



## A taxonomic revision of the genus *Mastigolejeunea* (Marchantiophyta: Lejeuneaceae)

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With 26 figures

**Abstract:** A world-wide revision of the liverwort genus *Mastigolejeunea* leads to the recognition of 18 species, including 16 extant and 2 fossil ones. Of 103 further species described in the genus, one is reduced to varietal level and 25 are transferred to other genera; 95 species (80%) are synonyms. *Mastigolejeunea* is closely related to *Thysananthus*; both genera share thick stems without hyalodermis, absence of *Frullania*-type branches, convolute leaves, elongate cells, cordate trigones, segmented oil bodies, undivided underleaves, gynoecia with 1–2 lejeunoid innovations, 3-keeled perianths, a non-articulate seta and absence of specialized means of asexual reproduction. The principal difference between the two is in the perianth, which is entire in *Mastigolejeunea* and toothed in *Thysananthus*. A key to the species of *Mastigolejeunea* is provided and each species is fully described and illustrated, with complete synonymy and details on habitat and distribution. The genus is pantropical with three species occurring in the New World, five in Africa, six in Australia and ten in Southeast Asia; one species, *M. gradsteinii* (Malaysia), is endemic. The species grow on bark or rock in moist tropical forests to about 1500 m elevation (exceptionally 3100 m). Several species are mainly restricted to the forest canopy and two are only known from limestone rock.

**Key words:** Lejeuneaceae, *Mastigolejeunea*, taxonomy, *Thysananthus*, tropical liverworts.

### Introduction

*Mastigolejeunea* was first described by Spruce (1884) as subgenus *Mastigo-Lejeunea* Spruce in the broadly defined genus *Lejeunea* Lib. The subgenus was characterized by undivided underleaves, entire leaf and underleaf margins, gynoecia with 1–2 innovations, and 3-keeled perianths with smooth keels. Spruce (l.c.) included three species in the subg. *Mastigo-Lejeunea*, all of them from tropical America: *Lejeunea auriculata* (Wilson & Hook.) Spruce, *L. innovans* Spruce and *L. plicatiflora* Spruce.

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