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Notes on Early Land Plants Today. 49. On *Lejeunea huctumalcensis* Lindenb. & Gottsche and the resurrection of *Otigoniolejeunea* (Spruce) Schiffn., an older name for *Physantholejeunea* R.M.Schust. (Marchantiophyta, Lejeuneaceae)

YU-MEI WEI[1,2], RUI-LIANG ZHU[1,3,*] & S. ROBBERT GRADSTEIN[4]

[1]*Department of Biology, School of Life Sciences, East China Normal University, 3663 Zhong Shan North Road, Shanghai 200062, China*

[2] *Guangxi Institute of Botany, Guangxi Zhuang Autonomous Region and the Chinese Academy of Sciences, Guilin, Guangxi 541006, China*

[3] *Shanghai Key Lab for Urban Ecological Processes and Eco-Restoration, East China Normal University, 500 Dongchuan Road, Shanghai, China*

[4] *Muséum National d'Histoire Naturelle, Dept. Systématique et Evolution, Case Postale 39, 57 rue Cuvier, 75231 Paris cedex 05, France*

[*]*Author for correspondence*

Lejeunea huctumalcensis Lindenb. & Gottsche in Gottsche *et al.* (1847: 762), a widespread neotropical species, is one of the most unusual taxa in *Lejeunea* Libert (1820: 372) owing to the variable gynoecial innovation type which may be lejeuneoid or pycnolejeuneoid, the presence of ocelli in leaf lobes and the perianth keels usually with bifid or more ramified laciniae (Reiner-Drehwald & Ilkiu-Borges 2007). In other species of this large genus, innovations are invariably lejeuneoid, ocelli are lacking and perianth keels do not produce bifid or more ramified laciniae. The generic position of *Lejeunea huctumalcensis* has long been controversial and the species has been assigned to at least six different genera, including *Ceratolejeunea* (Spruce 1884: 77) Jack & Stephani (1892: 16), *Hygrolejeunea* (Spruce 1884: 77) Schiffner (1893: 124), *Lejeunea*, *Otigoniolejeunea* (Spruce 1884: 77) Schiffner (1893: 125), *Pycnolejeunea* (Spruce 1884: 246) Schiffner (1893: 124), and *Trachylejeunea* (Spruce 1884: 180) Schiffner (1893: 126) (Reiner-Drehwald & Ilkiu-Borges 2007). The latter authors showed that *L. huctumalcensis* is an older name for *L. xiphotis* Spruce (1884: 227), the type species of *Lejeunea* subg. *Otigoniolejeunea* Spruce (≡ *Otigoniolejeunea* (Spruce) Schiffn.), and thus *L. huctumalcensis* automatically becomes a member of this group. *Otigoniolejeunea* was provisionally accepted by Reiner-Drehwald & Ilkiu-Borges (2007) as a subgenus of *Lejeunea*, with *L. huctumalcensis* as its only species. Other recent authors, however, have treated *Otigoniolejeunea* as a mere synonym of *Lejeunea* (e.g., Grolle 1983; Singh 2013).

Recent molecular studies by Wei (2013) and Czumay *et al.* (2013) have independently recovered *Lejeunea huctumalcensis* in a small and robust clade outside the genus *Lejeunea*, together with *Physantholejeunea portoricensis* (Hampe & Gottsche 1853: 352) Schuster (1978: 429). The latter taxon is a rare species from the West Indies which shares with *Lejeunea huctumalcensis* the occurrence of ocelli in the leaves, and the presence of pycnolejeuneoid type innovations (Gradstein *et al*. 2001). Although the two species differ in several important morphological respects (see key below), they may be considered congeneric based on the results of the molecular analysis. The results clearly confirm the importance of presence/absence of ocelli and gynoecial innovation type as stable and reliable generic characters in *Lejeunea* (Wei 2013). Moreover, the circumscription of *Lejeunea* has become much improved by the removal of *Lejeunea huctumalcensis* and other taxa with ocelli (Dong *et al.* 2013; Wei & Zhu 2013).

Based on the molecular results, Czumay *et al.* (2013) transferred *Lejeunea huctumalcensis* to *Physantholejeunea.* However, *Otigoniolejeunea* (Spruce) Schiffn. is a much older name than *Physantholejeunea* and has priority. Therefore, the generic *Otigoniolejeunea* has to be resurrected and the following treatment is necessary.

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References

Czumay, A., Dong, S.S., Scheben, A., Schäfer-Verwimp, A., Feldberg, K. & Heinrichs, J. (2013) Transfer of *Lejeunea huctumalcensis* to *Physantholejeunea* (Lejeuneaceae, Porellales). *Australian Systematic Botany* 26: 386–392. http://dx.doi.org/10.1071/sb13039

Dong, S.S., Schäfer-Verwimp, A., Pócs, T., Feldberg, K., Czumay, A., Schmidt, A.R., Schneider, H. & Heinrichs, J. (2013) Size doesn't matter-recircumscription of *Microlejeunea* (Lejeuneaceae, Porellales) based on molecular and morphological evidence. *Phytotaxa* 85: 41–45. http://dx.doi.org/10.11646/phytotaxa.85.2.2

Evans, A.W. (1907) Hepaticae of Puerto Rico VII. *Bulletin of the Torrey Botanical Club* 34: 1–34. http://dx.doi.org/10.2307/2479163

Gottsche, C.M., Lindenberg, J.B.W. & Nees von Esenbeck, C.G. (1847) *Synopsis Hepaticarum*, fasc. 5. Meissner, Hamburg, pp. 625–834. http://dx.doi.org/10.5962/bhl.title.15221

Gradstein, S.R. (2013) A classification of Lejeuneaceae (Marchantiophyta) based on molecular and morphological evidence. *Phytotaxa* 100: 6–20. http://dx.doi.org/10.11646/phytotaxa.100.1.2

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.

Grolle, R. (1983) Nomina generica Hepaticarum; references, types and synonyms. *Acta Botanica Fennica* 121: 1–62.

Grolle, R. & Piippo, S. (1984) Annotated catalogue of Western Melanesian bryophytes. I. Hepaticae and Anthocerotae. *Acta Botanica Fennica* 125: 1–86.

Hampe, E. & Gottsche, C.M. (1853 [1852]) Expositio hepaticarum Portoricensium, quas collegit Schwanecke, hortulanus. *Linnaea* 25: 337–358.

Jack, J.B. & Stephani, F. (1892) Hepaticae Wallisianae. *Hedwigia* 31: 11–27.

Libert, M.-L. (1820) Sur un genre nouveau d'hépatiques, *Lejeunia*. *Annales générales des sciences physiques* 6: 372–374.

Piippo, S. (1986) A monograph of *Lepidolejeunea* and *Luteolejeunea* (Lejeuneaceae: Hepaticae). *Acta Botanica Fennica* 132: 1–69.

Reiner-Drehwald, R.E.(1999) Catalogue of the genus *Lejeunea* Lib.(Hepaticae) of Latin America. *Bryophytorum Bibliotheca* 54 : 1–101.

Reiner-Drehwald, M.E. (2011) Studies on Neotropical Lejeuneaceae (Jungermanniopsida). New Synonyms and *Ceratolejeunea temnantha* (Spruce) *comb. nov. Cryptogamie Bryologie* 32: 95–100. http://dx.doi.org/10.7872/cryb.v32.iss1.2011.095

Reiner-Drehwald, M.E. & Ilkiu-Borges, A.L. (2007) *Lejeunea huctumalcensis*, a widely distributed Lejeuneaceae from the Neotropics, and its relation to *Ceratolejeunea*. *The Bryologist* 110: 465–474. http://dx.doi.org/10.1639/0007-2745(2007)110[465:lhawdl]2.0.co;2

Schiffner, V. (1893) *Hepaticae (Lebermoose)*. *In*: Engler, A. & Prantl, K. (Ed) Die Natürlichen Pflanzenfamilien 1: 1–141. Leipzig.

Schuster, R.M. (1978) Studies on Venezuelan Hepaticae. II. *Phytologia* 39: 425–432.

Schuster, R.M. (1992) The oil-bodies of the Hepaticae. II. Lejeuneaceae (part 2). *Journal of the Hattori Botanical Laboratory* 72: 163–359.

Singh, S.K. (2013) New combinations in *Lejeunea* with a new name to *Otigoniolejeunea indica. Phytotaxa* 96: 63–64. http://dx.doi.org/10.11646/phytotaxa.96.1.3

Söderström, L., Hagborg, A. & von Konrat, M. (2012) Notes on Early Land Plants Today. *Phytotaxa* 65: 41–42. http://dx.doi.org/10.11646/phytotaxa.112.1.3

Spruce, R. (1884) Hepaticae of the Amazon and Andes of Peru and Ecuador. *Transactions and Proceedings of the Botanical Society of Edinburgh* 15: 1–308.

Stephani, F. (1923) Species Hepaticarum 6. George & Cie, Genève & Bale, pp. 369–432.

Vanden Berghen, C. (1948) Genera des Lejeuneaceae. *Lejeunia* 6: 1–59.

Wei, Y.-M. (2013) *Molecular phylogeny of Lejeunea (Lejeuneaceae).* PhD thesis, East China Normal Uinversity, Shanghai.

Wei, Y.-M. & Zhu, R.-L. (2013) Transfer of two Asiatic taxa from *Lejeunea* to *Microlejeunea* (Lejeuneaceae, Marchantiophyta). *Cryptogamie Bryologie* 34: 307–311. http://dx.doi.org/10.7872/cryb.v34.iss3.2013.307