

Limbella fryei (Williams) Ochyra

Status: **Critically endangered (CR)** B1, 2c

Class: Bryopsida

Order: Hypnobryales

Family: Amblystegiaceae

Description and biology: Plants trailing or dendroid, forming yellowish-green to dark green sods or mats to 1 m in diameter. Stems dark reddish brown to black, 3-8 (13) cm long, with small scaly leaves, densely matted with dark reddish-brown rhizoids at base. Branch leaves somewhat contorted when dry, ovate-oblong or ovate-lanceolate, tapered gradually to a bluntly pointed tip, with a midrib and conspicuously thickened margins. Tips of leaves strongly toothed, with small teeth to the base. Unisexual, with only female plants known. Sporophytes unknown. Populations limited to vegetative reproduction.

Distribution and habitat: Endemic to Pacific Northwestern North America. Known only from two populations (one now extinct) on the coast of Oregon, USA. To be sought in coastal British Columbia, Washington and northern California. Habitat is tall shrub swamp (*Salix hookeriana*, *Salix sitchensis*, *Malus fusca*, *Ledum glandulosum*) with *Carex obnupta* and *Lysichiton americanum*. The substratum is buttress roots and decumbent stems of tall shrubs, rotten wood, or leaf and twig litter at edges of pools.

History and outlook: The original population at the type locality (discovered 1922) is extinct. The second population (discovered 1978) is protected by The Nature Conservancy. Many sites along 560 km of coastline between southern British Columbia and northern California have been searched without finding any additional populations.

Potential threats include water pollution from nearby houses, commercial collecting for the floral or pharmaceutical trade, road construction, changes in environmental protection laws, and catastrophic flooding during a subduction earthquake.

References:

Christy, J.A. 1987. *Limbella fryei* (Williams) Ochyra distinct from *L. tricostata* (Sull.) C.M. (Musci: Amblystegiaceae). J. Hattori Bot. Lab. 63: 395-410.

Christy, J.A. 2001. *Limbella*. Flora of North America 28 (Bryophyte Flora of North America 2) [volumes in preparation, with completed treatments online: <<http://www.buffalomuseumofscience.org/BFNA/V2/AmbLimbella.htm>>].

Ochyra, R. 1987. On the taxonomy and family placement of the moss genus *Limbella* (C. Muell.) Broth. J. Bryol. 14: 465-485.

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