

Euphorbia L. SPURGE

Euphorbia terracina L., TERRACINA SPURGE, GERALDTON CARNATION WEED. Perennial herb, with taprooted caudex, not rosetted, several-stemmed at base, lateral branches often unbranched below terminal inflorescence, decumbent or ascending to erect, 25–70 (< 100) cm tall; monoecious; shoots with only cauline leaves, the leaves spreading or sometimes reflexed on principal axis by growth of axillary shoots, essentially glabrous, glaucous; latex white, copious; caudex vertical (horizontal), to 15 mm diameter, with brownish bark.

Stems: cylindric, to 12 mm diameter, often dark rose-colored on exposed surfaces.

Leaves: helically alternate, unlobed or sometimes 2–3-lobed at base, subsessile and sometimes with lobes \pm clasping, without stipules; petiole appressed to stem, 0–0.5 mm long, reddish; blade symmetric, narrowly oblong to elliptic or narrowly triangular, 10–33(–40) \times 2–5.2 mm (–8 mm wide, if lobed), the lobes at base grading into several teeth, minutely blunt short-serrate on margins above teeth, acute at tip, pinnately veined with midrib raised on lower surface, green becoming reddish on margins and tip, glaucous, upper surface sometimes short-hairy next to axillary bud. **Inflorescence:** cyathium

(involucre with staminate flowers and 1 pistillate flower), in terminal and axillary arrays, the arrays leafy, lax, unbranched to dichotomously forked, or of 3–5-rayed umbel with dichotomously forked cymelike branches; rays and main axes of principal branch with several–9 nodes, with opposite decussate cauline leaves fused across node, the leaves grading into bracts at fertile nodes subtending cyathium, cauline leaves and bracts triangular to ovate or shallowly deltate, 4–11 \times 8–14 mm, minutely toothed on margins and sometimes toothed at base, palmately veined, glaucous, upper surface short-hairy at base; bracts subtending rays of terminal inflorescence 3 (whorled), 4 (opposite decussate), or 5 (opposite + whorl of 3), of axillary inflorescence = cauline leaf, ray spreading via pulvinuslike swelling at base; **cyathium** \pm 2.5 mm wide (including spreading glands and horns); **involucre** bell-shaped, 1.8–2.3 \times 1.8–2 mm, green, with 5 bracts and 4 glands, the bracts of involucre fused most of length, with tips semicircular, \pm 0.5 mm long, green, fringed on margins, the glands alternate with bracts (1 absent), nectar-producing, raised, oblong to transversely trapezoidlike, ca. 1.4 \times 0.75 mm, fleshy, green to yellow-green, with a hornlike extension at opposite ends of each gland, 0.5–1.5 mm long, pale yellowish green; staminate flowers 10–15, in 5 clusters of 2–3, stalked, each associated with 1 bractlet; bractlet filamentous or flattened (laminar) to midpoint, < staminate flower, whitish, if laminar divided at base and again higher up with terminal branches filamentous or flat, some hairy at tip, pedicel cylindric, \pm 2 mm long, glabrous; pistillate flower on a pedicel-like stalk (gynophore), at anthesis gynophore erect and 1 mm long increasing to > cyathium in fruit, with styles initially exposed from involucre, soon gynophore elongating 3 \times and having mature ovary fully exerted, recurved, thicker, and dark reddish. **Staminate flower:** reduced to 1 stamen; filaments \pm 0.7 mm long, flared at base where attached to pedicel; anthers conspicuously dithecal, 0.5 mm long, yellowish, longitudinally dehiscent; pollen golden yellow to yellowish. **Pistillate flower:** reduced to a pistil, erect and fully exerted at anthesis; ovary superior, 3-lobed subspheroid, ca. 1 \times 1 mm, green, lobes rounded, obtuse on angle, glabrous, 3-chambered, each chamber with 1 ovule; styles 3, fused 0.3 mm at base, spreading, \pm 1.3 mm long, 2-branched at or above midpoint; stigmas minute. **Fruit:** capsule, 3-seeded, deeply 3-lobed, 3.3–4 \times 4.2–4.7 mm, yellowish to

greenish tan, ± woody, elastically dehiscent along septa and chambers into 6 dry valves (some valve-pairs remaining attached at base) and expelling seeds. **Seed:** with fleshy appendage (caruncle), subspheric, 2.2–2.5 × 1.7–2 mm, dark brown coated by a tannish, sometimes mottled layer, with an oblique end, seed coat minutely granular with a fleshy body (caruncle); caruncle versatile on oblique end of seed by a very short stalk, ovate and ca. 1 × 0.75 mm in surface view, mushroomlike in lateral view, whitish, firm. Late October–late July.

Naturalized. Annual first noted in Malibu during the late 1990s but which rapidly became a seriously invasive species along the coast in waste areas and openings, then appearing in native habitats. Now *Euphorbia terracina* also occasionally is found in central parts of the range. *Euphorbia terracina* grows tall in the maritime climate and locally can soon outcompete other weeds.

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