

Vascular Plants of Williamson County

Trifolium campestre – PINNATE HOP CLOVER [Fabaceae]

Trifolium campestre Schreb., PINNATE HOP CLOVER. Annual, taprooted, initially rosetted, 1–several-stemmed at base, late-branching in canopy, ascending to spreading, in range to 35 cm tall; shoots initially with several basal leaves (absent at flowering) and several cauline leaves, soft-hairy; roots nodulated. **Stems:** cylindrical, to 1 mm diameter, green, internodes to 50 mm long at midplant, with circular leaf scars at nodes, appressed-pilose with upward-pointing hairs. **Leaves:** helically alternate, pinnately 3-foliolate, petiolate without pulvinus, with stipules; stipules 2, not fused around stem, asymmetrically ovate, $\pm 6 \times 3\text{--}4$ mm, fused to petiole at least to midpoint, entire often wavy and ciliate on free margin, acute to short-acuminate at tip, ca. 10-veined from base, the veins green and tissue colorless between veins, surfaces glabrous, aging scarious and persistent; petiole above stipules channeled, slender and to 25 mm long, sparsely short-hairy; rachis channeled, 1.5–5 mm long, short-hairy; petiolules pulvinuslike, 0.5 mm long, light green, with several hairs; blades of leaflets subequal, symmetric, ovate, (4–)8–12(–16) \times (4–)6–8 mm, terminal leaflet wider than lateral leaflets, broadly tapered at base, short-dentate from just below midblade, roundish to shallowly notched or subtruncate at tip, pinnately veined with evenly spaced, parallel lateral veins with veins ending in teeth, midrib slightly sunken on upper surface and raised on lower surface, upper surface glabrous, lower surface with appressed hairs along midrib. **Inflorescence:** headlike raceme, axillary, spheroid to aging broadly ellipsoid, 10–15+ \times 9–10 mm, of 50+ flowers closely spaced in poorly defined whorls, flowers at anthesis ascending to spreading-ascending, lacking bracts; peduncle ascending, slender, to 30 mm long, > leaf, densely strigose with upward-pointing hairs; **involucre** of bractlets subtending the lowest whorl of flowers absent; rachis strongly ridged but with short internodes, with each ridge descending from each pedicel; bractlet subtending pedicel absent (obscure); pedicel at anthesis ascending, cylindrical, 0.5 mm long later spreading and thicker in fruit, whitish, glabrous. **Flower:** bisexual, bilateral, pealike (papilionaceous), 3 mm across (widely spreading banner); **nectary** nectar-producing receptacle below ovary not observed; **calyx** 5-lobed, in range ca. 1.5 mm long; tube \pm bell-shaped, colorless, 5-veined, but only 3 raised to the longest lobes; lobes unequal, acuminate, 2 opposite banner < 0.3 mm long, 2 lateral lobes (opposite wings) ca. 1 mm long, 1 opposite keel ca. 0.7 mm long, 1-veined, initially green having a couple long hairs ascending from tip; **petals** 5, appearing light yellow; banner folded later widely spreading, lacking claw, \pm inversely heart-shaped (broadly obovate) cupped at base, $\pm 4 \times 3$ mm, mostly colorless with ca. 15 conspicuous, radiating light yellow veins on upper surface, somewhat greenish on lower surface, minutely toothed and jagged above midpoint on margins; wings 2, \perp banner, clawed, 3 mm long, the claw slender, ± 1 mm long, colorless, limbs obovate-oblong, obovate-oblong, mostly colorless but light yellow approaching tip, with acuminate backward-pointing basal lobe 0.3 mm long; keel of 2 petals partially fused on lower edge above midpoint, ca. 2.5 mm long, clawed, the claws slender, ± 1 mm long, colorless, limbs folded, colorless to tip; **stamens** 10, diadelphous (9 filaments fused and 1 free); filament sheet 1 mm long, filament free portions straight, to 0.4 mm long, whitish; anthers dorsifixed, dithecal, < 0.1 mm long, light yellow, longitudinally dehiscent; pollen yellowish; **pistil** 1, ca. 1.2 mm long, short-stalked (stipe), the stipe to 0.5 mm long; ovary

superior, short club-shaped compressed side-to-side, $\pm 1.2 \times 0.25$ mm, green, glabrous, 1-chambered with 1 ovule attached to upper side; style greenish, upcurved at tip into stigma; stigma minute, terminal, green. **Fruit:** pod (legume), short-stalked, persistent within papery flower, the stalk ca. 0.5 mm long, in range 1-seeded, ellipsoid, $1.7\text{--}2 \times 1$ mm, with thick edge and inflated papery faces rupturing, with persistent hooked style at tip. **Seed:** ellipsoid, in range $1.1\text{--}1.2 \times 0.7 \times 0.4$ mm, pale yellow, with hilum near tip, smooth.

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