

Sphaerolejeunea umbilicata Herz.

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

Class: Hepaticae

Order: Jungermanniales

Family: Lejeuneaceae

Description and Biology: *Sphaerolejeunea* is a monospecific neotropical genus of the large family Lejeuneaceae. Plants are epiphyllous, pale green, loosely creeping on living leaves. Stems are 1 or more cm long and 2 mm wide, little branched. Leaves are suborbicular with a broadly rounded apex, a narrow hyaline border of dead cells, and a small ventral lobule with a short tooth. Underleaves are small, 2-lobed, firmly attached to the substrate by a large rhizoid disc. The perianth sits on a very short branch, with 1 short innovation, and is fully inflated and smooth, without keels. The species is autoicous but sporophytes have not yet been observed. Vegetative reproduction is unknown.

Distribution and Habitat: The liverwort is only known from two localities in the northern Andes, Colombia (Dept. Cauca, the type) and Peru (Dept. San Martín). The plants were collected as epiphylls in forests, between 1300-1800 m. In Peru the species was found in a lower montane rainforest, only slightly disturbed, in an area entirely built of limestone. The species was restricted to humid sites in the understory of the forest, close to a temporary stream. The plants at the Peruvian site grow closely appressed to the leaves of approximately 10 different species of trees and shrubs, including palm leaves and ferns. *Sphaerolejeunea umbilicata* was found covering large parts of the substrate, and was mainly associated with epiphyllous lichens, rarely with a few stems of other bryophytes, including *Crossomitrium epiphyllum* (Mitt.) Müll. Hal., *Aphanolejeunea* sp., *Lejeunea laetevirens* Nees & Mont., and *Odontolejeunea lunulata* (F. Weber) Schiffn.

History and Outlook: This epiphyllous liverwort was known until recently only from the 80-year-old type material of *S. umbilicata* Herzog. During field work in northern Peru in January 2001, *Sphaerolejeunea umbilicata* was rediscovered growing on living leaves in a lower montane rainforest. Apparently, *S. umbilicata* is very rare. The ecological data from Peru suggest the species is restricted to humid places in primary forests with a very low degree of disturbance. We do not know whether the fact that *Sphaerolejeunea* was found in a limestone area is of any importance for explaining its limited distribution. In spite of its rediscovery, *S. umbilicata* may still be considered critically endangered because: 1. the area where it is present in northern Peru is very small (ca. 15,000 m²); 2. the species may be extinct in its original collection site as it was not recollected since 1922, and 3. the habitat where the species occurs is strongly declining.

References:

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- Herzog, T. 1938. *Sphaerolejeunea*, eine neue Gattung der Lejeuneaceae Schizostipae. - *Ann. Bryol.* 11: 86-89
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