Galium L. BEDSTRAW

Galium andrewsii A. Gray subsp. ***intermedium*** Dempster & Stebbins, PHLOX-LEAVED BEDSTRAW. Perennial herb, drought-dormant, somewhat spinescent, finely fibrous-rooted at nodes of buried stem, many-stemmed at base, tufted and mat-forming, much branched from lax, crooked lower stems, branching from subterminal axils whenever a shoot tip forms a terminal inflorescence or flower, decumbent, < 10 cm tall; dioecious, the pistillate plants denser than staminate plants; shoots with bristle-tipped leaves and persistent dead leaves, essentially glabrous. **Stems:** squarish with 4 rounded ridges, < 0.8 mm diameter, ridges descending from leaf midribs, not tough, green on young growth and brown below, internodes 2–10 mm long. **Leaves:** whorled, 4 per node, strictly in 4 vertical ranks (= 4 stem ridges), simple, sessile and fused at base, stipules 2 indistinguishable from blades in whorl; blade mostly spreading, narrowly lanceolate to awl-shaped, 3–5.5 × 0.3–0.6 mm, (stipules > blades), weakly keeled at base and triangular in ×-section, entire with 0–3 hispid hairs on each translucent margin near base, acute at tip with bristle point, 1-veined, lower surface midrib translucent. **Inflorescences:** cyme, in axillary or terminal, 1–3-flowered cymes (staminate) or terminal and solitary (pistillate), 1–4 inflorescence per node; peduncle of cyme slender and cylindric, to 8 mm long; bractlet within 3-flowered cyme sometimes present, leaflike, < 2 mm long; pedicel (peduncle of pistillate flower) 0.5–2.5 mm long increasing and becoming downward curved and twisted in fruit. **Staminate flower:** ± radial, 2.5–3 mm across; **perianth (corolla)** (3–)4(–5)-lobed, of 1 whorl, rotate, 1.2–1.5 mm long, greenish yellow; tube 0.2 mm long; lobes wide-spreading, ovate to oblong, acuminate to acute and papillate at tip, with 3 veins converging near tip, minutely glandular-hairy along vein furrows, sometimes papillate on lower edge of margins; **stamens** 4, fused near top of corolla tube alternate with lobes; filaments erect aging incurved, 0.3 mm long, translucent greenish yellow; anthers dithecal, 0.4–0.5 mm long, light yellow aging red, longitudinally dehiscent; pollen light yellow; **nectary disc** not producing nectar; **pistil** 1, sterile; ovary inferior, 2-lobed; stigmas sessile or on very short style, not exceeding level of nectary. **Pistillate flower:** ± radial, 2.5–3 mm across; **perianth (corolla)** (3–)4(–5)-lobed, of 1 whorl, rotate, 1.5–1.8 mm long, greenish yellow; tube 0.2 mm long; lobes widely spreading, ovate to oblong, acuminate to acute and papillate at tip, with 3 veins converging near tip, minutely glandular-hairy along vein furrows, sometimes papillate on lower edge of margins; **stamens** 0 or 4, if present either incompletely formed or appearing sterile; **nectary disc** arising from depressed center of ovary, ± flush with cylindric portion of corolla tube, with 2 fleshy, crescent-shaped lobes, greenish; **pistil** 1; ovary inferior, 2-lobed, 0.8–1 × 1–1.3 mm, lobes ellipsoid to subspheric, 0.5 mm thick, light green, glabrous, 2-chambered, each chamber with 1 ovule; style (= 2 fused), 0.8–1 mm long, yellowish green and translucent, 2-branched below midpoint, the branches spreading to recurved; stigmas club-shaped, papillate. **Fruit:** berry, thinly fleshy, strongly 2-lobed (1-lobed by abortion), when 2-seeded 1.5–2 × 2–2.3 mm, pale greenish drying dark brown, glabrous. Early May–mid-June.

Native. A mound-forming perennial herb in range occurring in shaded, moist microhabits of chaparral, typically in crevices or near bases of sandstone boulders. *Galium andrewsii* superficially resembles *Selaginella* or a robust moss, and has its awl-shaped leaves with

bristle tips produced in four vertical rows (four-ranked). This species is dioecious, and in the field the pistillate plant is more compact and has solitary flowers, versus several-flowered cymes on the staminate plant. A fruit is a deeply two-lobed berry, but often only half of the ovary matures with a seed. Fruits are seldom observed, and when found are somewhat concealed among the leaves; each fruit is reoriented by bending of the shoot tip and twisting of the pedicel.
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