

We have derived the specific epithet, "sonorae," from the Sonoran Desert in which the range of this taxon lies.

Malacothrix stebbinsii sp. nov. (fig. 1, 2e). Herba annua; foliis ad radices lanceolatis vel oblanceolatis, dentatis, raro pinnatifidis; capitulis campanulatis, 7–10 mm. longis, 3.5–8 mm. latis, floribus 19–70; corollis flavis, raro albis; achaeniis fusiformo-columnaris, 1.7–2.3 mm. longis, ad basim subattenuatis, raro flexuosis, nunc cinereo-fuscis nunc stramineis, subtiliter aequaliterque 15-costatis, in sectione transversa rotundis, parte superiore subdilata, achaenii parte superiore ad 0.14–0.20 mm. non costata, ab annulo setarum 14–17 scabriusarum circumdata; setis perstatis 1, per occasionem 2.

Annual herb 6–60 cm. tall, usually unbranched at the base but occasionally with up to 9 stems; basal leaves lanceolate to oblanceolate, dentate, more rarely pinnatifid, the rachis often narrowed near the base; heads campanulate, 5–66 (median, 20), 7–10 mm. high, 3.5–8 mm. broad, 19–70-flowered; ligules yellow, rarely white; pollen grains 24–36 μ in diameter (mean=30 μ); achenes narrowly fusiform-columnar, tapering slightly to the base, 1.7–2.3 mm. long, 0.3–0.45 mm. wide, rarely curved, grey-brown to straw-colored, finely 15-ribbed, all the ribs equal, the achene round in transverse section, the apex slightly flared, the upper 0.14–0.20 mm. of the achene not ribbed, bordered by a ring of 14–17 white-scarious teeth, of which the basal portions rarely extend above the achene lip, the teeth rarely and irregularly cleft, straight, lance-linear; the persistent setae 1, rarely 2.

Type. Abundant in shade of a large rock, moist soil, Mendoza Canyon, Coyote Mountains, Pima County, Arizona, altitude 3,800 feet, 22 April 1945, *K. F. Parker 5815* (ARIZ 32,709; isotype, UC).

Representative specimens. NEVADA. Washoe County: hills west of Reno, *Hillman* in 1893. Clark County: Nelson, *Jones* in 1907. CALIFORNIA. Inyo County: Titus Canyon, *Eastwood & Howell 7786*; 4 miles east of Aberdeen, *Kerr 630*; 2 miles east of Bradbury Wells, *Howell* in 1928; Slate Range, *Alexander & Kellogg 1135*. San Bernardino County: Turtle Mountains, *Munz & Harwood 3505*; Quail Springs, Little San Bernardino Mountains, *Munz & Johnson 5227*; south base of Old Dad-Granite Mountain Range, *Wolf 10092*; Kingston Mountains, *Wolf 10456*. Riverside County: Murray Canyon, *Peirson 2715*; 12 miles southwest of Twentynine Palms, *Alexander & Kellogg 2129*. San Diego County, Palm Canyon, Borrego Valley, *Wolf 8451*; San Felipe Hill, *Jones* in 1906. ARIZONA. Mohave County: Yucca, *Jones* in 1884; Chemehuevis, *Jones* in 1903; Diamond Creek Canyon, *Wilson* in 1893. Yavapai County: Burro Creek, *Crooks & Darrow* in 1938; Skull Valley, *Jones* in 1903. Gila County: Pine Creek, near Roosevelt, *Peebles et al. 5227*; Mazatzal Mountains, *Eastwood* in 1929, *17163*. Pinal County: near Oracle, *Peebles 6844*; between Superior and Miami, *A. & R. A. Nelson 1900*; Galuro Mountains, 12 miles above Mammoth, *Gentry 6051*. Pima County: Baboquivari Peak, *Goodding 4649*; Florita Canyon, *Knipe* in 1938; Oracle Camp, Santa Catalina Mountains, *Simon 224*; Sabino Canyon, Santa Catalina Mountains, *Thornber* in 1905, in 1913. Santa Cruz County: Stone Cabin Canyon, Santa Rita Mountains, *Thornber 5543*. SONORA, MEXICO. 4 miles south of Imuris, *Abrams 13202*.

Pollen of this species is consistently larger than in *M. clevelandii* and *M. sonorae*, both of which are diploids, and, like that of the tetraploid

M. similis, is mostly tetra-aperturate. We believe that the count reported by Stebbins *et al* (*op. cit.*) of $2n=28$ for "*Malacothrix clevelandii*" from Tucson, Arizona (for which we can find no voucher) probably refers to *M. stebbinsii*. From a consideration of morphology we believe that *M. stebbinsii* may be an allotetraploid between *M. clevelandii* and *M. sonora*. Stebbins and his associates postulated that it might be an allotetraploid between *M. clevelandii* and *M. fendleri*, but they were not aware of the probably diploid *M. sonora*. As we have mentioned above, *M. sonora* is nearly intermediate between *M. clevelandii* and *M. fendleri*, both morphologically and geographically.

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DOCUMENTED CHROMOSOME NUMBERS OF PLANTS
(See Madroño 9:257-258. 1948)

SPECIES	NUMBER	COUNTED BY	COLLECTION	LOCALITY
PORTULACACEAE				
<i>Montia</i> <i>*perfoliata</i> (Willd.) Howell	n = 6	P. Raven LA ¹	<i>H. & M. Lewis</i> in 1956, LA	Mather, Tuolumne County, California
	n = 12	H. Lewis LA	<i>H. Lewis</i> in 1955 LA	Mather, Tuolumne County, California
	n = 18	P. Raven LA	<i>H. Lewis</i> in 1956 LA	La Panza Range, San Luis Obispo County
	n = 18	P. Raven LA	<i>H. Lewis</i> in 1956 LA	San Juan Canyon, San Luis Obispo County, California
	n = 18	P. Raven LA	<i>H. Lewis</i> in 1956 LA	Temblor Grade, Kern County, Calif.
<i>sibirica</i> (L.) Howell	n = 12	W. H. Lewis ASTC	<i>W. H. Lewis</i> 5367 SMU	Near Sechelt, British Columbia, Canada
RANUNCULACEAE				
<i>Delphinium</i> <i>virescens</i> Nutt.	n = 8	R. C. Jackson KANU	<i>McGregor</i> 14282 KANU	Douglas County, Kansas
<i>Trautvetteria</i> <i>grandis</i> Nutt.	n = 8	R. Ornduff DUKE	<i>Ornduff</i> 6262 UC	Multorpor Moun- tain, Clackamas County, Oregon
MAGNOLIACEAE				
<i>Michelia</i> <i>*fuscata</i> Blume	n = 19	P. Raven LA	<i>Raven</i> 14026 UC	Cultivated, Los Angeles, Calif.
SAXIFRAGACEAE				
<i>Bolandra</i> <i>oregana</i> S. Wats.	n = 7	R. Ornduff DUKE	<i>Ornduff</i> 6240 UC	Elowah Falls, McCord Creek, Multnomah County, Oregon

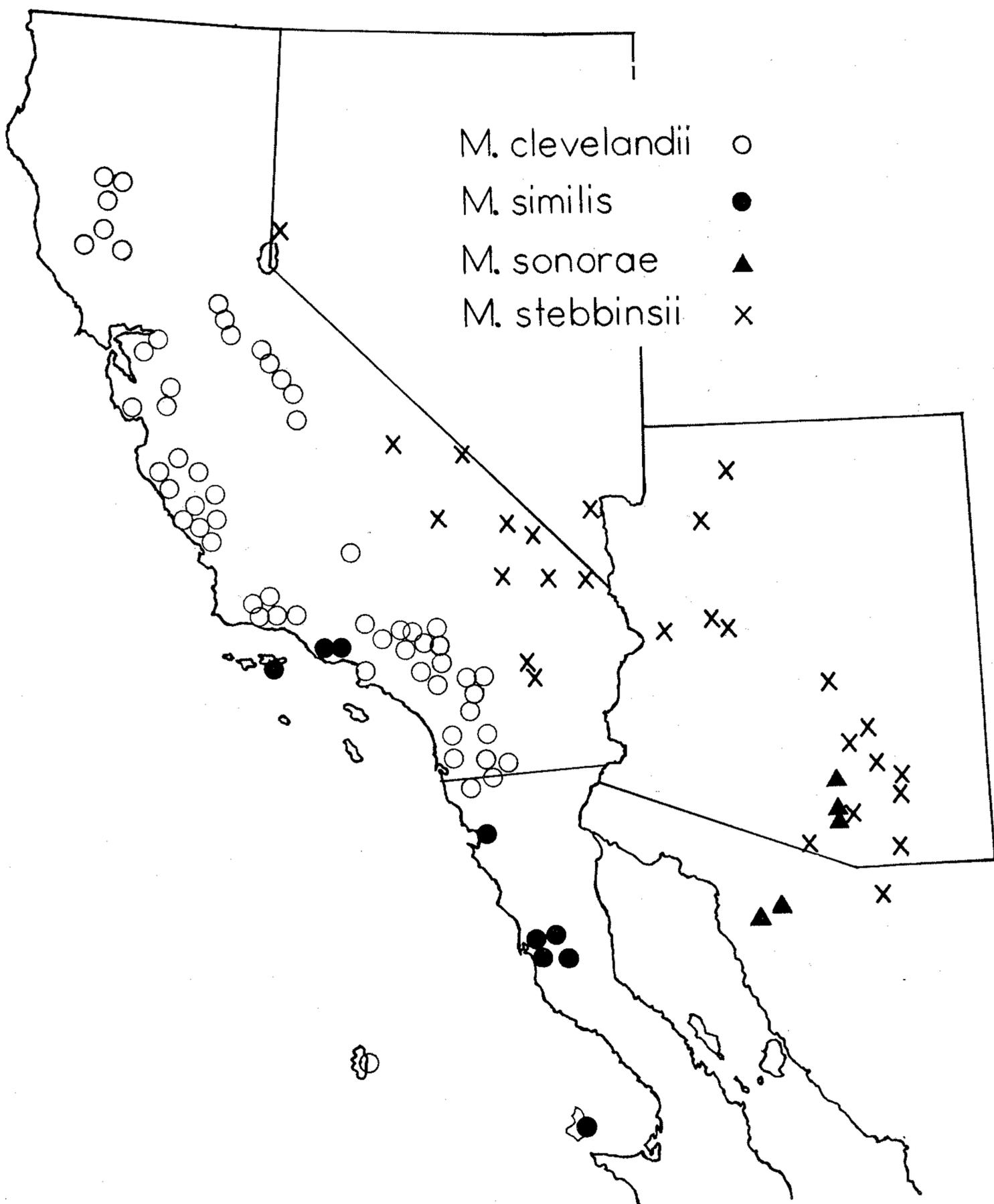


FIG. 1. Distribution of *Malacothrix clevelandii* and allied species in the southwestern United States and northwestern Mexico.

Drytown, *Hansen 401*. BAJA CALIFORNIA, MEXICO. Guadalupe Island, *Palmer 51*; 13 miles southeast of Tecate, *Munz 9520*.

As shown by the specimens cited above and by figure 1, this species occurs on the coastward slopes of the mountains of California and northernmost Baja California. Its occurrence on Guadalupe Island should be confirmed by additional material and by determination of chromosome number. In addition to the report of Stebbins *et al.* of a chromosome number of $2n=14$ from the Sharsmith collection cited above from Santa Clara County, we have obtained this number in a collection from the Santa Monica Mountains, Los Angeles County, California (*Raven &*

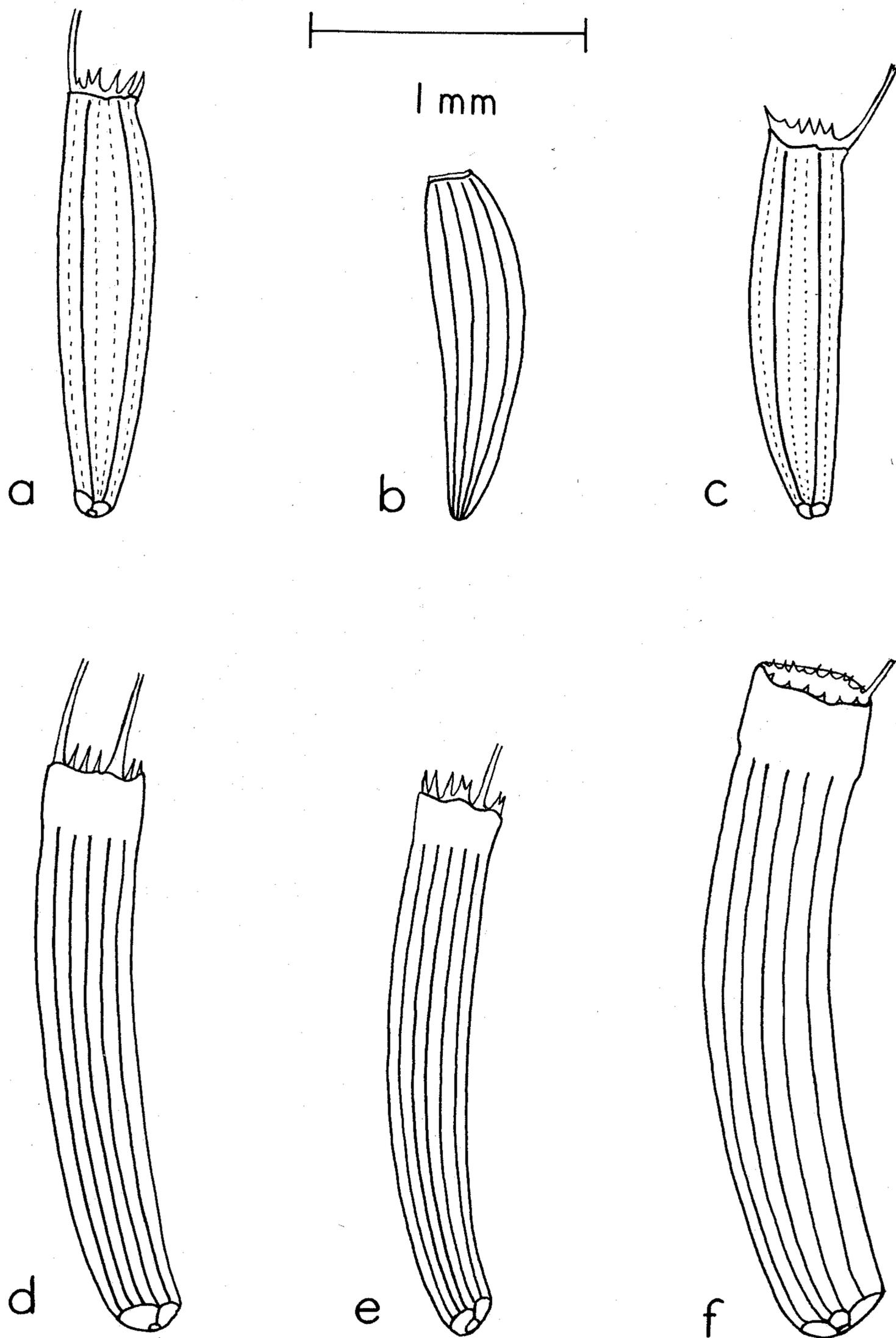


FIG. 2. Mature achenes of species of *Malacothrix*: a. *M. clevelandii*; b. *M. foliosa*; c. *M. similis*; d. *M. sonorae*; e. *M. stebbinsii*; f. *M. fendleri*.

other California station, are much to be desired. In both cases the pollen measurements are consistent with the range of size expected for the tetraploid. We suggest that an understanding of relationships in the complex