

*Galium nuttallii* A. Gray subsp. *nuttallii*, SAN DIEGO BEDSTRAW. Subshrub, brittle-wooded, slender-stemmed, much-branched, climbing or clambering over or among shrubs, 60–150 cm tall; dioecious; shoots conspicuously scabrous with short, stiff, broad-based, backward-curved (retrorse) prickle-hairs. **Stems:** 4-sided (square in  $\times$ -section) and conspicuously 4-ridged (herbaceous stems), < 1.5 mm diameter, with ridges descending from leaf midribs, tough, green becoming reddish tinged, internodes 3–28 mm long, ridges with stiff, backward-pointing (retrorse) prickle-hairs  $\pm$  0.1 mm long; internodes hollow; old stems cylindrical with smooth, peeling, brown periderm. **Leaves:** whorled, typically 4 per node, simple, sessile, with stipules; stipules 2 indistinguishable from blades in whorl (treated here as leaves); blade radiating, narrowly obovate to narrowly lanceolate or ovate, 0.7–5  $\times$  0.6–1.8 mm, appearing linear when margins inrolled under (revolute), entire with colorless, backward-pointing prickle-hairs to 0.25 mm long on margins, acute to acuminate at tip with a terminal hair (often hooklike) on young leaves but not old leaves, 3-veined with midrib raised on lower surface, upper surface glabrous, lower surface with some fine, erect hairs and with broad-based, stiff, erect to retrorse prickle-hairs along midrib and having a patch of colorless, elongate cells concealing the midrib near the tip. **Inflorescence:** cyme, functionally unisexual, terminal as well as axillary and paired at node, each cyme several-flowered, bracteate, with backward-pointing prickle-hairs; axes stemlike but more slender; bracts 4, 2, or 0 per node, decreasing in number toward the tip, leaflike, lanceolate, 1–3 mm long; bractlet subtending pedicel absent; pedicel to 1.5 mm long. **Staminate flower:** radial, 1.5–2.5 mm across, 4-sided in bud; **perianth (corolla)** 4-lobed, of 1 whorl, cymbal-shaped (rotate), in bud having a colorless patch of elongate cells on outer (lower) surface of each (resembling lower surface of leaves); tube 0.1–0.4 mm long, greenish; lobes spreading, narrowly ovate, 0.5–1 mm long, creamy yellow (upper surface) and greenish at base and also commonly purplish red approaching tip (lower surface), incurved and papillate at acute tip, 3-veined, minutely papillate on veins; **stamens** 4, fused to base of corolla alternate with lobes; filaments  $\pm$  0.4 mm long; anthers dithecal,  $\pm$  0.2 mm long, yellowish orange, longitudinally dehiscent; pollen yellowish orange; **nectary disc**  $\pm$  flush with top of corolla tube, 2-lobed with each lobe crescent-shaped, green and sometimes reddish on margins, papillate; **pistil** 1, vestigial. **Pistillate flower:** radial, 1.5–2.5 mm across; **perianth (corolla)** 4-lobed, of 1 whorl, cymbal-shaped (rotate); tube 0.1–0.4 mm long, greenish; lobes spreading, narrowly ovate, 0.5–1 mm long, creamy yellow (upper surface) and greenish at base and also commonly purplish red approaching tip (lower surface), incurved and papillate at acute tip, 3-veined, minutely papillate on veins; **stamens** vestigial; **nectary disc**  $\pm$  flush with top of corolla tube, 2-lobed with each lobe crescent-shaped, green and sometimes reddish on margins, papillate; **pistil** 1; ovary inferior, 2-lobed, ca. 0.5  $\times$  0.8  $\times$  0.4 mm, green, lobes ellipsoid-oblong, glabrous, with rows of domed cells, 2-chambered, each chamber with 1 ovule; style  $\pm$  0.5 mm long, 2-branched at midpoint; stigmas capitate, greenish yellow, papillate. **Fruit:** schizocarp, 2-chambered forming 2 fleshy, 1-seeded berrylike segments (mericarps) with fleshy fruit wall  $\pm$  fused to seed coat; mericarp  $\pm$  obovoid but flat on the inner face,  $\pm$  1.4 mm long, pale yellow-green with reddish brown spots, glabrous. Late January–mid-June.

Native. Subshrub tending to be a climber, occurring mostly in chaparral and southern oak woodland, typically growing up through shrubs in partial shade. *Galium nuttallii* is

distinctly scabrous because stems and leaves possess backward-pointing (retorse) prickle-hairs or softer hairs. Its shoots resemble those of *G. angustifolium*, which is not a climber and does not have the retrorse prickle-hairs on the shoots, and so does not cling to itself when collected. This is the common species of *Galium* that has fleshy mericarps.

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