

**Rare Plant Status Review: *Erythranthe bergeri***  
**Proposed Addition to California Rare Plant Rank 3, G1Q / S1**  
Molly S. Wiebush (CNPS), Aaron E. Sims (CNPS), and Katie Ferguson (CNDDDB)

**Forum Comment Summary After First Call May 29, 2022**

- Naomi Fraga – Supports addition to CRPR 3
- Jim Morefield – Supports addition to 1B
- Ann Howald – Supports addition to 1B.1

**After Final Call June 13, 2022**

- Naomi Fraga – Strongly questions the validity of this species and thinks it is most likely *E. nasuta*. Criticizes lack of due diligence with regard to herbarium specimen review and field work. Is not planning on including it in Jepson eFlora update. Does not think article was reviewed properly.
- Vince Schiedt – Supports addition to 1B, because he does not want rank 3 to be used.
- Jim Andre – Nomination seems rushed. Does not favor CRPR 3. CBR may be appropriate while due diligence on taxonomy is completed.
- Martin Oliver – wanted to point out that the litter and target shooting mentioned are not on BLM land. Most likely they are on LADWP land.
- Len Lindstrand – Recommends CBR, because of uncertain taxonomy. Doesn't care for rank 3.
- Naomi Fraga – points out that this is a validly published taxon, just not an accepted taxon at this time.

**CNPS & CNDDDB**

- Aaron Sims – Add to rank 3
- Katie Ferguson – Add to rank 3 because of taxonomic ambiguity, or we could postpone due to lack of due diligence in documenting range, but we do not yet have a postpone rank to use. Therefore, favors adding to rank 3.



## New Topics

Forum Rare Plant Status Review

# Erythranthe bergeri

This topic is closed.

X

**edean**

Administrator

Site Admin

| Join Date: Apr 2021 | Posts: 100

## Erythranthe bergeri

05-05-2022, 01:44 PM

#1

### Rare Plant Status Review: *Erythranthe bergeri*

#### Proposed Addition to California Rare Plant Rank 3, G1Q / S1

Molly S. Wiebush (CNPS), Aaron E. Sims (CNPS), and Katie Ferguson (CNDDDB)

5 May 2022

This status review is being expedited through an agreement between the California Native Plant Society and the Center for Plant Conservation (CPC), with contributions from the state of California, CPC, and the California Plant Rescue initiative. Aside from being advanced as part of this agreement, the process, content, and information provided herein is not altered, modified, or developed differently in any way or form compared to other status reviews developed by CNPS.

### Background and Taxonomy

*Erythranthe bergeri* Nesom is an annual herb in Phrymaceae that is known only from northwestern Inyo County, California. Described in 2020, it is not included in *The Jepson Manual* (Thompson 1993), the *Jepson eFlora* (Fraga 201, or *Flora of North America North of Mexico* (Nesom and Fraga 2019). It was first collected in 2020 (*Berger s.n.*, RSA) (Nesom and Berger 2020).

It is most similar to *Erythranthe nasuta*, “but different in its evenly and densely hirtellous vestiture (stems, leaves, calyx), connate-perfoliate distal leaves, the distalmost pairs forming cuplike structures with upturned margins, leaf margins shallowly and irregularly dentate-serrate, and its calyces with raised-thickened ridges and membranous inter-ridge areas” (Nesom and Berger 2020). There are no records of *E. nasuta* in Inyo County (Calflora 2022, CCH2 2022). The connate-perfoliate leaves of *E. bergeri* distinguish it from most other *Erythranthe* species; “[t]he only other species of *Erythranthe* with connate-perfoliate leaves is *E. glaucescens* [...], which is restricted to Butte and Tehama counties (California) and is characterized by broadly bilabiate, herkogamous-allogamous flowers and glabrous-glaucous vestiture” (Berger and Nesom 2020).

*Erythranthe bergeri* is in *Erythranthe* section *Simiola*, a complex section with poorly understood species boundaries (Fraga pers. comm. 2022). Herbarium records have not been reviewed for this

species (Nesom pers. comm. 2022). Searches for additional populations will be done later this year (Berger pers. comm. 2022, Fraga pers. comm. 2022), but currently this species is only known from its type locality. More data, including molecular studies, a search of herbarium records and more field work are probably needed before *E. bergeri* can be considered for addition in the *Jepson eFlora* (Fraga pers. comm. 2022).

*Erythranthe bergeri* is named for Matt Berger, who first discovered it.

### Ecology

*Erythranthe bergeri* occurs in granite substrate at the bottom of a seasonal creek, where it grows from fissures and stagnant pools in the rocks (Berger pers. comm. 2022). *Erythranthe bergeri* was in flower and fruit in May of 2020 and probably flowers April to May. It was found at an elevation of 4060 feet (Nesom and Berger 2020, Berger pers. comm. 2022). Species associates include: *Myriopteris covillei*, *Lomatium rigidum* (CRPR 4.3), *Eremogone ferrisiae*, *Thelypodium laciniatum*, *Eriogonum nudum* var. *westonii* and *Ivesia saxosa* (Berger pers. comm. 2022, CNPS 2022).

### Distribution and Abundance

*Erythranthe bergeri* is endemic to Inyo County in the east of the Sierra Nevada (SNE) bioregion. It is currently known from only one recent occurrence (the type collection) on BLM land 3.2 miles northwest of Big Pine; the population consists of 20–50 individuals (Berger pers. comm. 2022). This area has not been thoroughly surveyed (CCH2 2022).

### Status and Threats

*Erythranthe bergeri* is found near a BLM pullout that is frequently used for camping and target shooting. Litter is common, “but the plants are up a rocky drainage and don't seem to be threatened” by these activities (Berger pers. comm. 2022).

### Summary

Due to the paucity of data for this species, CNPS and CNDDDB recommend adding *E. bergeri* to CRPR 3. The G1Q global rank is recommended, because further investigation of this species may lead to a change in its classification. If knowledge on the distribution, threats, and rarity status of *E. bergeri* changes in the future, we will re-evaluate its status at that time.

### Recommended Actions

CNPS: Add *Erythranthe bergeri* to CRPR 3

CNDDDB: Add *Erythranthe bergeri* to G1Q / S1

### Draft CNPS Inventory Record

*Erythranthe bergeri* Nesom

Berger's monkeyflower

Phrymaceae

USDA Plants Symbol: not available

Synonyms: none

CRPR 3

Counties: Inyo

Big Pine 3711823

General habitat: Great Basin scrub

Microhabitat: Rocky, granitic, vernal mesic

Elevation: 1235 meters

Life form: annual herb.

Blooms: April to May.

Threats: Potentially threatened by recreational activities.

Taxonomy: Similar to *Erythranthe nasuta*; differs in having cup-shaped, perfoliate distal leaves.

References:

- Original description: *Phytoneuron* 77: 1–25 (2020).

### Literature Cited

Calflora. 2022. Information on wild California plants for conservation, education, and appreciation. Website <http://www.calflora.org/> [accessed April 2022].

[CCH2] Consortium of California Herbaria Portal 2. 2022. Data provided by the participants of the Consortium of California Herbaria and the California Phenology Thematic Collections Network (CAP-TCN). Regents of the University of California, Berkeley and Cal Poly, San Luis Obispo. Website <http://www.cch2.org/portal/index.php> [accessed April 2022]

[CNPS] California Native Plant Society, Rare Plant Program. 2022. *Inventory of Rare and Endangered Plants of California* (online edition, v9-01 1.0). Website <https://www.rareplants.cnps.org> [accessed 1 March 2022].

Fraga, N. S. 2018. *Erythranthe*. In: Jepson Flora Project (eds.), *Jepson eFlora*. Website <http://ucjeps.berkeley.edu/eflora/ef...php?tid=19622> [accessed March 2022].

Nesom, G. L. and M. Berger. 2020. New species of monkeyflower (*Erythranthe*: Phrymaceae) from the California Sierra. *Phytoneuron* 77: 1–25. (Taxonomic treatment.)

Nesom, G. L. and N. S. Fraga. 2019. *Erythranthe* Spach, in Flora of North America Editorial Committee (eds.), *Flora of North America North of Mexico*, Volume 17. Website [http://www.efloras.org/florataxon.as...axon\\_id=107275](http://www.efloras.org/florataxon.as...axon_id=107275) [accessed March 2022].

Thompson, D. M. 1993. *Mimulus* (Scrophulariaceae). in Hickman, J. C. (ed.), *The Jepson manual: Higher plants of California*. University of California Press, Berkeley, CA. Website: <https://ucjeps.berkeley.edu/cgi-bin/...t.pl?7177,7386> [accessed March 2022].

### Personal Communications

Berger, Matt. 2022. Email correspondence about *Erythranthe angulosa* and *Erythranthe bergeri*. Personal communication 18 March 2022.

Fraga, Naomi. 2022. Email correspondence about *Erythranthe angulosa* and *Erythranthe bergeri*. Personal communication. 6 April 2022.

Nesom, Guy. 2022. Email correspondence about *Erythranthe angulosa* and *Erythranthe bergeri*. Personal communication. 4 April 2022.

### Attached Files

[ErythrantheBergeri\\_20220055\\_StsRevAdd.zip \(69.3 KB, 1 view\)](#)

Last edited by edean; 05-05-2022, 04:57 PM.

Tags: None

Edit Quote Like 0

### NaomiFraga

Forum Member | Join Date: Apr 2020 | Posts: 17

05-05-2022, 02:25 PM

#2

Provided the current available information I support the ranking of 3.

Edit Quote Comment Like 0

**jdmore**

Jim Morefield | Join Date: Mar 2007 | Posts: 45

05-10-2022, 01:01 PM

#3

When contemplating adding something directly to list 3, without previously having been on any other list, I think two questions need to be considered first:

1. What specific information is missing and needed to either move the species to another list, or to remove it from consideration entirely?
2. What is the realistic timeframe we can expect for that information to become available while the species sits on List 3?

If we assumed for a moment that the existing scientific information on this taxon represents the true picture of its taxonomy and status, I'm guessing it would be proposed at 1B.2 or 1B.1 instead (due to intrinsic rarity and drought, if nothing else). Unless there are already concrete near-term plans to obtain all of the needed additional information, it doesn't seem likely that the apparent status of the species would change significantly in the foreseeable future.

My impression (correct me if mistaken) is that things on List 3 don't tend to be prioritized for research funding, or for sensitive species designations by land management agencies.

Given the apparent vulnerability of this taxon based on the best currently available scientific information, I think it would be prudent to err on the side of caution and place this species on List 1B instead.

*Last edited by jdmore; 05-10-2022, 01:06 PM.*

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**Ann Howald**

Forum Member | Join Date: Dec 2005 | Posts: 41

05-11-2022, 10:52 AM

#4

Jim makes some good points. While List 3 is not exactly where rare plants go to die, it's close. Just because a taxon is problematic, this does not mean that someone is working on the problems. Since taxonomic researchers are becoming rarer than rare plants, it can be many years, or essentially never, before some of these issues are resolved. Agencies have their own research priorities, and List 3 plants are not typically on their radar screens for listing because of their uncertain status. Academic researchers want to do what they want to do. Consultants who conduct rare plant surveys for individual projects may not focus on List 3 plants because: 1) there are taxonomic issues so no good keys or other identification information exists, and/or 2) distribution and habitat information is not known due to 1). It would be nice to think that there are numbers of qualified volunteers eager to go out and look for new locations of List 3s on their own but in my experience this is not the case.

CNPS could make List 3 species problems more resolvable by:

- 1) Setting a time limit (2 years?) for plants on List 3, and requiring further review at that time.
- 2) Publicizing and funding appropriate research on List 3s if the issues are taxonomic. Present "research needed" lists at conferences?
- 3) If the issues are abundance/distribution related, actively organizing field searches for the species in question. Rare Plant Treasure Hunts should prioritize List 3s.

So, given that, as far as I know, we do not have any of the above in place, and given the apparent rarity of the taxa in review, and the unknowns of climate change not to mention hungry beasts, I would lean towards 1B.1 for these two, AND organize searches asap to figure out whether their apparent rarity holds. Changes in CNPS status, if needed, do require more staff time, but this would be the case whether the taxon is initially List 3 or 1B. Better to go with the protection on these. If past practices hold, 1B status means these "automatically" would be elevated to Sensitive status by Inyo NF, providing an important level of protection.

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#### NaomiFraga

Forum Member | Join Date: Apr 2020 | Posts: 17

05-30-2022, 06:53 AM

#5

I strongly question the validity of this taxon and I am would caution against the description of new taxa in Erythranthe section Simiola when such little information is available such as with the description of Erythranthe bergeri. A more robust phylogenetic framework needs to be established to sort out relationships, especially regarding morphologically diverse taxa and especially for putatively self-pollinating taxa where populations can fix for an uncommon or unusual character. Without such a framework we might end up describing hundreds of species due to unusual or distinct morphologies, but where other evidence would suggest (genetic or ecological) they should be included within in the circumscription of a more widespread and morphologically variable species.

In particular Erythranthe bergeri is identified as being distinct from E. nasuta due to vestiture which is not always a reliable character (it is noted in the FNA treatment that E. nasuta is sometimes hirtellous distally), leaf margins that are dentate (again a variable character), and calyces with raised thickened ridges (which is common). The primary difference that is described are the connate perfoliate distal leaves. The FNA description for E. nasuta says that the leaves are petiolate and narrowly flanged, but I am sure with more observations one could find several example of individual specimens or populations with connate leaves at the base such as this iNaturalist observation. The cupping is seemingly different, but again its a highly variable species complex. <https://www.inaturalist.org/observations/110719519>

Erythranthe nasuta is an incredibly variable taxon, and E. bergeri is probably best identified as E. nasuta. I don't think Nesom would have considered holding on publishing until more information was available. I was asked to review it on Nov 3. I replied on November 9 that I would like to review it but I have been swamped and asked for a couple of weeks. It was published without my review on Nov. 20. I am not sure if it was reviewed by others.

A rare plant rank of 3 is a Review List: Plants about which more information is needed. I think this taxon fits the bill. It has a name now so we need to consider it, but as one of the few taxonomic experts of Phrymaceae, I am not convinced this is should be recognized. As such I am not working on including it he Jepson eflora treatment. I will be making the effort to visit this populaution and also to visit more E. nasuta in and around Inyo County of which there are not many specimens or iNat observation (yet). If we are questioning the validity of list 3,

then that is a whole other discussion. But as proposed with the current information this species fits a list 3.

Naomi

*Last edited by NaomiFraga; 05-30-2022, 08:47 AM.*

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**NaomiFraga**

Forum Member | Join Date: Apr 2020 | Posts: 17

05-30-2022, 07:22 AM

#6

Also if we want the field of taxonomy and sysyematics to be taken more seriously then we should do our due diligence with our work prior to publication to ensure we have robust data to support our hypothesis. More than one year of observations and surveys, plus a more through review of the herbarium specimen record should be a minimum for a proposed new taxon. This taxon does not have that currently.

*Last edited by NaomiFraga; 05-30-2022, 08:45 AM.*

Edit Quote Comment Like 0

**Vince**

Forum Member | Join Date: Oct 2006 | Posts: 72

05-30-2022, 08:06 AM

#7

As with Erythranthe angulosa, I strongly support CRPR 1B at this time.

CNPS should empty the CRPR 3 dustbin, where many taxa have languished for decades. Plants placed in CRPR 3 are virtually never considered during the CEQA/NEPA process, so they might as well be CBR. There is no meaningful protocol for conserving them. If (and when) the taxonomic uncertainties are cleared up, this very rare plant can be re-evaluated and either kept at 1B or downgraded to a 4 or CBR.

Edit Quote Comment Like 0

**jimandre**

Forum Member | Join Date: Mar 2006 | Posts: 246

05-30-2022, 10:35 AM

#8

In my opinion this nomination seems rushed, as is apparent by the lack of consensus of reasoning among posts above. Meanwhile, I don't favor CRPR 3. CBR may be more appropriate until sufficient due diligence on taxonomic relationship, ecology and distribution, and threats, is conducted. Expecially with a new taxon, it would be most helpful to attain some agreement on taxonomic placement among experts in the group.

*Last edited by jimandre; 05-31-2022, 09:01 AM.*

James M. Andre

Edit Quote Comment Like 0

**edean**

Administrator

Site Admin

| Join Date: Apr 2021 | Posts: 100

06-03-2022, 09:01 AM

#9

Comment provided to Ellen Dean from Martin Oliver by email on June 2, 2022: "My comment isn't about the species or potential CRPR listing rather just a clarification about land status for Erythranthe bergeri.

The description says:

**Status and Threats**

**Erythranthe bergeri is found near a BLM pullout that is frequently used for camping and target shooting. Litter is common, "but the plants are up a rocky drainage and don't seem to be threatened" by these activities (Berger pers. comm. 2022).**

Looking at the location data, the plants ARE on BLM managed land, however the "BLM pullout that is frequently used for camping and target shooting" is NOT BLM managed land. I believe the pullout/camping area is on LADWP owned land.

Thanks,  
Martin

Martin Oliver

Botanist, Bishop Field Office

Bureau of Land Management, CA

Department of the Interior, Region 10 (California, Great Basin)

Edit Quote Comment Like 0

**Len Lindstrand III**

Forum Member | Join Date: Oct 2009 | Posts: 20

06-03-2022, 04:04 PM

#10

My comments apply to both plants (E. angulosa, E. bergeri) subject to this Forum.

Aside from ignoring taxonomic naming rules and not having been peer reviewed (at least not that I can tell upon reading the paper), I had assumed the species description as valid, so the addition to CRPR 3 seemed odd to me, given most of those plants have taxonomic issues. So we have a valid species, why are we suggesting designating this with a bunch of plants with problematic taxonomy? I conceded since the rank definition suggests "additional information" may include information outside taxonomy per se.



The additional comments in this Forum, particularly from Ms. Fraga who is a subject group expert, suggest my assumption regarding the valid taxonomy was incorrect. If this isn't a valid taxon, then why are we proposing this for any ranking? This all seems rushed and unsupported by best available science. If we expect CRPR species to be taken seriously in a regulatory framework, the ranking system best be sound; this seems the opposite. There is a difference between something "new" that needs more work and something that is taxonomically problematic (but otherwise "accepted"). A colleague and I just spent 5+ years publishing a new species with only 2 known occurrences currently (just 1 more than the subject plants here); yet since we performed due diligence ruling out taxonomic issues, we had no reservation suggesting a 1B ranking. Valid taxonomy aside, these papers also lack descriptions of other potential habitat (searched or not), effort spent on these findings, or other information necessary to truly prepare a rank assessment. Those topics are outside of pure species descriptions, but either the papers or other supplemental information need to provide such information to conduct a good assessment. Again, this all seems rushed and incomplete, and two more species heading to Rank 3 Purgatory. I could even get behind a 1B Rank, but not with uncertain taxonomy. Like many, I don't care for our Rank 3 because among other things so many of those plants have been there for decades with no resolution. That said, I can understand why a "placeholder" of sorts is valuable for new taxa we are just learning about. However, that should be reserved for valid taxa. I recommend a CBR at this time until we have these issues rectified.

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#### NaomiFraga

Forum Member | Join Date: Apr 2020 | Posts: 17

06-05-2022, 06:12 AM

#11

This is a valid taxon which is not to same thing as saying it is an accepted taxon. Under the botanical code, peer review is not required for effective publication. The reason this plant is being proposed for RPR of 3 is not because of a nomenclatural issue (valid publication), but it is because of a taxonomic issue and whether or not this entity will be accepted as a species recognized in CA. There are many valid names that are not recognized or accepted as species and are therefore eventually end up on the CBR list. *Mimulus sookensis* is a good example. It is a validly published taxon that underwent peer review (was published in Mardono), but the taxonomic experts (Nesom and myself) have elected to treat it as a synonym of *Erythranthe nasuta*, so it is a CRPR because it is not an accepted taxon.

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#### edean

Administrator

Site Admin

| Join Date: Apr 2021 | Posts: 101

Today, 01:21 PM

#12

Comment made on June 21, 2022 when this discussion was closed: Based on the available information and comments received, *Erythranthe bergeri* will be added as a California Rare Plant Rank (CRPR) 3 taxon in the CNPS Inventory. Based on the above comments, there is disagreement of how to proceed with this species. The expert on this group believes that more taxonomic work is needed and that the questions that need addressing can and will be addressed soon. Rather than postponing a decision on the ranking of this species, we are adding it to CRPR 3 which is a rank expressly defined for taxa with taxonomic ambiguity.

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English (US)

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