

Lopholejeunea herzogiana Verdoorn (Lejeuneaceae, Bryophyta), a new record in Thailand

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ABSTRACT. *Lopholejeunea herzogiana* Verdoorn, a new Thai record collected from Khao Fa Mi, Khao Luang National Park, Nakhon Si Thammarat Province, Thailand, is described and illustrated.

KEY WORDS: Lejeuneaceae, *Lopholejeunea herzogiana*, new record, Thailand.

INTRODUCTION

Lopholejeunea are leafy hepatics and the largest genus in Lejeuneaceae subfamily Ptychanthoideae with about 30 species worldwide and 17 species in Asia (Zhu & Gradstein, 2005). The genus exhibits a pantropical distribution and grows on bark, rocks, soil and rarely on living leaves. The main characteristics of this genus are the blackish-green plants, unlobed underleaves, isodiametrical leaf cells with homogeneous oil bodies, absence of gynoecial innovations, and 2–5-keeled perianths with serrulate to lacinate keels.

In Thailand, seven species of *Lopholejeunea* have been recorded; *L. applanata* (Reinwardt, Blume & Nees) Schiffner, *L. ceylanica* Stephani, *L. eulopha* (Taylor) Schiffner, *L. horticola* Schiffner, *L. nigricans* (Lindenberg) Schiffner, *L. nipponica* Horikawa, and *L. subfusca* (Nees) Schiffner (Lai *et al.*, 2008; Sukkharak *et al.*, 2008).

DESCRIPTION

Lopholejeunea herzogiana Verdoorn, Rec. Trav. Bot. Néerl. 30: 217. 1933. Fig. 1.

Plants blackish-green, brownish-black in herbarium specimens; 14–25 by 2–2.5 mm with

leaves; irregularly branched, branching of the *Lejeunea*-type; ventral merophyte 6–8 cells wide; rhizoids few, fasciculate, brown, at base of underleaves. Leaves imbricate, widely spreading. Lobe suborbicular, 1.1–1.5 by 1–1.4 mm, apex rounded, usually incurved, margin entire; lobe cells usually thick-walled, trigones and intermediate thickenings usually frequent, sometimes very large, apical cells subquadrate, 17.5–22.5 by 17.5–20 µm, median cells isodiametric, 27.5–32.5 by 25–27.5 µm, basal cells 37.5–60 by 27.5–32.5 µm. Lobule ovate, 2/5–1/2 as long as the lobe, 0.4–0.65 by 0.25–0.4 mm, strongly inflated and constricted medially, free margin strongly involute, apex attached to the leaf lobe by only a single cell, apical free margin wide. Underleaves large, imbricate, reniform, 0.6–0.75 by 1.1–1.25 mm, 5–8 times as wide as the stem, entire, apical margin mostly recurved, insertion line strongly arched. Autoicous. Androecia terminal on long branches; bracts in 10–14 pairs, imbricate, bract lobe 0.4–0.6 by 0.3–0.5 mm; bract lobule 0.39–0.42 by 0.2–0.4 mm, free margin nearly plane, keel arched; bracteoles 10–14, slightly smaller than the underleaves, entire, borne throughout the androecium. Gynoecia on short or long branches; bracts in 1–3 pairs, bract lobe ovate-oblong, 2.1–2.2 by 1.4–1.6 mm, apex rounded to subacute, margin irregularly serrulate; bract lobule about 1/2–2/3 as long as the bract lobe,

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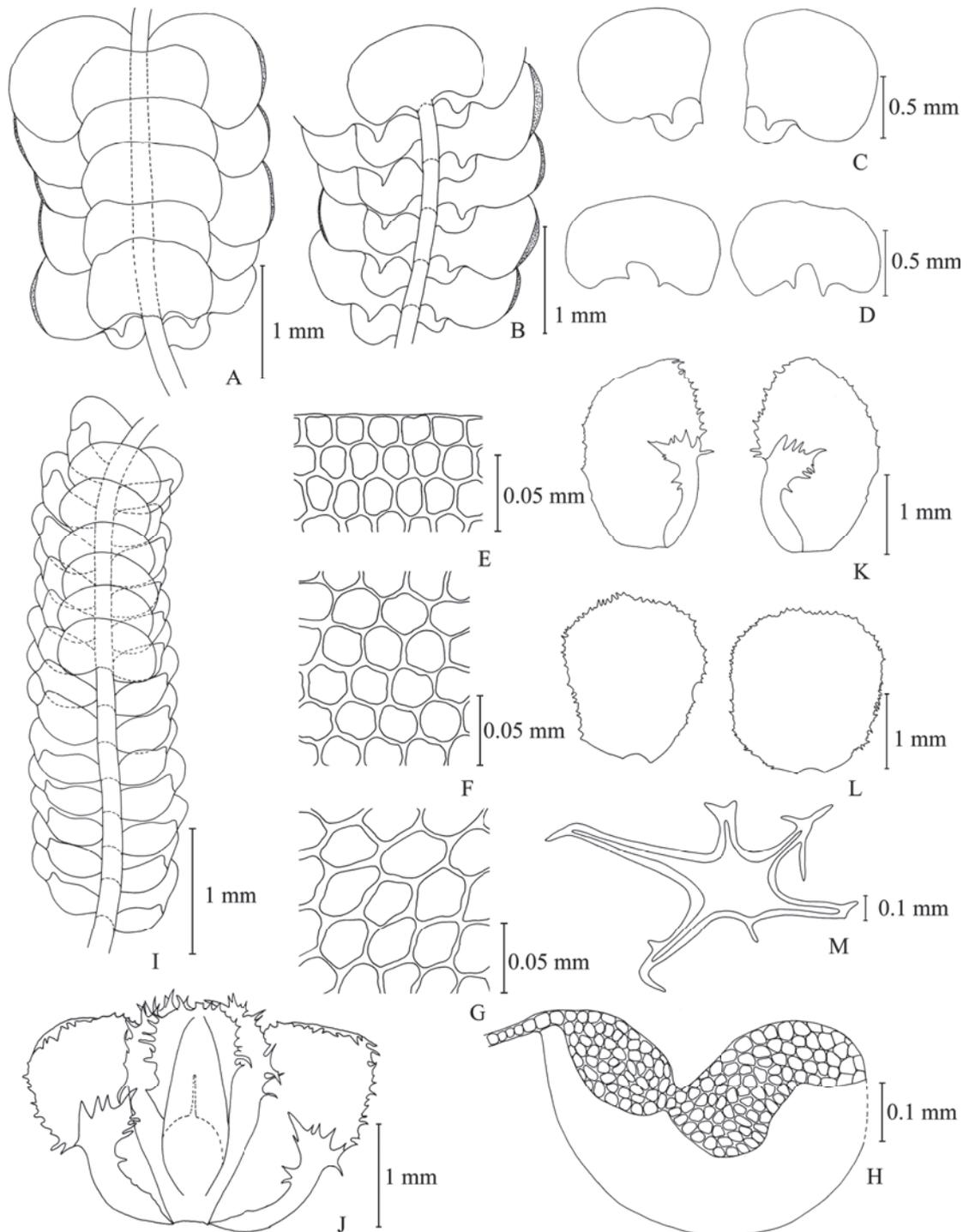


Figure 1. *Lopholejeunea herzogiana* Verdoorn: A.–B. ventral part of plant; C. leaves; D. underleaves; E. apical leaf cells; F. median leaf cells; G. basal leaf cells; H. leaf lobule; I. androecium; J. gynoecium; K. female bracts; L. female bracteoles; M. transverse section of perianth. Based on *Kornochalert* 1103 (CMU). Drawn by S. Kornochalert.

oblong, 1.3–1.4 by 0.2–0.3 mm, margin ciliate-dentate at least at upper margin; bracteole oblong to suborbicular, 2–2.25 by 1.9–2.1 mm, margin plane and ciliate-dentate throughout. Perianth immersed, obovate, 1.9–2.1 by 1.1–1.3 mm, with 5 strongly laciniate keels.

Thailand.— PENINSULAR: Nakhon Si Thammarat [Khao Fa Mi, 2 May 2009, *Kornochalert* 1103 (BKF, CMU)].

Distribution.— Indonesia (Java (type), Kalimantan, Irian Jaya), Malaysia (Sabah), Papua New Guinea, New Caledonia.

Ecology.— On branches of trees in primary lower montane forest, ca 1400 m altitude.

Notes.— The diagnostic characters of *Lopholejeunea herzogiana* Verdoorn are: 1) robust, blackish-green plants, 2) leaf lobule with a distinct medial constriction and strongly involute free margin, 3) large underleaves with a strongly arched insertion line, and 4) strongly immersed perianths. *L. herzogiana* resembles *L. eulopha*, but differs by having larger plants and longer leaf lobules with a conspicuous constriction in the middle.

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