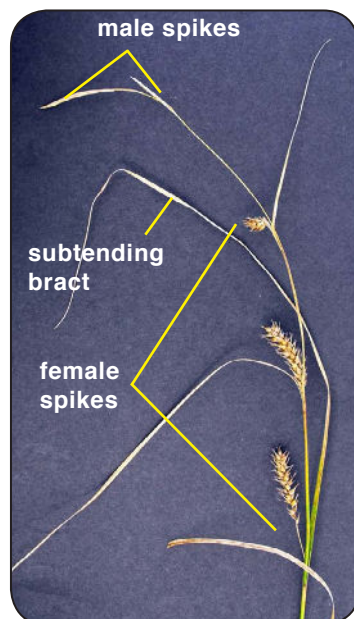


When fruit are ripe the
crowded lower leaves are
tan and curled

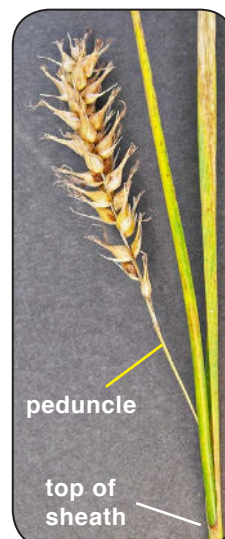
Perigynium x10;
showing position of
fruit (achene) inside



Ripe perigynia c. 6 mm
long on female spike



In August the female spikes
have tan perigynia



Lowest female spike
is usually attached
to visible peduncle



Two female
spikes with
ripening pe-
rigynia; lowest
spike 3.5 cm
long