

**Changed from California Rare Plant Rank 4.3 to 3.3 in the CNPS Inventory on August 29, 2013**

**Rare Plant Status Review: *Arabis repanda* var. *greenei*  
Proposal to ~~Keep as~~ **Change from California Rare Plant Rank 4.3 to 3.3, G5T2T3 / S2S3 to G5T2T3Q / S2S3****

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Changes made to the original document appear in blue text.

### Background

*Arabis repanda* var. *greenei* is a perennial herb in the Brassicaceae that has been included in the CNPS Inventory since 2001 (6<sup>th</sup> Edition). It is mostly found on the eastern slope of the Sierra Nevada, but may sometimes be found nearby on the western side (Taylor 2010). It was included in *The Jepson Manual* (TJM 1993) but was treated as a synonym of *Boechea repanda* in *The Jepson Manual, Second Edition* (TJM 2) and the *Flora of North America* (FNA). The FNA treatment notes that “the form recognized as var. *greenei* appears to be a growth response to ecologically marginal habitats”. Al-Shehbaz (2003) transferred most American species of *Arabis* to *Boechea*, including *A. repanda*, but not var. *greenei*. TJM 2 and FNA treatment author I. Al-Shehbaz (pers. comm. 2012) synonymized the two varieties based on a review of herbarium specimens. Taylor (2010), however, maintained the varieties, noting that var. *greenei* has entire to lobed leaves (vs. toothed in var. *repanda*) that are 1.5x as long as wide (vs. 2-3x in var. *repanda*), and has a smaller stature at <3 dm (vs. >3 dm in var. *repanda*). Taylor’s (pers. comm. 2012) decision to recognize *Arabis repanda* var. *greenei* (as *Boechea repanda* var. *greenei* in Taylor 2010) was based on the largely allopatric distribution of the two taxa, with var. *greenei* occurring at higher elevations and mostly on the eastern slope of the Sierra Nevada, and var. *repanda* occurring mostly to the west of var. *greenei*.

Currently, there are only nine specimens listed as *A. repanda* var. *greenei* in the Consortium of California Herbaria (CCH 2013). However, many specimens were never identified to variety, and others were annotated to *B. repanda* by I. Al-Shehbaz and M. Windham. There are likely more than nine occurrences of *A. repanda* var. *greenei*, as the CCH (2013) includes 121 specimens of *B. repanda* from counties where var. *greenei* has been reported (Inyo, Madera, Mono, and **Tulare** ~~Tuolumne~~ counties) (Calflora 2013, CCH 2013). Also, much of the Eastern Sierra Nevada remains under-explored botanically, so additional occurrences could be found. We recommend botanists to conduct field surveys throughout its potential habitat, and also to review specimens of *B. repanda* from the Eastern Sierra Nevada and annotate them to variety, if possible, so that the status of both varieties can be better understood.

Further taxonomic research on this group is underway; it does not focus on variation within *B. repanda*, but rather on the placement of the species at the generic level. The recent genetic work will placed *B. repanda* into a new genus, *Yosemitea* (M. Windham

pers. comm. 2012; [Alexander et al. 2013](#)). If the combination *Y. repanda* var. *greenei* is made in the future, CNPS and CNDDDB will evaluate it as a non-substantive name change.

Based on the available information, CNPS and CNDDDB recommend [changing](#) ~~maintaining~~ *Arabis repanda* var. *greenei* ~~from as a~~ California Rare Plant Rank (CRPR) 4.3 ~~to CRPR 3.3 taxon~~ in the CNPS Inventory. Its allopatric distribution and morphological distinctiveness suggest that it [may](#) warrants taxonomic recognition. [However, the possibility of it just being a phenotypic response to the environment is an equally valid hypothesis, and these hypotheses need to be tested prior to coming to a conclusion about the taxonomic validity of \*A. repanda\* var. \*greenei\*.](#)

### Recommended Actions

CNPS: ~~Keep as 4.3~~ [Change to 3.3](#)

CNDDDB: ~~Keep as~~ [Change to G5T2T3Q / S2S3](#)

### Current CNPS Inventory Record

Available online at: [www.rareplants.cnps.org/detail/1296.html](http://www.rareplants.cnps.org/detail/1296.html)

### Revised CNPS Inventory Record

*Arabis repanda* Wats. var. *greenei* Jeps.

Greene's rockcress

Brassicaceae

CRPR ~~4.3~~ [3.3](#)

Inyo, Madera, Mono, Tulare

Haiwee Pass (306A) 36118B1, Templeton Mtn. (329C) 36118C2, Olancha (329D) 36118C1, Aberdeen (373A) 36118H3, Mt. Pinchot (373B) 36118H4, Coyote Flat (393B) 37118B4, Mt. Thompson (394A) 37118B5, Mt. Morgan (414B) 37118D6, Mt. Abbot (415A) 37118D7, Toms Place (433C) 37118E6, Bloody Mtn. (434C) 37118E8, Crestview (452C) 37118G8, June Lake (453D) 37119G1

Subalpine coniferous forest, upper montane coniferous forest / granitic, talus, rocky or sandy; elevation 2345 – 3600 meters.

Perennial herb. Blooms June to August.

[Previously CRPR 4.3; move to CRPR 1B or 4? May be taxonomically distinct or just a phenotypic response to the environment; needs further study.](#) A synonym of *Boecheera repanda* in *TJM 2*; *B. repanda* was recently placed into the genus *Yosemitea*, but [varieties were not recognized.](#) See *Flora of California* 2(2):63 (1936) by W.L. Jepson for original description, and *Novon* 13:388 (2003) and *Flora of the Yosemite Sierra* pp. 102 (2010) by D.W. Taylor for taxonomic treatments, and *Systematic Botany* 38(1):192-209 (2013) for placement of *B. repanda* into the genus *Yosemitea*.

### Literature Cited

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