

**Draft key to the *Malacothamnus* (Malvaceae) of
Monterey and San Luis Obispo Counties, CA
by Keir Morse
Updated Dec. 24, 2019**

Comments, corrections, and questions welcome at kmorse@rsabg.org

1. Infl capitate to subcapitate - 2

1'. Infl spike-like to panicle-like - 4

2. Many rays of stellate trichomes on stem 1-3mm; many simple glandular trichomes 0.3-1.4 mm, generally distinct at 20x magnification, occasionally sparse and difficult to detect; leaves often rancid smelling; surface of stem and calyx lobes generally easily visible through trichomes to the naked eye - *M. palmeri* var. *lucianus*

2'. Most rays of stellate trichomes on stem <1mm; glandular trichomes ≤ 0.1 mm, often only apparent as a resinous dot, much smaller than and often obscured by adjacent stellate trichomes; surface of stem and calyx lobes often hidden by dense trichomes - 3

3. Adaxial leaf surface densely stellate hairy in mature leaves, centers of stellate trichomes average ≤ 0.25 mm apart, rays of adjacent trichomes generally overlapping across entire leaf surface; inflorescence with stipular bracts linear to lanceolate and unlobed, widest stipular bracts $\leq 6.5(9)$ mm wide - *M. palmeri* var. *palmeri*

3'. Adaxial leaf surface glabrous to sparsely stellate hairy in mature leaves, if more densely hairy, centers of stellate trichomes average ≥ 0.5 mm apart, rays of adjacent trichomes not overlapping across entire leaf surface; inflorescence generally with lobed stipular bracts that are about as wide as long, widest stipular bracts $\geq 7(5)$ mm wide measured below lobes - *M. palmeri* var. *involucratus*

4. Calyx bracts ≥ 1 mm wide - 5

4' Calyx bracts < 1mm wide - 7

5. Calyx lobes subcordate, much wider above base - *M. aboriginum*

5' Calyx lobes triangular, generally widest at base - 6

6. Adaxial leaf surface densely stellate hairy - *M. abbottii*

6'. Adaxial leaf surface glabrous to sparsely stellate hairy in mature leaves (see 3') - *M. palmeri* var. *involucratus*

7. Mature leaves \pm green on both surfaces, \pm thinly white to yellowish stellate, more densely so abaxially; leaf base generally cordate - 8

7'. Mature leaves pale green, blueish, or grayish; densely white stellate hairy on both surfaces; If leaf base cordate, rays of stellate hairs too short to be distinguished by the naked eye - 9

8. Calyx bracts usually no more than 1/3 length of calyx; many stellate trichomes clearly stalked - *M. davidsonii*

8'. Calyx bracts usually \pm 1/2 length of calyx (if calyx bracts 1/3 length of calyx or shorter, then few stellate trichomes clearly stalked) - *M. orbiculatus*

9. Leaves usually clearly lobed; calyx bracts generally green - *M. fasciculatus* var. *nuttallii*

9'. Leaves not lobed to obscurely lobed; calyx bracts generally \pm red-brown to black in age - 10 (*M. jonesii* s.l.)

10. Calyx appearing fluffy due to relatively long calyx hairs; infl generally panicle-like - *M. niveus*

10'. Calyx not appearing fluffy, calyx hairs relatively short; infl spike or panicle-like - 11

11. Infl spike-like - *M. jonesii* s.s.

11' Infl panicle-like - *M. gracilis*

Notes:

- See Calphotos for images of each species
- Calyx bracts are a whorl of three bracts beneath each calyx.
- Stipular bracts are modified stipules between the calyx bracts and leaves.
- This key has only been thoroughly tested for the *M. palmeri* varieties and only with dry specimens.
- I'm a little dubious about couple 7, but it is a start. Check Calphotos to verify. They just look different.
- *M. jonesii* s.l. (*M. jonesii* s.s., *M. niveus*, and *M. gracilis*) aren't always clear. This group still needs a lot of work.

M. abbottii

- Only known to naturally occur in Monterey County, but a CalTrans planting exists along Hwy 166 in SLO County

M. aboriginum

- Not known south of Monterey County

M. davidsonii

- Occurs in both Monterey and SLO Counties

M. fasciculatus var. *nuttallii*

- Outside of cultivation, only known in SLO County from a single location just north of Santa Maria. Common in Santa Barbara County.

M. gracilis

- Only known from SLO County
- Possible intermediates with *M. jonesii* and *M. niveus*

M. jonesii s.s.

- Occurs in both Monterey and SLO Counties
- Possible intermediates with *M. gracilis* and *M. niveus*

M. niveus

- Occurs in both Monterey and SLO Counties
- Possible intermediates with *M. jonesii* and *M. gracilis*

M. orbiculatus

- Only known in SLO county from near the south and east boundaries

M. palmeri var. *involucratus*

- Occurs in Monterey County. One collection in SLO County from Cuesta Pass is clearly var. *involucratus*, but the location information is questionable.

M. palmeri var. *lucianus*

- Occurs only in Monterey County

M. palmeri var. *palmeri*

- Occurs only in San Luis Obispo County