

**Kept as California Rare Plant Rank 4.3 on February 28, 2013****Rare Plant Status Review: *Caulanthus major* var. *nevadensis*  
Proposal to Keep at Rank 4.3, G4T3? / S3.3**

Danny Slakey (CNPS), Aaron Sims (CNPS) and Roxanne Bittman (CNDDDB)

January 8, 2013

**Background**

*Caulanthus major* var. *nevadensis* is a perennial (or sometimes biennial) herb in the Brassicaceae family, and is currently a California Rare Plant Rank (Rank) 4.3 taxon. It has been included in the CNPS Inventory since the 6<sup>th</sup> Edition (2001). It was included in *The Jepson Manual* (TJM 1993) and *Intermountain Flora*, Vol. 2b (Holmgren et al. 2005), but the varieties of *Caulanthus major* were not recognized in *The Jepson Manual, Second Edition* (TJM 2) or the *Flora of North America* (FNA). The varieties have been separated based on several characters, with var. *nevadensis* having a more slender stem than var. *major*, a pedicel that is more often bristly, purple sepals (vs. greenish-white or cream-colored in var. *major*), and purplish petals (vs. brownish in var. *major*) (TJM 2, Holmgren et al. 2012; the original description by Rollins 1993 could not be obtained for this status review). The two varieties are also separated geographically, with var. *major* occurring in southern California, at a few scattered locations in Nevada, and disjunctly in south-central and southeastern Utah; var. *nevadensis* occurs in northeastern California, northwestern Nevada, and southeastern Oregon (Holmgren et al. 2005). The varieties are reported to be allopatric (having non-overlapping ranges) (Holmgren et al. 2005, R. Meinke pers. comm. 2012), but there are records of both from Washoe County, NV, so there could be a small region of overlap (Holmgren et al. 2005). According to TJM 2 and FNA treatment author I. Al-Shehbaz (pers. comm. 2012), the varieties were not included because they were based on characters that are continuous throughout the range of the entire species. However, the characters differentiating them are not preserved well in herbarium specimens (D. Taylor pers. comm. 2012). Many of the field botanists contacted by CNPS were familiar with only their local variety, but A. Tiehm (pers. comms. 2012) had experience with both varieties in the field and felt they merit taxonomic recognition. When R. Meinke (pers. comm. 2005) reviewed herbarium specimens of *C. major* prior to the original description of var. *nevadensis* in 1993, he determined that the new taxon (soon to be named var. *nevadensis*) should be treated at the species level. Meinke (pers. comm. 2005) also felt that the varieties were poorly described by Rollins (1993), which may have also contributed to their exclusion from TJM 2 and FNA.

*Caulanthus major* var. *nevadensis* is only known in California from about 15 occurrences. Many of the records in the Consortium of California Herbaria (CCH 2012) were not identified to variety, but could easily be placed based on their location. Schoolcraft (pers. comm. 1999) estimated that there could be 50 or more occurrences in California. Given that *Caulanthus major* var. *nevadensis* occurs in a rather remote part of California, and botanists have not been intensively surveying for it (L. Janeway, D. Lepley pers. comm. 2012), there are likely more undocumented occurrences. Clifton (pers. comm. 1996, and unpublished flora), for example, notes that it is common on the

Sent to: MP, SN, I. Al-Shehbaz, N.H. Holmgren, R. Meinke, R. O'Dell, A. Tiehm, T. Stoughton, S. Vrielaikas, J. Whittall on 1/08/2013

eastern side of the Diamond Mountains, but there are only four known collections from that region. Outside of California, *C. major* var. *nevadensis* is common in Nevada (J. Morefield pers. comm. 1999), but is very rare in Oregon, where it is ranked S1 (generally <5 occurrences), is a federal and state species of concern, and is on Oregon Biodiversity Information Center (ORBIC) List 2 (equivalent to Rank 2) (ORBIC 2010).

Based on the available information, CNPS and CNDDDB recommend continuing to recognize *C. major* var. *nevadensis* as a Rank 4.3 plant. If more information on the taxonomy, distribution, or abundance of this plant becomes available in the future, CNPS and CNDDDB will re-evaluate its status at that time.

### Recommended Actions

CNPS: Keep on Rank 4.3

CNDDDB: Change from G4T3? / S3.3 to G4T3? / S3

### Draft CNPS Inventory Record

*Caulanthus major* (Jones) Pays. var. *nevadensis* Roll.

slender jewelflower

Brassicaceae

Rank 4.3

Alpine, Lassen, Mono, Plumas

Nevada, Oregon

Topaz Lake (505A) 3811965, Heenan Lake (505B) 3811966, Mckesick Peak (602C) 4012012, Doyle (602D) 4012011, Ferris Creek (603D) 4012013, Shaffer Mtn. (621A) 4012043, Susanville (622B) 4012046, Shinn Mtn. (638B) 4012062, Fredonyer Peak (640A) 4012065, Gallatin Peak (640C) 4012056, Spalding Tract (641A) 4012067, Observation Peak (656C) 4012072, Buckhorn Canyon (656D) 4012071

Pinyon and juniper woodland (often rocky); elevation 1705 – 2895 meters.

Perennial herb. Blooms June to September.

Candidate for state listing in OR. Allopatric with *C. major* var. *major*. Not in *TJM 2*.

See *The Cruciferae of Continental North America: Systematics of the Mustard Family from the Arctic to Panama* (1993) by R.C. Rollins for original description.

### Literature Cited

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken. 2012. *The Jepson Manual: vascular plants of California (TJM 2)*. University of California, Berkeley, CA.

Clifton, G. (Year Unknown). Plumas County Flora (Draft). Unpublished Flora.

Consortium of California Herbaria (CCH). 2012. Data provided by the participants of the Consortium of California Herbaria. Regents of the University of California, Berkeley.

Accessed on 17 December, 2012. Available online at:

<http://ucjeps.berkeley.edu/consortium/>

Sent to: MP, SN, I. Al-Shehbaz, N.H. Holmgren, R. Meinke, R. O'Dell, A. Tiehm, T. Stoughton, S. Vrielaikas, J. Whittall on 1/08/2013

Flora of North America Editorial Committees, eds. 1993+. *Flora of North America North of Mexico (FNA)*. New York and Oxford.

Hickman, J.C. 1993. *The Jepson Manual: higher plants of California (TJM 1993)*. University of California Press, Berkeley, CA.

Holmgren, N.H, P.K. Holmgren, and A. Cronquist. 2005. *Intermountain flora: vascular plants of the intermountain West, U.S.A.* Volume 2, Part B. New York Botanical Garden, Bronx, New York, USA.

Oregon Biodiversity Information Center (ORBIC) 2010. *Rare, threatened, and endangered species of Oregon*. Portland State University, Portland, OR. Available online at <http://orbic.pdx.edu/documents/2010-rte-book.pdf>.

Rollins, R.C. 1993. *The Cruciferae of continental North America: systematics of the mustard family from the Arctic to Panama*. Stanford University Press, Stanford, CA (not seen).