

**Changed name of *Swertia albomarginata* to *Frasera albomarginata* var. *albomarginata*, and changed from California Rare Plant Rank 4.3 to 2B.2 in the CNPS Inventory on December 10, 2013**

**Rare Plant Status Review: *Swertia albomarginata*  
Proposed Name Change to *Frasera albomarginata* var. *albomarginata*  
Proposed Rank Change from 4.3, G5 / S3 to 2B.2 ~~2B.3~~, G5T5 / S3  
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October 31, 2013**

Changes made to the original document appear in blue text.

### **Background**

*Swertia albomarginata* is a perennial herb in the Gentianaceae that is known from Desert Mountains of Inyo and San Bernardino counties in California, to Colorado. It has been included as a California Rare Plant Rank (CRPR) 4.3 species in the CNPS Inventory since the 6th Edition (RPSAC and Tibor 2001). Its genus was recently changed back to *Frasera* in *The Jepson Manual, Second Edition* (Baldwin 2012; available online at: [http://ucjeps.berkeley.edu/cgi-bin/get\\_IJM.pl?tid=59220](http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=59220)), which also recognizes two varieties within the species; var. *albomarginata* and var. *induta* (to eliminate confusion, *Swertia albomarginata* will be referred to as *Frasera albomarginata* var. *albomarginata* for the remainder of this document). *Frasera albomarginata* var. *albomarginata* is distinguished from var. *induta* in having glabrous (versus puberulent) inflorescence branches and calyx lobes, and a nectary pit that is two-lobed at the tip (versus more or less truncate or notched at the tip in var. *induta*). It also differs in range; var. *induta* is restricted to the Clark Mountains of California and southern Nevada, whereas var. *albomarginata* is known from other desert mountain ranges, excluding the Clark Mountains. *Frasera albomarginata* var. *induta* is an apparently rare taxon that is concurrently being evaluated for addition to CRPR 1B of the CNPS Inventory. At the same time, since the Clark Mountain Range in California no longer includes var. *albomarginata*, it is apparently rarer than previously known. *Frasera albomarginata* var. *albomarginata* is known to flower in California mostly from April to June, but has been observed flowering as late as September (Consortium of California Herbaria 2013; CalPhotos 2013).

Although currently a CRPR 4 taxon, *F. albomarginata* var. *albomarginata* is presently only known from approximately twelve occurrences in California, over half (seven) of which are considered historical (occurrences not “seen” in the past twenty years are considered historical by the CNDDDB), with four of its twelve occurrences having not been re-documented in over fifty years. However, its high number of historical occurrences may not be significant; there has been little or no land use change in its area of occupancy, so the probability of the plants still being present is considered to be high. *Frasera albomarginata* var. *albomarginata* is mostly known the New York Mountains (particularly in the vicinity of Keystone Canyon), but has also been documented in Mid Hills, and the Pinto and Providence Mountains (Calflora 2013; Consortium of California Herbaria 2013). It is also known from two historical

occurrences in Death Valley National Park, from Last Chance Mountains. However, it is possible that the records from the Last Chance Range are actually *F. albomarginata* var. *induta*, as that region has a strong affinity to the Spring Mountains where var. *induta* is only known to occur (J. Andre pers. comm. 2013). One of the populations in the Last Chance Range was photographed just over 10 years ago by D. York (pers. comm. 2013), who is going to try and locate the images to determine which variety occurs there. In the meantime, however, we intend to include them as var. *albomarginata* until/if determined otherwise. Another record, documented from Mt. San Jacinto, Riverside County (*Bruff 543, RSA704855*) (Consortium of California Herbaria 2013) is well out of the expected range of this taxon, and on a recent visit to RSA, the specimen could not be located (D. Slakey pers. comm. 2013). A search for the genus *Frasera* from "San Jacinto" in the Consortium of California Herbaria (2013) yields 25 records, all of which are *F. parryi*, and it is therefore expected that the collection by Bruff was originally a misidentification of *F. parryi* (D. Slakey pers. comm. 2013). *Frasera albomarginata* var. *albomarginata* is mostly known from protected federal lands. Nine of its occurrences are known from Mojave National Preserve, two are from Death Valley National Park, and a single occurrence is known from private land, or land with an unknown ownership. Although the records of *F. albomarginata* var. *albomarginata* is scarce, it is reasonable to assume that there are more populations of it out there; the paucity of collections is possibly due to the low density of botanical exploration throughout its range. This suggests that *F. albomarginata* var. *albomarginata* should remain as a CRPR 4 taxon; however, additional surveys are necessary to affirm or deny this hypothesis.

Threats to *F. albomarginata* var. *albomarginata* are not known at this time. Given that the majority of its occurrences are on protected federal lands, threats are expected to be minimal. Also, since *F. albomarginata* var. *albomarginata* is known from rocky or gravelly areas at generally high elevations in the mountains, solar energy development is not expected to be a significant threat. However, due to heavy grazing pressure in Mojave National Preserve (J. Andre pers. comm. 2013), and the lack of a grazing management plan there (T. Thomas pers. comm. 2013), *F. albomarginata* var. *albomarginata* is possibly threatened by grazing.

Based on the available information, CNPS and CNDDDB recommend changing the name of *Swertia albomarginata* to *Frasera albomarginata* var. *albomarginata*, and re-ranking it from CRPR 4.3 to 2B.2 ~~2B.3~~ in the CNPS Inventory. If additional information becomes available in the future which might constitute a change in the rarity status of *F. albomarginata* var. *albomarginata*, CNPS and CNDDDB will re-evaluate its status at that time.

### Recommended Actions

CNPS: Change name of *Swertia albomarginata* to *Frasera albomarginata* var. *albomarginata*; change from CRPR 4.3 to 2B.2 ~~2B.3~~

CNDDDB: Change name of *Swertia albomarginata* to *Frasera albomarginata* var. *albomarginata*; change from G5 / S3.3 to G5T5 / S3

### Current CNPS Inventory Record

*Swertia albomarginata* (Wats.) Kuntze

desert green-gentian

Gentianaceae

CRPR 4.3

Arizona, Colorado, Nevada, Utah

Inyo, San Bernardino

Pinto Valley (200A) 35115B3, Ivanpah (225D) 35115C3, Clark Mtn. (249D) 35115E5

Pinyon and juniper woodland (rocky or gravelly); elevation 1370-2315 meters.

Perennial herb. Blooms May-August.

In review. See *Botany of the King Exploration*, p. 280 (1871) for original description, and

*American Midland Naturalist* 21:12 (1991) for taxonomic treatment.

(Available online at: <http://www.rareplants.cnps.org/detail/651.html>)

### Revised CNPS Inventory Record

*Frasera albomarginata* S. Watson var. *albomarginata*

desert green-gentian

Gentianaceae

CRPR [2B.2](#) ~~2B.3~~

Arizona, Colorado, Nevada, Utah

Inyo, San Bernardino

Pinto Valley (200A) 3511523, Mid Hills (200B) 3511524, Columbia Mtn. (200C)

3511514, Cima (201A) 3511525, Ivanpah (225D) 3511533, Last Chance Mtn. (410C)

3711736

Pinyon and juniper woodland (rocky or gravelly); elevation 1370-2315 meters.

Perennial herb. Blooms April-June (September).

Previously CRPR 4.3; rarer than originally thought. Known in CA mostly from the New

York Mtns. [Possibly threatened by grazing](#). See *Botany of the King Exploration*, p. 280

(1871) for original description.

### Literature Cited

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