

**Rare Plant Status Review: *Monardella australis* subsp. *gabrielensis*
Proposed Addition to California Rare Plant Rank 4.3, G4T3 / S3**

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Changes to the original document are in blue text.

This status review is being expedited through an agreement between the California Native Plant Society and the Center for Plant Conservation (CPC), with contributions from the state of California, CPC, and the California Plant Rescue initiative. Aside from being advanced as part of this agreement, the process, content, and information provided herein is not altered, modified, or developed differently in any way or form compared to other status reviews developed by CNPS.

Background and Taxonomy

Monardella australis Abrams subsp. *gabrielensis* Elvin & A.C. Sanders is a subshrub in Lamiaceae endemic to the San Gabriel Mountains (Los Angeles County). It was only recently described (Elvin et al. 2015) and is not yet treated in the *Jepson eFlora* (Sanders et al. 2012). The treatment of Lamiaceae in the *Flora of North America* is still unpublished.

Plants previously treated as *Monardella australis* (Jokerst 1993) are currently separated into five subspecies that intergrade with each other in some cases: *M. australis* subsp. *australis* (San Jacinto and San Bernardino mtns.), *M. australis* subsp. *cinerea* (San Gabriel Mtns., CRPR 4.3, G4T3 / S3), *M. australis* subsp. *gabrielensis*, *M. australis* subsp. *jokerstii* (San Gabriel Mtns., CRPR 1B.1, G4T1? / S1?), and *M. australis* subsp. *occidentalis* (mtns. of Ventura and Santa Barbara cos., CRPR 1B.1, G4T1 / S1) (Elvin et al. 2015; Sims et al. 2011, 2020; CNPS 2022). The subsp. *gabrielensis* is reportedly most similar to subsp. *australis* but differs in having green to stramineous bracts (vs. purple or rose-tinged) that are shorter (mostly 6.5–9 vs. 12–18 mm) and narrower (2–4.5 vs. 4–8 mm), shorter calyces (7–8 vs. 8.5–10 mm), and in lacking non-glandular calyx trichomes (Elvin et al. 2015). For information on the distinctions between subsp. *gabrielensis* and the other two subspecies occurring in the San Gabriel Mtns., see Elvin et al. (2015). In the eastern San Gabriel Mountains (from Mt. Williamson eastward) there is also a “zone of introgression” between subspecies *gabrielensis* and *australis* (Elvin et al. 2014; M. Elvin 2022, personal communication). In addition, subsp. *gabrielensis* is reported to form intermediates with subsp. *cinerea* and with *M. linoides* subsp. *erecta* (Elvin et al. 2015).

Ecology

Monardella australis subsp. *gabrielensis* inhabits openings in montane coniferous forest, montane coniferous woodland, and canyon live oak woodland that sometimes has a montane chaparral understory. It most commonly occurs in either colluvium of decomposed granite/grandiorite soils or granitic outcrops at 1600–2200 m in elevation. Associated dominants include *Calocedrus decurrens*, *Pinus jeffreyi*, *P. lambertiana*, and *Quercus chrysolepis*. Other commonly associated species include *Bromus tectorum*, *Poa secunda*, *Ericameria nauseosa*, *Eriophyllum confertiflorum*, *Hulsea vestita* subsp. *gabrielensis*, *Gayophytum diffusum*, *Cordylanthus nevini*, *Eriogonum nudum*, *E. umbellatum*, and *Galium jepsonii*. The blooming period is from mid-July to mid-September (Elvin et al. 2015). The flowers are two-lipped and may be pollinated by bees, butterflies or Acroceridae flies (Moldenke 1976, Westerkamp and Claßen-Bockhoff 2007, Akiba et al. 2018).

Distribution and Abundance

There are 16 known occurrences of *Monardella australis* subsp. *gabrielensis*, all in the north-central San Gabriel Mountains (Los Angeles County). Four of the occurrences are recent (discovered or revisited within the last 20 years), and twelve are historical. All of the known occurrences are on the Angeles National Forest, and four are in designated Wilderness areas (including three in the Pleasant View Ridge Wilderness and one in the San Gabriel Wilderness) (Elvin et al. 2015, CCH2 2021; M. Elvin 2022, personal communication). The extent of occurrence (EOO) and area of occupancy (AOO) were previously estimated as 149 km² and 8 km², respectively (Elvin et al. 2015). Using GeoCAT (Bachman et al. 2011) and a 4 km² grid cell size, we have re-estimated the EOO as 183 km² and the AOO as 60 km².

Data on population size and trends over time are almost completely lacking for *M. australis* subsp. *gabrielensis*. About 400 plants were seen at Pacifico Mtn. (type locality) in Sept. 2011; a few other, anecdotal observations by collectors suggest that the plants may be locally common or abundant (Elvin et al. 2015, CCH2 2021). Field work is needed to rediscover historical occurrences, gather population data, assess site quality and threats, and search for additional occurrences. It seems likely that additional occurrences will be found, given the unspecialized habitat of subsp. *gabrielensis* and the fact that it is not yet included in the *Jepson eFlora* or other floristic works. Identification may be difficult since there is not yet a published key to the currently recognized subspecies of *M. australis*. Also, some local populations or individuals may not be clearly identifiable due to introgression (see Background and Taxonomy).

Status and Threats

Monardella australis subsp. *gabrielensis* is a recently described taxon that was provisionally assessed as Critically Endangered using IUCN criteria (Elvin et al. 2015). Threats to this subspecies are undocumented, and it may receive some protection due to its restriction to National Forest land or designated Wilderness. However, it has a limited range and few known occurrences. Fire effects need study.

Summary

Based on the available information, CNPS and CNDDDB [originally recommended](#) adding *Monardella australis* subsp. *gabrielensis* to California Rare Plant Rank 4.3 of the CNPS Inventory. The rank of 4.3 [was](#) recommended based on the lack of any known or potential threats and the need for further research into hybridization and introgression between subsp. *gabrielensis* and the two subspecies *australis* and *cinerea*, as well as with *M. linoides* subsp. *erecta*. [However, during the review process, the consensus was to add this taxon to CRPR 1B.2.](#) If knowledge on the distribution, threats, and rarity status of this taxon changes in the future, we will re-evaluate its status at that time.

Recommended Actions

CNPS: Add *Monardella australis* subsp. *gabrielensis* to CRPR [1B.2](#)

CNDDDB: Add *Monardella australis* subsp. *gabrielensis* to G4 T3 / S3

Draft CNPS Inventory Record

Monardella australis Abrams ssp. *gabrielensis* Elvin & A.C.Sanders
San Gabriel Mountains monardella
Lamiaceae

USDA Symbol: None.

Synonym(s)/Other Name(s): None.

CRPR [1B.2](#)

Counties: Los Angeles

Quad name (code): Acton (3411842), Chilao Flat (3411831), Condor Peak (3411832), Crystal Lake (3411737), Juniper Hills (3411748), Pacifico Mountain (3411841), Waterman Mtn. (3411738)

Habitats: lower montane coniferous forest, broadleaved upland forest, chaparral (montane)

Micro-habitats: granitic, openings, outcrops

Elevation: 1600-2200 meters (5200-7200 feet)

Life form: subshrub

Blooms: July to September

Threats: None

Taxonomy: Intergrades with *M. australis* ssp. *australis* and *cinerea* and *M. linoidea* ssp. *erecta*.

Most similar to *M. australis* ssp. *australis*; differs in having green to stramineous bracts (vs. purple or rose-tinged) that are shorter (mostly 6.5–9 vs. 12–18 mm) and narrower (2–4.5 vs. 4–8 mm), shorter calyces (7–8 vs. 8.5–10 mm), and in lacking non-glandular calyx trichomes.

Selected references:

- Original description: *Novon* 23(4): 417 (2015) [<https://doi.org/10.3417/2014002>]

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Personal Communications

Elvin, Mark A. 2022. Senior Fish and Wildlife Biologist, U.S. Fish and Wildlife Service, Ventura, CA and Research Associate, University of California, Los Angeles. Email correspondence regarding information needs for *M. australis* subsp. *gabrielensis* and three other *Monardella* taxa nominated for CRPR status. Personal communication 13 February & 13 March 2022.