

First collected by *Coulter*, probably in the southern part of the State. Sitgreaves Pass (*Newberry*); Nacimiento River and San Luis Obispo, *Brewer*. Apparently on the Sacramento or San Joaquin, *Fitch, Kellogg*. Involucre over half an inch in diameter, not unlike that of a *Xeranthemum*. Structure in other respects wholly that of *Malacothrix*.

§ 2. *Involucre of narrow and acute or acuminate scales, slightly if at all scarious, in 2 or 3 series. (Pappus present.)* — MALACOTHRIX proper.

* *Annuals: flowers light yellow, often turning purple. (Leptoseris, Nutt.)*

+ *Head large, solitary, terminating mostly simple naked scapes.*

2. **M. Californica**, DC. Loosely long-woolly when young, sometimes nearly glabrous with age: leaves mostly all in a radical tuft, laciniately pinnately parted into very narrowly linear divisions: scapes ascending, a span to a foot high: scales of the broad involucre linear-subulate, loosely imbricated: akenes narrow, minutely and obtusely striate-ribbed (acutish and with a minute callus at the base): outer pappus of 2 persistent bristles, between the bases of which are several very minute pointed teeth.

Var. **glabrata**, Eaton in Bot. King Exp., 201, is a form apparently destitute of wool, even when young.

Open grounds, rather common from the Bay of San Francisco to San Diego, and east to the borders of Nevada and S. Utah, where the smooth variety was collected by *Anderson, Watson, Parry, &c.* Head as large as that of a Dandelion, on a scape which is usually naked to the base, rarely with a leaf or two, and with a tendency to bear lateral heads.

+ + *Heads smaller and paniculate on branching stems or scapes: involucre of equal scales and a few short calyculate ones at base.*

+ + *Pappus with one or more somewhat persistent stouter and naked bristles.*

3. **M. Torreyi**, Gray. A span to a foot and a half high, rather leafy, nearly glabrous: branches and especially the peduncles more or less beset with some gland-tipped bristles: heads rather large: involucre campanulate and many-flowered: akenes linear-oblong, very strongly ribbed; the 5 principal ribs almost wing-like, the pair in each interval much less prominent: outer pappus of 4 to 8 (usually 5) stout persistent bristles, between the thickish bases of which are minute teeth. — Proc. Am. Acad. ix. 213. *M. sonchoides*, Torr. in Stansbury Rep. 392; Gray, Pl. Wright. ii. 105, in part; Eaton in Bot. King Exp. 201, not of Torr. & Gray.

Eastern side of the Sierra Nevada, on the borders of the State (*Anderson, Watson, Lemmon*); thence east to Salt Lake and the southern part of Utah. Involucre sometimes half an inch high, generally smaller.

4. **M. Xanti**, Gray, l. c. Slender, glabrous or slightly woolly when young: stem scape-like and loosely panicled, a foot or more high: leaves mostly radical, runcinate-pinnatifid, thin; the cauline ones small and with almost filiform lobes: heads small: involucre cylindraceous, rather few-flowered: akenes linear-oblong, obtusely 15-ribbed, with 5 ribs moderately stronger, the cup-like apex obtusely 5-toothed: outer pappus of 3 to 5 very slender and partly persistent bristles. — *M. parviflora* (?), Gray, Proc. Am. Acad. v. 163, not of Benth.

Cape San Lucas, Lower California (*Xantus*). It may occur in the southern part of the State.

5. **M. Clevelandi**, Gray. Slender, glabrous: stem rather naked, loosely panicled, a foot or more high, bearing numerous heads: leaves thin, all linear, sparingly laciniate-pinnatifid: involucre campanulate, rather many-flowered; the scales green with brownish or purplish tips: young akenes cylindraceous, equably and lightly striate-nerved: outer pappus of one stout bristle and a crown of many conspicuous thin and white teeth; soft bristles of the inner pappus disposed to fall separately. — Proc. Am. Acad. ined.

Near San Diego, *D. Cleveland*. Also Guadalupe Island, Lower California, *Dr. E. Palmer*. Leaves a line or two wide, even the radical ones seldom over 2 or 3 lines broad, from 1 to 3 inches

long. Involucre barely 4 lines high. The conspicuous many-toothed crown to the akene is here evidently pappus, and of the series to which the stout bristle belongs.

M. FENDLERI, Gray, Pl. Wright., of New Mexico, is known by its rather large heads, and dark-colored cylindrical and equally 15-ribbed akenes, with the cup-like apex entire, and a single persistent bristle; in aspect it resembles *M. Torreyi*.

++ ++ *All the bristles of the pappus deciduous in a ring: the border of the akene naked or merely denticulate.*

6. *M. obtusa*, Benth. A span to a foot or more in height, glabrous, except some woolliness when young: stems loosely paniculately branched, scape-like or few-leaved below: leaves runcinate-pinnatifid, their lobes and teeth obtuse and rounded: heads small: involucre narrow-campanulate (3 or 4 lines long, containing rather numerous or sometimes few flowers): akenes obovate-oblong, obtusely angled by the 5 stronger ribs, the small intermediate ribs either obscure or evident, the slightly narrowed apex with a narrow entire border. — *M. obtusa* & *M. parviflora*, Benth. Pl. Hartw. 321, the latter apparently no more than a slender and small-flowered form.

Open ground, rather common from Monterey to Humboldt Co., and Sierra Valley. In this species the capillary bristles of the receptacle are often manifest, and about twice the length of the akenes, but fragile or deciduous; sometimes only traces of them are to be found.

7. *M. sonchoides*, Torr. & Gray. A span high, diffusely spreading, nearly glabrous, stouter: radical leaves runcinate-pinnatifid with teeth or lobes somewhat spinulose-pointed: heads larger: akenes linear-prismatic, five of the 15 ribs being stronger than the rest; the summit hardly contracted, bearing a crown-like minutely 15-denticulate white border. — *M. obtusa*, Eaton, Bot. King Exp. 202, in part. *Leptoseris sonchoides*, Nutt. in Trans. Am. Phil. Soc. n. ser. vii. 438.

N. W. Nevada, Lemmon, 1875. Utah to Nebraska. The most eastern species; but now detected so near to California that it probably will be found within it.

* * *Perennials or sometimes probably biennials, with a firm or somewhat woody base: no outer pappus of bristles. (Malacomeris & Leucoseris, Nutt.)*

+ *Flowers yellow: plant white-woolly.*

8. *M. incana*, Torr. & Gray. Low, white with cottony wool: leaves mostly crowded on a (biennial?) crown or on short stout stems, pinnatifid: flowering stems scape-like, a few inches high, bearing one or two rather large heads. — *Malacomeris incana*, Nutt. l. c.

San Diego, on an island in the bay. Collected only by Nuttall, whose specimens are imperfect.

+ + *Flowers white (changing to rose-color?): stems leafy, paniculately branched, a foot or two high, apparently from a perennial root.*

9. *M. saxatilis*, Torr. & Gray. Minutely and lightly tomentose, or nearly glabrous: leaves lanceolate or the lower somewhat spatulate, or those of the branches linear, entire, lacinate-toothed, or sparingly pinnatifid: involucre campanulate or hemispherical, about half an inch high; the short calyculate scales numerous and passing into loose subulate bracts: akenes linear-oblong, 10-ribbed, crowned with an obvious 10-denticulate border. — Gray, l. c. *M. saxatilis* & *M. commutata*, Torr. & Gray. *Leucoseris saxatilis* & *L. Californica*, Nutt. l. c. *Hieracium? Californicum*, DC. *Senecio flocciferus*, DC.

On the coast at Santa Barbara and southward. Seems to pass into the next, unless the akenes furnish a character.

10. *M. tenuifolia*, Torr. & Gray. Glabrous or nearly so, with slender paniculate peduncles: leaves narrowly linear or the upper filiform, mostly pinnately parted into few divisions: akenes obovate and with an obscure nearly entire border. — *Leucoseris tenuifolia*, Nutt. l. c.?