

Rare Plant Status Review:

Arenaria macradenia* var. *kuschei

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Arenaria macradenia var. *kuschei* is an endemic, perennial herb in the Caryophyllaceae. It is currently included on CNPS List 1B.1, and is ranked by NatureServe as a G5T1, S1 taxon. *A. macradenia* var. *kuschei* grows on granitic substrate in openings within chaparral habitat from approximately 1220-1700 meters in elevation. CNDDDB currently track 5 occurrences of *A. macradenia* var. *kuschei* in the Liebre Mountains of Los Angeles County. Threats to *A. macradenia* var. *kuschei* include land management, development, mining, road maintenance, and vehicles.

New taxonomic treatments put *Arenaria* (including *A. macradenia*) of the section *Eremogone* into the genus *Eremogone*.

Additionally, *A. macradenia* var. *kuschei* is treated as a synonym of *A. macradenia* var. *arcuifolia* in *The Flora of North America* (Vol. 5) and *The Jepson Manual* (2nd Edition), treatment available online at:

<http://ucjeps.berkeley.edu/tjm2/review/treatments/caryophyllaceae.html>

According to Ronald Hartman and Richard Rabeler in the *Flora of North America* (Vol. 5)

“The collection from “Forest Camp” described as *Arenaria macradenia* var. *kuschei* differs from var. *arcuifolia* in having densely stipitate-glandular pedicels and sepals; it does not deserve taxonomic recognition. Recently, populations of plants matching var. *kuschei* were discovered in the Liebre Mountains, northwestern Los Angeles County (T. S. Ross and S. Boyd 1996b). Four of the seven populations were mixed, some individuals having the stipitate-glandular pubescence of var. *kuschei*, and others, the glabrous inflorescences of var. *arcuifolia*. Furthermore, there was an east-to-west trend along the summit of Liebre Mountain from populations with a low frequency of glandular individuals to populations that were strictly glandular (Boyd, pers. comm.).”

Considering this evidence, a discussion about how *A. macradenia* var. *kuschei* should be treated in the CNPS Inventory seems warranted. Three potential options include:

1. Continue to include *A. macradenia* var. *kuschei* on CNPS List 1B.1, but change its name to *Eremogone macradenia* var. *kuschei* (Eastwood) R.L. Hartman & Rabeler. If this is the preferred option, only a name change would be required in the CNPS Inventory and CNDDDB databases.

2. Adopt the new taxonomic treatment, which places *A. macradenia* var. *kuschei* into synonymy with the more common *E. macradenia* var. *arcuifolia*. *E. macradenia* var. *arcuifolia* has not yet been considered for inclusion in the CNPS Inventory. A preliminary analysis of herbarium specimens identified as *E. macradenia* var. *kuschei* combined with specimens identified as *E. macradenia* var. *arcuifolia* indicates that there are at least 54 occurrences (please see the attached locality spreadsheet) of *E. macradenia* var. *arcuifolia*. Additionally, there are dozens of specimens of *E. macradenia* within the range of *E. macradenia* var. *arcuifolia* not currently annotated to variety. Examination of these specimens may add more occurrences of *E. macradenia* var. *arcuifolia*. Consequently, it appears that *E. macradenia* var. *arcuifolia* is probably too common for CNPS List 1B, but it may be a candidate for List 4. *E. macradenia* var. *arcuifolia* occurs in a relatively restricted geographic area within Kern, Los Angeles, and San Bernardino counties. Many of the known occurrences of this taxon are likely threatened by ongoing urban development. If reviewers decide to adopt the current taxonomic treatments, and they determine that *E. macradenia* var. *arcuifolia* (including previous occurrences of *E. macradenia* var. *kuschei*) should be considered for addition to the CNPS Inventory, we will draft a status review proposing its addition to List 4 (or possibly List 1B) of the Inventory. If reviewers decide upon this option, *A. macradenia* var. *kuschei* will be deleted from the CNPS Inventory (it will be placed on the Considered but Rejected (CBR) list, and will be listed as a synonym of *E. macradenia* var. *arcuifolia* if it is added to the Inventory) and the CNDDDB.

3. Adopt the new taxonomic treatment (with *A. macradenia* var. *kuschei* treated as a synonym of *E. macradenia* var. *arcuifolia*), and decide that *E. macradenia* var. *arcuifolia* is too common to be considered for addition to the CNPS Inventory. This will result in the deletion of *A. macradenia* var. *kuschei* from the CNPS Inventory (it will be placed on the CBR list) and the CNDDDB. *E. macradenia* var. *arcuifolia* will not be considered for addition to the CNPS Inventory.

Please submit your comments on how CNPS should deal with the current taxonomic treatment of *A. macradenia* var. *kuschei*. In summary, the three options include:

1. Retain *A. macradenia* var. *kuschei* on CNPS List 1B.1, but change its name to *E. macradenia* var. *kuschei*. No change in conservation status is required.
2. Adopt the new taxonomic treatment (with *A. macradenia* var. *kuschei* treated as a synonym of *E. macradenia* var. *arcuifolia*), but consider *E. macradenia* var. *kuschei* for addition to the CNPS Inventory (*A. macradenia* var. *kuschei* will be deleted from the CNPS Inventory and a new status review proposing the addition of *E. macradenia* var. *arcuifolia* to the CNPS Inventory will be drafted).

3. Accept the new taxonomic treatment (with *A. macradenia* var. *kuschei* treated as a synonym of *E. macradenia* var. *arcuifolia*), delete *A. macradenia* var. *kuschei* from the CNPS Inventory (it will be placed on the CBR list), and, considering it too common, fail to consider *E. macradenia* var. *arcuifolia* for addition to the CNPS Inventory.

Current CNPS Inventory Record

Arenaria macradenia Wats. ssp. *kuschei* (Eastw.) Maguire

Kusche's sandwort

Caryophyllaceae

List 1B.1

Los Angeles (LAX)

Burnt Peak (163A) 3411865, Liebre Mountain (163B) 3411866

Chaparral (Chprl)(openings, granitic). 1220 - 1700 meters

Perennial herb. Blooms Jun-Jul

Known from approximately five occurrences. Threatened by land management development, activities, mining, road maintenance, and vehicles. See *Proceedings of the California Academy of Sciences* IV 20:140 (1931) for original description, and *Crossosoma* 22(2):65-71 (1996) for information on rediscovery.