

Added to California Rare Plant Rank 1B.3 on October 17, 2012

**Rare Plant Status Review: *Monardella hypoleuca* ssp. *intermedia*
Proposed New Add to Rank 1B.3, G4T2T3 / S2S3**

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August 13, 2012

Changes made to the original document appear in blue text.

Background

Monardella hypoleuca ssp. *intermedia* is a perennial, rhizomatous herb in the Lamiaceae that is endemic to California. It was recently described by Elvin and Sanders (2009), and is included in *The Jepson Manual, Second Edition (TJM 2)*; available online at http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=91099; the Lamiaceae treatment in the *Flora of North America* is not yet available. *Monardella hypoleuca* ssp. *intermedia* was described from populations of *M. hypoleuca* ssp. *hypoleuca* from the Santa Ana Mountains. It is similar to subspecies *hypoleuca* in having relatively glabrous upper leaf surfaces and sparse pubescence on the stem, but shares the narrow and strongly revolute leaf shape of subspecies *lanata*. The specific epithet of *M. hypoleuca* ssp. *intermedia* is indicative of its intermediate leaf morphology, appearance, and geographic distribution relative to subspecies *hypoleuca* and *lanata*. *Monardella hypoleuca* ssp. *intermedia* and ssp. *lanata* are very closely related, whereas ssp. *hypoleuca* may be best treated as a distinct species based on its discrete range and lack of introgression, but at this point the treatment authors are being conservative. *Monardella hypoleuca* ssp. *intermedia* flowers between April and September (Elvin and Sanders 2009).

Monardella hypoleuca ssp. *intermedia* occurs in mountains and foothills and is generally an understory taxon in chaparral, oak woodland, and occasionally coniferous forest. It grows at an approximate elevation of 400 to 1250 meters (Elvin & A. C. Sanders, 2009).

Monardella hypoleuca ssp. *intermedia* is known from approximately 35 occurrences from the Santa Ana and Palomar Mountains in Orange, Riverside, and San Diego counties. Of the 35 known occurrences, only 11 have been documented in the past 20 years (occurrences not "seen" in the past 20 years are considered historical by the CNDDDB), and 9 occurrences are only represented by herbarium specimens that were collected over 50 years ago. Many records of *M. hypoleuca* ssp. *intermedia* in the Consortium of California Herbaria (CCH, 2012) are shown as ssp. *hypoleuca* or have no subspecies indicated. These records, however, have all been verified as subspecies *intermedia* through personal communications with M. Elvin (2010) and/or F. Roberts (2012), and comments have been submitted to the Consortium by the first author in order to allow database managers to make the corrections as needed.

Monardella hypoleuca ssp. *intermedia* is rather localized and uncommon throughout its range, but it can appear to be locally common due to its rhizomatous habit (Elvin and

Sanders 2009). It is known from a small geographic range, however, it does not appear to have highly restricted site requirements and therefore additional occurrences may be discovered with more field surveys. On the other hand, the Santa Ana and Palomar Mountains have been extensively surveyed by botanists throughout the past and present (as seen by the collection records in CCH, 2012), so our current knowledge may actually well represent the true frequency and distribution of this taxon. *At the same time, the area of occupancy of M. hypoleuca ssp. intermedia is steep and brushy with generally poor access, so populations have doubtlessly been overlooked. Nevertheless, the general range of ssp. intermedia is fairly well worked out and it is unlikely that it will be found beyond the Santa Ana Mountains and Palomar areas. All specimens of M. hypoleuca from Riverside and Orange counties are ssp. intermedia regardless of how they are named in CCH (2012; A. Sanders pers. comm. 2012).*

Threats to *M. hypoleuca ssp. intermedia* ~~are unknown~~ would likely be associated with trails and trail maintenance or fuel modifications (F. Roberts pers. comm. 2012). Many occurrences are near or adjacent to trails, so foot traffic and/or recreational activities may be a possible threat, but further documentation is needed before making this determination. *The increase in fire frequency and intensity that is occurring within the range of M. hypoleuca ssp. intermedia is a major threat, as well as climate change; the mountain ranges in California, including the Santa Ana Mountains, are expected to become refugia for plant species as the climate changes, and the resulting increase in species diversity will result in increased competition (M. Elvin pers. comm. 2012).* The Santa Ana and Palomar Mountains are also surrounded by urban development, and further development and habitat loss may pose a possible threat to some populations.

Based on the available information, CNPS and CNDDDB recommend adding *M. hypoleuca ssp. intermedia* to California Rare Plant Rank 1B.3 of the CNPS Inventory. ~~Although no threats are currently known,~~ *The limited range, and low number of recent occurrences, and unknown site quality/viability of many occurrences of M. hypoleuca ssp. intermedia* indicate that it should be placed on Rank 1B.3.

Recommended Actions

CNPS: Add to California Rare Plant Rank 1B.3

CNDDDB: Add to CNDDDB G4T2T3 / S2S3

Please review the draft CNPS Inventory record below, respond Yes or No on the proposal to add this species to the Inventory and CNDDDB, and provide any edits/comments. If responding No, please provide supporting information.

Draft CNPS Inventory Record

Monardella hypoleuca A. Gray ssp. *intermedia* A.C. Sanders & Elvin
intermediate monardella
Lamiaceae
Rank 1B.3
Orange, Riverside, San Diego

Santiago Peak (070A) 3311765, Alberhill (069B) 3311764, Sitton Peak (069C) 3311754, Black Star Canyon (087C) 3311776, Corona South (087D) 3311775, Canada Gobernadora (070D) 3311755, Pechanga (050A) 3311741, Wildomar (069D) 3311753, Fallbrook (051A) 3311743, Margarita Peak (051B) 3311745, Pala (050D) 3311731, El Toro (070B) 3311766, San Clemente (052A) 3311745, Boucher Hill (049C) 3311638
Chaparral, cismontane woodland, lower montane coniferous forest (sometimes) / usually in understory; elevation 400-1250 meters.
Perennial rhizomatous herb. Blooms April – September.
Known only from Santa Ana and Palomar Mtns; [all specimens of *M. hypoleuca* from RIV and ORA cos. are ssp. *intermedia*](#). Many occurrences historical; need field surveys. [Threatened by alteration of fire regime. Possibly threatened by fuel modifications, recreational activities, and trail maintenance.](#) Intergrades with *M. hypoleuca* ssp. *lanata* in small area. See *Novon* 19:315-343 (2009) for original description.