

A new species of *Trocholejeunea* (Lejeuneaceae, Marchantiophyta) from China

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Abstract

Trocholejeunea sinensis J.Wang bis, R.L.Zhu & Gradst. *sp. nov.* (Lejeuneaceae) is described and illustrated based on specimens collected from Guangxi and Yunnan, China. The new species differs from all other species of *Trocholejeunea* by the presence of an “extra” lobule tooth situated at the extreme end of the free margin, near the junction of the lobule and the lobe. A key to the species of *Trocholejeunea* is provided.

Key words: Guangxi, liverworts, Ptychanthoideae, taxonomy, Yunnan

Introduction

Trocholejeunea Schiffner in Dixon et al. (160:1932) is an Asiatic genus of Lejeuneaceae subfamily Ptychanthoideae Mizut. with four species (Mizutani, 1989; Singh & Nath, 2008). The genus is characterized by predominantly *Frullania*-type branching, absence of flagella, entire underleaves and entire margins of leaf lobes, cordate trigones, homogeneous oil bodies, epistatic male bracts, presence of *Frullania*-type innovations or occasionally of *Radula*-type innovations, perianth with 6–10 keels, non-articulate seta with 16–17 rows of outer cells and 8–10 rows of inner ones (Gradstein, 1975; Thiers, 1985; Gradstein *et al.*, 2002; Zhu & So, 2001). *Trocholejeunea* is most closely related to *Acrolejeunea* (Spruce 1884: 115) Schiffner (1893: 128), which is distinguished by the occasional presence of flagella, predominantly *Lejeunea*-type branching, absence of innovations, articulate seta with 16 outer cell rows and 4 inner cell rows (Zhu & So, 2001). In addition, the two genera differ in the size and shape of the male bracts which are equal to vegetative leaves in *Trocholejeunea* but slightly smaller than vegetative leaves and with more strongly inflated lobule in *Acrolejeunea*.

In the course of our study Lejeuneaceae subfam. Ptychanthoideae from China, we found two collections from Guangxi and Yunnan which were quite different from other species of *Trocholejeunea*. A new species, *Trocholejeunea sinensis* J.Wang bis, R.L.Zhu & Gradst., is here described and illustrated. In addition a key to the species of *Trocholejeunea* is provided.

Trocholejeunea sinensis J.Wang bis, R.L.Zhu & Gradst., *sp. nov.* (Figs. 1–2)

A new species characterized by the branches usually of *Frullania*-type and occasionally of *Lejeunea*-type; the hexagonal median cells with cordate trigones and homogeneous oil bodies; the lobule always with 3 teeth and the first tooth situated at the extreme end of the free margin near the junction of the lobule and the lobe; the gynoeceia with 1–2 *Frullania*-type innovations; and the perianths with 9–10 straight or somewhat flexuose keels.

Type:—CHINA. Guangxi. Jinxiu Co., Dayaoshan National Nature Reserve, *Cathaya argyrophylla* Protection Station, on rotten logs, 900–1000 m, 19 Jul. 2009, Wen Ye & Yu-Mei Wei 20090719-47A (holotype HSNU!).

Dioicous? (Androeceia not seen). Plants 1.6–2 cm long, 1.1–1.8 mm wide, yellowish green, brown when dry, irregularly branched, branches predominantly of the *Frullania*-type (long branches), occasionally of the *Lejeunea*-type (short branches). Stems 0.12–0.16 mm in diameter, ventral merophyte 4–6 cells wide, stem in transverse section with 14–15 cortical cells and 20–21 medullary cells. Rhizoids few, fasciculate, brown, rhizoid disc absent. Leaves imbricate,

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