

Trifolium fucatum Lindl., BULL CLOVER. Annual, taprooted, several-stemmed at base, ascending, 8–25 cm tall; shoots with only cauline leaves, glabrous; roots nodulated.

Stems: cylindrical, to 2 mm diameter, ± tough, green or becoming tinged purplish red on exposed side. **Leaves:** helically alternate, palmately 3-foliolate, petiolate, with stipules; stipules 2, attached to stem at node and fused to petiole for 5–10 mm, semi-ovate to oblong, 7–19 × 1–5 mm, acuminate to 2-toothed or 3-toothed to ± bristlelike (aristate) at tip, green or green along veins and whitish between veins, glabrous; petiole ascending, hemi-cylindric, 29–90 mm long, pulvinus absent; petiolules 0.1–1 mm long, green; blades of leaflets equal, broadly obovate, in range 6–20 × 5–15.5 mm, rounded to tapered at base, short-dentate on margins with weakly bristled teeth, roundish to truncate at tip, pinnately veined with lateral veins often obscure on upper surface, glabrous, upper surface often with a whitish V-shaped marking. **Inflorescence:** headlike spike, axillary, subspheric, ± erect, 7–9(–14)-flowered, lower whorl typically with 6–8 flowers and 1 central, terminal flower solitary (sometimes central flowers also in second whorl), flowers of lower whorl spreading, central flower ± erect, bracteate, glabrous; peduncle slender, 45–130 mm long; **involucre** subtending spike of 6–9 bractlets, initially cupped and star-shaped becoming saucer-shaped by late flowering or early fruit, fused at bases 0.5–2.5 mm long, lobes lanceolate to ovate, 5–8.5 × 1.9–3.2 mm, acuminate at tip, mostly green but whitish at base and membranous on lower lobe margins and upper portion of tube, netted-veined with 1 or sometimes 2 basal veins per lobe, persistent; rachis short; bractlet subtending central flower reduced and awl-shaped; pedicel 0–0.3 mm long. **Flower:** bisexual, bilateral, pealike (papilionaceous), at anthesis 2.2–4 mm across becoming inflated, 11.5–18.5 mm long; **calyx** ± 2-lipped, 5-lobed, 7–8.5 mm long; tube oblique, 1.5–2 mm long between lips, membranous having 1 green vein to each lobe, glabrous; upper lip 2-lobed, lobes awl-shaped, 2.6–3 × 0.4–0.6 mm, green, tapered and bristle-tipped; lower lip 3-lobed, lobes awl-shaped, 3.4–6 × 0.5–0.8 mm, green, tapered and bristle-tipped; **petals** 5; banner elliptic when unfolded, 11–18 × 4.5–8 mm, folded lengthwise and concealing wings but at anthesis tip upturned and spreading, pale greenish white, tapered at base, broadly notched at tip, glabrous, initially obscurely veined becoming inflated at flowering and also longer and reddish with prominent dark reddish veins; wings 2, clawed, claw narrow, 5.8–7 mm long, limbs 4.2–7.5 mm long, pale greenish white (sometimes stained with reddish purple from the opposite spot on keel), with backward-pointing lobe above upper side of claw at base, rounded at tip, glabrous; keel of 2 petals fused only along lower edges approaching tip, clawed, claw narrow, 5.8–8 mm long, limbs prowlike with tip with fused lower margins curved upward to form a right angle with the free, slightly convex upper margins, mostly pale greenish white above claw with a ± rectangular, purplish red spot near tip, glabrous; **stamens** 10, diadelphous, (9 filaments fused and 1 free); filaments to 12 mm long, filament sheet to at least 0.7 of length, white, free portions alternately expanded or narrow, free filament 7–11 mm long; anthers basifixed on expanded filaments and dorsifixed on narrow filaments, oblong to ovoid, ca. 0.4 mm long, yellow, glabrous, longitudinally dehiscent; pollen yellow, sticky; **pistil** 1, stalked (stipe), 1.2–1.5 mm long; ovary superior, ± obovoid to trapezoidal compressed side-to-side, 3.3–3.5 × 0.8–0.9 mm, green, glabrous, 1-chambered with 3–4 ovules attached to upper side; style 4.2–4.3 mm long, pale green, glabrous; stigma terminal, ± helmet-shaped, with minutely papillate

surface continuous on inner side, across top, and on outer side, yellowish green, **Fruit:** pod (legume), on stipe to 1.1 mm long, hidden within inflated, papery corolla, easily ruptured, 1–4-seeded, \pm oblong slightly compressed side-to-side, ca. 7.5×3.2 mm, saclike and thin-walled, tannish to light brown and veiny. **Seed:** \pm ovoid somewhat compressed side-to-side, ca. 2.5×2 mm, dark brownish, commonly notched on inward side of radicle tip, rough on surface.

Native. Annual collected once in range on California State Parks Trippet Ranch. *Trifolium fucatum* has comparatively broad leaflets, as in *T. hirtum*, but a banner that becomes conspicuously inflated, as in *T. depauperatum*.
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