

*Erodium macrophyllum* Hooker & Arnott, CALIFORNIA STORKSBILL. Annual (in range), taprooted, rosetted, acaulous or short-stemmed with basal leaves congested in a tight helix, with 1–several axillary inflorescences, 5.5–15.5 cm tall; shoots with only basal leaves, canescent and glandular-pilose, the nonglandular hairs short and curved backward to appressed, the glandular hairs 2–3× longer and with erect heads. **Stems:** = peduncle. **Leaves:** helically alternate, unlobed (small leaves) or shallowly 3-lobed, 5-lobed, or 7-lobed, long-petiolate, with stipules; stipules 2, laterally fused with petiole and basally fused to and partially enveloping stem, oblong, in range 3.5–6 × 1.3–2 mm, light green to whitish and translucent but larger stipules with green midvein, ciliate on margins, obtuse to acuminate at free tip (1.5–3 mm long), canescent and glandular-pilose; petiole ± cylindrical or slightly flattened on upper side, 20–40 mm long, 3-veined at base, densely pubescent and sparsely capitate-glandular; blade kidney-shaped to inversely heart-shaped, 11–20 × 12–23 mm, cordate at base, short-crenate on margins of shallow lobes, rounded at tip, palmately 3-veined at base with lateral veins forked just above base and principal veins sunken on upper surface and raised on lower surface, densely pubescent with scattered glandular hairs, lower surface more glandular and with veins becoming reddish. **Inflorescence:** umbel-like cyme, axillary, in range 1–5-flowered, bracteate, short-hairy and glandular-pilose like shoot; peduncle at anthesis 45–150+ mm long increasing in fruit, > leaf, 0.8–1 mm diameter at base, light green but becoming reddish brown from base upwards, with involucre at top; **involucre** of 2–5 bractlets subtending pedicels, bractlets sometimes fused at base, ovate to lanceolate, 2.8–5 × 1.3–1.6 mm, entire, white-membranous on margins, with nonglandular and glandular hairs; pedicel at anthesis ascending and 4–9 mm long increasing and reflexed in fruit, ± 1 mm diameter, green but becoming reddish tinged to strawberry red in fruit, with nonglandular and glandular hairs. **Flower:** bisexual, radial, 15–17 mm across; **sepals** 5, overlapping, spreading becoming ascending in fruit, ovate and shallowly boat-shaped, 5.5–8 × 3–4 mm increasing in fruit, green with ciliate membranous margins, membranous margin broad if overlapped in bud and narrow if exposed, acute at tip with subterminal appendage < 0.2 mm long, without terminal bristles, with 5–7 dark green, parallel veins, upper surface glabrous, lower surface moderately pubescent and densely glandular-hairy; **petals** 5, spreading to ascending, and easily dislodged (fugacious), equal, obovate without a claw, 8–9 × 4–5 mm, thin, in range pale pink (appearing white) without darker pigmentation or with fine green lines, palmately veined with 5–6 veins at base, glabrous or sparsely short-ciliate at base; **nectaries** 5, appressed to bases of stamens, greenish; **stamens** 5 (fertile), free, lacking staminodes; filaments erect, ± 4 mm long, translucent-colorless with broad wings below midpoint, glabrous; anther dorsifixed, dithecal, deep purple, longitudinally dehiscent; pollen golden yellow; **pistil** 1, at anthesis = stamens; ovary 5-lobed, green, 5-chambered, each chamber with 1 ovule; styles 5, fused to ovary axis and forming narrowly pyramidal beak. **Fruit:** schizocarp, of 5 dry, 1-seeded mericarps, before dehiscence sharply erect and needlelike (beaks) with 5 swollen bases (seed bodies), mericarp abscising lengthwise with beak (style) becoming strongly coiled; seed body narrowly hemi-oblongoid, 7–8.5 × 1.7–2 mm, tannish to gray, long-tapered at base, open on inner edge, densely hirsute-hispid, with ascending, whitish hairs, not transversely wrinkled on surface, below the style truncate with a midridge (= attachment of beak), lacking chevronlike troughs or circular pits, not producing beads of exudate; beak (style column) ca. 25–30 mm long, brown,

hygroscopic, with 2–4 tight coils below midpoint, short-strigose with whitish hairs, inner surface long-strigose. **Seed:** narrowly obovoid, ca.  $5 \times 1.5$ –2 mm, dull dark brown, minutely roughened on surface.

Native. Annual rarely found on cracking clay in grasslands formerly growing with other spring native herbs, especially *Microseris douglasii* subsp. *tenella*, *Achyrachaena mollis*, *Gilia angelensis*, *Amsinckia menziesii*, and *Lupinus* spp. *Erodium macrophyllum* is a plant of conservation concern because its habitat is now dominated by either non-native annual grasses or introduced thistles, e.g., at SMMNRA Cheeseboro (SH) and Malibu Creek State Park (SMM), where it can no longer compete. Recently *Erodium macrophyllum* has also been treated as *California macrophylla* (Hooker & Arnott) Aldasoro, C. Navarro, P. Vargas, L. Sáez & Aedo, because the authors judged that this species is distinctive enough to be recognized as a separate genus rather than as an early clade or subgenus of *Erodium*. *Erodium macrophyllum* has petals that abscise instantly if exposed to a slight wind, touch, or jolt of any kind, so it is frustrating to photograph a flower in perfect condition. Some fertile fruits are produced, so it is not known what role petals play in its pollination but may be one reason why the species is rare.

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