



Notes on Early Land Plants Today. 46. Transfer of *Vitalianthus urubuensis* (Marchantiophyta, Lejeuneaceae) to *Cheilolejeunea*

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Vitalianthus was established by Schuster & Giancotti (1993) based on *Drepanolejeunea bischleriana* K.C.Pôrto & Grolle (1987: 301), which is endemic to the Atlantic coast of north-eastern Brazil. This genus is related to *Drepanolejeunea* (Spruce 1884: 76) Schiffner (1893: 119) (Gradstein *et al.* 2001, Gradstein & Costa 2003, He *et al.* 2012a, b) and characterized by the 1) hyaline papilla at the proximal side of lobule tooth, 2) unbroken basal vitta of 3–7 ocelli in leaf lobes, 3) bilobed underleaves with upright lobes, 4) gynoeical innovations with a pycnolejeuneoid leaf sequence, 5) perianth keels unarmed, and 6) absence of specialized cladia (He *et al.* 2012a). In addition to the type species, this genus currently also contains *Vitalianthus urubuensis* Zartman & Ackerman (2002: 267) from the Amazonian rainforests of Brazil and Colombia (Zartman & Ackerman 2002, Mota de Oliveira & ter Steege 2013, Campos *et al.* in prep.), and *V. guangxianus* Zhu *et al.* (2012a: 32). Our examination of type material and recent collections of *Vitalianthus urubuensis* from Brazil and Colombia reveals that the hyaline papilla of the leaf lobule is distal as in *Cheilolejeunea* (Spruce 1884: 79) Schiffner (1893: 118) (Fig. 1E,F). The moniliate, unbroken vitta of ocelli in the leaf lobes, one of the most important features of *Vitalianthus*, also occurs in some species of *Cheilolejeunea*, e.g. in *Cheilolejeunea falsinervis* (Sande Lacoste 1854: 321) Schuster & Kachroo (1961: 56) from Asia and Australasia. It thus appears that *V. urubuensis* is morphologically more similar to *Cheilolejeunea* than to *Vitalianthus*. The morphological affinity between *Vitalianthus urubuensis* and *Cheilolejeunea* is confirmed by our unpublished molecular data (ITS, *trnG* and *trnL-F*; Wei *et al.*, in prep.) which show that *V. urubuensis* and several species of *Cheilolejeunea* form a monophyletic lineage. Therefore, the following new combination is necessary.

Formal treatment

The format of this note follows Söderström *et al.* (2012).

Cheilolejeunea urubuensis (Zartman & I.L.Ackerman) R.L.Zhu & Y.M.Wei, *comb. nov.* (Fig 1)

Basionym:—*Vitalianthus urubuensis* Zartman & I.L.Ackerman, *Bryologist* 105: 267, 2002 (Zartman & Ackerman 2002).

Type:—BRAZIL. Amazonas State. EMBRAPA research station at kilometer 54 of the BR-174 highway (02°30'40" S, 60°01'46" W), elev. ca 150 m; lowland, seasonally wet terra-firma rainforest in capoeira on the bark of *Vismia cayennensis* (Jacq.) Pers., August 2001, Zartman 2626 (holotype INPA; isotype DUKE!).

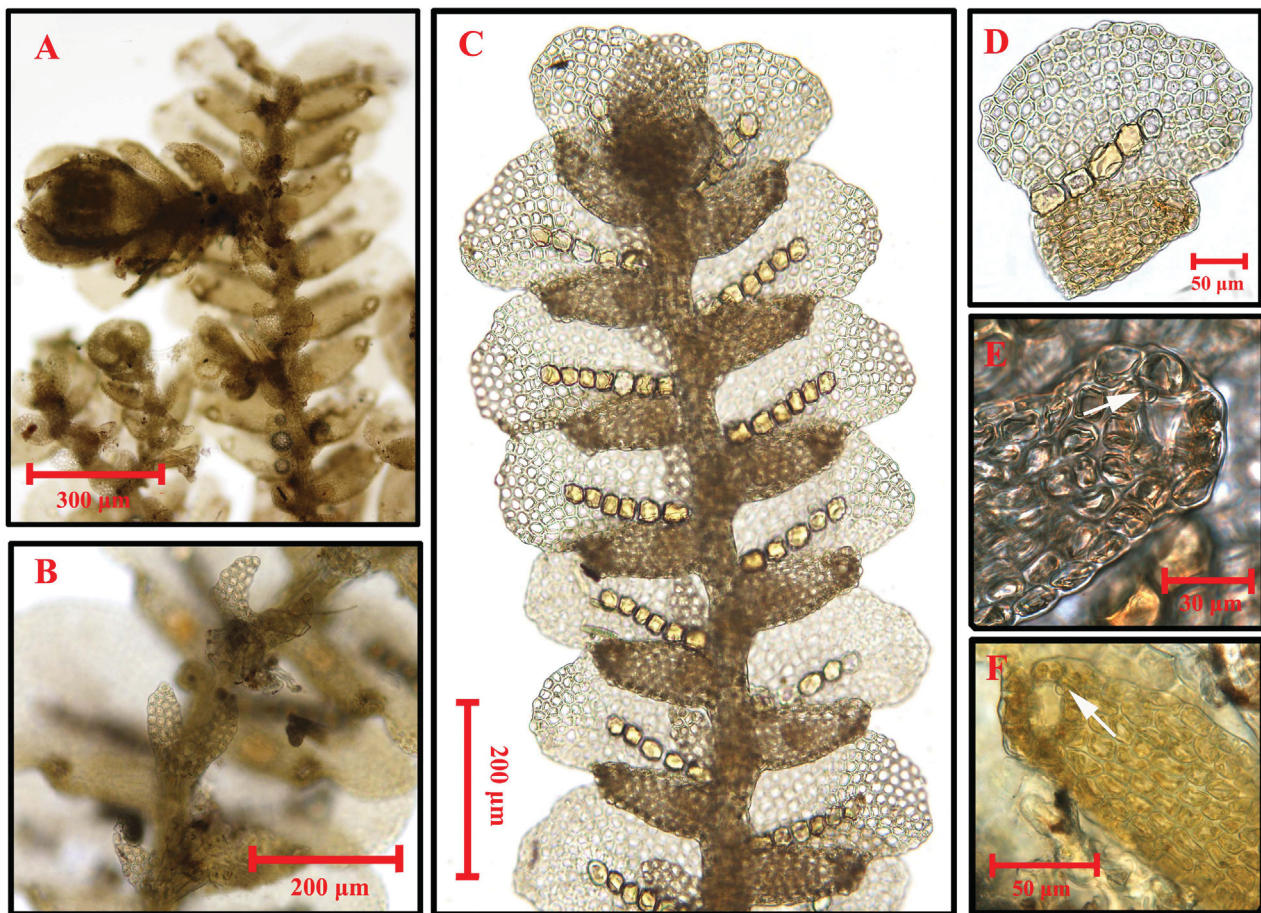


FIGURE 1. *Cheilolejeunea urubuensis* (Zartman & I.L.Ackerman) R.L.Zhu & Y.M.Wei. A. Portion of plant with perianth. B. Portion of plant, showing underleaves. C. Portion of plant, ventral view. D. Leaf, ventral view. E, F. Leaf lobule, showing a hyaline papilla (arrow). A from *Laura V. Campos 713* (HSNU); B, F from *Laura V. Campos 712* (HSNU); C-E from *C.E. Zartman 2626* (isotype, DUKE).

Note: Within tropical America, *Cheilolejeunea urubuensis* is the only vittate species in the genus..

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