

Added to California Rare Plant Rank 2B.3 of the CNPS Inventory on June 2, 2014**Rare Plant Status Review: *Nardia hiroshii*
Addition to California Rare Plant Rank 2B.3, G5 / S1**

Aaron E. Sims (CNPS), Danny Slakey (CNPS), and Roxanne Bittman (CNDDDB)
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Background

Nardia hiroshii is a liverwort in the Jungermanniaceae that was previously only known from Japan and the adjacent Kuril Islands. It was recently confirmed from California, where only known from a single collection from Nevada County. *Nardia hiroshii* forms a loose, pure mat in California. In Japan, it is often in association with other species, through it can also form pure mats there. It is similar to *N. unispiralis*, another species that is known from Japan and the Kuril Islands. Both *N. hiroshii* and *N. unispiralis* form a peculiar group of *Nardia* that have a similar appearance to *Lophozia* species (Bakalin 2012).

In California, *Nardia hiroshii* occurs in soil at the edge of a meadow, in openings of *Pinus contorta*, with granitic bedrock. In the South Kurils, *N. hiroshii* grows on soil covering stones, in crevices on cliffs composed of tufa along streams, on lake banks in craters, and on bare soil near glaciers. In California it is known from an approximate elevation of 2,195 meters.

Nardia hiroshii is known from a single occurrence in California, along the "Pacific Crest Trail immediately south of I-80, Donner Summit" (*Whittemore 4157*, CAS), in Tahoe National Forest. The California locality is within a similar latitudinal range as Japan, and it is apparent that the species will be found in additional localities in western North America after future searches (Bakalin 2012).

Threats to *N. hiroshii* in California are unknown. Given that its single occurrence is on federal National Forest land, no threats are known, and that additional occurrences are likely to be found, we are giving it a threat rank of .3 at this time.

Actions

CNPS: Added to 2B.3

CNDDDB: Added to G5 / S1

CNPS Inventory Record

Nardia hiroshii Amak.

Hiroshi's flapwort

Jungermanniaceae

CRPR 2B.3

Nevada

Norden (555D) 3912033

Meadows and seeps / damp soil with granitic bedrock; elevation 2,195 meters

liverwort

See *Journal of the Hattori Botanical Laboratory* 21:283 (1959) for original description, and *Arctoa* 21:1-4 (2012) for information on discovery in CA.

Literature Cited

Bakalin, V.A. 2012. *Nardia hiroshii* Amakawa – a new species for North American liverwort flora and the key to *Nardia* species in North Pacific. *Arctoa* 21: 97-100.

Tairoko, A. 1959. [unknown title]. *Journal of the Hattori Botanical Laboratory* 21: 283. (Original description; not seen)