

**Added to California Rare Plant Rank 1B.2 of the CNPS Inventory on
January 17, 2017**

Rare Plant Status Review: *Chorizanthe minutiflora*

Proposed Addition to California Rare Plant Rank 1B.2, G1 / S1

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Changes made to the original document are in blue text.

Background

Chorizanthe minutiflora **and** Morgan, Styer, & Reveal is an annual herb in the Polygonaceae known only from the Fort Ord National Monument in Monterey, California. *Chorizanthe minutiflora* was recently described by Morgan et al. in 2014, and is therefore not included in *The Jepson Manual* (Hickman 1993), *The Jepson Manual, Second Edition* (Costea and Reveal 2012), or *Flora of North America, Vol 5* (Reveal 2005). It is, however, included in the *Jepson eFlora* (Reveal and Rosatti 2016). The most defining characteristic of *C. minutiflora* are its tiny flowers that are barely visible at full anthesis; it has the smallest flowers of the genus, measuring only 1.5-2 mm long. *Chorizanthe minutiflora* is similar to *C. cuspidata*, and was once identified as *C. angustifolia*, but is differentiated from both in being sparsely pubescent and yellow to green in color, versus being densely pubescent and tannish to reddish or grayish in color in both *C. cuspidata* and *C. angustifolia*. It is also allopatric to these species, with *C. angustifolia* occurring to the south in San Luis Obispo and Santa Barbara counties, and *C. cuspidata* occurring in the San Francisco Bay region and further north (Morgan et al. 2014).

Chorizanthe minutiflora occurs in sandy openings of coastal scrub and maritime chaparral at an approximate elevation of 55-150 meters, and is known to flower in April through July (Morgan et al. 2014). Some of its associated species include *Chorizanthe diffusa*, *C. pungens*, *Cardionema ramosissimum*, *Navarretia hamata* subsp. *parviloba*, *Navarretia mellita*, *Cryptantha clevelandii*, *C. micromeres*, *Plagiobothrys* sp., *Horkelia cuneata* var. *cuneata*, *Erodium botrys*, *E. cicutarium*, *Deinandra corymbosa*, *Crassula tillaea*, *Anagallis arvensis*, *Camissoniopsis micrantha*, *Logfia gallica*, and *Pterostegia drymarioides* (see Morgan et al. 2014 for additional associated species).

Chorizanthe minutiflora is known from approximately five occurrences (comprised of 11 collections) within Fort Ord National monument in Monterey County. One occurrence is located within the army managed portion of Fort Ord and at least two occurrences are found on the BLM managed portion, while the last two are either on army land or BLM managed land, depending on where the population is actually located.

Chorizanthe minutiflora appears to be threatened by a lack of disturbance. According to David Styer and Dean Taylor (pers. comms. 2016), disturbance appears to help *C. minutiflora* rather than destroy it, in that it is found in areas where tanks were driven at one time, which keeps the chaparral sparse. David Styer indicated that *C. minutiflora* has previously been seen in five separate locations but is likely to only be currently found in three of these locations. The fifth record may be an example of a need for

disturbance; *C. minutiflora* was found there several years after a controlled burn, but has not been found in that location since (Styer pers. comms. 2016). It also appears to be threatened by non-native annual grasses, which include *Bromus hordeaceus*, *B. diandrus*, *B. madritensis* subsp. *rubens*, *Festuca bromoides*, *Avena barbata*, *Aira caryophyllea*, *Briza maxima*, and *B. minor*. Where these annual grasses cover the ground more densely, there are no *C. minutiflora* plants (Morgan et al. 2014). Management favoring this plant may thus need to include weed control, and the creation or maintenance of openings throughout its preferred habitat.

Based on the available information, CNPS and CNDDDB recommend adding *Chorizanthe minutiflora* to California Rare Plant Rank 1B.2 of the CNPS Inventory. If knowledge on the distribution, threats, and rarity status of *Chorizanthe minutiflora* changes in the future, we will re-evaluate its status at that time.

Recommended Actions

CNPS: Add *Chorizanthe minutiflora* to CRPR 1B.2

CNDDDB: Add *Chorizanthe minutiflora* to G1 / S1

Draft CNPS Inventory Record

Chorizanthe minutiflora [Rand](#). Morgan, Styer, & Reveal
Fort Ord spineflower

Polygonaceae

CRPR 1B.2

Monterey

Salinas (365B) 3612166, Marina (366A) 3612167

Coastal scrub, chaparral (maritime) / sandy, openings; elevation 55-150 meters.

Annual herb. Blooms April to July.

Discovered in 1994 by R. Morgan. Threatened by lack of disturbance and chaparral succession. Also threatened by non-native plants. See *Phytoneuron* 63:1-9 (2014) for original description.

Literature Cited

Costea, M. and J. L. Reveal. 2012. *Chorizanthe*. Pp. 1077-1082 in Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds.), *The Jepson manual: vascular plants of California*, second edition. University of California Press, Berkeley, CA.

Hickman, J. C. 1993. *Chorizanthe*. Pp. 856-860 in Hickman, J.C. (ed.) *The Jepson manual: higher plants of California*. University of California Press. Berkeley and Los Angeles, CA.

Morgan, R., D. Styer, J. L. Reveal. 2014. *Chorizanthe minutiflora* (Polygonaceae: Eriogoneae), a new narrow endemic California species. *Phytoneuron* 63: 1-9.

Reveal, J. L. 2005. *Chorizanthe*. *Flora of North America* Editorial Committee (eds.), *Flora of North America: North of Mexico, Volume 5: Magnoliophyta: Caryophyllidae*, part 2. Oxford University Press.

_____ and T. J. Rosatti. 2016. *Chorizanthe minutiflora*, in Jepson Flora Project (eds.) *Jepson eFlora*. Website http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=99777 [accessed 30 November 2016].