

## Washington Status Factors

**Elcode** IMGASK4120  
**Gname** JUGA SP 3  
**Gcomname** BROWN JUGA

### Number of Occurrences

B = 6 - 20

**Comments** Sporadic occurrences in several Columbia Gorge streams and also at one or two sites in the Central Gorge, Skamania County, Washington and Multnomah and Hood River Counties, Oregon (Frest and Johannes, 1995c).

### Number of Occurrences with Good Viability

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

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

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

**Comments** Sporadic occurrences in several Columbia Gorge streams and also at one or two sites in Central Gorge, Skamania County, Washington and Multnomah and Hood River Counties, Oregon (Frest and Johannes, 1995c).

### Population Size

U = Unknown

**Comments** Unknown

### Range Extent

C = 250-1,000 km<sup>2</sup> (about 100-400 square miles)

D = 1,000-5,000 km<sup>2</sup> (about 400-2,000 square miles)

**Comments** Original distribution uncertain. Most likely the western two-thirds of the Columbia Gorge, in Washington and Oregon; may have been widespread (Frest and Johannes, 1995c).

### Area of Occupancy

E = 100-500 km<sup>2</sup> (about 25,000-125,000 acres)

LE = 1,000-5,000 km (about 620-3,000 miles)

**Comments** Sporadically occupies several Columbia Gorge streams and associated springs, especially on the Washington side, in the western end of the Gorge. Also occurs at one or two sites in the Central Gorge, Skamania County, Washington, and Multnomah and Hood River Counties, Oregon (Frest and Johannes, 1995c). Frest and Johannes (1995c) surveyed many spring sites in the Gorge from 1987 to 1993 and it is unlikely that many more sites will be discovered, or that the range will increase.

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

U = Unknown. Long-term trend in population, range, area occupied, or number or condition of occurrences unknown

Comments Unknown

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

C = Rapidly Declining. Decline of 30-50% in population, range, area occupied, 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 The species is declining, in terms of number of sites and area occupied (Frest and Johannes, 1995c).

### 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 Moderate

Comments Most springs in the Gorge have been impacted by diversion for public, private, and stock water supplies; for state and federal fish hatcheries; and lumber mills. Others have been destroyed for highway and railroad rights-of-way. Much of the Gorge has been logged or grazed in the past (Frest and Johannes, 1995c).

### Number of Appropriately Protected and Managed Occurrences

A = None. No occurrences appropriately protected and managed

Comments There are no known protected occurrences. A few sites are located in the Columbia Gorge National Scenic Area. Likely in Gifford Pinchot National Forest (Frest and Johannes, 1995c).

### Intrinsic Vulnerability

U = Unknown

Comments Unknown

### Environmental Specificity

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

Comments Often narrowly localized and restricted to small springs and spring sources, generally at low to medium elevations (Frest and Johannes, 1995c).

### Other Considerations

Listed as Juga (Juga) n. sp. 1 in Frest and Johannes (1995c). Possibly NOT the Survey and Manage Species in ROD.

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### Reasons

Range slightly restrictive, but sites scattered and abundance at all sites low. There are no protected occurrences.

### BCD Sources

## **New Sources**

Frest, T.J. and E.J. Johannes. 1995c. Interior Columbia Basin mollusk species of special concern. Report to Interior Columbia Basin Ecosystem Management Project. 274 pp.

Oregon Natural Heritage Program. 2001. Rare, Threatened and Endangered Plants and Animals of Oregon. Oregon Natural Heritage Program, Portland, Oregon. 94 pp.