

42908 (RSA); dunes near Flasher, nw part of island, 10–15 ft, 11 April 1973, *Thorne 42879* (CAS, TEX)*; north end, east coast, 9 April 1923, *Munz 6612* (POM, UC). MEXICO: Baja California Norte. Los Islas Coronados, 12 May 1895, *A. W. Anthony s.n.* (UC); 10 June 1926, *M. E. Jones s.n.* (POM); 30 May 1926, *W. M. Pierce s.n.* (POM, specimen on the left).

In cultivation, 19% of the plants grown from wild achenes were self-incompatible. Self-compatible plants were poorly self-pollinating (<40% of the achenes were filled/pigmented in undisturbed heads. *Malacothrix foliosa* was collected on Los Coronados Island in the past, but not since 1926.

1c. ***Malacothrix foliosa*** A. Gray ssp. ***philbrickii*** W. S. Davis ssp. nov.—TYPE: USA, California, Santa Barbara Co., Santa Barbara Island, west side, 100 m, 27 April 1941, *Moran 824* (holotype: DS!; isotypes: CAS!, UC!, US!).

Plantae annuae, 6–35 mm altae. Caulis unicus vel e basi aliquot, supra ramosus decumbens ascenden vel arrectus. Folia superna caulina ovato-obovata vel lanceolato-oblancheolata, in marginibus vel dentata, longi-serrata vel pinnatim lobata vel in 2–4 paria segmentorum dentatorum plerumque non crispatorum divisa; folia supremus lanceolato-oblancheolata, apicem versus acuta vel obtusa, in marginibus dentata vel apicem versus brevi-lobata. Capitula sub anthesi 3.1–6.7 mm lata, in base subcontacta. Involucrum 7–11 mm altum; phyllaria exteriora 9–19, phyllariis interioribus 2plo vel aliquantum breviora, pallide viridia vel rubrescenti-viridia, in apice subatriora et squarrosa; phyllaria interiora 11–21, subviridia vel viridia. Flosculi 40–113; corollae 8–16 mm longae, mediocriter flavae; ligulae flosculorum extimorum 2–4 mm latae trans involucrum 4–8 mm exsertae; stamina 5–8 mm longa; ramuli styli 0.4–0.7 mm longi. Fructus 1.3–1.7 mm longus, mediocriter vel atro-fuscae, plerumque 5-angulus. Autogamae vel non autogamae.

Plants annual, 6–35 cm tall. Stems one to several from the base, branched above, decumbent, ascending to erect. Upper cauline leaves ovate-obovate to lanceolate-oblancheolate, margins dentate, long-serrate, or pinnately lobed or parted into 2–4 pairs of toothed, generally not crisped segments; uppermost leaves lanceolate-oblancheolate, apically acute to obtuse, margins toothed or short lobed to near the tip. Heads 3.1–6.7 mm wide at anthesis, base somewhat tapered. Involucre 7–11 mm high; outer phyllaries 9–19, ½ as long to nearly as long as inner phyllaries, pale green to reddish green, tips generally darker, and squarrose; inner phyllaries 11–21, pale green to green. Florets 40–113; corollas 8–16 mm long, medium yellow; ligules of outermost florets 2–4 mm wide, exserted 4–8 mm beyond involucre; stamens 5–8 long; style branches 0.4–0.7 mm

long. Fruit 1.3–1.7 mm long, medium to dark brown, generally 5-angled. Self-compatible or self-incompatible.

Paratypes (* progenies from wild achenes propagated in growth chambers). USA, California: Santa Barbara Co., Santa Barbara Island, Cliff Canyon, 5 May 1963, *Blakley 5696* (SBBG, RSA); bluff, due w of mouth of Cliff Canyon, 200 ft, 21 May 1966, *Philbrick and Benedict B66–373* (SBBG)*; bluff, halfway between Landing Cove & Cliff Canyon, 21 May 1966, *Philbrick and Benedict B66–371* (SBBG)*; canyon between Landing Cover and Cliff Canyon, 18 March 1968, *Philbrick B68–32* (CAS, SBBG); lower Middle Canyon, 22 March 1970, *Philbrick and Benedict 70–53* (SBBG); upper part of Graveyard Canyon, 27 April 1968, *Thorne 37512* (RSA); 3 July 1931, *Abrams and Wiggins 304* (DS, UC); above landing, along steps leading to Ranger's Residence, 3 July 1982, *Davis 434* (DHL)*; cliffs above Graveyard Canyon, 3 July 1982, *Davis 435* (DHL)*; upper southern margins of Middle Canyon, 3 July 1982, *Davis 436* (DHL)*; dry ridge along trail n of Ranger's Residence, 3 July 1982, *Davis 437* (DHL)*; along trail s of Middle Cliff Canyon, 3 July 1982, *Davis 438* (DHL)*; along path through desert pavement area, nw tip of island, 3 July 1982, *Davis 439* (DHL)*; west side, common, 28 May 1939, *M.B. Dunkle 8133* (DS, LAM, SBBG, UNM); just above landing platform, Landing Cove, 21 May 1966, *Philbrick and Benedict B66–356* (SBBG); east side of embayment of Cat Canyon, 28 April 1968, *Thorne 37485* (CAS, DS, RSA); north slope of Signal Peak, 4 May 1963, *Blakley 5677* (SBBG).

PHI is particularly variable in growth habit and cauline leaf morphology, and at least two distinct ecotypes are recognizable. On the windy northwest side of Santa Barbara Island, on open flats with coarse, gravelly soil, is a low-growing decumbent form with 5–10 abundantly leafy stems from the base. On the drier southeast side, in among shrubs and other vegetation in small canyons or draws, is an erect form, generally with a single stem from the base and branched above, with cauline leaves reduced upward. The two ecotypes breed true in cultivation and are indistinguishable in floral morphology.

Thirty-one percent of the plants of PHI grown in cultivation from wild achenes were self-incompatible. Self-compatible plants were poorly self-pollinating (<10% of the achenes from mature undisturbed heads were pigmented/filled).

1d. ***Malacothrix foliosa* ssp. *polycephala*** W. S. Davis ssp. nov.—
TYPE: USA, California, Ventura Co., San Nicolas Island, annual, pale yellow flowers, clay slopes about 200–300 ft elevation, above the docks scattered near the west end of the island;