

Added to Rank 4.3 in the CNPS Inventory on September 4, 2012**Rare Plant Status Review: *Eriastrum sparsiflorum*****Proposed New Add to Rank 4.3, G3G4 / S3?**

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Changes made to the original document appear in blue text.

Background

Eriastrum sparsiflorum is an annual herb in the Polemoniaceae family known from California's Great Basin Desert and extending into western Nevada. It is included in *The Jepson Manual, Second Edition (TJM 2)*; available online at http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=24597) and *The Jepson Manual* (1993). The *Flora of North America* treatment for Polemoniaceae is not yet available. It was originally described as *Gilia sparsiflora* by Eastwood (1902) and has undergone several subsequent name changes (see the "literature review" section on the attached spreadsheet). It was given its current name by Mason (1945), although subsequent treatments have treated it as *E. sparsiflorum* var. *sparsiflorum*, including var. *wilcoxii* within the species as well (*Intermountain Flora Vol. 4, Flora of the Pacific Northwest, Vascular Plants of the Pacific Northwest Vol. 4*). *Eriastrum wilcoxii* is now treated as a distinct species (TJM 2). *Eriastrum sparsiflorum* has long been considered common, but a recent review of herbarium material by Gowen (2008) led to a re-circumscription of the species. The majority of taxonomic treatments of *E. sparsiflorum* have been based on specimens other than A. Eastwood's type specimen (CAS516; Gowen 2008), resulting in a broad taxonomic concept and circumscription. Gowen (2008) described *Eriastrum signatum*, which accounts for the majority of specimens previously identified as *E. sparsiflorum* (and the majority of specimens currently labeled as *E. sparsiflorum* in the Consortium of California Herbaria; D. Gowen pers. comm. 2011). *Eriastrum signatum* is most easily distinguished from *E. sparsiflorum* by its dark maroon spot near the base of each corolla lobe and the **general** lack of glandular hairs on the plant ("*E. signatum* actually does have some glandular hairs, but they are smaller and much more sparse, such that they are not readily apparent"; S. De Groot pers. comm. 2012). *Eriastrum signatum* and *E. sparsiflorum* co-occur at several sites in California and Nevada, but there is no evidence of hybridization (Gowen 2008) **or even intermediacy** (S. De Groot pers. comm. 2012). *Eriastrum sparsiflorum* has a minute glandular pubescence, a character shared with *E. pluriflorum* and *E. filifolium* ~~ssp.~~ *sapphirinum*, but those taxa differ from *E. sparsiflorum* in several other characters, such as degree of stamen exertion and the location of the stamen-corolla attachment (Gowen 2008, TJM 2). **Another way to tell these two species apart is by the number of flowers; *E. sparsiflorum* usually has small heads and few flowers, while *E. pluriflorum* has larger heads and more flowers, and also a longer tube** (S. De Groot pers. comm. 2012). *Eriastrum sparsiflorum* blooms from May to September.

Eriastrum sparsiflorum is found in Great Basin scrub habitats, most often on granitic, sandy soils (Consortium of California Herbaria [CCH] 2012). **It is also known from Mojave Desert scrub, Joshua tree "woodland", Pinyon and juniper woodland,**

cismontane woodland, and montane chaparral; usually in open, sunny areas (S. De Groot pers. comm. 2012). *Eriastrum signatum*, in contrast, does not appear to be restricted to this soil type (Gowen 2008). *Eriastrum sparsiflorum* is found between 4080 1075 and 4995 1710 meters in elevation within California (D. Gowen pers. comm. 2012, S. De Groot pers. comm. 2012).

There are currently about 22 known occurrences of *E. sparsiflorum* in California. Although there are 200 combined records of *E. sparsiflorum* and *E. sparsiflorum* ssp. *sparsiflorum* in the Consortium, the vast majority of those plants actually belong to *E. signatum* or to other taxa (D. Gowen pers. comm. 2011). The 22 occurrences were calculated based on the specimens of *E. sparsiflorum* listed by D. Gowen (2008), specimens from the UC and Jepson herbaria that had been annotated by D. Gowen (pers. comm 2011), specimens from S. De Groot (pers. comm. 2012), and a Calphotos (2012) record by L. Blakely. Specimens from other herbaria should be reviewed in order to identify any potential additional occurrences. Of the 22 known occurrences, 44 9 are historical (occurrences not documented in the past 20 years are considered historical by the CNDDDB); however, in general, plants have recently been found in the historical occurrences, including the type locality, have been recently documented (D. Gowen pers. comm. 2012), and therefore should not be documented as historical.

Eriastrum sparsiflorum is known from at least three specimens from eastern western Nevada, in Ormsby Carson City and Douglas County Counties (Gowen 2009, J. Morefield pers. comm. 2012). Annotations of more Nevada specimens would be needed in order to better determine its overall abundance in Nevada (and in California as well). NatureServe (2012) lists the species as also occurring in Idaho, Oregon, and Utah, but that is likely based on the old, broader concept of the species.

~~Threats to *Eriastrum sparsiflorum* are not currently known.~~ *Eriastrum sparsiflorum* is possibly threatened by development or habitat loss, and some occurrences might be impacted by road or trail maintenance (S. De Groot pers. comm. 2012). However, with many occurrences distributed fairly widely throughout California's Great Basin Desert, and the likelihood that future herbarium work and field surveys will lead to the discovery of additional populations, it should be considered not highly-threatened.

Based on the available information, CNPS and CNDDDB recommend that *Eriastrum sparsiflorum* be added to California Rare Plant Rank 4.3. If current records in California and Nevada are later found to be an under-representation of its actual distribution and frequency, it will be re-evaluated by CNPS at that time.

Recommended Actions

CNPS: Add to CNPS 4.3

CNDDDB: Add to CNDDDB G3G4 / S3?

Please review the draft CNPS Inventory record below, respond Yes or No on the proposal to add this species to the Inventory and CNDDDB, and provide any edits/comments. If responding NO, please provide supporting information.

Draft CNPS Inventory Record

Eriastrum sparsiflorum (Eastw.) H. Mason

few-flowered eriastrum

Polemoniaceae

Rank 4.3

Alpine, Fresno, Inyo, Kern, Lassen, Mono, Plumas, Tulare

Nevada

Benton (450C) 3711874, Bishop (413C) 3711834, Cactus Peak (305D) 3611717, Camp Nelson (308A) 3611825, Cannell Peak (284D) 3511873, Constantia (586A) 3912081, Crag Peak (306C) 3611812, Hockett Peak (307B) 3611824, Lamot Peak (283D) 3511871, Poleta Canyon (413D) 3711833, Sentinel Peak (308D) 3611815, The Sphynx (374D) 3611875, Walker Pass (259A) 3511861, Woodfords (522D) 3811977

Great Basin scrub, [Mojave Desert scrub](#), [cismontane woodland](#), [pinyon and juniper woodland](#), [Joshua tree "woodland"](#), [chaparral](#) / granitic, sandy, usually openings; elevation ~~4080—1995~~ [1075 -1710](#) meters.

Annual herb. Blooms May – September.

[Possibly threatened by development, habitat loss, and road and trail maintenance.](#)

Previously included *E. signatum*; a common plant that was formerly undescribed. See *Proceedings of the California Academy of Sciences* III 2(9):291-292 (1902) for original description, *Madroño* 8(3):86-87 (1945) for taxonomic treatment, and *Madroño* 55(1):82-87 (2008) for new circumscription.