

Changed from California Rare Plant Rank 4.3 to 3.3 in the CNPS Inventory on December 15, 2014

**Rare Plant Status Review: *Malacothamnus helleri*
Proposal to Change from California Rare Plant Rank 4.3 to 3.3,
G3Q / S3.3 to G3Q / S3**

Danny Slakey (CNPS), Aaron E. Sims (CNPS), and Roxanne Bittman (CNDDB)
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Background

Malacothamnus helleri is a shrub in the Malvaceae that has been included in the CNPS Inventory since 1974, and is currently included on California Rare Plant Rank (CRPR) 4.3. It was not formally recognized in *The Jepson Manual* (Bates 1993), but the author noted, under *M. fremontii*, that plants with small calyces from the North Coast Ranges are the *M. helleri* form. It was also treated as a synonym of *M. fremontii* in *The Jepson Manual, Second Edition* (Slotta 2012). The *Flora of North America* treatment of Malvaceae is not yet available. The plant was originally described as *Malvastrum helleri* by Eastwood (1936), was moved to *Malvastrum fremontii* var. *helleri* by McMinn (1939), and changed again to *Malacothamnus helleri* by Kearney (1951). Another taxon, *Sphaeralcea fremontii* var. *exfibulosa*, was described by Jepson (1936) later in the same year of Eastwood's publication, and has been synonymized with *M. helleri* by Kearney (1951). Bates (1963) performed the next major revision of the genus, but we were unfortunately unable to obtain a copy of his dissertation. Slotta (2004) recently performed another major revision of the genus, using both morphological and genetic data. However, *M. helleri* was not included in the genetic analyses. Slotta examined nine specimens of *M. helleri* for the morphological study, assessing 20 different morphological (both vegetative and reproductive) features. In multivariate analyses of the morphological data, Slotta (2004) noted that the majority of data points for a group comprised of *M. fremontii*, *M. hallii*, *M. helleri*, and *M. howellii* clustered closely together. Based on this analysis, Slotta (2004) kept *M. helleri* as a synonym of *M. fremontii*, but did not elaborate any further on the synonymy. Contrary to Slotta's (2004, 2012) treatments, J. Ruygt (pers. comm. 2014) intends to recognize the plant under the name *Malacothamnus fremontii* var. *helleri* in the *Flora of Napa County*. Both J. Ruygt and D. Gowen (pers. comms. 2014) are familiar with *M. helleri* from the North Coast Ranges and *M. fremontii* from the San Francisco Bay Area, and note a fairly clear distinction between the two, with some degree of intergradation. Additionally, *M. helleri* occurs north of most *M. fremontii* collections, providing some degree of geographic separation (Jepson Flora Project 2014). *Malacothamnus helleri* has been separated from *M. fremontii* using a suite of characters, which are well-summarized in Munz's (1959) key break: *M. helleri* has shorter stem hairs, truncate to subcuneate (vs. cordate) leaf bases, crenate-dentate (vs. coarsely crenate) leaf margins, and shorter bractlets subtending the calyx.

There are currently about 12 known occurrences of *Malacothamnus helleri* from Colusa, Lake, Napa and Yolo Counties. Munz (1959) treated *M. helleri* as ranging from Tehama to Yolo Counties, but we were unable to find *M. helleri* specimens from Glenn and

Tehama Counties. Due to a long history of synonymy with *M. fremontii*, some *M. helleri* specimens may be found under the name *M. fremontii*. The Consortium of California Herbaria (CCH 2014) currently includes 9 specimens of *M. fremontii* from within the range of *M. helleri*, including four specimens from Tehama County, so some of those could represent additional occurrences of *M. helleri*.

Based on the available information, CNPS and CNDDDB recommend changing *Malacothamnus helleri* from CRPR 4.3 to 3.3. Although the plants may be best described as a variety of *M. fremontii*, the combination *Malacothamnus fremontii* var. *helleri* has not yet been published, so we will not change its name in the CNPS Inventory at this time. While the low number of known occurrences of *M. helleri* indicate it may need to change to CRPR 1B, a long history of synonymy could mean that it's been under-documented, making it possible to be as common as other CRPR 4 taxa. The lack of records from Glenn and Tehama Counties adds another source of confusion, and until more information becomes available regarding its taxonomic distinctiveness, distribution, and rarity, we feel that a change to CRPR 3.3 is most appropriate at this time.

Recommended Actions

CNPS: Change *Malacothamnus helleri* from CRPR 4.3 to 3.3

CNDDDB: Change *Malacothamnus helleri* from G3Q / S3.3 to G3Q / S3

Current CNPS Inventory Record

Malacothamnus helleri (Eastw.) Kearn.

Heller's bush mallow

Malvaceae

CRPR 4.3

Colusa, Glenn, Lake, Napa, Tehama, Yolo

Knoxville (532D) 38122G3

Chaparral (sandstone); elevation 305-635 meters.

Perennial deciduous shrub. Blooms June to August.

A synonym of *M. fremontii* in *The Jepson Manual*.

Available online at <http://www.rareplants.cnps.org/detail/1066.html>

Revised CNPS Inventory Record

Malacothamnus helleri (Eastw.) Kearn.

Heller's bush mallow

Malvaceae

CRPR 3.3

Colusa, Glenn?, Lake, Napa, Tehama?, Yolo

Winters (514C) 3812158, Esparto (515A) 3812261, Brooks (515B) 3812262, Lake

Berryessa (515C) 3812252, Rumsey (531B) 3812282, Guinda (531C) 3812271, Wilson

Valley (532B) 3812284, Knoxville (532D) 3812273, Lower Lake (533A) 3812285, Wilbur

Springs (547C) 3912214, Benmore Canyon (548D) 3912215, Lodoga (563C)

Chaparral (sandstone), riparian woodland (gravel); elevation 305-635 meters.

Perennial deciduous shrub. Blooms May to July.
Previously CRPR 4.3; move to CRPR 1B? Location, rarity, and taxonomic information needed. A synonym of *M. fremontii* in *TJM* (1993) and *TJM* 2. See *Leaflets of Western Botany* 1(18):217-218 (1936) for original description, and 6(6):124-125 (1951) for taxonomic treatment.

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