

Lithophragma Nutt. WOODLAND STAR

Lithophragma affine A. Gray, SAN FRANCISCO WOODLAND STAR. Perennial herb, rhizomatous, fibrous-rooted, loosely rosetted, 1–several-stemmed at base from rhizome, unbranched above base, lax and spreading to ascending, 15–70 cm tall; shoots tender, with basal leaf and 1–3 widely spaced cauline leaves (commonly > 150 mm apart), short-pilose on basal leaves and the lowermost shoot, with glandular hairs on stem and cauline leaves increasing in density toward inflorescence, the glandular hairs with minute rose-colored heads, never viscid; rhizomes slender, mostly < 1 mm diameter, bearing bulblets, the bulblets compressed heart-shaped, becoming irregularly shaped with lobes and nodules developing from the notches, 1–4.5 mm long, whitish aging purplish, sometimes rhizome with awl-shaped scales. **Stems:** cylindric, to 2 mm diameter, firm; irregularly hollow and sometimes filled with water. **Leaves:** helically alternate, shallowly 3-lobed or 5-lobed (basal leaves) to deeply 3-lobed (cauline), long-petiolate, with stipules; stipules 2, winglike and fused to petiole base, 3–7.5 mm long, colorless, ciliate or fringed; petiole cylindric, \pm 1 mm diameter, of basal leaves \gg blade, sometimes > 150 mm long, of cauline leaves > blade, slender, fleshy, pale green to greenish with scattered, radiating hairs spoon-shaped at base and also glandular-hairy; blade very broadly ovate to heart-shaped or kidney-shaped, to 45 mm wide, length < width, of basal leaves sinuses to 4 mm deep, primary lobes sublobed or crenate with a point (mucron) terminating each principal vein, of cauline leaves lobes coarsely toothed or sublobed and the uppermost lobes divided nearly to base, palmately veined with principal veins raised on lower surface, dull, upper surface sparsely hirsute with unbranched hairs along veins, lower surface strigose on raised veins, sometimes also glandular-hairy. **Inflorescence:** raceme or panicle of 2 racemes with 1 raceme subtended by the uppermost cauline leaf, terminal, raceme 5–10(–15)-flowered, bracteate, densely short glandular-hairy; peduncle long and stemlike, sparsely pilose from base and densely short glandular-hairy approaching tip; bractlet subtending pedicel spreading, sessile, heart-shaped to wedge-shaped, 1.5–2.5 \times 1.5–2 mm, thin, pale green, ciliate on margins, acuminate to fringed-truncate at tip, short glandular-hairy; pedicel at anthesis 3–5(–10) mm long increasing 2 \times in fruit. **Flower:** bisexual, radial, in range 7–22 mm across; bud with dense glandular hairs; hypanthium fused to midpoint of ovary and inversely conic, free portion expanded above ovary 2.5–3 mm long, green, 10-veined, glandular-hairy, with ill-defined yellowish nectaries on inside at base; **calyx** 5-lobed; tube very short, poorly differentiated from hypanthium; lobes erect, deltate, 1.5–2 \times 1.8–2.3 mm, green, surfaces glandular-hairy, hairs on outer surface with red heads, hairs of inner surface colorless; **petals** 5, alternate with sepals, arising on hypanthium, clawed, deciduous; claw ascending, 1–1.5 mm long, white with pink vein; limb spreading, broadly elliptic to obovate in outline, 4–9.5 \times 4–6.8 mm, cordate and \pm funneled into claw, unequally 3-lobed to 3-toothed above midpoint (unlobed), rarely with an extra tooth on a lateral lobe or with small teeth near base of limb, white with faint pinkish, pinnate veins, middle lobe 2.5–3.8 mm long, lateral lobes or teeth 1–2.2 mm long; **stamens** 10, free, arising from upper hypanthium; filaments unequal, erect, \pm 1.1 mm long (opposite sepals) and 0.5–0.8 mm long (opposite and at bases of petals), greenish, tapered to tip; anthers basifixed, dithecal, 0.7–1.2 mm long, yellow or blushed orange, blunt-cordate at base, with indented sides, longitudinally dehiscent; pollen light yellow; **pistil** 1, 3.5–3.7 mm long;

ovary slightly > half-inferior, ellipsoid, 2.3–2.5 × 1.7 mm, fused to hypanthium for 1.3–1.5 mm, of 3 sections each tapering to a style, 1-chambered with many ovules attached to side, ± open at top with ovules visible between style bases; styles 3, narrowly conic, pale green or whitish to midpoint opened at base and narrowed to a groove at midpoint, cylindric above midpoint, green, sparsely glandular; stigmas included, capitate, with minute, colorless, papillate hairs. **Fruit:** capsule, dehiscent by 3 splits on inner face at the top of the style, ca. 5 mm long, slightly > calyx tube. **Seed:** ovoid, 0.5–0.6 mm long, dark brown, mostly smooth. Early March–late May.

Native. Perennial herb of moist, often shady, grassy slopes especially in tall chaparral and southern oak woodland. *Lithophragma affine* has petals that are mostly 3-lobed, but occasionally a flower may have one or two entire petals. Seeds of this species are smooth. *Lithophragma heterophyllum* is a very similar plant but has instead spiny seeds, and to date has not been validly recorded in range, but that species may also occur locally.
B. A. Prigge & A. C. Gibson