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Source: *Lindbergia*, 2022(1)

Published By: Dutch Bryological and Lichenological Society and Nordic Bryological Society

URL: <https://doi.org/10.25227/linbg.01151>

# Notes on early land plants today. 79 Transfer of African *Taxilejeunea* to *Lejeunea* (Lejeuneaceae, Marchantiophyta)

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*Lejeunea* Lib. including *Taxilejeunea* (Spruce) Schiffn. is one of the largest genera in Lejeuneaceae and diverged from its sister group, *Microlejeunea* (Spruce) Steph., during Eocene around 52 Ma (million years ago) (Lee et al. 2020). The morphology of *Lejeunea* and *Taxilejeunea* are largely overlapping, e.g. the arrangement of the gynoecia in rows on lateral branches, the stem with seven large epidermal cells and numerous medullary cells and the large bifid underleaves with cordate or auriculate bases. The molecular work has shown that *Taxilejeunea* elements are diffusely distributed in almost all lineages of *Lejeunea* (Heinrichs et al. 2013). Taxonomic treatment of 11 unrevised names of Asian *Taxilejeunea* and four of Indian origin were revised by Singh and Pócs (2016) and Lee et al. (2018), respectively. However, four species from Africa remain to be transferred, of which three need new combinations and one needs a new name in *Lejeunea*.

## Formal treatment

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

***Lejeunea cuneistipula* (Steph.) G.E.Lee & Pócs, comb. nov.** Basionym: *Taxilejeunea cuneistipula* Steph., Sp. Hepat. 6: 401. 1923 (Stephani 1923). Type: Cameroon. 1911, Mildbraed J. 4566 (lectotype G00066792!, here designated).

***Lejeunea furcicornuta* (Grolle) G.E.Lee & Pócs, comb. nov.** Basionym: *Taxilejeunea furcicornuta* Grolle, J. Bryol. 8: 93. 1974 (Grolle 1974). Type: Madagascar. R.N. du Marojejy, 1300 m, 1972, Guillaumet 4139/c (holotype JE04002583!). Additional specimen examined: Réunion. Mascarene, around the Cascade de l'Arc en Ciel, on mosses, 520–800 m, 21°14'S, 55°37'–40'E, 1994, Kis, det. Pócs, 9436/AV (EGR).

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***Lejeunea simii* G.E.Lee & Pócs, nom. nov. pro *Taxilejeunea elobulata* Sim**, Trans. R. Soc. S. Afr. 15: 66. 1926 (Sim 1926). Type: South Africa, Maritzburg: Natal, Sim 8302 & 8257 (lectotype PRU!, here designated). **Blocking name:** *Lejeunea elobulata* (Sim) S.W.Arnell, Hepat. S. Afr. 203, 1963 (Arnell 1963). Note: Sim's original description seems to refer to two gatherings '(Sim 8302, fertile; 8257, etc.)', but indicating that there may be more gatherings. However, on the packet in PRU, which seems to be a single gathering (cf. ICN Art. 8) both numbers are written. We here lectotypify it with that specimen and treat it as being a single gathering although both collection numbers are written on the package.

***Lejeunea vallis-gratiae* (Sim) G.E.Lee & Pócs, comb. nov.** Basionym: *Taxilejeunea vallis-gratiae* Steph., Hedwigia 35: 137. 1896 (Stephani 1896). Type: South Africa, Gnadenthal, Breutel Steph. herb. no. 10790 (lectotype G00045613!, here designated). Additional specimens examined: South Africa, Port Shepstone, Natal, Jul 1907, Sim 7448 (PRU!). Africa, Blanco, A. Rehmann 214 (G00064802!).

## Current names and synonyms of African *Taxilejeunea*

*Taxilejeunea acuta* (Mitt.) Steph. ≡ *Lejeunea acuta* Mitt.

*Taxilejeunea borbonica* S.W.Arnell = *Lejeunea eckloniana* Lindb.

*Taxilejeunea cuneistipula* Steph. ≡ *Lejeunea cuneistipula* (Steph.) G.E.Lee et Pócs (this paper)

*Taxilejeunea dusenii* Steph. = *Lejeunea ramosissima* Steph.

*Taxilejeunea epiphyta* Steph. = *Taxilejeunea conformis* (Nees et Mont.) Steph. ≡ *Lejeunea conformis* Nees et Mont.

*Taxilejeunea elobulata* Sim ≡ *Lejeunea simii* G.E.Lee et Pócs (this paper)

*Taxilejeunea furcicornuta* Grolle ≡ *Lejeunea furcicornuta* (Grolle) G.E.Lee et Pócs (this paper)

*Taxilejeunea heterofolia* Steph. = *Lejeunea eckloniana* Lindb.

*Taxilejeunea krakakammae* (Lindenb.) Sim  $\equiv$  *Strepsilejeunea krakakammae* (Lindenb.) Steph.  $\equiv$  *Cheilolejeunea krakakammae* (Lindenb.) R.M.Schust.

*Taxilejeunea lindblomii* Pearson = *Taxilejeunea conformis* (Nees et Mont.) Steph. (Grolle 1991)  $\equiv$  *Lejeunea conformis* Nees et Mont.

*Taxilejeunea longirostris* Steph. = *Lejeunea grossecristata* (Steph.) E.W.Jones

*Taxilejeunea lyratiflora* (Steph.) Tixier = *Lejeunea lyratiflora* Steph.

*Taxilejeunea mitracalyx* Eifrig = *Lejeunea alata* Gottsche

*Taxilejeunea nicholsonii* Pearson = *Lejeunea grossecristata* (Steph.) E.W.Jones

*Taxilejeunea pulchriflora* Pearson  $\equiv$  *Lejeunea pulchriflora* (Pearson) G.E.Lee, Bechteler, Pócs, Schäfer-Verw. et Heinrichs

*Taxilejeunea pusilla* Pearson = *Lejeunea eckloniana* Lindenb.

*Taxilejeunea ramosissima* (Steph.) Steph. = *Lejeunea ramosissima* Steph.

*Taxilejeunea rotundifolia* Steph. = *Lejeunea caespitosa* Lindenb.

*Taxilejeunea sikorae* Steph.  $\equiv$  *Lejeunea sikorae* (Steph.) Steph.

*Taxilejeunea trichomanoides* (Mont. et Nees) Steph.  $\equiv$  *Lejeunea trichomanoides* Mont. et Nees = *Taxilejeunea conformis* (Nees et Mont.) Steph.  $\equiv$  *Lejeunea conformis* Nees et Mont.

*Taxilejeunea vallis-gratiae* Steph.  $\equiv$  *Lejeunea vallis-gratiae* (Steph.) G.E.Lee et Pócs (this paper)

*Acknowledgements* – We are very thankful to the curators of herbaria JE, G and PRU for their courtesy in making the type specimens available for this study.

*Funding* – Financial support by the Ministry of Education (MOE) Malaysia through Fundamental Research Grant Scheme (FRGS/1/2018/WAB13/UMT/03/1, grant awarded to GEL) is gratefully acknowledged.

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