

Trifolium L. CLOVER

Trifolium ciliolatum Benth., TREE CLOVER. Annual, taprooted, several-stemmed at base, branching at each node along principal shoot, ascending to erect, in range to 45 cm tall; shoots with only cauline leaves, glabrous; cotyledons 1-foliolate, long-petiolate; roots sometimes nodulated. **Stems:** cylindrical, to 3 mm diameter, \pm tough, often reddish. **Leaves:** helically alternate, palmately 3-foliolate, petiolate, with stipules; stipules 2, slightly sheathing stem at node and fused to petiole base for 3–14 mm, winglike, 7–25 mm long, entire and narrowly membranous on margins, long-acuminate elliptic and bristlelike at tip, conspicuously veined; petiole 7–75 mm long, without pulvinus; petiolules 0.5–1 mm long; blades of leaflets obovate to oblanceolate or elliptic, 10–37 \times 4.7–11 mm, flat, tapered at base, short-serrate on margins with short-ciliate-like tooth for each lateral vein, rounded to slightly notched at tip, pinnately veined with midrib raised on lower surface, dull green, upper commonly with a conspicuous, reddish purple mark along midrib (including bases of lateral veins) and sometimes with whitish to pale green Λ -mark (chevron) above midpoint. **Inflorescence:** headlike raceme, terminal, \pm erect, ovoid to spheric, at anthesis 7–15(–20) mm across, 12–24-flowered typically in 3–4 whorls of (3–)7–8 flowers, with a sterile extension of the rachis beyond the terminal pedicels; peduncle 50–140 mm long in fruit; **involucre** subtending raceme absent, diminutive bractlets fused with minute white teeth; bractlet subtending pedicel, in each whorl fused forming a cuplike sheath < 0.5 mm long, each bractlet truncate with 2–3 short teeth; pedicel at anthesis ascending to erect and 1–3 mm long soon reflexed and increasing 2 \times in fruit, upper side often purplish. **Flower:** bisexual, bilateral, papilionaceous, \pm 2 mm across; **calyx** 5-lobed, 5–6.5 mm long, becoming purplish on upper side; tube bell-shaped compressed side-to-side, 1.2–1.5(–1.8) mm long, light green, 10-veined, glabrous; lobes unequal, long-acuminate with bristle tip, the sinus between upper 2 lobes 2.8–3.2 mm deep, other sinuses 3.5–4.5 mm deep, membranous and bristly short-ciliate on margins with broad-based flat hairs (appearing short-dentate when hairs break and only base remains), 1-veined or 2-veined; **petals** 5; banner ascending, folded, spreading at anthesis, 6–8 mm long, with limb folded and slightly saclike at base, whitish at base to pink to deep rose approaching tip; wings 2, claws 2.5–3.5 mm long, limbs 5–6.5 mm long, adherent to keel; keel fused only along lower edge near tip, 5.5–6 mm long, claws ca. 3 mm long; **stamens** 10, diadelphous (9 fused and 1 free); filaments 4.5–6 mm long with sheath 3.5–4.3 mm long, translucent-white, \pm straight, free portion 1–1.5 mm long and upcurved approaching tip; anthers dorsifixed, dithecal, \pm 0.3 mm long, yellow, longitudinally dehiscent; pollen yellow; **pistil** 1, 5–6 mm long, on a thick, green stalk (stipe) 0.5–0.7 mm long; ovary superior, oblong compressed side-to-side, 2–2.5 \times 1–1.5 mm, green, glandular-hairy and sparsely nonglandular-hairy above midpoint, the glandular hairs club-shaped, 1-chambered with 1–2 ovules attached to upper side; style 3–3.5 mm long, translucent-white, flattened below stigma, hooked at tip; stigma terminal, \pm 0.2 mm long and wide, yellowish green, 2-lobed, papillate. **Fruit:** pod (legume), indehiscent, included in persistent corolla, generally 1 seeded (1–2-seeded), glabrous. Late March–mid-May.

Native. Annual rarely observed in grassy patches of chaparral. *Trifolium ciliolatum* is a glabrous species with calyx lobes having short-ciliate margins, although there are also hairs on the ovary above midpoint. Typically, the upper surface of the leaflet has a reddish

purple streak along the midrib. Of the clover species in range, this is the only one in which the bractlets are fused subtending each inner whorl of pedicels, and the rachis of the raceme has a sterile extension above the terminal pedicels. Flowers are arranged in three or four distinct whorls. Probably because there is no involucre, the fruits often are somewhat reflexed.

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