

Deleted from California Rare Plant Rank 4.3 of CNPS Inventory on 21 July 2020

Rare Plant Status Review: *Thermopsis gracilis*

Proposed Deletion from California Rare Plant Rank 4.3, G4 / S4

Kaitlyn Green (Chico State Enterprises), Aaron E. Sims (CNPS), and Katie Ferguson (CNDDDB)
28 May 2020

Background and Taxonomy

Thermopsis gracilis Howell is a perennial rhizomatous herb in the Fabaceae that has been included in the CNPS Inventory as a California Rare Plant Rank (CRPR) 4.3 species since the 5th edition (Skinner and Pavlik 1994). It is found in northern California, north to Oregon, and occupies a wide variety of habitats. Additional information on *T. gracilis* can be found in the CNPS Online Inventory at <http://www.rareplants.cnps.org/detail/1330.html>.

Distribution and Abundance

As a list 4 species, *Thermopsis gracilis* has not been formally mapped by the CNDDDB, making an actual occurrence count difficult to obtain. The 5th edition of the CNPS Inventory does not include USGS 7.5 minute quads for list 4 taxa, but *T. gracilis* is currently known from at least 36 quads. By examining the specimens and other recorded instances of *T. gracilis*, there are an estimated 81 occurrences (see location spreadsheet). While there is an expectation of inaccuracy in some or many of the coordinates provided for specimens of *T. gracilis*, as well as an expectation of duplicates, it is likely that this occurrence count is considerably less than the actual number of occurrences of this species. Within the location table there are 19 additional specimens and observations that are unaccounted for in the occurrence count due to a lack of coordinates. Additionally, CNDDDB has 382 unprocessed field survey forms for this species that were not mapped due to its watchlist status. With this unaccounted data, the occurrence count could potentially exceed 150 occurrences.

Thermopsis gracilis is also expected to be more common than what is reported from collections and field survey forms and is noted to thrive on disturbance. In 2018, Julie Kierstead indicated that Martin Lenz found a ‘carpet’ of *T. gracilis* at Ski Island, a heavily used recreation site in Shasta Lake. Julie went on to say that this species is “abundant and well distributed within its geographic range” and that it “thrives on disturbance, including wildfire and mechanical thinning”, indicating that the same is also true for *T. californica* var. *argentata*, a CRPR 4.3 taxon that is concurrently under review for deletion from the CNPS Inventory. In more recent personal communications, Martin Lenz (pers. comm. 2020) indicated *T. gracilis* is plentiful between the McCloud River and Trinity River from Shasta Lake to Weed, California.

Status and Threats

Thermopsis gracilis is indicated to be threatened by logging and road maintenance, and possibly threatened by non-native plants (CNPS 2020). While possible threats from non-native plants may continue, as a disturbance tolerant species, it may respond well to some disturbance associated with timber harvest activities and road maintenance. Furthermore, the recent wildfires and current high fire expectancy throughout the range of *T. gracilis* indicate it will continue to increase in population size and numbers due to its positive response to such disturbances.

Summary

Based on the available information, CNPS and CNDDDB recommend deleting *Thermopsis gracilis* from California Rare Plant Rank 4.3 of the CNPS Inventory and placing it on the Considered But Rejected list. *Thermopsis gracilis* appears to be trending towards an increased distribution and frequency, especially based on the current fire regime in the area it occupies, and no longer meets the criteria for limited distribution / watchlist status. If knowledge on the distribution, threats, and rarity status of *T. gracilis* changes in the future, we will re-evaluate its status at that time.

Recommended Actions

CNPS: Delete *Thermopsis gracilis* from CRPR 4.3

CNDDDB: Delete *Thermopsis gracilis* from G4 / S4 (change to G5 / S5)

Current CNPS Inventory Record

Thermopsis gracilis Howell

slender false lupine

Fabaceae

Synonym: *Thermopsis gracilis* var. *gracilis*

CRPR 4.3

Del Norte, Humboldt, Shasta, Siskiyou, Trinity

Oregon

Whitmore (645B) 4012168, Bella Vista (646B) 4012262, Project City (647A) 4012263, Shasta Dam (647B) 4012264, French Gulch (648B) 4012266, Roaring Creek (663B) 4012188, Montgomery Creek (663C) 4012178, Goose Gap (664A) 4012281, Bollibokka Mtn. (664B) 4012282, Minnesota Mtn. (664C) 4012272, Devils Rock (664D) 4012271, Hanland Peak (665A) 4012283, Lamoine (665B) 4012284, Bohemotash Mtn. (665C) 4012274, O'Brien (665D) 4012273, Damnation Peak (666A) 4012285, Trinity Center (666B) 4012286, Papoose Creek (666C) 4012276, Schell Mtn. (666D) 4012275, Covington Mill (667A) 4012287, Rush Creek Lakes (667C) 4012278, Trinity Dam (667D) 4012277, Big Bend (680C) 4112118, Yellowjacket Mtn. (681C) 4112212, Dunsmuir (682A) 4112223, Seven Lakes Basin (682B) 4112224, Tombstone Mtn. (682D) 4112213, Mumbo Basin (683A) 4112225, Tangle Blue Lake (683B) 4112226, Carrville (683C) 4112216, Whisky Bill Peak (683D) 4112215, French Camp Ridge (688A) 4112327, Scott Mountain (700C) 4112236, Holter Ridge (705C) 4112338, Johnsons (705D) 4112337, Smith River (740B) 4112482

Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest / sometimes roadsides; elevation 100-1720 meters.

Perennial rhizomatous herb. Blooms March to July.

Threatened by logging and road maintenance. Possibly threatened by non-native plants. A synonym of *T. macrophylla* var. *venosa* in TJM (1993). See *Erythea* 1:109 (1893) for original description, *Annals of the Missouri Botanical Garden* 81(3):714-742 (1994) for taxonomic treatment, and *Phytologia* 76(5):383-384 (1994) for combination that established varieties of *T. gracilis*.

Revised CNPS Inventory Record

Thermopsis gracilis Howell

Changed from 4.3 to CBR on 2020/MM/DD

Considered But Rejected: More common than originally known. Responds well to disturbance, including wildfire and mechanical thinning.

Literature Cited

[CNPS] California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 28 May 2020].

Skinner, M.W. and B.M. Pavlik (eds.). 1994. California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California. Special Publication No. 1 (Fifth Edition). California Native Plant Society, Sacramento. 338 pp.

Personal Communications

Kierstead, Julie. 2018, 2020. Botanist, Shasta-Trinity National Forest (retired). Email correspondence regarding conservation status of *Thermopsis gracilis*.

Lenz, Martin. 2018, 2020. Botanist, Shasta-Trinity National Forest. Email correspondence regarding conservation status of *Thermopsis gracilis*.