# Oregon Status Factors

**Elcode** NBMUS6P010

**Gname** SCHISTOSTEGA PENNATA

**Gcomname** MOSS

## Number of Occurrences

B = 6 - 20

Comments Estimated 15 occurrences in Oregon. The ISMS database contains 16 occurrences for Oregon, representing about 11 sites.

## Number of Occurrences with Good Viability

C = Few (4-12) occurrences with good viability

Comments Estimated 10 occurrences in Oregon with good viability.

## Population Size

D = 1,000-2,500 individuals

Comments Estimated 1500-2000 individuals in Oregon.

## Range Extent

F = 20,000-200,000 km2 (about 8,000-80,000 square miles)

Comments Estimated range is 20,000 square miles in Oregon. Known from Coast Range and Cascade Range.

## Area of Occupancy

A = <0.4 km2 (less than about 100 acres)

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

Comments Estimated area of occupancy is 10 acres in Oregon. Although widespread in the state, with estimated 15 occurrences, this species has a spotty distribution and in most places occurs only in patches covering less than 1 square meter.

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

E = Relatively Stable (±25% change)

Comments Long-term trend is elatively stable. Populations disappear naturally from unstable habitats such as animal burrows or under root balls of fallen trees, but these habitats are reproduced over time and the species may recolonize them.

## 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 ±10% fluctuation

Comments Short-term trend is relatively stable, for reasons cited above.

## Threats

F = Widespread, low-severity threat. Threat is of low severity but affects (or would affect) most or a significant portion of the population, occurrences, or area. Ecological community occurrences are not threatened severely, with changes reversible and recovery moderately rapid.

Scope High Severity Low Immediacy High

Comments Widespread, low-severity threat. Logging, road and trail construction, or other activities that increase incident light and decrease humidity, may cause the species to disappear. Expanding urban development tends to have more calcareous or nutrient-rich substrates that are unsuitable for this species, although some populations are known to have occurred in old cellar holes and under decaying structures.

## Number of Appropriately Protected and Managed Occurrences

B = Few (1-3) occurrences appropriately protected and managed

Comments Only 1 site is protected in Oregon and managed accordingly.

## 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. Populations are few and far between, yet dispersal happens and new sites are colonized naturally.

## Environmental Specificity

A = Very Narrow. Specialist or community with key requirements scarce.

Comments Very narrow environmental specificity. In Oregon, the primary substrate is soil in animal burrows, shaded banks, in crevices of root balls of fallen trees, or around tree roots in dark, dense forests. Schistostega can survive where other bryophytes cannot because of its ability to capture and concentrate low levels of light, just enough to photosynthesize. If the light gets too bright, other bryophytes invade, and Schistostega disappears. In many cases, the species is obviously a pioneer on disturbed soil, but despite an abundance of suitable habitat, it remains rare because of its highly irregular distribution.

## Other Considerations

ORNHIC - List 2. Despite its large range and an abundance of suitable habitat, Schistostega remains rare because of its highly irregular distribution. Populations are never very large and this taxon is always considered rare and much sought after by collectors.

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

**Grank** S2 **Grank Date** 11/19/2002

## Greasons

Estimated 15 occurrences in Oregon. Estimated 10 occurrences in Oregon with good viability. Estimated 1500-2000 individuals in Oregon. Estimated range is 20,000 square miles in Oregon. Estimated area of occupancy is

0 acres in Oregon. Long-term and short-term trends are relatively stable. Widespread, low-severity threat. Only 1 site is protected in Oregon. Moderately vulnerable. Very narrow environmental specificity.

## BCD Sources

## New 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.
Crum, H. 1983. Mosses of the Great Lakes Forest. 3rd ed. Univ. Michigan Herbarium, Ann Arbor. 417 pp.
Crum, H. & L.E. Anderson. 1981. Mosses of Eastern North America. 2 vols. Columbia University Press, New York. 1328 pp.
USDA Forest Service, USDI Bureau of Land Management, USDI Fish and Wildlife Service. 2002. Interagency Species Management System [ISMS] database. Portland, Oregon.