

**Added to California Rare Plant Rank 2B.3 of the CNPS Inventory on May 15, 2014**

**Rare Plant Status Review: *Jaffueliobryum raii*  
Addition to California Rare Plant Rank 2B.3, G4? / S2?**

Aaron E. Sims (CNPS), Danny Slakey (CNPS), and Roxanne Bittman (CNDDDB)  
May 15, 2014

**Background**

*Jaffueliobryum raii* is one of 29 bryophytes that are being added to the CNPS Inventory and CNDDDB based on decisions made at one to three California Bryophyte Working Group (CBWG) meetings held on January 18, 2010, January 28, 2013, and January 30, 2014. The CBWG is a committee of bryology experts that are familiar with the taxonomic, rarity, and/or conservation status of bryophytes in California. If you are interested in joining and/or learning more about this group, please contact the first author at [asims@cnps.org](mailto:asims@cnps.org) or (916) 324-3816.

*Jaffueliobryum raii* is a moss in the Grimmiaceae that is known from southeastern Alberta, Canada to mid- and south-western United States, extending to the Mojave Desert of California. It was discovered in California by J. A. Harpel in 1980, where the previously closest known populations to California were in Mohave and Yavapai counties in Arizona (Harpel 1999). *Jaffueliobryum raii* is very similar to *J. wrightii*, and the two species were treated as one for much of their taxonomic history (Spence 2007). It is distinguished from *J. wrightii* in having acute to acuminate distal lamina (versus distal lamina that are broadly acute-rounded), distinctly keeled leaves (versus leaves not keeled), and in having proximal stem leaves that are mostly spreading (versus proximal stem leaves mostly appressed in *J. wrightii*). The capsules of *J. raii* mature in spring to summer depending on elevation (Spence 2007).

*Jaffueliobryum raii* occurs in dry, calcareous rock crevices in openings of chaparral, alpine scrub, and creosote bush scrub. It is known from an approximate elevation of 490 to 2,100 meters in California.

*Jaffueliobryum raii* is currently known from eight occurrences. Six of its occurrences are in Tulare, San Bernardino, and Riverside counties. One occurrence is known from Greenwater Canyon in Death Valley National Park, Inyo County, and a single occurrence is known from slopes of Anthony Peak in Tehama County (Norris 55046), which is highly disjunct from all of its other known sites in California. About half of the occurrences of *J. raii* are historical (occurrences not 'seen' in the past 20 years are considered historical by the CNDDDB), the most recent being from April 2005 in the Turtle Mountains and Mopah Range in San Bernardino County (Laeger & Emerson 2561, 2570). Additional surveys for *J. raii* should occur throughout preferred habitat in southern California; "...due to its very small size and xeric substrate requirements this species has probably been overlooked" (Harpel 1999).

*Jaffueliobryum raii* is ranked S1 in Alberta, Canada, S1S3 in Colorado, S2 in Wisconsin, and unranked by NatureServe (2013) in other states.

Threats to *J. raii* include the possibility of road or trail construction and/or maintenance, mining, and off-highway vehicles (CBWG 2010, 2013); an assessment of these threats, and other possible threats should occur in attempts to identify their likelihood and severity to occurrences of *J. raii*.

### **Actions**

CNPS: Added to 2B.3

CNDDDB: Added to G4? / S2?

### **CNPS Inventory Record**

*Jaffueliobryum raii* (Austin) Thériot

Rau's jaffueliobryum moss

Grimmiaceae

CRPR 2B.3

Arizona, Colorado, Iowa, Kansas, Minnesota, Montana, Nebraska, Nevada, New Mexico, Oklahoma, South Dakota, Texas, Utah, Wisconsin, Wyoming

Inyo, Riverside, San Bernardino, Tehama, Tulare

Rabbit Peak (046B) 3311642, Clark Lake NE (047A) 3311643, Valerie (064C) 3311652, Martinez Mtn. (065D) 3311653, Indian Cove (102C) 3411612, Savahia Peak SW (122C) 3411436, Greenwater Canyon (300A) 3611625, Kern Peak (330D) 3611833, Mendocino Pass (597C) 3912278

Alpine dwarf scrub, chaparral, Mojavean desert scrub, Sonoran desert scrub / dry openings, rock crevices, carbonate; elevation 490 to 2,100 meters.

Moss

Discovered in California by J. A. Harpel in 1980. Potentially threatened by vehicles. Possibly threatened by road or trail construction and maintenance, and mining. Similar to *J. wrightii*. See *Memoirs of the New York Botanical Garden* 45:691-708 (1987) for taxonomic treatment, and *Madroño* 46(4):215 (1999) for information on discovery in California.

### **Literature Cited**

Harpel, J.A. 1999. Noteworthy collections: California; *Jaffueliobryum raii*. *Madroño* 46(4): 215-216.

NatureServe. 2013. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Website <http://www.natureserve.org/explorer> [accessed 25 January 2013].

Spence, J.R. 2007. *Jaffueliobryum raii*. Pp. (online) in *Flora of North America North Editorial Committee (eds.), Flora of North America North of Mexico, Vol. 27: Bryophytes: Mosses, Part 1*. Oxford University Press.