

Vascular Plants of Williamson County
Carex planostachys – CEDAR CARIC SEDGE [Cyperaceae]

Carex planostachys Kunze, CEDAR CARIC SEDGE. Perennial herb, rhizomatous, fibrous-rooted, many-stemmed at base, densely cespitose, acaulous, forming a tufted mound with spreading to ascending or suberect shoots, in range to 38 cm tall, shoots with inflorescences to 45 cm long; monoecious; shoots with only basal leaves (some with long sheath appearing cauline) and fibrous cataphylls on new axillary shoots arising belowground, glabrous; rhizome of young plants erect to suberect, concealed by persistent sheaths of old leaves, to 7×3 mm, solid with whitish flesh in \times -section dotted with many vascular bundles, of robust plants with horizontal rhizomes connecting clones, to 2.5 mm diameter; cataphylls from a bud triangular, tough, brown with purple-red veins glossy on outer (lower) surface, acute to acuminate; adventitious roots on lower side of rhizome.

Stems (culms): = peduncle of inflorescence; slender and wiry, finely ridged, arising from rhizome, to 0.5 mm diameter, green, often minutely scabrous along ridges; solid. **Leaves:** alternate (obscurely tristichous), simple with sheath; sheath open (the earliest leaves on a shoot) and closed, the lowest sheaths whitish aging dark brown with membranous margins; blade folded somewhat upward from midrib (immature blades V-shaped in \times -section), long-tapered linear, $< 45\text{--}320 \times 1.3\text{--}3.5(-4.8)$ mm, often tough, minutely toothed on margins (especially above midblade) and with teeth upward-pointing along some veins of upper surface, parallel-veined with 9 or 11(-17) veins with veins somewhat sunken on upper surface and raised on lower surface, only 2 veins converging at tip. **Inflorescence:** unisexual spikes in terminal, racemelike panicle, in range of 1-4 spikes, mostly having 1-3 pistillate spikes below 1 staminate spike, if solitary spike pistillate, bracteate, somewhat scabrous and essentially glabrous; bract subtending peduncles of spikes closed, sheath at anthesis 1.2-4 mm long increasing in fruit, often puberulent and minutely ciliate on margin, blade leaflike, acuminate-linear, at anthesis $1.2\text{--}50 \times$ to 0.3 mm increasing in fruit, mostly \geq spikes (diminutive when 1-spiked), mostly 3-veined, minutely scabrous on margins; internodes between bracts relatively short at anthesis increasing sometimes to 50 mm long in fruit; bract subtending peduncle of upper pistillate or staminate spike with sheath closed < 3 mm long, minutely scabrous in line from base to sinus, the blade acuminate-narrowly triangular, to 5 mm long; peduncle of staminate inflorescence exerted at anthesis ca. 5.5 mm, channeled, green, scabrous along veins. **Staminate inflorescence:** spike mostly 20+-flowered, flowers alternate tristichous and overlapping, oblong-narrowly ellipsoid \pm 3-sided, before or after flowering $9\text{--}12(-20) \times 1.4\text{--}2$ mm, during flowering with spreading and ascending exerted anthers, having appressed bractlets; rachis internodes 0.6-0.7 mm apart; bractlet (bract) subtending flower sheathing and open, narrowly triangular, ± 4.7 mm long, green with membranous margins, rounded on back (not keeled) with 5 raised veins, short-ciliate on margins, obtuse to truncate or rounded and minutely fringed at tip; perigynium absent. **Staminate flower:** perianth absent; stamens 3, free, conspicuously exerted from bractlet; filaments 4.2-5.7 mm long, colorless, with exerted and ascending portion 1-1.8 mm long, glabrous; anthers fully exerted and often divergent from spike, basifixed, dithecal, linear, $(2.3\text{--})2.5\text{--}3.3 \times 0.3\text{--}0.35$ mm, pale yellow, longitudinally dehiscent; pollen whitish to pale yellow; **pistil** absent. **Pistillate inflorescence:** spike, 5-9-flowered, flowers alternate tristichous and overlapping, terminal

flower often sterile; bractlets appressed, alternate in 3 vertical rows (tristichous), acute-ovate, ca. 4×2 , green with colorless margins, ca. 13 raised veins from base, \pm keeled, the keel minutely scabrous; scale surrounding pistillate flower (perigynium) forming a flask-shaped sac with a small opening at tip through which stigmatic style branches exerted, 3-sided, obovate in outline, at anthesis $1.7\text{--}2 \times 0.7\text{--}0.8$ mm, green colorless approaching tip, many-ribbed and conspicuously puberulent above midpoint on outer side, white, \pm smooth, and glabrous lower portion, face next to bractlet convex, orifice narrow at tip. **Pistillate flower:** **perianth** absent; **stamens** absent; **pistil** 1, short-stalked; ovary superior, elliptic in outline and strongly 3-sided (trigonous), ca. 1×0.4 mm, greenish, 1-chambered with 1 ovule; style slightly enlarged at base tapered upward, 3-branched above 1 mm, lower style 0.25 mm diameter at top of ovary and pale green and exerted portion ca. 0.3 mm above perigynium, 3-lobed (descending from branches), and whitish, the stigmatic branches nearly fully exerted from bractlet and conspicuously papillate, \pm 3 mm long, whitish, aging curved and twisted. **Fruit:** achene fully enclosed within perigynium, perigynium = dispersal unit; perigynium obovoid and aging slightly inflated, in range often $3\text{--}4.5 \times 1.7\text{--}2.3$ mm and green + whitish mound at top and smooth and white at base, the mound papillate and having the 3 stigmatic style branches, sac with many fine, raised ridges; achene short stalked, trigonous with 0–2 concave faces, $2\text{--}2.5 \times 1.7\text{--}1.9$ mm, \pm obtuse at top, with or without basal portion of style.

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