

Added to California Rare Plant Rank 4.3 of the CNPS Inventory on August 28, 2018**Rare Plant Status Review: *Eucephalus glabratus*
Proposed Addition to California Rare Plant Rank 4.3, G3 / S3**

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July 16, 2018

Changes made to the original document are in blue text.

Background and Taxonomy

Eucephalus glabratus (Greene) Greene is a perennial herb in the Asteraceae known from northwestern California, north to southwestern Oregon. It is included in the *Jepson eFlora* (Allen 2012), *Flora of North America* (Allen 2006), and is expected to be included in the *Flora of Oregon* (Jaster et al. 2017). *Eucephalus glabratus* was originally described as *Aster brickelliioides* var. *glabratus* in 1889 by Greene. The name was later changed by Greene in 1896 to *Eucephalus glabratus*. The names *Aster siskiyouensis*, described in 1913 by Nelson and Macbride, and *Eucephalus glandulosus*, described in 1931 by Eastwood, are recognized by Allen (2012) as synonyms, and are not currently in use. An additional synonym, *Aster glabratus*, described in 1941 by Blake, is considered illegitimate (Tropicos 2018).

According to Geraldine Allen (pers. comm. 2018), *Eucephalus* taxonomic treatment author for *The Jepson Manual* and *Oregon Flora Project*, the rayless/few-rayed asters of this group (including *E. glabratus*, *E. tomentellus*, and *E. vialis*) are taxonomically difficult, and are not clearly separated by ray number, and show considerable overlap in vegetative traits, as well as pubescence. *Eucephalus glabratus* is most similar to *E. tomentellus*, but is possibly differentiated in having leaves that are less glabrous on both sides (vs. leaves that are fairly glabrous adaxially, and mostly tomentose abaxially in *E. tomentellus*). *Eucephalus* is Greek for “good head”, which describes the involucre (Allen 2012). The specific epithet *glabratus* comes from the Latin word glabrous, which means without hairs (Charters 2017).

Ecology

Eucephalus glabratus occurs in rocky openings of lower and upper montane coniferous forests, mostly from an approximate elevation of 700 to 2,400 meters (Allen 2012). Allen (2012) reports a blooming period of July to October, but all records in California indicate it blooms only as late as September (Consortium of California Herbaria 2018). Plants that potentially grow in association with *E. glabratus* include *Aconogonon davisiae*, *Boechera suffrutescens*, *Carex multicaulis*, *Castilleja arachnoidea*, *Heuchera merriamii*, *Penstemon newberryi* var. *berryi*, *Picea breweriana*, *Quercus vacciniifolia*, *Silene grayi*, and *Senecio aronicoides* (Dana York pers. comm. 2018; JEPS123445, Consortium of California Herbaria 2018).

Distribution and Abundance

Eucephalus glabratus is currently known from approximately 27 occurrences in California, ranging throughout the Klamath and inner North Coast ranges (Consortium of California Herbaria 2018). Of its 27 occurrences, approximately 23-24 occur within USDA Forest Service lands: Klamath National Forest (NF) (8 occurrences), Shasta-Trinity NF (7), Six Rivers (6), Mendocino (1), Siskiyou (1), and possibly one occurrence in Lassen NF (Consortium of California Herbaria 2018; CPAD 2016). The remaining 3-4 occurrences are located on land of unknown ownership. The possible occurrence in Lassen NF, Shasta County (*Howe 4314*;

SD64430), is out of the ordinary range of other records, and should be verified for proper identification. The *Eucephalus* in this region that have been collected by Dean Taylor (pers. comm. 2018) have been annotated by Strother as *E. tomentellus*. Therefore, records of *E. glabratus* from the Cascade Ranges are suspect, and the record from Shasta County will not be treated as legitimate unless it is re-annotated and found to actually be *E. glabratus*.

Of its 27 occurrences, 21 (21/27, ~78%) are considered historical (occurrences not seen in over 20 years are considered historical by CNDDDB), and 12 occurrences have not been seen in over 50 years. This is fairly typical for plants proposed for new addition that are currently only known from herbarium collections. In response to questions on the rarity of *E. glabratus*, Shasta-Trinity NF Botanist, Julie Nelson (pers. comm. 2018) indicated that she has only come across this species once, and does not recall seeing it from several locations where other collections have been reported. Dean Taylor (pers. comm. 2018) indicated that he is only familiar with an Oregon specimen, but still thinks *E. glabratus* could be a California Rare Plant Rank 4 species due to the remote California sites. Dana York (pers. comm. 2018) indicated that he does not recall it being very common in the Castle Crags area in Siskiyou County. Population size and count information is limited for this taxon; one record indicates plants as being frequent (*Tracy 17043*; CCH 2018), another mentioned plants as scattered (Ingram 1102; CPNWH 2018), and a third record indicates the population as being local (*Nelson 2015-120*; CCH 2018).

Eucephalus glabratus appears to form a pattern of clustered occurrences that are possibly small in area, but distributed over a large area throughout the Klamath and inner North Coast ranges. The ruggedness and relative roadlessness of this plant's range suggests that additional populations could be discovered in appropriate habitats. A concerted effort to locate this species in the field has not yet been undertaken.

In Oregon, *E. glabratus* is known from approximately 34 collection records, mostly from Jackson and Josephine counties, with two records from Curry County, and a single record from Klamath County (CPNWH 2018).

Due to overlapping characters and difficulty in separating *E. glabratus* from *E. tomentellus*, determining the true distribution and abundance of *E. glabratus* is problematic, and it would be helpful to review all records of rayless/few-rayed species of this group in northern California to determine their identity (Allen, G. pers. comm. 2018). Also, morphological and molecular work on this group is currently being conducted by Geraldine Allen and Tom Kaye, and their findings so far indicate intergradation that matches what is being seen in the morphological traits, giving indication that it might make sense to treat all of the rayless/few flowered forms as varieties of a single species in the future (Allen, G. pers. comm. 2018).

Status and Threats

Eucephalus glabratus is currently unranked (SNR) in Oregon (NatureServe 2018), and is not referenced in the Oregon Biodiversity Information Center (ORBIC 2016). There are currently no reported threats to *E. glabratus* in California or Oregon, but this is typical for plants known only from collection records.

Summary

Based on the available information, CNPS and CNDDDB recommend adding *Eucephalus glabratus* to California Rare Plant Rank 4.3 of the CNPS Inventory. If knowledge on the

[taxonomy](#), distribution, threats, and rarity status of *E. glabratus* changes in the future, we will re-evaluate its status at that time.

Recommended Actions

CNPS: Add *Eucephalus glabratus* to CRPR 4.3

CNDDDB: Add *Eucephalus glabratus* to G4 / S3

Draft CNPS Inventory Record

Eucephalus glabratus (Greene) Greene

Siskiyou aster

Asteraceae

CRPR 2B.3

Del Norte, Humboldt, Mendocino, ~~Shasta~~, Siskiyou, Trinity

Oregon

Hull Mountain (581C) 3912258, North Yolla Bolly W (613B) 4012228, Black Lassic (634D) 4012335, Board Camp Mtn. (652B) 4012366, Mt. Hilton (668A) 4012381, Thurston Peaks (668B) 4012382, Willow Creek (670B) 4012386, ~~Burney Falls (679C) 4112116~~, Dunsmuir (682A) 4112223, Seven Lakes Basin (682B) 4112224, Trinity Mtn. (686C) 4112314, Mount Eddy (699C) 4112234, Scott Mountain (700C) 4112236, South China Mtn. (700D) 4112235, Etna (701B) 4112248, English Peak (702B) 4112342, Marble Mountain (719C) 4112352, Polar Bear Mtn. (738A) 4112385, Broken Rib Mtn. (738B) 4112386, Devils Punchbowl (738C) 4112376, Preston Peak (738D) 4112375, Gasquet (739C) 4112378, Caribou Lake (864C) 4112218

Lower montane coniferous forest, upper montane coniferous forest / rocky openings; elevation 120-2705 meters.

Perennial herb. Blooms July to September.

Occurrences are few and possibly local, but widely distributed; needs field surveys. [Difficult to differentiate from *E. tomentellus* and *E. vialis*; needs further study.](#) See *Pittonia* 2(7B): 17 (1889) for original description, and *Pittonia* 3(14B): 56 for revised nomenclature (1896).

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