

Rare Plant Status Review: *Streptanthus vernalis*
Proposed New Add to List 1B.32

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December 17, 2008

Changes made since the original status review are in blue.

Background

Streptanthus vernalis is a California endemic, herbaceous annual in the Brassicaceae. This species was discovered by botanical researchers in the 1970s and 1980s, but was not described until 2005 by Richard O'Donnell and Rebecca W. Dolan in *Madroño* 52(3): 202-206. Although not included in *The Jepson Manual* (1993), *S. vernalis* will be included in the new *Jepson Manual* (2ND Ed.) (Ihsan Al-Shehbaz, pers. comm. 2008). *S. vernalis* shares morphological similarities with *S. batrachopus*, *S. brachiatus*, *S. breweri* var. *hesperidis*, and *S. morrisonii* ssp. *elatus*. Characteristics that differentiate *S. vernalis* from other *Streptanthus* taxa include its annual life cycle, floral and leaf characteristics, growth habit, and flowering time. Additionally, allozyme analysis (O'Donnell and Dolan 2005) indicates that *S. vernalis* is, "genetically distinct from related taxa," but most closely allied with *S. morrisonii*. *S. vernalis* flowers between March and May.

S. vernalis is found on serpentine talus and gravel at approximately 610 m in elevation. Associated taxa found growing in the vicinity of *S. vernalis* include *Cupressus sargentii*, *Pinus sabiniana*, *Arctostaphylos viscida*, *Quercus durata*, *Streptanthus morrisonii* ssp. *elatus*, *Mimulus brachiatus*, *Minuartia douglasii*, and *Epilobium minutum* (O'Donnell and Dolan 2005). Habitat types associated with *S. vernalis* include chaparral, and closed-cone coniferous forest.

S. vernalis is only known from a single occurrence near Three Peaks in Lake County approximately 3 mi east of Mount Saint Helena. O'Donnell and Dolan (2005) state that, "Nielson first reported an undescribed *Streptanthus* in an unpublished consultant's report (Nielson 1977)...and noted that it was fairly common in the vicinity of Three Peaks, an observation we have not been able to confirm." Suitable habitat within and beyond the known range of *S. vernalis* should be searched for additional occurrences.

The land ownership in the vicinity of the only occurrence of *S. vernalis* is unknown. ~~To date, no threats to *S. vernalis* have been reported.~~ *S. vernalis* is potentially threatened by vehicles

Based on this information CNPS and CNDDDB recommend that *S. vernalis* be added to CNPS List 1B.2.

Recommended Actions

Sent to NW, CW, R. O'Donnell, R. Dolan, I. Al-Shehbaz, A. Kruckeberg, L. Vorobik, M. Wetherwax on 12/17/08

CNPS: Add to CNPS List 1B.2
CNDDDB: Add to CNDDDB as G1 / S1

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

Streptanthus vernalis R. O'Donnell & R.W. Dolan

Brassicaceae

List 1B.2

Lake

Detert Reservoir (517A) 3812265

Chaparral, closed-cone coniferous forest / serpentinite; elevation 610-610 meters.

Annual herb. Blooms March-May.

Known from only one occurrence. [Potentially threatened by vehicles](#). See Madroño 52(3):202-206 (2005) for original description.