

Added to CNPS Inventory on July 23, 2012**Rare Plant Status Review: *Sidalcea elegans*****Proposed New Add to Rank 3.3, G4? / S2?**

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June 13, 2012

Background

Sidalcea elegans is a perennial rhizomatous herb in the Malvaceae family that is known only from the Klamath Ranges in far northern California and southwestern Oregon. It is included in *The Jepson Manual, Second Edition (TJM 2)*; available online at http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=91787), but was listed as a synonym of *Sidalcea malviflora* ssp. *asprella* in *The Jepson Manual* (1993); the *Flora of North America* treatment for Malvaceae is not yet available. This plant has undergone several taxonomic revisions, being first described as *S. elegans* by E. L. Greene in 1914. In her monograph of *Sidalcea*, Roush (1931) treated the plant as a synonym of *S. asprella*. Hitchcock (1957) treated it as *Sidalcea malviflora* ssp. *elegans*, but noted that “if *asprella* were to be treated as a species, ssp. *elegans* would best be considered thereunder” (*S. asprella* was treated as *S. malviflora* ssp. *asprella* at the time). Hitchcock (1957) noted that both ssp. *elegans* and ssp. *asprella* are very similar and readily intergrade. Dimling (1991) also recognized both of these taxa as closely-related subspecies of *Sidalcea malviflora*, but noted that they are very clearly distinct from each other, with no mention of intergradation. Recent taxonomic work by Andreasen and Baldwin (2003) confirmed that *Sidalcea elegans* is a close relative of *Sidalcea asprella* and not *Sidalcea malviflora*. Their study found no evidence of genetic divergence among members of the *Sidalcea asprella* clade, but it may still be possible to distinguish them genetically (K. Andreasen pers. comm. 2012). Based on the research by Dimling (1991) and Andreasen and Baldwin (2003), as well as morphological distinctiveness, Hill (2009) removed ssp. *elegans* and ssp. *asprella* from *S. malviflora*, and elevated them to the rank of species. *Sidalcea elegans*, however, may not be included in the Oregon Flora, as R. Halse was unable to differentiate Oregon herbarium specimens of *S. elegans* from *S. asprella* (R. Halse pers. comm. 2012).

TJM 2 notes that *Sidalcea elegans* can be easily confused with *S. asprella* and *S. glaucescens*. *Sidalcea elegans* is likely unique within the genus in having very brittle stems that snap easily when fresh (a poor character for herbarium material); it also has relatively long, soft, simple hairs at the base of the stem and long, slender rhizomes (Hill 2009, Dimling 1991). *Sidalcea asprella* has stellate hairs at the stem base and the stem is not particularly brittle (*TJM 2*). *Sidalcea asprella* can have rhizomes that are absent or <10 cm (ssp. *asprella*) or long slender rhizomes like *S. elegans* (ssp. *nana*; *TJM 2*) *Sidalcea elegans* can be mistaken for *S. glaucescens* because of its sometimes glaucous upper stem, but *S. glaucescens* does not form rhizomes (*TJM 2*). It is uncertain whether *S. elegans* and *S. asprella* intergrade (see Hitchcock 1957 vs. Dimling 1991), but a review of herbarium specimens by S. Hill (pers. comm. 2012) suggests that identification of herbarium material is very difficult - perhaps due to

intergradation or the lack of morphological characters that are preserved in pressed specimens. *Sidalcea elegans* blooms from May until July in California.

Sidalcea elegans is found within lower montane coniferous forests (often dominated by Jeffrey pine) and chaparral of the Klamath Ranges. It is usually found on serpentinite, and occurs between 215 and 1365 meters in elevation (Consortium of California Herbaria, CCH, 2012).

There are about 13 known occurrences of *S. elegans* in California – the majority from Del Norte County, with one occurrence from Siskiyou County. Most of the occurrences are within the Six Rivers National Forest, but some may be on private land, such as *Overton 4988* and *Smith 6719*, which are both near the town of Gasquet. None of these occurrences have been documented in the past 20 years (occurrences not documented in the past 20 years are considered historical by the CNDDDB). Botanists from the Six Rivers National Forest are not aware of the abundance of *S. elegans* on their lands, although *Sidalcea malviflora* is listed (with no ssp.) as a serpentine associate (L. Hoover pers. comm. 2012). New observations and collections by field botanists are especially important, as only fresh material can be checked for its brittleness and susceptibility to snapping. Annotations of herbarium specimens are also needed to reflect the revised taxonomy of the group. The majority of *S. elegans* specimens from California are housed at the Humboldt State University Herbarium, and most of the names follow Hitchcock (1957) as *Sidalcea malviflora* ssp. *elegans*. Some specimens have been annotated to *S. malviflora* ssp. *asprella* around 1990, but their proximity to other collection sites of *S. elegans*, as well as their occurrence on serpentine, suggests that they are actually *S. elegans* (these are included in the 13 known occurrences). Six additional specimens of *S. elegans* were mentioned by Hitchcock (1957; see attached spreadsheet), but no location or herbarium information was included, and these specimens are not in the CCH. Herbarium specimens of *S. asprella* and *S. glaucescens* from Del Norte and Siskiyou counties should be reviewed in an attempt to find other populations, although identification of herbarium specimens can be very difficult in this group.

Outside of California, *Sidalcea elegans* is only known from Josephine, Douglas, and Curry counties in southwestern Oregon; where it is ranked “Apparently secure” (S4; uncommon, but not rare) by NatureServe. *Sidalcea elegans* is not currently recognized by the Oregon Flora Project (OFP 2012), so it is treated as a synonym of *Sidalcea malviflora* ssp. *asprella*. However, there are 19 specimens in the OFP that were previously determined to be *S. malviflora* ssp. *elegans*. Hill also provided us with information on ten specimens of *Sidalcea elegans* from Oregon, although some of these specimens could not be confidently identified (S. Hill pers. comm. 2012).

Threats to *Sidalcea elegans* are currently unknown. Owing to the remoteness of populations and their occurrence on U.S. Forest Service lands, threats should be considered minimal.

Based on the available information, CNPS and CNDDDB recommend that *Sidalcea elegans* be added to California Rare Plant Rank 3.3. Uncertainty about its abundance in California and Oregon can be traced to the difficulty in identifying herbarium material and a lack of recent collections. Its taxonomic status is also uncertain, as reflected in conflicting treatments (e.g. Dimling 1991 vs. Hitchcock 1957; *TJM 2* vs. *Oregon Flora*). If more information on the distribution and/or taxonomy of *Sidalcea elegans* becomes available, it will be re-evaluated by CNPS at that time.

Recommended Actions:

CNPS: Add to CNPS 3.3

CNDDDB: Add to CNDDDB G4? / S2?

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

Sidalcea elegans Greene

Del Norte checkerbloom

Malvaceae

Rank 3.3

Oregon

Del Norte, Siskiyou

Broken Rib Mtn. (738B) 4112386, Cant Hook Mtn. (722B) 4112368, Chimney Rock (721C) 4112356, Gasquet (739C) 4112472, Hiouchi (740D) 4112471, Polar Bear Mtn. (738A) 4112385, Shelly Creek Ridge (739A) 4112387

Lower montane coniferous forest, chaparral / serpentinite; elevation 215 – 1365 meters.

Perennial rhizomatous herb. Blooms May – July.

Move to List 1B? Field surveys needed. Known in CA only from the Klamath Range.

Very difficult to distinguish from *S. asprella* and *S. glaucescens*, especially in herbarium material; further study needed. See *Clybele Columbiana: A Series of Studies in Botany, Chiefly North America* 1(1):35-36 (1914) for original description.