

Baccharis L. FALSE WILLOW, GROUNDSEL-TREE

Baccharis plummerae A. Gray subsp. *plummerae*, PLUMMER'S BACCHARIS. Shrub, winter-deciduous, many-stemmed at base, with ascending to arching, photosynthetic, wandlike current-year branches (virgate), flowering shoots unbranched and to 100 cm long, in range 75–195 cm tall; dioecious; shoots pubescent with scattered, brownish shaggy hairs throughout and on some parts with inconspicuous, yellowish green glandular hairs but not in pits, not resinous, faintly scented. **Stems:** many-ridged, young shoots ca. 5 mm diameter, with 3 ridges descending from each leaf, green. **Leaves:** helically alternate, simple, sessile, without stipules; blade lanceolate or \pm oblanceolate to elliptic, 15–70 \times 2.5–14 mm, serrate on margins with bristly teeth, the teeth from near base to tip, acute at tip, 3(1)-veined at base with principal veins sunken on upper surface and raised on lower surface, upper surface typically without sunken glandular hairs and glabrate, lower surface especially hairy along veins + glandular hairs uniformly distributed. **Inflorescences:** unisexual heads, in terminal, open, several-headed, cymelike arrays at ends of branchlets, head discoid, 4–5 mm across, 19–26-flowered (staminate) and 20–30-flowered (pistillate), bracteate, shaggy pubescent, not glutinous; bract subtending lateral branch and branchlet leaflike, < 15 mm long, decreasing upward, with teeth above midblade; axes ridged with 3 ridges descending from each bract, pubescent; peduncle at anthesis 4–6 mm long (staminate) and several– > 10 mm long (pistillate), ca. 1.5 mm diameter, conspicuously ridged, shaggy-pubescent, with 3–4 bracts along axis above midpoint, the 2 closest to involucre often subopposite and 2–3 mm long; **involucre** \pm bell-shaped, 6–7 \times 4–4.5 mm (staminate) and 8–8.5 \times 4–5 mm (pistillate), phyllaries 40+ in 5–7 series, erect, linear-lanceolate or oblong-linear, 3–7 \times 0.5–1.5 mm, the outermost phyllaries short and narrow, exposed phyllaries with raised, green, and pubescent axis having membranous margins, hidden phyllaries flat, 1-veined, membranous with green midstripe, the margins fringed especially above midpoint; receptacle flat to slightly domed, without bractlets (paleae), shallowly pitted, rims around ovaries low and with white glandlike hairs. **Functionally staminate flower:** appearing bisexual (stigma and style present), radial, 3 mm diameter; **calyx (pappus)** of ca. 30 capillary bristles in 1 whorl, 4–5 mm long, white, often kinky at base; **corolla** 5-lobed, 5–6.5 mm long; tube \pm 2.5 mm long, pale green, with several short hairs at junction of tube and throat; throat bell-shaped, 1 mm long, pale green; lobes recurved, lanceolate, ca. 2 \times 0.6 mm, pale green to whitish; **stamens** 5, filaments fused to corolla above tube; filaments ca. 1 mm long, whitish; anthers fused into cylinder surrounding style, basifixed, dithecal, 2 mm long including appendages at tip, whitish, the appendages awl-shaped, 0.3–0.6 mm long, longitudinally dehiscent; pollen colorless; **pistil** 1, sterile; ovary inferior, aborted, wedge-shaped, ca. 0.5 mm long, white, angled, with white glandlike hairs; style included, \pm 3.5 mm long, with a swollen green nectary at base 0.3 mm long, style pale green, 2-branched, the branches spreading, \pm 1 mm long, conspicuously papillate-hairy. **Pistillate flower:** < 0.5 mm across; **calyx (pappus)** of 60+ capillary bristles in 2–3 whorls arising from green rim atop ovary, at anthesis 5–5.5 mm long (> pistil) increasing in fruit, tannish white; **corolla** irregularly short-toothed (< 5 teeth), narrowly cylindrical, at anthesis ca. 2 mm long increasing 2 \times , not tapered, pale green, finely short-strigose with upward-pointing hairs above midpoint; teeth inconspicuous, unequal, < 0.3 mm long, whitish; **stamens** absent; **pistil** 1; ovary inferior,

inversely conic, 1 mm long, white, inconspicuously 5–7-stripped (= ribs), with white glandlike hairs especially between ribs, 1-chambered with 1 ovule; style exerted, 3.5–4 mm long increasing 2× in fruit, with a short green nectary at base, 2-branched, green below fork and pale green above, the branches appressed, ± 1.5 mm long, whitish, inconspicuously papillate. **Fruits:** cypselae, compressed sausage-shaped and angled, 3–3.5 mm long, cinnamon brown, 5–7-ribbed, short-hairy (glandular hairs); pappus of 60+ capillary bristles of various length, 5–9 mm long, tannish white. Mid-August–mid-October.

Native. Shrub growing mostly in canyons, especially in shady understory of southern oak woodland and riparian woodland, occurring with poison oak (*Toxicodendron diversilobum*), snowberry (*Symphoricarpos mollis*), and California blackberry (*Rubus ursinus*). *Baccharis plummerae* has separate sexes and never forms dense populations. Isolated plants tend to be staminate, whereas small populations develop in the vicinity of at least one pistillate plant. Its flowers open during mid-summer, and the staminate flowers are the ones with significant nectar reward for insects that are able to probe the narrow, tubular corolla. Interestingly, the stigmatic style branches of staminate flowers are conspicuously hairy and spreading, even though the ovary never forms a fruit, whereas the pistillate flower has stigmatic branches that are appressed and essentially smooth.
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