Rare Plant Status Review: Monardella australis subsp. occidentalis
Proposed Addition to California Rare Plant Rank 1B.1, G4T1 / S1
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Background and Taxonomy
Monardella australis Abrams subsp. occidentalis Elvin, R.A. Burgess & A.C. Sanders is a perennial herb in Lamiaceae known from only two occurrences in the Transverse Ranges and the southeastern edge of the outer south Coast Ranges in Ventura and Santa Barbara counties. It was described by Elvin et al. in 2015 and is not included in The Jepson Manual (Jokerst 1993) or Jepson eFlora (Elvin and Sanders 2012); the Flora of North America volume on Lamiaceae is not yet available. Monardella australis subsp. occidentalis is distinguished from M. australis subsp. australis (the most similar taxon) by its wider leaves (4–11 mm vs. 2.5–5 mm in subsp. australis), shorter bracts (7–12 mm vs. 12–18 mm), shorter calyces (7–8.5 mm vs. 8.5–10 mm), and short non-glandular stem trichomes, 0.1–0.2 mm long. Monardella australis subsp. occidentalis is distinguished from M. australis subsp. gabrielensis by its wider leaf blades (4–11 mm vs. [2.2]3.5–5[6] mm) and wider glomerule bracts ([3.5]4–5.5 mm versus 2–4.5 mm), which exceed or equal the calyces length being less than calyx lengths in subsp. gabrielensis. It is further distinguished from subsp. gabrielensis in having short (0.1–0.2 mm) non-glandular trichomes on its stems (which are lacking in subspecies gabrielensis). Monardella australis subsp. occidentalis is distinguished from M. australis subsp. cinerea (a CRPR 4.3 taxon, http://www.rareplants.cnps.org/detail/1144.html) in having larger leaves (11–17 x 4–11 mm vs. 5–10 x 2–5 mm in cinerea), green vestiture (vs. cinereous), and overall plant stature (subsp. occidentalis tends to be slightly taller at 8–22 cm vs. 3–15 cm in subsp. cinerea). Monardella australis subsp. occidentalis differs from subsp. jokerstii (a CRPR 1B.1 taxon, http://www.rareplants.cnps.org/detail/3621.html) in having leaf blade margins that are more or less entire (vs. serrate in jokerstii) and the presence of solitary glomerules (vs. one to five glomerules in an open compound cyme in jokerstii). The subspecies’ epithet ‘occidentalis’ refers to the western distribution of this taxon in comparison to the other Monardella australis subspecies (Elvin et al. 2015), and the specific epithet ‘australis’ refers to the southern distribution of the species in relation to other species of Monardella.

Ecology
The single recent occurrence of subsp. occidentalis is known from a “steep slope with clay loam soils derived from a sandstone base in a rocky/screer colluvium matrix” (Elvin et al. 2015). It occurs at an approximate elevation of 1,890 and 2,435 meters and blooms between early June and early July; however, its flowering season may extend well into late summer and perhaps into early fall (Elvin et al. 2015). Species associates at the single recent occurrence include: Ceanothus cordulatus, Chaenactis santolinoides, Eriastrum densifolium subsp. austromontanum, Ericameria nauseosa var. mohavensis, Epilobium canum subsp. latifolium, Frangula californica subsp. tomentella, Pinus jeffreyi, P. lambertiana, and P. ponderosa (Elvin et al 2015, D. L. Magney pers. comm. 2020).

Distribution and Abundance
The single recent occurrence of M. australis subsp. occidentalis is on Reyes Peak, Pine Mountain Ridge in Ventura County and was last documented by D. L. Magney on July 9, 2020 (pers. comm. 2020). The only other referenced occurrence of this taxon is based on a collection
from the San Rafael Mountains near Big Pine Mountain (Hoffmann 644, CAS, SBBG; Elvin et al. 2015). Additional information about the Hoffmann collection was not accessible at the time of this writing but is expected to have been collected in June 1931 based on a sequential, subsequent collection of Holodiscus discolor var. discolor made by Hoffman in Santa Barbara County on June 5, 1931 (Hoffmann 645, CAS-BOT-BC150074; CCH1 2020). The status of this historical record from the vicinity of Big Pine Mountain is unknown, and surveys should be conducted in attempts to relocate and assess this taxon’s viability in that area. Both occurrences are wholly known from Los Padres National Forest.

A Monardella collection from Sewart Mountain (Burgess 9433 [VFWO]) represents a putative intermediate specimen between M. australis subsp. occidentalis and M. linoides subsp. oblonga. Introgression between the two taxa may be expected due to established intergradation between M. australis s.l. and M. linoides s.l. in the San Bernardino, San Jacinto, and San Gabriel mountains in areas where these species occur in close proximity (Elvin and Sanders 2009; Elvin et al. 2015). The total estimated extent of occurrence size for the taxon is estimated to be approximately 27 square km (Elvin et al. 2015). However, Elvin et al. also acknowledge the limitations of sampling associated with the harsh terrain immediately surrounding these areas and suggest that intensive surveying of these areas may yield additional occurrences of the taxon.

Status and Threats
Due to its narrow distribution, the separation of the two sites where records have been collected, and uncertainty regarding climate change, Elvin et al. (2015) consider this taxon to be Critically Endangered according to IUCN (2001) categories and criteria. The Reyes Peak Forest Health and Fuels Reduction Plan has been proposed for an area containing the single recent occurrence, and to-date this taxon is not considered in that plan. The potential existence of unknown populations of M. australis subsp. occidentalis in this vicinity, as suggested by Elvin et al., as well as the taxon’s response to fire events should be considered in further development and implementation of the fuels reduction plan.

Summary
Based on the available information, CNPS and CNDDB recommend adding Monardella australis subsp. occidentalis to California Rare Plant Rank 1B.1 of the CNPS Inventory. If knowledge on the distribution, threats, and rarity status of M. australis subsp. occidentalis changes in the future, we will re-evaluate its status at that time.

Recommended Actions
CNPS: Add Monardella australis subsp. occidentalis to CRPR 1B.1
CNDDB: Add Monardella australis subsp. occidentalis to G4T1 / S1

Draft CNPS Inventory Record
Monardella australis Abrams ssp. occidentalis Elvin, R.A. Burgess & A.C. Sanders
southwestern mountain monardella
Lamiaceae
CRPR 1B.1
Ventura, Santa Barbara
Reyes Peak, 3411963; Big Pine Mtn. 3411966

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*Monardella australis* subsp. *occidentalis*

Upper montane coniferous forest, chaparral (montane)/ clay loam, rocky scree; elevation 1890-2435 meters
Perennial herb. Blooms June to July.

**Literature Cited**


United States Department of Agriculture, Forest Service. *Reyes Peak Forest Health and Fuels Reduction Project Proposal*. Published 8 May 2020. Available at:
https://www.fs.usda.gov/project/?project=58012, direct:

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