

DISCOVERY

Corallorhiza trifida forma trifida found near South Lake Tahoe



Twenty-four early coralroot plants were found growing along a stream bank on June 24, 2023 while performing botanical surveys for the LTBMU.



Plants were found in moist, bare patches along the stream under white fir, incense cedar and quaking aspen. A past dozerline marked the edge of the population.



Flowers had magenta-tinged petals and sepals with some spotting (a color form not thought to be in this part of its range).

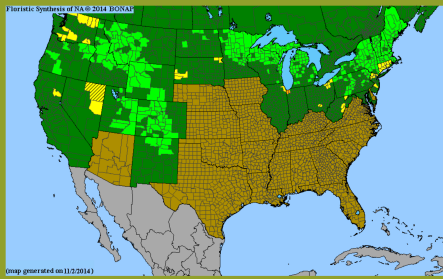


Four additional plants were found upstream in a more open area with denser vegetative ground cover.

RESEARCH AND FINDINGS

1. Range and Rarity

- *Corallorhiza trifida* is a circumpolar species that is fairly common in northern/eastern US and Canada
- It also occurs in the Rocky Mountains and west to central Washington and northeastern Oregon
- In 1977 Bruce A. Sorrie discovered a disjunct population of *C. trifida* near Quincy in Plumas County, California



- *C. trifida* is rated a California rare plant rank of 2B.1: seriously threatened in CA, but more common elsewhere
- Callflora had 9 observations for *C. trifida*, however most of the records did not include photos or herbarium specimens

2. Lookalikes



Corallorhiza maculata f. flavida; from iNaturalist user rezumel

- The related spotted coralroot has a yellow, white-lipped color form called *Corallorhiza maculata f. flavida*
- While often confused for the rarer *C. trifida*, these two species differ in a few ways:

| | <i>C. trifida</i> | <i>C. maculata f. flavida</i> |
|--------------------|-------------------|-------------------------------|
| petal/sepals color | chartreuse green | lemon yellow |
| petal/sepals vein | one vein | three veins |
| labellum size | <5mm | >5mm |
| overall height | 8-36 cm | 10-65 cm |

4. More Discoveries!

- Another El Dorado County record was located: collected in 1954 by Galen Smith near Echo Summit
- But the specimen in question had Alaska listed as its origin, differing from the CA data on the record
- After searching near Echo Summit, a new population was successfully located!



- This small population of 3 plants contained both *C. trifida f. verna* and *f. trifida*
- However, it turns out there was an herbarium mix up after all, and the specimen was indeed from Alaska.
- The Echo Summit location data from the record was for a completely different plant...
- ...which means we found a new *C. trifida* population based on a record that didn't even exist!!!

3. Historical Records



- Some historical records of *C. trifida* were originally thought to be different species
- This herbarium specimen from 1920, collected by Alice Otley, was originally identified as *C. bigelovii*
- It was determined to be *C. trifida* in 1990 when it was examined for the Flora of North America



- Other records listed as *C. trifida* ended up being misidentifications of other orchids
- This 1989 specimen of "*C. trifida*" from Plumas County is actually *C. maculata f. flavida*
- Note larger size, and see inset for closer look at the three veins on the petals and sepals

CONCLUSION

Herbarium records show that *C. trifida* has been in the Sierra Nevada for quite some time; it was documented in the Lake Tahoe Basin over 100 years ago

Both *Corallorhiza trifida* forma *trifida* and *verna* were documented in the Tahoe Basin this year; geographic separation of these forms might not be straightforward

At least two Callflora records have been shown to be misidentifications through our efforts; remaining records will need to be relocated to be confident in accuracy

...it is inspiring to know that even in heavily explored areas of our country, new things are still happening in the world of native orchids.

- Ron Coleman; the American Orchid Society Bulletin, April 1991