

**Changed from California Rare Plant Rank 1B.2 to 4.3 in the CNPS Inventory on
2 March 2020**

Rare Plant Status Review: *Penstemon sudans*

Proposed Change from California Rare Plant Rank 1B.2, G3 / S3 to 4.3, G4 / S4
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Changes made to the original document are in blue text.

This species review is being expedited through a challenge cost share agreement between the California Native Plant Society and the USDA Forest Service, Pacific Southwest Region. Aside from being advanced as part of this agreement, the process, content, and information provided herein is not altered, modified, or developed differently in any way or form compared to other status reviews developed by CNPS.

Background and Taxonomy

Penstemon sudans Jones is a perennial herb in the Plantaginaceae that is known in California from the high Cascade Range, Great Basin Province, Modoc Plateau, and Warner Mountains, north to Oregon, and east to Nevada. It has been included in the CNPS Inventory as a 1B plant for 18 years (RPSAC and Tibor 2001; CNPS 2019). When first added to the Inventory it was only known in California from the vicinity of Susanville from 12 USGS 7.5" quadrangles in Lassen County, but is now known from 34 quadrangles in Lassen, Modoc, Plumas, and Sierra counties.

Ecology

Penstemon sudans occurs in rocky volcanic areas, sometimes along roadsides, in Great Basin scrub, openings of lower montane coniferous forest, and in pinyon and juniper woodland at an approximate elevation of 1,200 to 2,425 meters. It flowers between June and July, sometimes blooming as late as August to September. More information about *P. sudans* can be found in the CNPS Inventory at <http://www.rareplants.cnps.org/detail/1998.html>.

Distribution and Abundance

Penstemon sudans is currently known from 140 occurrences Lassen, Modoc, Plumas, and Sierra counties. There are potentially 10 additional occurrences of *P. sudans* represented from unprocessed data in the CNDDDB backlog. Of the 140 occurrences currently recognized, 18 are considered historical (occurrences not seen in the past 20 years are considered historical by the CNDDDB), and all are considered to be extant. Eighty-five occurrences are considered "excellent" or "good" (A or B), while 26 are ranked "fair" (C), and 29 are unranked by CNDDDB. The population sizes of *P. sudans* are fairly well known, with data available for 120 of the 140 occurrences. Twenty of its occurrences have population count/estimates of 1,000 or more individuals. Based on the available data, the total number of known individuals of *P. sudans* is estimated to be over 39,000 plants (population count/estimate data is available in the attached "PenstemonSudans_20200110_change" spreadsheet.) Within the Lassen National Forest "Plant counts run the gamut from one to thousands, with counts of several hundred being typical." (Don Lepley, Lassen NF, pers. comm. 2019). Nearly half of the occurrences (65) are on private land, mostly managed by timber companies, 35 are on land managed by BLM, 18 are located in

Lassen National Forest, five are located in Plumas National Forest, one is located in Tahoe National Forest, and the remaining 15 are on land of unknown ownership.

Status and Threats

Half of the occurrences of *Penstemon sudans* have listed threats in the CNDDDB. Forty occurrences of *P. sudans* are noted to be threatened by direct and indirect impacts of timber harvest activities, including logging and road construction and maintenance. Additional threats noted include development, grazing, erosion, non-native plants, and ORV activity (CNDDDB 2019). Occurrences from the Diamond Mountains do not experience much disturbance, with grazing and wildfire maintenance being the main form of disturbance, yet very little of any population would be affected (Jim Belsher-Howe, Plumas NF, pers. comm. 2019). Occurrences located on lands owned by Sierra Pacific Industries (SPI) have been subjected to varying amounts of disturbance including clear cutting, planting, and herbicides, but *P. sudans* exhibits substantial tolerance to this disturbance (Tom Engstrom, SPI, pers. comm. 2019).

Summary

With 85 occurrences ranked as “excellent” or “good” by CNDDDB, *Penstemon sudans* has met the general level of meriting down ranking from California Rare Plant Rank 1B to 4 based on occurrence numbers alone (in general, California Rare Plant Rank 1B contains plants that are known from fewer than 50 occurrences ranked as “excellent” or “good” by CNDDDB). *Penstemon sudans* does not appear to be in a trend towards extirpation in California at this time, and therefore currently appears to not be eligible for state listing. Nevertheless, the condition of *P. sudans* occurrences after timber harvest and associated activities, along with information on the long-term trends and viability of populations in California, should continue to be documented and assessed in order to adequately determine the conservation status of this species.

Based on the available information, CNPS and CNDDDB recommend re-ranking *Penstemon sudans* from California Rare Plant Rank 1B.2 to 4.3. If occurrences of *P. sudans* in California begin to trend downward, and/or if threats to its survival increase, CNPS and CNDDDB will re-evaluate its status at that time.

Recommended Actions

CNPS: Change *Penstemon sudans* from CRPR 1B.2 to 4.3

CNDDDB: Change *Penstemon sudans* from G3 / S3 to G4 / S4

Current CNPS Inventory Record

Penstemon sudans Jones

Susanville beardtongue

Plantaginaceae

CRPR 1B.2

Lassen, Modoc, Plumas, Sierra

Nevada

Antelope Valley (571A) 3912063, Kettle Rock (604B) 4012026, Moonlight Peak (605A) 4012027, Little Mud Flat (620B) 4012042, Shaffer Mtn. (621A) 4012043, Litchfield (621B) 4012044, Johnstonville (622A) 4012045, Susanville (622B) 4012046, Diamond Mtn. (622C) 4012036, Roop Mountain (623A) 4012047, Pegleg Mtn. (623B) 4012048, Westwood East (623C) 4012038, Fredonyer Pass (623D) 4012037, Al Shinn Canyon (638A) 4012061, Shinn

Mtn. (638B) 4012062, Five Springs (638C) 4012052, Snowstorm Mtn. (639A) 4012063, West of Snowstorm Mtn. (639B) 4012064, Petes Valley (639C) 4012054, Karlo (639D) 4012053, Gallatin Peak (640C) 4012056, Tunnison Mtn. (640D) 4012055, Buckhorn Lake (656A) 4012081, Dodge Reservoir (656B) 4012082, Observation Peak (656C) 4012072, Termo (657C) 4012074, Snake Lake (673A) 4112021, Jess Valley (674A) 4112023, Cold Spring Mtn. (674D) 4112013

Great Basin scrub, lower montane coniferous forest (openings), pinyon and juniper woodland / volcanic, rocky, sometimes roadsides; elevation 1,200 – 2,425 meters.

Perennial herb. Blooms Jun-Jul (Aug-Sep)

Known in CA only from the vicinity of Susanville. Threatened by road maintenance, vehicles, and non-native plants. Possibly threatened by logging. See *Contributions to Western Botany* 8:37 (1898) for original description.

Revised CNPS Inventory Record

Penstemon sudans Jones

Susanville beardtongue

Plantaginaceae

CRPR 4.3

Lassen, Modoc, Plumas, Sierra

[Oregon](#), Nevada

Antelope Valley (571A) 3912063, Kettle Rock (604B) 4012026, Moonlight Peak (605A) 4012027, Little Mud Flat (620B) 4012042, Shaffer Mtn. (621A) 4012043, Litchfield (621B) 4012044, Johnstonville (622A) 4012045, Susanville (622B) 4012046, Diamond Mtn. (622C) 4012036, Roop Mountain (623A) 4012047, Pegleg Mtn. (623B) 4012048, Westwood East (623C) 4012038, Fredonyer Pass (623D) 4012037, Al Shinn Canyon (638A) 4012061, Shinn Mtn. (638B) 4012062, Five Springs (638C) 4012052, Snowstorm Mtn. (639A) 4012063, West of Snowstorm Mtn. (639B) 4012064, Petes Valley (639C) 4012054, Karlo (639D) 4012053, Gallatin Peak (640C) 4012056, Tunnison Mtn. (640D) 4012055, Buckhorn Lake (656A) 4012081, Dodge Reservoir (656B) 4012082, Observation Peak (656C) 4012072, Termo (657C) 4012074, Snake Lake (673A) 4112021, Jess Valley (674A) 4112023, Cold Spring Mtn. (674D) 4112013

Great Basin scrub, lower montane coniferous forest (openings), pinyon and juniper woodland / volcanic, rocky, sometimes roadsides; elevation 1,200 – 2,425 meters.

Perennial herb. Blooms Jun-Jul (Aug-Sep)

[Changed from 1B.2 to 4.3 on 2020-03-02.](#)

[More common than originally known. Potentially threatened by logging and road construction and maintenance, but reported to respond well to disturbance.](#) ~~Possibly threatened by vehicles, and non-native plants.~~ Possibly threatened by development, grazing, erosion, non-native plants, and vehicles. See *Contributions to Western Botany* 8:37 (1898) for original description.

Literature Cited

[CNDDDB] California Natural Diversity Database. 2019. RareFind 5 [Internet]. California Department of Fish and Wildlife [Government Version, November 20, 2019].

CNPS, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-02). California Native Plant Society, Sacramento. Website <http://www.rareplants.cnps.org> [accessed December 3, 2019].

[RPSAC] Rare Plant Scientific Advisory Committee and D. P. Tibor (ed.). 2001. *California Native Plant Society's Inventory of Rare and Endangered Plants of California*. Special Publication No. 1 (Sixth Edition). California Native Plant Society, Sacramento. 387 pp.