

Added to California Rare Plant Rank 4.2 of the CNPS Inventory on June 26, 2018**Rare Plant Status Review: *Cryptantha rostellata*****Proposed Addition to California Rare Plant Rank 4.2, G4 / S3**

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Changes made to the original document are in blue text.

Background and Taxonomy

Cryptantha rostellata (Greene) Greene is an annual herb in the Boraginaceae known from northern California, Oregon, and Washington, with a single collection record from western Idaho (CPNWH 2018). It was included as a note under *C. flaccida* in *The Jepson Manual* (Kelley and Wilken 1993) and later included with its own entry in *The Jepson Manual, Second Edition* (Kelley et al. 2012) and *Jepson eFlora* (Kelley et al. 2018). The Boraginaceae treatment for *Flora of North America* has not yet been written. *Cryptantha rostellata* is most similar to *C. spithamaea*, a taxon not included in *The Jepson Manual* (Kelley and Wilken 1993), but later included in the *Jepson eFlora* (Kelley et al. 2018). *Cryptantha rostellata* var. *spithamaea* is treated as a synonym of *C. spithamaea* in the *eFlora* (Kelley et al. 2018). *Cryptantha rostellata* is differentiated from *C. spithamaea* in having a smaller corolla limb that is 1-2 mm in diameter (vs. 3-6 mm in diameter), calyx lobe midveins that have many stout hooked/curved bristles (vs. appressed to ascending curved hairs with hooked/curved bristles only at tip), and a larger nutlet that is 2.3-2.8 mm (vs. 1.6-2 mm in *C. spithamaea*) (Kelley et al. 2018).

Cryptantha rostellata was originally described as *Krynitzkia rostellata* in 1886 by Edward Lee Greene, who then, a year later, expanded the genus *Cryptantha* to include North American species that had been placed in the genus *Krynitzkia* (Green 1887). In the 1925 and 1993 Jepson manuals, *C. rostellata* was not given full recognition, and instead included within a note under *C. flaccida*: “[Plants] from n CA-FP with nutlets ± plump, groove ± closed have been called *C. rostellata* (E. Greene) E. Greene incl var. *spithamea* (I.M. Johnson) Jepson.” (Kelley and Wilken 1993). The more recent treatment (Kelley et al. 2018) has separated *C. rostellata* from *C. flaccida* based on the characteristics of the nutlet attachment scar.

In 1931, August Brand treated *C. suksdorfii* (a species described from Oregon and Washington) as a variety of *C. rostellata*. Twelve years later, in 1943, Willis Linn Jepson treated *C. spithamaea* (a species originally described by I. M. Johnston in 1939) as a novel variety of *C. rostellata* as well (Tropicos 2018). *Cryptantha rostellata* var. *spithamaea* was included in Munz and Keck (1973), but no varieties of *C. rostellata* are accepted in current taxonomy. The specific epithet *rostellata* comes from the Latin word *rostellum*, meaning little beak likely referring to the beak shaped nutlet (Charters 2017).

Biology

In California, *Cryptantha rostellata* is known from valley and foothill grasslands and cismontane woodlands. It generally occurs in gravelly openings and along roadsides, at an approximate elevation of 40 to 800 meters (CCH 2018). According to Ron Kelley (pers. comm. 2012), it is edaphically correlated to barren extrusive igneous substrates. *Cryptantha rostellata* is known to flower from April to June (Kelley et al. 2018). Potential associated species include *Quercus douglasii* and *Plagiobothrys* spp. (J. Nelson pers. comm. 2018).

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Distribution

Within California, *C. rostellata* is currently known from an estimated 14 occurrences across the northern half of the state. Of the 14 occurrences, 13 (13/14 ~93%) are considered historical (occurrences not seen in over 20 years are considered historical by CNDDDB). Of the 14 occurrences, three are located in National Forests (one in each of Stanislaus, Six Rivers, and Mendocino), two are located on BLM land, and the rest are located on land of unknown ownership. In the *Jepson eFlora* (Kelley et al. 2018), *C. rostellata* is reported to be distributed in the inner North Coast Ranges, northern Sierra Nevada Foothills, Sacramento Valley, Great Basin Province, Warner Mountains, and Modoc Plateau; however, scattered collection records indicate it also occurs in the Klamath Ranges, outer North Coast Ranges, and Cascade Range Foothills (CCH 2018). Further surveys are certainly needed to obtain a better understanding of the true distribution and range of this species in California.

While there are few occurrences, and a large number of them are historical, it is likely to be more common than it would seem. There is likely to be a large amount of suitable habitat located on private land that has yet to be surveyed (J. Nelson pers. comm. 2018), and according to the *Jepson eFlora* treatment author, Ron Kelley (pers. comm. 2012), California Rare Plant Rank 4 is the correct placement for this species because it is scattered throughout northern California and is correlated with a relatively common substrate. Furthermore, the plants are always short in stature and small flowered, likely resulting in under-collection by field botanists.

Status and Threats

Although NatureServe (2018) indicates that *Cryptantha rostellata* is considered vulnerable (S3) in Oregon, it is actually currently on their Review List with a state rank of SNR since they are not certain about its rank (Vrilakas, S. pers. comm. 2018). *Cryptantha rostellata* is considered ~~and~~ imperiled (S2) in Washington (NatureServe 2018). There are currently no known threats to *C. rostellata* in California.

Summary

Based on the available information, CNPS and CNDDDB recommend adding *Cryptantha rostellata* to California Rare Plant Rank 4.2 of the CNPS Inventory. Although no threats are currently known, a threat rank of .2 is suggested due to the paucity of known occurrences of this taxon, and the historical status of the vast majority of all of its known records. If knowledge on the distribution, threats, and rarity status of *C. rostellata* changes in the future, we will re-evaluate its status at that time.

Recommended Actions

CNPS: Add *Cryptantha rostellata* to CRPR 4.2

CNDDDB: Add *Cryptantha rostellata* to G4 / S3

Draft CNPS Inventory Record

Cryptantha rostellata (Greene) Greene

red-stemmed cryptantha

Boraginaceae

CRPR 4.2

Butte, Colusa, Glenn, Mariposa, Napa, Shasta, Siskiyou, Sutter, Tehama, Trinity

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Oregon, Washington

Coulterville (439B) 3712062, Walter Springs (516A) 3812263, Sutter (544B) 3912126, Leesville (547B) 3912224, Honcut (560D) 3912135, Chico (577A) 3912167, Hall Ridge (596C) 3912276, Inskip Hill (627C) 4012138, Balls Ferry (628B) 4012242, Black Lassic (634D) 4012335, Weaverville (649B) 4012268, Callahan (701D) 4112237, Hornbrook (734A) 4112285
Cismontane woodland, valley and foothill grassland / often gravelly, volcanic openings; often roadsides; elevation 40-800 meters.

Annual herb. Blooms April to June.

See *Bulletin of the California Academy of Sciences* 1(4A):203 (1886) for original description, and *Pittonia* 1(7):116 (1887) for taxonomic treatment.

Literature Cited

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[CCH] Consortium of California Herbaria. 2018. Data provided by the participants of the Consortium of California Herbaria. Regents of the University of California, Berkeley. Website <http://ucjeps.berkeley.edu/consortium/> [accessed 7 May 2018].

[CPNWH] Consortium of Pacific Northwest Herbaria. 2018. Data provided by the participants of the Consortium of Pacific Northwest Herbaria. University of Washington Herbarium. Website <http://www.pnwherbaria.org/data/search.php> [accessed 7 May 2018].

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