Notes on Early Land Plants Today. 29. A new combination in Radula (Radulaceae, Marchantiophyta)

MATT A. M. RENNER1, LARS SÖDERSTRÖM2, ANDERS HAGBORG3 & MATT VON KONRAT3

1Botanic Gardens and Domain Trust, Royal Botanic Gardens Sydney, Mrs Macquaries Road, Sydney NSW2000, Australia; matt.renner@rbgsyd.nsw.gov.au
2Department of Biology, Norwegian University of Science and Technology, N-7491 Trondheim, Norway; lars.soderstrom@bio.ntnu.no
3Department of Botany, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605–2496, USA; hagborg@pobox.com, mvonkonrat@fieldmuseum.org

Radula javanica Gottsche et al. (1845: 257) was described with many syntypes. Castle (1966) lectotypified it with a specimen from Caroline Islands. This is appropriate in spite of the name indicating it is from Java as it is the only syntype that bears perianths and these were described in the protologue. The plant in Castle’s lectotype turns out to be the same entity as Radula cordiloba Taylor (1846: 375) which was, we believe correctly, synonymized with R. javanica by So (2005).

Radula cordiloba subsp. erigens was proposed as a synonym of Radula longispica Stephani (1910: 183) by So (2006). This synonymization avoided the creation of an orphaned subspecific taxon. However, on the basis of comparison of types, we have reason to believe this synonymy is incorrect. Although many details of morphology cannot be assessed from the existing, fragmentary type material, it can be established that Radula longispica differs from R. erigens in details of lobule shape. Specifically, the lobules are not ampliate over the ventral stem surface, the lobule apex is acute, and lies well above the top of the lobe-stem insertion (conceptual reorientation granted for ease of description), the overall lobule shape is trapezoid. As indicated by the name, the male branches are unusually long. The male bracts are also unusual, in that the bract lobule is caducous, as is the apex of the bract lobule. The specimen in FH ex herb Stephani comprises three pieces, two comprised almost exclusively of long male branches attached to old leading axes whose leaf lobes have fragmented off. The third piece comprises the youngest portion of a sterile leading shoot with several branches, and has all leaf lobes and lobules intact. The lectotype Geneva is the same entity. If these four pieces represent the same plant, and they probably do given similarities in branch lobule morphology, then Radula cordiloba subsp. erigens is not a synonym of R. longispica.

We believe differences in lobule morphology are substantial, and warrant the recognition of R. cordiloba subsp. erigens as distinct from both R. javanica and R. longispica. However, Radula cordiloba subsp. erigens would be orphaned unless combined as a full species. We publish this combination below.

Formal treatment

The format of this note follows what is outlined in Söderström et al. (2012).

Radula erigens (M.A.M.Renner et Braggins) M.A.M.Renner, comb. et stat. nov.


Type: NEW ZEALAND. Kermadec Is.: Raoul Island, 1956 R. Cooper (holotype AK 44347 ex AKU063120!).
Representative specimens examined:—NEW ZEALAND. Kermadec Is.: Raoul Island, Denham Bay Track, above Orange Cove, 29°14'55.6"S 177°55'54.1"W, 208 m, 18 May 2011, P.J. de Lange K742 (AK325678); Raoul Island, Moumoukai Track, 29°16'0"S 177°54'0"W, 384 m, 8 May 2009, P.J. de Lange K224 & D.C. Havell (AK313206); Raoul Island, Moumoukai Track, 29°16'0"S 177°54'0"W, 336 m, 15 May 2011, P.J. de Lange K741 (AK325676); Raoul Island, Denham Bay Track, 29°15'39.5"S 177°56'15.7"W, 271 m, 18 May 2011, P.J. de Lange K744 (AK325681); Raoul Island, 1956, R.C. Cooper 4435 (CHR558807).

Notes:—To date known with certainty only from Raoul Island in the Kermadec Group, the northernmost outlier of the New Zealand Botanical Region. On Raoul Island R. erigens grows in sheltered ravines, typically as a saxicol on exposed basalt on ravin walls, but also as an epiphyte on the bases of palm trunks. Radula erigens co-occurs with Lejeunea anisophylla Montagne (1843: 263), L. exilis (Reinwardt et al. 1824: 227) Grolle (1979: 353), L. gracilipes (Taylor 1846: 385) Spruce (1884: 213), Lopholejeunea sp. and Plagiochila pacifica Mitten (1873: 407), Papillaria crocea (Hampe 1853: 715) Jäger & Sauerbeck (1877: 267) and Echinodium umbrosum (Mitten 1859: 92) Jäger & Sauerbeck (1877: 314). Occurrence on islands elsewhere throughout the Pacific would not be unexpected, but to date examination of herbarium material and recent collecting activities in the Cook Islands (Rarotonga) and Fiji (Viti Levu, Kadavu, Taveuni) have failed to locate this species.

Also examined:—Radula longispica Steph. INSULA WALLIS. Unea, 1902, Joly, herb Corbière 113. (Lectotype fide Yamada 1979, G-42698! [=G-15438!]; INSULA WALLIS. Unea, 1902, Joly (Isolectotype, FH!). The specimen identified as lectotype is cited as a holotype by So (2006). As no specific collection was indicated in the protologue, and there is more than one duplicate, it must be regarded as a lectotype instead.

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References


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.


