

**Re-ranked *Eriastrum brandegeae* from California Rare Plant Rank 1B.2 to 1B.1, and re-ranked *Eriastrum tracyi* from California Rare Plant Rank 1B.2 to 3.2 in the CNPS Inventory on August 23, 2012**

**Rare Plant Status Review: *Eriastrum brandegeae* and *Eriastrum tracyi***  
**Proposed rank change of *E. brandegeae* from 1B.2, G3 / S3 to 3.1 1B.1, G1Q / S1**  
**Proposed rank change of *E. tracyi* from 1B.2, G1Q / S1.1 to 3.2, G3Q / S3**  
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## **Background**

*Eriastrum brandegeae* and *Eriastrum tracyi* are both CNPS Rank 1B.2 plants in the Polemoniaceae family that have been included in the Inventory since 1974 (First Edition). Additionally, *E. tracyi* is state-listed as Rare in California. Both taxa are included in *The Jepson Manual, Second Edition (TJM 2)*; available online at [http://ucjeps.berkeley.edu/cgi-bin/get\\_IJM.pl?tid=24588](http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=24588) and [http://ucjeps.berkeley.edu/cgi-bin/get\\_IJM.pl?tid=24598](http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=24598), respectively). In *The Jepson Manual* (1993), *E. tracyi* was considered a synonym of *E. brandegeae*. The *Flora of North America* treatment for Polemoniaceae is not yet available. Considerable taxonomic uncertainty has surrounded this group since both species were first described by Mason (1945). Harrison (1959), for example, was hesitant to recognize *E. tracyi*. The two species are separated by several subtle characters, with *E. brandegeae* having slightly longer stamens, longer filaments relative to anther size, and narrower corolla lobes than those of *E. tracyi* (*TJM 2*). Specimens and garden-grown plants from the type localities (near Borax Lake, Lake County and in Hayfork Valley, Trinity County for *E. brandegeae* and *E. tracyi*, respectively) fit the descriptions of *E. brandegeae* and *E. tracyi* well, but many populations from other geographic areas do not clearly align with either species. Several distinct forms have been found, but they do not form a clear gradation from one species to the other, and represent *E. brandegeae*, *E. tracyi*, or an undescribed relative of them (Gowen 2008).

Some clarification on the currently-accepted circumscriptions of both species is helpful in understanding the difficult taxonomy. In addition to plants from near the type locality in Trinity County, additional populations from the southwestern Sierra, Santa Clara County, and northeastern Shasta County have been attributed to *E. tracyi* (Gowen 2008). Garden-grown plants from the southwestern Sierra and the type locality of *E. tracyi* were very similar (but with some minor variation), resulting in the treatment of these plants as *E. tracyi* (D. Gowen pers. comm. 2012). A record of *Eriastrum brandegeae* in the CNDDB (EO# 58) from Contra Costa County actually belongs to an undescribed taxon and should be removed from the CNDDB (D. Gowen pers. comm. 2012). In the area between the two type localities, identification of plants to either *E. tracyi* or *E. brandegeae* is particularly troubling. These plants vary in several characters, the most conspicuous being flower color (D. Gowen pers. comm. 2012). **Plants from the east side of East Park Reservoir in the inner coast ranges of Colusa County are intermediate, especially in flower, and are fairly common on eroding mudstone outcrops within juniper scrub and chaparral (A. Howald pers. comm. 2012).**

The plants growing at and near the type locality of *E. brandegeeeae*, near Borax Lake, may be the only representatives of true *E. brandegeeeae*, making them of particular conservation concern (D. Gowen pers. comm. 2012). [This population is on vacant lots within a development of houses and trailers, and is in high danger of extirpation \(D. Gowen pers. comm. 2012\).](#) Other populations from the southern Cascades in Lassen National Forest have recently been discovered, but these have not been determined to the specific level (J. Nelson pers. comm. 2012).

Clearly, more information is needed in order for us to have a better understanding of the taxonomy and distribution of *E. brandegeeeae*, *E. tracyi*, and any other taxa that may be delimited from this group in the future. Molecular work on the group may be particularly helpful in advancing our understanding of these plants. Given the current state of knowledge on these taxa, CNPS and CNDDDB recommend that both [Eriastrum brandegeeeae be moved from 1B.2 to 1B.1, and Eriastrum tracyi be moved from Rank 1B.2 to Rank 3.](#) Given that *E. brandegeeeae* may be limited to only a few occurrences and that much of its habitat near Clear Lake may have been lost to development (D. Gowen pers. comm. 2012, B. Malloch pers. comm. 1983), it should be of particular conservation concern, so a threat ranking of .1 is proposed. *Eriastrum tracyi* is currently thought to be more widespread, so a threat ranking of .2 is proposed.

### Recommended Actions

**CNPS:** Re-rank *Eriastrum brandegeeeae* from 1B.2 to ~~3.4~~ [1B.1](#);

Re-Rank *Eriastrum tracyi* from 1B.2 to 3.2

**CNDDDB:** Re-rank *Eriastrum brandegeeeae* from G3 / S3 to G1Q / S1;

Re-rank *Eriastrum tracyi* from G1Q / S1.1 to G3Q / S3

### Revised CNPS Inventory Records

*Eriastrum brandegeeeae* H. Mason

Brandegee's eriastrum

Polemoniaceae

Rank ~~3.4~~ [1B.1](#)

Lake

Clearlake Highlands (533B) 3812286, Kelseyville (534A) 3812287, The Geysers (534D) 3812277

Chaparral, cismontane woodland / volcanic, sandy; elevation 425 - 840 meters.

Annual herb; blooms April – August.

~~Previously on List 1B.2.~~ Most reliable occurrence is at and near type locality near Borax Lake, which may include the only true representatives of this taxon. Plants from COL, GLE, TEH, and southern SHA cos. may be attributable to *E. brandegeeeae*, *E. tracyi* or undescribed taxa; needs study. [Seriously threatened at its type locality by development.](#) Also threatened by grazing, competition, vehicles, recreation, ~~development,~~ and road maintenance. [Includes \*E. traceyi\* in TJM \(1993\); does not include \*E. tracyi\* here.](#) See *Madroño* 8(3):88-89 (1945) for original description, and *Madroño* 55(1):82-87 (2008) for additional taxonomic information.

*Eriastrum tracyi* H. Mason

Tracy's eriastrum

Polemoniaceae

Rank 3.2

Fresno, Kern, Santa Clara, Shasta, Stanislaus, Trinity, Tulare, Colusa?, Glenn?, Tehama?

Alta Sierra (261A) 3511865, Auberry (397C) 3711914, Burney Falls (679C) 4112116, Cross Mountain (236C) 3511832, Day (678A) 4112123, Democrat Hot Springs (261C) 3511856, Dubakella Mtn. (632B) 4012342, Emerald Mtn. (237D) 3511833, Eylar Mtn. (426A) 3712145, Fairview (284B) 3511884, Hayfork (650C) 4012352, Hogback Ridge (661B) 4012184, Hume (375C) 311878, Hyampom (651C) 4012354, Hyampom Mtn. (651B) 4012364, Isabel Valley (426D) 3712135, Johnsondale (285A) 3511885, Lake Isabella South (260C) 3511854, Miracle Hot Springs (261D) 3511855, Mt. Boardman (425B) 3712144, Mt. Stakes (425C) 3712134, Pine Mountain (262D) 3511857, Solyo (444D) 3712153, Tehachapi North (212B) 3511824, Tehachapi South (212C) 3511814, Bartlett Springs (548B)? 3912226, Beegum E (631D)? 4012237, Beegum W (631C)? 4012238, Chanchelulla (631B)? 4012248, Chickabally Mtn. (630C)? 4012236, Cold Fork (612B)? 4012226, Elk Creek (580D)? 3912255, Fouts Springs (564C)? 3912236, Gilmore Peak (564D)? 3912235, Lodoga (563C)? 3912234, Lowrey (612D)? 4012215, Newville (596D)? 3912275, North Yolla Bolly E (613A)? 4012227, Paskenta (596A)? 3912285, Raglin Ridge (612C)? 4012216, Stonyford (564A)? 3912245

Chaparral, cismontane woodland; elevation 315 – 1645 meters.

Annual herb. Blooms May – July.

~~Move to List 4?~~ Previously on List 1B.2. Plants from COL, GLE, TEH, and southern SHA cos. may be attributable to *E. brandegeae* or undescribed taxa. Plants from the southern Sierra differ slightly from northern California plants and may belong to an undescribed taxon; needs study. Threatened by vehicles, competition, development, grazing, and road maintenance. A synonym of *E. brandegeae* in *TJM* (1993). See *Madroño* 8(3):87 (1945) for original description, and *Madroño* 55(1):82-87 (2008) for additional taxonomic information.