



Notes on Early Land Plants Today. 21. On *Archilejeunea herminieri* (Lejeuneaceae, Marchantiophyta)

S. ROBBERT GRADSTEIN

Muséum National d'Histoire Naturelle, Dept. Systématique et Evolution, Case Postale 39, 57 rue Cuvier, 75231 Paris cedex 05, France; email: gradstein@mnhn.fr

In a revision of *Archilejeunea* (Spruce 1884: 88) Stephani (1888: 113) in tropical America, Gradstein & Buskes (1985) suggested that *Archilejeunea herminieri* might be conspecific with *Amblyolejeunea fulfordiae* Jovet-Ast (1949: 25) (\equiv *Lejeunea fulfordiae* (Ast) Zhu & Cheng (2008: 617)). The identity of the material could not be ascertained with certainty because perianths, which are characteristically inflated and without keels in *Lejeunea fulfordiae*, were lacking and the hyaline papilla at the lobule apex was not observed. Now, 25 years later, my re-examination of the type specimen has revealed that the material is identical to *Oryzolejeunea saccatiloba* (= *Oryzolejeunea antillana*). When sterile, *Oryzolejeunea saccatiloba* is confusingly similar to *Lejeunea fulfordiae*. Both species have undivided, rounded underleaves, stems with ventral merophytes 2 cells wide, somewhat falcate leaf-lobes with rounded apex, crenulate leaf margins with large, thin-walled cells, and large leaf-lobules with a truncate apex and a short, obtuse apical tooth. However, *Oryzolejeunea saccatiloba* has a distal hyaline papilla (which now has been observed in the type material of *Archilejeunea herminieri*, admittedly with some difficulty), the distal free margin of the lobules bordered by cells that are similar in size to the inner lobule cells, and lobe cells with an asperulate cuticle (but occasionally smooth; see Bernecker-Lücking 1999). In *Lejeunea fulfordiae*, however, the hyaline papilla is proximal, the distal free margin is bordered by enlarged cells (Zhu & Cheng 2008, Fig. 1: I), and the cuticle of the lobe cells is always smooth. The lack of a border of enlarged cells on the distal free margin, the distinctly asperulate lobe cells and the distal hyaline papilla in *Archilejeunea herminieri* leave no doubt about the identity of the species.

Stephani (1911) and Gradstein & Buskes (1985) described the type material of *Archilejeunea herminieri* as being sterile, but my re-examination of the material revealed the presence of a few male stems, with androecia positioned on short specialized branches, consisting of 3 or 4 pairs of strongly swollen male bracts and 1 or 2 small bracteoles limited to the base of the male spike.

Oryzolejeunea saccatiloba is a widespread Neotropical species from bark and living leaves in wet submontane and lower montane rain forests, occurring at elevations ranging from 300 to about 2000 m. The species is known from Mexico (Fulford & Sharp 1990), Guatemala (Pérez 2009), Costa Rica (Dauphin 2005), the Dominican Republic (Schäfer-Verwimp & Pócs 2009), the Lesser Antilles (Guadeloupe (Lavocat & Schäfer-Verwimp 2011), Dominica (Schuster 1971)), Venezuela (Rico & Pócs 2004), Colombia (Campos & Uribe 2006), Ecuador (Nöske *et al.* 2003) and Brazil (Gradstein *et al.* 2001). The unnamed species of *Oryzolejeunea* with undivided underleaves and an asperulate cuticle reported from western Colombia by Schuster (1992) is most likely *Oryzolejeunea saccatiloba*.

Formal treatment

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

Oryzolejeunea saccatiloba (Steph.) Gradst., *Lindbergia* 23: 77, 1998 (Dauphin *et al.* 1998).

Basionym:—*Archilejeunea saccatiloba* Steph., *Hedwigia* 34: 61, 1895 (Stephani 1895).

Type:—BRAZIL. Without locality, *Beyrich s.n.* (G-60842! [=G-20795!])¹.

≡ *Cyrtolejeunea saccatiloba* (Steph.) Gradst., *Beih. Nova Hedwigia* 80: 110, 1985 (Gradstein & Buskes 1985).

= *Oryzolejeunea antillana* (R.M.Schust.) R.M.Schust., *J. Hattori Bot. Lab.* 72: 249, 1992 (Schuster 1992).

Basionym:—*Cyrtolejeunea antillana* R.M.Schust., *Bull. Torrey Bot. Club* 97: 336, 1970 [1971] (Schuster 1971).

Syn. fide R. Grolle (in Dauphin *et al.* 1998).

= *Archilejeunea herminieri* Steph., *Sp. Hepat. (Stephani)* 4: 714, 1911 (Stephani 1911), *syn. nov.* Type:—GUADELOUPE. Without locality, *l'Herminier s.n.* (G-60727! [=G-20789!]).

References

- Bernecker-Lücking, A. (1999) New species of Lejeuneaceae (Hepaticae) from Costa Rica. II. *Oryzolejeunea. Haussknechtia Beiheft* 9: 37–40.
- Campos, L. & Uribe-M., J. (2006) Additions to the Catalogue of Hepaticae and Anthocerotae of Colombia. *Cryptogamie, Bryologie* 27: 499–510.
- Dauphin, G. (2005) Catalogue of Costa Rican Hepaticae and Anthocerotae. *Tropical Bryology* 26: 141–218
- Dauphin, G., Gradstein, S.R., Bernecker-Lücking, A. & Morales, M.I. (1998) Additions to the hepatic flora of Costa Rica II. *Lindbergia* 23: 74–80.
- Fulford, M. & Sharp, A.J. (1990) The leafy Hepaticae of Mexico, One Hundred and Twenty-seven Years after C. M. Gottsche. *Memoirs of the New York Botanical Garden* 63: 1–86.
- Gradstein, S.R. & Buskes, G.M.C. (1985) A revision of Neotropical *Archilejeunea*. *Beihefte zur Nova Hedwigia* 80: 89–112.
- Gradstein, S.R., Churchill, S.P. & Salazar-Allen, N. (2001) Guide to the Bryophytes of Tropical America. *Memoirs of the New York Botanical Garden* 86: 1–577.
- Jovet-Ast, S. (1949 “1948”) Hépatiques des Antilles françaises récoltées par P. et V. Allorge en 1936 II. *Revue Bryologique et Lichénologique* 17: 24–34.
- Lavocat-Bernard, E. & Schäfer-Verwimp, A. 2011. Checklist of the bryophytes of the Guadeloupe archipelago and Martinique (French West Indies). *Cryptogamie, Bryologie* 32: 232–272.
- Nöske, N.M., Gradstein, S.R., Kürschner, H., Parolly, G. & Torracchi, S. (2003) Cryptogams of the Reserva Biológica San Francisco (Province Zamora-Chinchipe, Southern Ecuador) I. Bryophytes. *Cryptogamie, Bryologie* 24: 15–32.
- Pérez, P.E. (2009) Catálogo de las hepáticas (Marchantiophyta) de Guatemala: una actualización. *Brenesia* 71–72: 3–12.
- Rico, R. & Pócs, T. (2004) Briófitas de las tierras altas de la Guayana Venezolana: hepáticas del Roraima-tepui I. *Cryptogamie, Bryologie* 25: 249–269.
- Schäfer-Verwimp, A. & Pócs, T. (2009) Contributions to the hepatic flora of the Dominican Republic, West Indies. *Acta Botanica Hungarica* 51: 367–425. <http://dx.doi.org/10.1556/ABot.51.2009.3-4.13>
- Schuster, R.M. (1971 “1970”) Studies on Hepaticae. XLIX–LIII. New Lejeuneaceae from Dominica and Jamaica. *Bulletin of the Torrey Botanical Club* 97: 336–352. <http://dx.doi.org/10.2307/2483854>
- Schuster, R.M. (1992) The oil bodies of the Hepaticae. II. Lejeuneaceae. *Journal of the Hattori Botanical Laboratory* 72: 163–359.
- Söderström, L. Hagborg, A. & von Konrat, M. (2012) Notes on Early Land Plants Today. *Phytotaxa* 65: 41–42.
- Spruce, R. (1884) Hepaticae Amazonica et Andinae. *Transactions and Proceedings of the Botanical Society. Edinburgh* 15: 1–308.
- Stephani, F. (1888) Hepaticae africanae. *Hedwigia* 27: 106–113.
- Stephani, F. (1895) Hepaticarum species novae. VII. *Hedwigia* 34: 43–65.
- Stephani, F. (1911) *Species Hepaticarum* 4. George & Cie, Genève & Bâle, pp.465–736.
- Zhu, R.-L. & Cheng, X.-F. (2008) The status of *Amblyolejeunea* (Lejeuneaceae) from Ecuador and Guadeloupe. *Systematic Botany* 33: 617–620. <http://dx.doi.org/10.1600/036364408786500181>

1. Citation of specimens in G should preferably use the barcode (M. Price, pers. comm.) but for comparability the numbers printed on the specimen, which have often been cited by previous authors, are also given here in square brackets.