

Baccharis L. FALSE WILLOW, GROUNDSEL-TREE

Baccharis malibuensis R. M. Beauchamp & Henricks., MALIBU BACCHARIS. Shrub, winter-deciduous, many-stemmed at base, with ascending to arching, wandlike, current-year branches, flowering shoots unbranched and to 100 cm long, in range 40–210 cm tall; dioecious; shoots glabrescent with occasional shaggy brownish hairs, on some parts with inconspicuous, yellowish green glandular hairs (sunken in pits), not resinous, faintly scented. **Stems:** many-ridged, young shoots ca. 4 mm diameter, with 3 ridges descending from each leaf, green and sometimes somewhat glossy, becoming glabrate. **Leaves:** helically alternate, simple, sessile, without stipules; blade \pm linear, 15–70 \times 1–3(–8) mm, entire or with short teeth on margins, the teeth mostly above midblade, acuminate at tip, 1(3)-veined at base with midrib sunken on upper surface and raised on lower surface, upper surface with many glandular hairs sunken in pits, lower surface sparsely hairy along midrib + glandular hairs uniformly distributed. **Inflorescences:** unisexual heads in terminal, open, cymelike arrays at ends of branchlets, array several-headed, head discoid, 3–4 mm across, with 6–36 flowers (staminate) and 29–38 flowers (pistillate), bracteate, glabrescent, not glutinous; bract subtending lateral branch and branchlet leaflike, to 15 mm long, decreasing upward, mostly entire and folded upward, upper surface with yellowish green glandular hairs (not sunken); axes striped or inconspicuously ridged, glabrescent with short or minute hairs (including hairs with glandlike bases); peduncle at anthesis 4–50 mm long (staminate) and several- $>$ 10 \times 0.8 mm long (pistillate), striped or inconspicuously several-ridged, with 3–4 bracts along axis above midpoint, the 2 closest to involucre often subopposite and \pm 3 mm long; **involucre** \pm hemispheric, 5.5–6 \times 5.5–6 mm (staminate) and bell-shaped, 6–6.5 \times 3.5–4 mm (pistillate), phyllaries 40+ in 5–6 series, erect, lanceolate to elliptic or oblong-lanceolate, 2–5.5 \times 0.3–1.3 mm, outer phyllaries short and narrow, exposed outer phyllaries with raised, green center somewhat with scattered hairs and with membranous margins, hidden phyllaries flat, 1-veined, membranous with green midstripe, fringed on margins; receptacle flat to slightly domed, without bractlets (paleae), shallowly pitted, rims around ovaries with some prominent teeth to 1 mm long, with white glandlike hairs. **Functionally staminate flower:** appearing bisexual (stigma and style present), radial, ca. 2.5 mm diameter; **calyx (pappus)** of ca. 30 capillary bristles in 1 whorl, 4–5 mm long, white; **corolla** 5-lobed, 4.5–5.2 mm long; tube cylindrical, ca. 2 mm long, green; throat narrowly funnel-shaped (not bell-shaped), with scattered short hairs; lobes ascending, narrowly lanceolate, \pm 1.5 \times 0.45 mm, light green; **stamens** 5, filaments fused to corolla above tube; filaments ca. 1 mm long, green; anthers fused into cylinder surrounding style, basifixed, dithecal, ca. 1.7 mm long including appendages at tip, whitish, appendages acuminate and to 0.4 mm long, longitudinally dehiscent; pollen white; **pistil** 1, ca. 4.3 mm long, sterile ovary; ovary inferior, aborted, wedge-shaped, ca. 0.5 mm long, green, with white glandlike hairs; style exerted, \pm 3.5 mm long, with 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:** radial, $<$ 0.5 mm across; **calyx (pappus)** of 60+ capillary bristles in 2–3 whorls arising from green rim atop ovary, at anthesis 4–4.5 mm long ($>$ pistil) increasing in fruit, tannish white; **corolla** 5-lobed, \pm narrowly cylindrical tapered to tip, at anthesis ca. 2 mm long increasing 2 \times , green at base to pale green above, sparsely short-pubescent above midpoint;

lobes erect, unequal, linear to acuminate, 0.3–0.8 mm long, whitish; **stamens** absent; **pistil** 1, an anthesis to 4.3 mm long; ovary inferior, cylindrical, \pm 0.8 mm long, white, weakly striped or without stripes, with glandlike hairs, 1-chambered with 1 ovule; style exerted, ca. 3 mm long increasing 2 \times in fruit, with short, green nectary at base, 2-branched, green below fork, the branches appressed, < 1 mm long, pale green, inconspicuously papillate. **Fruits:** cypselae, compressed-ellipsoid, 2.4–3 mm long, dull light brown, with 5 yellowish ribs, with scattered glandlike hairs; pappus of 60+ capillary bristles of various length, 6.5–7.5 mm long, tannish white. Early August–mid-October.

Native. Shrub described in 1996 for populations endemic to chaparral and bordering southern oak woodland in the central SMM. A specimen later assigned to *Baccharis malibuensis* was first collected in 1988 by Carl Wishner at Salvation Army's camp along Las Virgenes Road near Mulholland Highway, and the known range of the species now extends from SMMNRA King Gillette Ranch westward to just west of Lake Malibou, an area of approximately 30 square kilometers. This plant so closely resembles *B. plummerae* subsp. *plummerae* that it would go unnoticed as a narrow-leaved form of Plummer's baccharis. Only when structures of the two relatives are placed together do differences become clear. Malibu baccharis is essentially glabrous, and its leaves are slender and have fewer teeth in comparison with Plummer's baccharis and teeth mostly restricted to above midblade. In *B. malibuensis* blades have glandular hairs in conspicuous pits on the upper surface, and both species have these glandular hairs but not noticeably sunken on the low surface. The pistillate head of *B. malibuensis*, analyzed at the same developmental stage as *B. plummerae*, is slightly smaller and produced on a narrower peduncle with few hairs and weakly developed ridges; its phyllaries are likewise smaller with fewer surface hairs (or glabrous). Good magnification is required to critically observe that the pistillate receptacle has tall teeth rimming the ovaries, and the corolla of *B. malibuensis* tapers base to orifice and has five slender lobes; in *B. plummerae* the teeth on the receptacle are not conspicuous, and the corolla does not taper significantly and has less than five irregular and very short teeth. The staminate flowers are also very different between the two species; the corolla of *B. malibuensis* is darker green, has narrower lobes, and lacks the bell-shaped throat.

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