

Draft key to the *Malacothamnus* (Malvaceae) of the San Francisco Bay Area
Including: Alameda, Contra Costa, Merced, San Joaquin, San Mateo,
Santa Clara, Santa Cruz, and Stanislaus Counties, CA
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Comments, corrections, and questions welcome at kmorse@rsabg.org

This key is based on dry specimen measurements. Estimated measurements for fresh material is included in [square brackets].

1. Corollas drying partially to fully open; calyx lobes ≥ 6 [7] mm long.*M. fremontii*
1' Corollas drying closed; calyx lobes < 6 [7] mm long.....**2**
2. Leaf blades generally moderately 3–7 lobed with lobes acute, rarely obscurely or round lobed;
stellate trichome rays on leaf blades mostly ≤ 0.2 mm; commonly planted.
..... *M. fasciculatus* var. *nuttallii*
- 2' Leaf blades unlobed or obscurely (rarely moderately) 3–5 lobed with lobes rounded to
approaching acute; stellate trichome rays on leaf blades mostly ≥ 0.2 mm; native to this
region.**3**
3. Calyx bract length ≥ 3 [3.5] mm and $\geq 1/2$ of calyx length; rays of stellate trichomes on stem
often distinct without magnification, longest stem hair rays generally > 0.5 mm.*M. arcuatus*
- 3' Calyx bract length ≤ 3.5 [4] mm and $\leq 1/2$ of calyx length; rays of stellate trichomes on stem
generally not distinct without magnification, longest stem hair rays generally ≤ 0.5 mm.
..... *M. hallii*

Notes:

- The flower drying character is how they dry on the plant after flowering. See figure below.
- Calyx bracts are a whorl of three bracts beneath each calyx. See figure below.
- Stellate trichomes are nonglandular and branched from a central point. Each branch is called a ray. When stalked, the stalk is called a stipe.
- Stem trichomes are best measured from the internode just below the inflorescence.
- Suspected hybrids of *M. hallii* and *M. fremontii* may key to *M. arcuatus*, but often have flowers drying partially open and are mostly known from Contra Costa County where *M. arcuatus* is not known to occur
- Plants where the ranges of *M. arcuatus* and *M. hallii* come together may be intermediate
- See photos of all taxa on Calphotos website:
<https://calphotos.berkeley.edu/flora/sci-M.html>



Fig_corolla. Corolla phenological stages of *Malacothamnus fremontii* var. *fremontii* (A-F) and *Malacothamnus jonesii* var. *jonesii* (G-I). A) Flowers in bud. B) Fresh flower fully open. C) Flower drying fully open. D) Flower dried fully open. E-F) Flower dried partially open. G) Flower bud (left), flower drying closed (middle), flower just before or after opening (right). H-I) Flowers dried closed.



Fig_calyx_and_calyx_bracts. Some calyx and calyx bract variation. Arrows point to calyx bracts.