

*Artemisia californica* Less., CALIFORNIA SAGEBRUSH. Shrub, drought-deciduous to semi-evergreen, during winter and spring forming wandlike main axes with ascending, short lateral shoots, lower plant highly branched, in range 50–200 cm tall; shoots slender-leaved, tufted with shorter leaves on unexpanded axillary shoots, grayish green to brownish green (green), with dense, feltlike, densely short-tomentose hairs and obscure peglike glands, strongly aromatic like sage (*Salvia*). **Stems:** ca. 8-ridged but  $\pm$  concealed by dense hair, aging cylindric. **Leaves:** helically alternate to subopposite, simple or very deeply lobed above midpoint, without stipules; petiole very short, with bulging petiole base appressed to stem; blade 12–70 mm long, especially short on unexpanded axillary shoots or when formed during dry season, linear or with 1–6 linear lateral lobes  $5\text{--}40 \times 0.5\text{--}1$  mm, entire, acute to  $\pm$  rounded at tip, 1-veined, grayish with dense hairs to light greenish with fewer hairs. **Inflorescence:** heads, terminal, in leafy paniclelike arrays having ascending, slender, racemelike axillary branches with spreading or nodding heads, head  $\pm$  disciform having 15–45 “disc flowers,” to 10 pistillate peripheral flowers and to 35 bisexual central flowers, bracteate, sparsely short-tomentose; peduncle typically  $< 6$  mm long, having 1–4 alternate to opposite bracts, bracts along axis leaflike, linear and unlobed, 1.5–3 mm long; **involucre** hemispheroid,  $3\text{--}3.5 \times 3\text{--}4$  mm, phyllaries ca. 15 in 3–4 series, 2–2.5 mm long, outer phyllaries narrowly to broadly triangular or obovate, narrowly to broadly membranous and irregularly cut on margins and at tip, rusty or tannish short-tomentose on broad, herbaceous central area, with green midvein on inner surface, inner phyllaries obovate to spatulate, broadly membranous on margins and at tip, glabrous, narrowly herbaceous along midvein; receptacle domed, without bractlets (paleae), glabrous. **Peripheral flower:** pistillate,  $\pm$  bilateral but not strap-shaped, 0.7 mm across; **calyx (pappus)** absent; **corolla** 4-lobed, 1–1.2 mm long, 2-angled or 3-angled, with colorless, short, peglike glands (especially on tube), with at least 1 angle commonly winglike; tube  $\pm 0.5$  mm long, wider than throat, greenish, the angles continuous with angles on ovary; throat whitish to reddish purple (upper throat); lobes erect, whitish or reddish purple, 2 opposing lobes folded lengthwise and flat, the folds continuous with angles on throat, 2 lobes unfolded and flat; **stamens** absent; **pistil** 1; ovary inferior, inversely conic,  $\pm 0.9$  mm long, translucent-white, 3-angled, with sessile, colorless peglike glands, 1-chambered with 1 ovule; style 1–1.3 mm long, 2-branched, the branches exerted, spreading or recurved, narrowly tongue-shaped,  $\pm 0.4$  mm long, dark reddish to whitish, channeled on both surfaces and short-papillate on the 2 ridges. **Central flower:** bisexual, radial,  $\pm 0.7$  mm across, **calyx (pappus)** absent; **corolla** 5-lobed, funnel-shaped, 1.2–1.5 mm long, with scattered, peglike glands; tube  $\pm 0.8$  mm long, greenish, 5-ribbed; throat,  $\pm 0.6$  mm long, slightly expanded, whitish to reddish purple (upper throat), 10-ribbed; lobes recurved, triangular, 0.3 mm long, whitish; **stamens** 5, fused to corolla near top of tube; filaments short; anthers fused into cylinder surrounding style, slightly exerted, basifixed, dithecal,  $\pm 0.7$  mm long, appendaged, whitish, longitudinally dehiscent; pollen whitish; **pistil** 1; ovary inferior, 5-ribbed and angled, compressed inversely conic, translucent-white, winged, prominently rimmed at tip, with peglike glandular hairs becoming glabrescent, 1-chambered with 1 ovule; style 1.2 mm long, 2-branched, the branches spreading,  $\pm 0.5$  mm long, channeled on both surfaces and short-papillate on the 2 ridges, stigmatic and short-bristlelike at tip. **Fruits:** cypselae, monomorphic, narrowly inversely conic-cylindric, 3

mm long, light brown, straight, 10-ribbed, with short hairs. Late September–mid-December (March).

Native. Shrub common throughout the range but an important codominant in coastal sage scrub. Foliage of *Artemisia californica* typically is grayish green and strongly aromatic, but individuals occur in every population that are more green (less hairy). On the threadlike leaves it is difficult to observe the glandular structures wherein the aromatic chemicals are produced. California sagebrush is one of the few shrub species that blooms during fall, and its flowers are nonshowy and wind-pollinated. Heavy rains during winter 2010 resulted in some early spring flowering on new growth.

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