

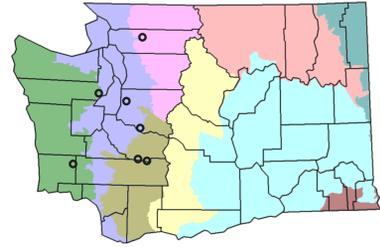
Brotherella roellii (Renauld & Cardot) M. Fleisch.

Roll's golden log moss

Sematophyllaceae

status: State Threatened, USFS strategic

rank: G3 / SH



General Description: Shiny golden to yellowish green moss forming thin, small carpets. Stems lying flat, creeping, branching irregularly, 0.5-3 cm x 0.5-1 mm. Leaves 0.8-1.2 mm long, often turned to one side, ovate-lanceolate, tip pointed, concave. Costa lacking, or double and very short. Alar cells strongly inflated. Outer layer of stem cells (cortical cells) are inflated, colorless, transparent, and larger than the interior cells. There is often a row of enlarged cells extending across the leaf base.

Reproductive Characteristics: Produces male and female sex organs on the same plant but in separate locations. Seta 0.6-1 cm long. Capsule erect to somewhat inclined, straight or slightly asymmetric. Urn 1-1.5 mm long. Operculum long and narrow, up to 1 mm long.

Identification Tips: *Hypnum circinale* is a similar species that often grows in the same habitat. However, it is a larger moss, dull grayish to bluish green in color, with longer leaves (up to 2.2 mm) that are slightly to strongly curved nearly into a circle. It has only a few slightly inflated quadrate to rectangular, alar cells; its cortical cells are small and thick-walled. In contrast, *B. roellii* has strongly inflated alar cells, and large, thin-walled, inflated cortical cells.

Range: Endemic to southwestern B.C. and WA.

Habitat/Ecology: Forms small, glossy, green to golden yellow mats, usually on old logs and other rotten wood; also on the bases of red alder (*Alnus rubra*) and other hardwood trees. Grows at low elevation in cool, moist, open, mixed deciduous and coniferous forests of floodplains, stream terraces, and valley margins.

Comments: Known from only a few historic sites within the state; all specimens were collected prior to 1913. Currently, none of the historical occurrences have been relocated and no new sites have been found. Threats to this species include habitat conversion to housing, timber harvest, thinning, removal of woody debris, and moss harvesting. It is rare throughout its range.

References: Lawton 1971; USDA Forest Service & USDI Bureau of Land Management 1996b.



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