

Added to California Rare Plant Rank 4.3 of the CNPS Inventory on May 5, 2014

**Rare Plant Status Review: *Bryum chryseum*
Addition to California Rare Plant Rank 4.3, G5 / S3**

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Background

Bryum chryseum 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 or (916) 324-3816.

Bryum chryseum is a moss in the Bryaceae with a mostly Neotropical distribution that was recently discovered in California. They are “strongly shiny, yellowish green plants with closely imbricate, triangular-ovate, or ovate-oblong leaves that have spreading to recurved apices” (Toren and Heise 2009). *Bryum chryseum* is similar to *B. argenteum*, but *B. chryseum* is smaller and most easily distinguished in having a brassy yellow color. “Microscopically, it has a somewhat sinuose, elongate upper leaf cells with thickened walls. The lower leaf cells are abruptly shorter and broader and the leaf apices are sometimes minutely denticulate” (Toren and Heise 2009).

In California, *B. chryseum* occurs mostly in oak woodlands with scattered granitic outcrops, primarily with *Quercus douglasii*, *Q wislizeni*, *Pinus sabiniana*, and *Ceanothus leucodermis*. It is also known from grasslands and openings in chaparral. Plants from Mendocino County were growing in short tufts on sunny soil at the base of a southwest facing rock outcrop within a mosaic of oak woodland and chamise chaparral. Associated bryophytes at this site include: *Ceratodon purpureus*, *Pleuridium acuminatum*, *Timmiella crassinervis*, and *Cephaloziella divaricata*. Also, the rarely collected terricolous lichen, *Heppia lutosa* was found nearby. Vascular species at the Mendocino site include: *Arbutus menziesii*, *Quercus parvula* var. *shrevei*, *Pickeringia montana*, *Eriodictyon californicum*, and *Diplacus aurantiacus*. In the cracks and crevices of the outcrop there were also several ferns, including: *Aspidotis densa*, *Polypodium californicum*, *Pellaea andromedifolia*, *P. mucronata*, and *Cheilanthes gracillima* (Toren and Heise 2009).

Bryum chryseum is currently known in California from five occurrences, from five different counties (Amador, Butte, Fresno, Madera, and Mendocino). Two of its occurrences are on Bureau of Land Management lands, one is in Sierra National Forest, and the remaining two occurrences have an unknown land ownership.

Threats to *B. chryseum* are unknown. Given that the majority of its known occurrences are on protected lands, threats should be considered minimal. Due to its very recent

discovery in California, common preferred habitat type, and potential to be overlooked, there are expected to be additional occurrences of *B. chryseum* in California. Therefore, we are adding *B. chryseum* to California Rare Plant Rank 4.3 at this time. If future surveys reveal that it is more common, or additional populations are not found, we will re-evaluate its status at that time.

Actions

CNPS: Added to 4.3

CNDDDB: Added to G5 / S3

CNPS Inventory Record

Bryum chryseum Mitt.

brassy bryum

Bryaceae

CRPR 4.3

South America

Amador, Butte, Fresno, Madera, Mendocino

Millerton Lake East (398D) 3711915, Hopland (535A) 3812381, Millerton Lake West (398C) 3711916, Shippee (576C) 3912156, Irish Hill (494B) 3812048

Cismontane woodland, valley and foothill grassland, chaparral (openings); elevation 50 to 600 meters.

Moss

Similar to *B. argenteum*. See *Journal of the Linnean Society* 12:304 (1869) for original description, and *Evansia* 26(3):98-101 (2009) for information on discovery in CA.

Literature Cited

Mitten, W. 1869. Tribus X. Bryeae. *Journal of the Linnean Society* 12: 304.

Toren, D. and K. Heise. 2009. *Bryum chryseum* Mitt. (Musci: Bryaceae) new to North America north of Mexico. *Evansia* 26(3): 98-101.