

# California Status Factors

**Elcode** NBHEP2U010  
**Gname** PTILIDIUM CALIFORNICUM  
**Gcomname** LIVERWORT

## Number of Occurrences

E = >300

**Comments** The ISMS database contains records from about 69 sites in California.

## Number of Occurrences with Good Viability

D = Some (13-40) occurrences with good viability

**Comments** Estimated 20 occurrences in California with good viability.

## Population Size

D = 1,000-2,500 individuals

**Comments** Estimated 1500 individuals in California.

## Range Extent

F = 20,000-200,000 km<sup>2</sup> (about 8,000-80,000 square miles)

**Comments** Estimated range is 10,000 square miles in California. Known from the Cascade Range south to Mt. Lassen, the Klamath and Siskiyou Mountains, the Shasta-Trinity area, and south in the Coast Range to the Mendocino National Forest.

## Area of Occupancy

A = <0.4 km<sup>2</sup> (less than about 100 acres)

LA = <4 km (less than about 2.5 miles)

**Comments** Estimated area of occupancy is 30 acres in California.

## Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

D = Moderate Decline (decline of 25-50%)

**Comments** Moderate long-term decline of 25-50% in California. Local impacts from logging. At the southern end of its range in northern California, it may be threatened by global climate change.

## Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

D = Declining. Decline of 10-30% in population, range, area occupied, and/or number or condition of occurrences

**Comments** Short-term decline of 10-30% in California, for reasons cited above.

## Threats

A = Substantial, imminent threat. Threat is moderate to severe and imminent for most (> 60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a widespread area, either causing irreversible damage or requiring long term recovery

**Scope** High      **Severity** Moderate      **Immediacy** Moderate

**Comments** Substantial, imminent threat in California. Logging and climate change are primary threats. Populations are small and scattered throughout the range.

## Number of Appropriately Protected and Managed Occurrences

C = Several (4-12) occurrences appropriately protected and managed

**Comments** About 9 protected occurrences in California.

## Intrinsic Vulnerability

C = Not Intrinsicly Vulnerable. Species matures quickly, reproduces frequently, and/or has high fecundity such that populations recover quickly (< 5 years or 2 generations) from decreases in abundance; or species has high dispersal capability such that extirpated populations soon become reestablished through natural recolonization (unaided by humans). Ecological community occurrences are resilient or resistant to irreversible changes in composition and structure and quickly recover (within 10 years).

**Comments** Not intrinsically vulnerable. Plants are small and fragile, but reproduce readily by spores and fragmentation of gametophytes. Plants will recolonize sites when suitable habitat and substrate are present, but this depends on the availability of inoculum from nearby populations.

## Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

**Comments** Narrow environmental specificity. Located on bark at the base of standing trees or recently fallen logs, rarely on other organic substrates. At the southern end of its range (Oregon and California) this species is distinctly restricted to middle elevation forests in the *Abies amabilis* zone (between 3000 and 5000 feet elevation), where it is one of the dominants of the cryptogam community.

## Other Considerations

There are a sufficient number of sites to make this species an S3, but most populations are reportedly very small and scattered discontinuously within the range of the species in California, suggesting that they are at greater risk than would be expected.

**Edition** 2/20/2003      **Edauthor** John A. Christy

**Grank** S2S3      **Grank Date** 11/25/2002

## Reasons

Known from about 69 sites in California. Estimated 20 occurrences in California with good viability. Estimated 1500 individuals in California. Estimated range is 10,000 square miles in California. Estimated area of occupancy is 30 acres in California. Moderate long-term decline of 25-50% in California. Short-term decline of 10-30% in California. Substantial, imminent threat in California. About 9 protected occurrences in California. Not intrinsically vulnerable. Narrow environmental specificity.

## BCD Sources

## New Sources

USDA Forest Service, USDI Bureau of Land Management, USDI Fish and Wildlife Service. 2002. Interagency Species Management System [ISMS] database. Portland, Oregon.

Christy, J.A. & D.H. Wagner. 1996. Guide for the identification of rare, threatened or sensitive bryophytes in the range of the northern spotted owl, western Washington, western Oregon, and northwestern California. USDI Bureau of Land Management. 200 pp.