

*Eriogonum angulosum* Benth., ANGLE-STEM WILD BUCKWHEAT. Annual, taprooted, rosetted, 1-stemmed at base, 3-forked at top of stem and then unequally 2-forked at the subsequent nodes of inflorescence (on robust plant sometimes at every node), erect to ascending with vase-shaped inflorescence, 10–98 cm tall; shoots with basal leaves and cauline leaves on stem 25–100 mm long, wispy inflorescence with photosynthetic axes, basal leaves typically senescent at flowering, white woolly-tomentose throughout with some surfaces aging glabrescent. **Stems:** 6-ridged, to 4 mm diameter, with ridges descending from each leaf or bract and continuous through each internode, stiff and woody. **Leaves:** whorled (rosette leaves) and helically alternate (cauline leaves), simple, petiolate (rosette leaves) and sessile (cauline leaves), without stipules (no ocrea); petiole to 30 mm long; blade roundish to broadly oblong (rosette leaves) and lanceolate or elliptic to oblanceolate or obovate, 12–45(–70) × 4–15 mm, tapered at base, entire and wavy (somewhat inrolled under) on margins, acute at tip, pinnately veined with only midrib conspicuous sunken on upper surface and raised on lower surface, upper surface woolly sometimes becoming glabrate, lower surface densely matted white-woolly. **Inflorescence:** involucre-enclosed units (cymes) in terminal, open and wispy paniclelike arrays, array repeatedly forked with slightly unequal branches diverging at ca. 60°, with 1 involucre terminating each peduncle, the involucre enclosing 20–44 flowers in a dense, headlike cluster, bracteate with leaflike and scalelike bracts at each node; scaly bracts subtending fork 3 in fused whorl, 1.5–2.5 mm long forming a cuplike sheath, lobes appressed to axis and triangular to acuminate concealing tomentose inner surface; leaflike bracts internal to scaly bracts typically 2, opposite with each subtending a branch at each fork and spreading, appearing like sessile cauline leaves, lanceolate, 3–27 × 0.8–8 mm; peduncle diverging from each node, slender and cylindric, 5–27 mm long, wirelike, smooth, mostly purplish red, sparsely woolly and often aging glabrate; axes 6-ridged, cylindric on thick axes to 3-sided on thin axes with 3 principal ridges alternating with a minor ridge on each face, main axis slightly zigzagged with internodes to 80 mm long, green but white woolly-tomentose aging glabrate. **Involucre:** sessile, inversely conic to cup-shaped, 1.4–2.5 × 1.4–2 mm, green, 5-lobed, 5-veined but not ribbed, minutely glandular-puberulent, lobes short and broad, ± 0.4 mm long, inrolled, each with 2 veins; bractlets subtending each pedicel ca. 3, dimorphic with 1 broad and 1–2 slender; broad bractlet oblanceolate-spatulate, 1.5–3.7 × 0.5–0.7 mm, green with white-membranous margins, narrowly tapered at base, woolly-ciliate on margins, cupped and rounded or truncate at tip, outer surface puberulent above midpoint; slender bractlet threadlike becoming featherlike above midpoint, 1–1.5 mm long; pedicel slender, 1.5–2 mm long, elastic, pale green, glabrous or with several glandular hairs approaching flower. **Flower:** bisexual, radial, 1.5–2 mm across; **perianth** 6-lobed, lobes (tepals) in 2 whorls, dimorphic; perianth tube dish-shaped to cup-shaped, 0.25 mm deep, green becoming purplish red in fruit, externally puberulent, with obscure nectaries = slightly thicker, yellowish green elliptic areas; lobes (tepals) commonly short-clawed, claw < 0.25 mm long, broadly obovate to roundish or ovate and cupped on each side of midvein, at anthesis 0.8–1.2 × 0.6–0.8 mm increasing to 1.6 × 0.9 mm in fruit (outer tepals) and lanceolate and flat below midpoint and cupped above midpoint, 1–1.7 × 0.35–0.7 mm increasing to 2 × 0.7 mm in fruit (inner tepals), white to pink-rose with a green midstripe terminating before tip aging rose-purple or purplish red with a darker purplish midstripe, on lower (outer) surface puberulent; **stamens** 9, attached

to “lobes” of nectary on perianth tube, exerted; filaments 1.2–1.7 mm long, translucent to white, glabrous, minutely papillate; anthers dorsifixed, dithecal, 0.2–0.3 mm long, purplish red to vivid red or pink, longitudinally dehiscent; pollen yellow; **pistil** 1, 1.4–2 mm long; ovary superior, 3-angled lanceoloid, 0.5 mm long, glossy green aging purplish red above midpoint, 1-chambered with 1 ovule; styles 3, initially coiled, ascending, pale pink or white and pink approaching tip, minutely papillate; stigmas minute-capitate, dark pink to purplish red. **Fruit:** achene (diclesium), teardrop-shaped and sharply 3-angled above seed chamber,  $\pm 1.5 \times 0.75$  mm, light brown often with black seed visible, seed chamber  $\pm$  glossy and smooth. Late July–early October.

Native. Annual known to date from two small patches on Cheeseboro Ridge (SH), occurring on south-facing, open, exposed slope with native herbs and naturalized annual grasses, along a road bank where plants get covered with fine silt dust. *Eriogonum angulosum* was first reported in 2002 by Carl Wishner, and still the known occurrence in range occurs on less than one hectare. *Eriogonum angulosum* is easily distinguished from other species in range in having six ridges on its photosynthetic inflorescence axes, hence the scientific name. Nearly the entire plant is a wispy inflorescence. The inflorescence has many orders of forking and from each fork producing a small involucre at the end of a long, wirelike peduncle. En masse, the flowers of an involucre appear rose-purple, including lighter colored bud and open flowers, and darker old flowers containing fruits. This is the only species in range having clawed perianth lobes (tepals), and outer and inner whorls are different enough to be considered dimorphic.

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