

Added to California Rare Plant Rank 1B.2 of the CNPS Inventory on July 19, 2017**Rare Plant Status Review: *Silene krantzii*****Proposed Addition to California Rare Plant Rank 1B.2, G1 / S1**

Kaitlyn Green (CNPS), Aaron E. Sims (CNPS), and Roxanne Bittman (CNDDDB)
May 17, 2017

Changes made to the original document are in blue text.

Background

Silene krantzii T.R. Stoughton is a perennial herb in the Caryophyllaceae known only from San Gorgonio Mountain, within the San Bernardino Mountains of California. *Silene krantzii* was described in 2014 and is therefore not included in *The Jepson Manual* (Wilken 1993), *The Jepson Manual, Second Edition* (Hartman et al. 2012), or *Flora of North America* (Morton 2005). After examining 130 specimens as part of a larger study on the *S. verecunda* complex, Stoughton et al. determined that collections previously unidentified or believed to be *S. verecunda* from San Gorgonio Mountain were sufficiently morphologically and ecologically distinct enough to warrant recognition as a new species. *Silene krantzii* was named after Timothy Krantz, who has greatly increased our knowledge of the flora of the San Bernardino Mountains. It is differentiated from *S. verecunda* s.l. in having a red calyx that is strongly keeled and somewhat inflated at flowering (vs. a generally greenish calyx that is non-keeled and tubular at flowering), glandular trichomes on proximal-most leaves (vs. at least some non-glandular trichomes on petioles of proximal-most leaves), basal leaves with low-stature and spreading to ascending branches (vs. ascending to erect branches in *S. verecunda*). *Silene krantzii* is also found solely in alpine habitats, whereas *S. verecunda* also occurs in coastal habitats (Stoughton et al. 2014).

Silene krantzii occurs in alpine dwarf scrub in sandy or gravelly substrate, primarily of igneous origin, at an approximate elevation 3,235-3,510 meters, and flowers from April to September, and fruits from June to October. "Most records describe it in open, exposed areas above tree line with mixed shrubs and herbs (including *Festuca saximontana*, *Raillardella argentea*, *Hulsea vestita* subsp. *pygmaea*, *Calyptridium umbellatum*, and *Elymus elymoides*), although some records describe the habitat as rocky rather than sandy or gravelly" (Stoughton et al. 2014).

Silene krantzii is known from an estimated two occurrences comprised of 18 collections on San Gorgonio Mountain. Both occurrences were last visited in 2011 and both are located within the San Bernardino National Forest. The species is cited as being common to scarce around the summit region of San Gorgonio Mountain, but personal observations by T. Stoughton suggest it is actually densely abundant at the type locality and in other areas around the summit (Stoughton et al. 2014). Nevertheless, it is currently only known as a very local endemic from high elevations of the San Bernardino Mountains.

Climate change has been suggested as a potential threat to *S. krantzii*, along with foot traffic; though *S. krantzii* grows primarily away from trails (H. Bartosh and T. Stoughton pers. comms. 2017).

Based on the available information, CNPS and CNDDDB recommend adding *Silene krantzii* to California Rare Plant Rank 1B.2 of the CNPS Inventory. Although no immediate threats are documented at this time, we feel that a threat rank of .2 is appropriate due to the paucity of occurrences of this species, and due to the limited availability of its potential habitat. If knowledge on the distribution, threats, and rarity status of *S. krantzii* changes in the future, we will re-evaluate its status at that time.

Recommended Actions

CNPS: Add *Silene krantzii* to CRPR 1B.2

CNDDDB: Add *Silene krantzii* to G1 / S1

Draft CNPS Inventory Record

Silene krantzii T.R. Stoughton

Krantz's catchfly

Caryophyllaceae

CRPR 1B.2

San Bernardino

San Gorgonio Mtn. (105D) 3411617

Alpine dwarf scrub/ usually sandy or gravelly, sometimes rocky; elevation 3,235-3,510 meters.

Perennial herb. Blooms April to September.

[Potentially threatened by climate change and foot traffic](#). See *California Fish and Game* 100(1):138-152 (2014) for original description.

Literature Cited

Hartman, R. L., R. K. Rabeler, D. H. Wilken. 2012. *Silene*. Pp. 616-622 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.

Morton, J. K. 2005. *Silene*. Pp. 166-214 in *Flora of North America* Editorial Committee (eds.), *Flora of North America North of Mexico*, Vol. 5. New York and Oxford.

Stoughton, T. R., D. D. Jolles, H. A. Bartosh. 2014. Recognizing a new species of *Silene* (Caryophyllaceae) from California: a splitter's game? *California Fish and Game* 100(1): 138-152.

Wilken, D. H. 1993. *Silene*. Pp 488-493 in *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley.