

Rare Plant Status Review:

Orthotrichum kellmanii

Kristi Lazar (CNPS) and Roxanne Bittman (CNDDDB)

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Information in blue text are changes made since the original status review was sent out.

Orthotrichum kellmanii is a newly described moss species endemic to California. *O. kellmanii* was first described by Norris, Shevock, and Goffinet in a 2004 article in *The Bryologist* (*The Bryologist* 107(2): 209-214). It is a member of the Orthotrichaceae and a phylogenetic study places it in the genus *Orthotrichum*. The extreme heterophylly of this species is very noticeable and is a key feature used to identify the species. Another distinctive feature of this species is its weak cladocarpus growth pattern in crescent shaped cushions. This species is present in Norris and Shevock's California Moss Key as "*Orthotrichum* species A" (*Madrono* 51(2): 218, 2004).

O. kellmanii is known from only 3 2 small populations in Big Basin Redwoods State Park and the Los Padres National Forest. It usually occurs in chaparral and oak woodland habitats with a scattered *Pinus attenuata* overstory and a mixed shrub understory of *Adenostoma fasciculatum*, *Arctostaphylos* spp., *Ceanothus* spp., *Eriodictyon californicum*, and *Quercus wislizenii*. It appears to be restricted to an isolated and narrow band of exposed sandstone rock outcrops with high calcium concentrations.

In *The Bryologist* article which originally described this species, the authors mention that they believe this species is "perhaps one of the rarest bryophytes known for California" and that "*O. kellmanii* may be a relatively old and relict species that has survived the transformation of California to a Mediterranean climate; with the species now restricted to a narrow strip overlooking the Pacific Ocean..."

O. kellmanii is a California endemic with only 2 known occurrences restricted to a narrow band of sandstone outcrops. Due to its limited distribution, *O. kellmanii* requires review for inclusion in both the CNPS Inventory and the CNDDDB.

Recommended Actions

Orthotrichum kellmanii

CNPS- Add to List 1B.2

CNDDDB- G1 S1.2

If added to the CNPS Inventory, the proposed CNPS *Inventory* Record would be as follows:

Orthotrichum kellmanii Norris, Shevock, & Goffinet

Orthotrichaceae

Kellman's bristle-moss

List 1B.2

Monterey, San Mateo, Santa Cruz

Sent to Bryophyte Group, CW- 7/12/07

Element Code: ?
Added to CNPS List 1B.2 on 8/16/07

Chaparral, [cismontane oak woodland](#) / sandstone, carbonate; 343-685 meters.
moss, fertile January-February

~~Known from only Big Basin Redwoods State Park.~~ See *The Bryologist* 107(2): 210 (2004) for original description.