

Vascular Plants of Williamson County
Cyperus difformis – VARIABLE FLATSEEDGE [Cyperaceae]

Cyperus difformis L., VARIABLE FLATSEEDGE. Annual, lacking rhizomes, stolons, and tubers, fibrous-rooted, rosetted, cespitose, several–many-stemmed at base, unbranched above base, with ascending shoots, in range 20–50 cm tall; shoots with several basal leaves and 3–5 spreading, leaflike inflorescence bracts forming a reproductive canopy at tip of stem, glabrous. **Stems (culms):** 3-angled, to 350 mm long, to 3 mm diameter, green nearly to base and with concave faces above leaf sheaths, tough, smooth; solid and with narrow air canals. **Leaves:** alternate tristichous, simple with sheath; sheath closed, closed portion 40–80+ mm long (increasing upward), membranous on margins and extending below open V-shaped throat, membrane of closed sheath minutely dark-dotted, wide-membranous on open portion of sheath, with slightly raised parallel veins; ligule absent but sheath margin membranous and flaplike protruding 0.5–0.8 mm from surface (contraligule), notched with short point at tip; blade ascending, linear and V-folded along midrib, 10–340 × 2–5 mm, the widest at base, very short on first leaf increasing upward, tough, mostly entire but with minute teeth approaching tip, long-tapered to tip, sharply keeled with concave halves, parallel-veined with midrib slightly sunken on upper surface and raised on lower surface, ± lustrous. **Inflorescence:** spikelets, in terminal, leafy paniclelike to umbel-like arrays, spikelets in (1–)3–6 dense, headlike clusters at ends of principal branches (primary rays), each headlike cluster 5–13+ mm across, with 50–80 radiating spikelets, on erect to spreading, axillary, primary rays, the longest primary ray < 40 mm long reduced upward and spikelets completely hiding terminal portion rachis, spikelet with 4–17 flowers, bracteate, glabrous; primary ray subtended by inflorescence bract (terminal spikelet cluster bractless) and a sheathing bract (prophyll); inflorescence bracts alternate and somewhat tristichous, suberect to spreading, leaflike but sheathless and fused to axis, unequal, linear, 10–270 mm long, the longest spreading to suberect and 2–5+ × inflorescence height, principal bracts >> reproductive canopy, bracts successively shorter and narrower from base to tip of array, the shortest bract threadlike, green inflorescence bracts leaflike, V-folded, entire but scabrous with minute teeth along keel and on margins approaching tip; primary prophyll sheathing and membranous, cylindrical and closed, 2.5–6 mm long, not keeled, tannish or sometimes purple-veined, orifice dilated and ± oblique; primary ray axes 5–50 mm long, cylindrical with a small, white pulvinus at base and above compressed bottom-to-top and green, with sessile spikelets at tips or with short secondary rays; bract subtending secondary ray membranous, ca. 2 mm long, tail-like (caudate) or needle-shaped (acicular) at tip; secondary ray axes typically 2, to 5 mm long; secondary prophyll closed sheath and same length as associated bract. **Spikelet:** compressed and narrowly ellipsoid to lanceoloid, in range 1.4–3.5 × 0.8–1.3 mm, with alternate distichous bractlets (floral scales) subtending sessile flowers and overlapping; **glumes** (bracts subtending spikelet) 2, membranous, broadly obovate and cupped, 0.5–0.6 mm long, upper glume broader and sheathing with green midstripe; axis (rachilla) without pulvinus and not jointed, internodes < 0.5 mm long, not winged, persistent; bractlet subtending flower sheathing and clasping, obovate to roundish cupped around flower, 0.6–0.75 mm long, narrowly green and herbaceous along center and dark reddish purple (whitish) on sides or whitish between green and reddish purple, rounded on back to

midpoint and somewhat keeled above midpoint, entire, truncate to notched with short point at tip, 1-veined or 3-veined, thickened at end of midvein, glabrous, deciduous. **Flower:** bisexual; **perianth** absent; **stamens** 1–2, free, included; filaments to 0.6 mm long, whitish; anthers basifixed, dithecal, 0.1–0.2 mm long, light yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1; ovary superior, 3-sided, ca. 0.2 mm long, translucent-green, 1-chambered with 1 ovule; style ca. 0.35 mm long, 3-branched at midpoint. **Fruit:** achene, sharply 3-sided obovoid to ellipsoid, 0.55–0.65 × 0.35–0.45 mm, greenish or golden yellow to tannish, acutely angled, slightly convex on 2–3 faces or slightly concave on 1 face, broadly tapered to tapered at base, obtuse to short-pointed at tip, faces finely pebbled; lacking beak.

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