

# Oregon Status Factors

**Elcode** NBMUS2M031  
**Gname** ENCALYPTA BREVICOLLA VAR CRUMIANA  
**Gcomname** MOSS

## Number of Occurrences

A = 1 - 5

**Comments** Known from only 1 locality in Oregon. Recent searches (Christy 2002) in Oregon failed to find new populations. The 10 records for Oregon in the ISMS database represent the single Oregon site. Given its small size and availability of suitable habitat, it is likely that other populations of this species exist in the state.

## Number of Occurrences with Good Viability

B = Very few (1-3) occurrences with good viability

**Comments** The single locality in Oregon is the only known viable occurrence. The Washington site has not been relocated since 1931.

## Population Size

B = 50-250 individuals

**Comments** Estimated 50-75 individuals known from single extant site.

## Range Extent

E = 5,000-20,000 km<sup>2</sup> (about 2,000-8,000 square miles)

**Comments** Estimated range is 5,000 square miles in Oregon, based on geographic spread of two known points between Mount Rainier, Washington, and southwestern Oregon. Endemic to the Pacific Northwest.

## 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** Area of occupancy at the single known site is about 1 acre.

## 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 50% estimated for the Oregon population, from 1978-2002 (Christy 2002), probably due to overcollecting.

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

E = Stable. Population, range, area occupied, and/or number or condition of occurrences unchanged or

remaining within  $\pm 10\%$  fluctuation

**Comments** Short-term trend is stable, based on observations made in 1994 and 2002, barring losses to new collecting, competing vegetation, or catastrophic disturbance such as fire or quarrying.

### 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** High **Immediacy** High

**Comments** Substantial, imminent threat from fire, road construction, quarrying, air pollution, and overcollecting. Overcollecting may have caused the estimated decline of 50% in the Oregon population between 1978-2002 (Christy 2002).

### Number of Appropriately Protected and Managed Occurrences

A = None. No occurrences appropriately protected and managed

**Comments** The single population in Oregon is not protected.

### Intrinsic Vulnerability

B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5-20 years or 2-5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans). Ecological community occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10-100 years).

**Comments** Moderately vulnerable. Plants are small and fragile, but reproduce readily by spores and fragmentation of gametophytes. Most species of Encalypta have spotty distributions and populations are scanty when they occur. 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. Habitat at the Oregon site is a dry, north-facing igneous outcrop, where the species grows in crevices, horizontal shelves, vertical faces, and overhanging ledges, many with partial shade. The outcrop is situated at the top of an open, exposed saddle at the head of a valley that may funnel moist marine air into the saddle.

### Other Considerations

ORNHIC - List 1. Ranked SH in Washington.

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

**Grank** S1 **Grank Date** 4/2/1992

### Reasons

Known from only 1 locality in Oregon. Given its small size and availability of suitable habitat, it is likely that other populations of this species exist in the state. The single locality in Oregon is the only known viable occurrence. Estimated 50-75 individuals known from the single extant site. Estimated range is 5,000 square miles in Oregon. Area of occupancy at the single known site is about 1 acre. Moderate long-term decline of 50%. Short-term trend is stable. Substantial, imminent threat. The single population in Oregon is not protected. Moderately

vulnerable. Narrow environmental specificity.

### **BCD Sources**

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.

### **New Sources**

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

Horton, D.G. 1983. A revision of the Encalyptaceae (Musci), with particular reference to the North American taxa. Part II. *Journal of the Hattori Botanical Laboratory* 54: 353-532.

Christy, J.A. 2002. Survey for *Encalypta brevicolla* var. *crumiana*, Siskiyou National Forest, Oregon. Report to USDA Forest Service, Gifford Pinchot National Forest. Oregon Natural Heritage Information Center, Oregon State University. 12 pp. + appendices.