



Notes on Early Land Plants Today. 31. *Lophonardia* replaces *Hypolophozia* (Cephaloziellaceae, Marchantiophyta)

LARS SÖDERSTRÖM^{1,4}, JIŘÍ VÁŇA², ANDERS HAGBORG³ & MATT VON KONRAT³

¹Department of Biology, Norwegian University of Science and Technology, N-7491 Trondheim, Norway; lars.soderstrom@bio.ntnu.no

²Department of Botany, Charles University, Benátská 2, CZ-12801 Praha 2, Czech Republic; vana@natur.cuni.cz

³Department of Botany, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605–2496, USA; hagborg@pobox.com, mvonkonrat@fieldmuseum.org

⁴Author for correspondence

Several segregates from *Lophozia* (Dumortier 1831: 53) Dumortier (1835: 17) *s. lat.* (e.g. *sensu* Schuster 1969) are now recognized as distinct genera. Bakalin elevated *Lophozia* subgen. *Hypolophozia* to *Hypolophozia* and transferred *Lophozia dusenii* as *Hypolophozia dusenii*.

Váňa in Engel & Gradstein (2003) synonymized *Lophonardia caespitosa* with *Lophozia laxifolia*, which is the type of the genus *Hypolophozia*. At the genus level *Lophonardia* has priority over *Hypolophozia*, so the former name has to be used. It should be noted that although heterotypic synonyms, both genera have the same “accepted” taxon as type.

Formal treatment

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

Lophonardia R.M.Schust., *Phytologia* 39: 244, 1978. (Schuster 1978).

Type:—*Lophonardia caespitosa* R.M.Schust. (= *Lophonardia laxifolia* (Mont.) L.Söderstr. et Váňa).

Lophozia subgen. *Hypolophozia* R.M.Schust., Rev. Bryol. Lichénol. 34: 276, 1966 (Schuster 1966) **syn. nov.**

Type:—*Lophozia subinflata* (Spruce) R.M.Schust. 1966 (= *Lophonardia laxifolia* (Mont.) L.Söderstr. et Váňa).

≡ *Hypolophozia* (R.M.Schust.) Bakalin, *Monogr. Lophozia*: 38, 2005 (Bakalin 2005).

***Lophonardia jamesonii* (Mont.) L.Söderstr. et Váňa, comb nov.**

Basionym:—*Jungermannia jamesonii* Mont., *Syll. Gen. Sp. Crypt.*: 60, 1856. (Montagne 1856).

Lectotype (Gradstein *et al.* 1983):—ECUADOR. "In Andes Peruviae prope Quito: *Jameson*", (PC-Mont.!, isolectotype PC-Mont.!).

≡ *Andrewsianthus jamesonii* (Mont.) Váňa, *Acta Bot. Acad. Sci. Hung.* 29: 147, 1983 (Gradstein *et al.* 1983).

= *Jungermannia achroa* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 514, 1885 (Spruce 1885), *syn. in* Gradstein *et al.* (1983). Type:—ECUADOR. "in monte Tunguragua, 2200m", Spruce, (lectotype MANCH, isolectotype G-47605!) ≡ *Cephaloziopsis achrous* (Spruce) Schiffn., *Hepat.* [Engl.-Prantl]: 85, 1893 (Schiffner 1893). ≡ *Sphenolobus achrous* (Spruce) Steph., *Bull. Herb. Boissier ser. 2*, 2: 174 (*Spec. Hep.* 2: 166), 1902 (Stephani 1902b). ≡ *Andrewsianthus achrous* (Spruce) R.M.Schust., *Nova Hedwigia* 8: 207, 1964 (Schuster 1964).

= *Lophozia kilimanjarica* S.W.Arnell, *Ark. Bot.* 3 (16): 539, 1956 (Arnell 1956), *syn. in* Gradstein *et al.* (1983). Type:—TANZANIA., Kilimanjaro: above Marangu in the eriaceous belt, 3400 m, on moist, sloping ground in a small ravine South of Peter's hut, *O. Hedberg no. 1363d* (holotype UPS!). ≡ *Andrewsianthus kilimanjaricus* (S.W.Arnell) Grolle et Váňa, *J. Hattori Bot. Lab.* 48: 228, 1980 (Váňa 1980).

= *Lophozia stolonifera* R.M.Schust., *Phytologia* 39: 242, 1978 (Schuster 1978) **syn. nov.** Type:—VENEZUELA. Estado

Tachira: Paramo de Tama, 3130-3140 m., *R.M. Schuster & L. Ruiz-Teran 76-1944* (holotype F, *non vidi*). Note:—Schuster (2002: 281) discussed the relation to *Andrewsianthus jamesonii* and emphasized that the differences was in gemmae production saying that *Lophonardia jamesonii* lacks gemmae. However, the latter does produce gemmae regularly (cf. Gradstein *et al.* 1983).

***Lophonardia laxifolia* (Mont.) L.Söderstr. et Váňa, comb. nov.**

Basionym:—*Sarcocyphos laxifolius* Mont., *Ann. Sci. Nat., Bot., ser. 3, 4*: 346, 1845 “*Sarcoscyphus*” (Montagne 1845).

Lectotype (**here designated**):—CHILE. *Gay* (PC 6633!, islectotypes BM!, FH!, G-113588! [G-11071!]¹, S!).

- ≡ *Hypolophozia laxifolia* (Mont.) Váňa, *Mem. New York Bot. Gard.* 105: 64, 2013 (Váňa & Engel 2013).
= *Jungermannia opacula* Spruce, *J. Bot.* 19: 33, 1881 (Spruce 1881), **syn. nov.** Lectotype (**here designated**):—ECUADOR. “in saxis terra obtectis ad pedem montis Chimborazo austro-orientalem, alt. 2600 m. lecta”, *Spruce* (MANCH, islectotype [G-18287!]). ≡ *Lophozia opacula* (Spruce) Steph., *Bull. Herb. Boissier ser. 2, 2*: 46 (*Spec. Hep.* 2: 146), 1902 (Stephani 1902a).
= *Jungermannia subinflata* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 513, 1885 (Spruce 1885), **syn.** in Gradstein (1999). Type:—ECUADOR. Tunguragua, 2400-3000 m., *Spruce*, (holotype MANCH) ≡ *Lophozia subinflata* (Spruce) R.M.Schust., *Rev. Bryol. Lichénol.* 34: 276, 1966 (Schuster 1966).
= *Jungermannia plicatula* Steph., *Hedwigia* 34: 50, 1895 (Stephani 1895), **syn. nov.** Type:—CHILE. Valdivia: 1887/1888, *D. Hahn, Herb. Jack* (holotype G-60998 [=G-11059!]). ≡ *Lophozia plicatula* (Steph.) Steph., *Bull. Herb. Boissier ser. 2, 1*: 1146 (*Spec. Hep.* 2: 129), 1901 (Stephani 1901a).
= *Jungermannia hahnii* Steph., *Hedwigia* 34: 50, 1895 (Stephani 1895), **syn. nov.** Type:—CHILE, Valdivia: 1887/1888, *D. Hahn, Herb. Jack* (holotype [G-18282!]). ≡ *Lophozia hahnii* (Steph.) Steph., *Bull. Herb. Boissier ser. 2, 1*: 1145 (*Spec. Hep.* 2: 137), 1901 (Stephani 1901b).
= *Lophozia dusenii* Steph., *Bih. Kongl. Svenska Vetensk.-Akad. Handl.* 26 (III,6): 24, 1900 (Stephani 1900), **syn.** in Grolle (1964). Lectotype (Grolle 1964):—CHILE. Rio Aysén, *Dusén 455* (G-69807 [=G-18278]) ≡ *Hypolophozia dusenii* (Steph.) Bakalin, *Monogr. Lophozia*: 39, 2005 (Bakalin 2005).
= *Sphenolobus argentinus* Steph. 1902, *Bull. Herb. Boissier ser. 2, 2*: 166 (*Spec. Hep.* 2: 158), 1902 (Stephani 1902b), **syn.** in Váňa & Engel (2013). Type:—ARGENTINA. *Lorentz* (holotype G-69818 [=G-18276!]) ≡ *Lophozia argentina* (Steph.) R.M.Schust., *Rev. Bryol. Lichénol.* 34: 276, 1966 (Schuster 1966).
= *Lophonardia caespitosa* R.M.Schust., *Phytologia* 39: 244, 1978. Type:—VENEZUELA. Estado Merida: Sierra Nevada de Merida, above Merida, above Loma Redonda station of the Teleferico, in sheltered isolated *Polylepis sericea* bosque, 4130 m, February 1976, *R.M.Schuster & L. Ruiz-Teran 76-1458* (holotype F, isotype MERF!).
= *Lophozia aenigmatica* R.M.Schust. *Beih. Nova Hedwigia* 119: 274, 2002 (Schuster 2002) *nom. inval.* (Art. 36,1; no Latin description). Original material:—VENEZUELA. Sierra de Santo Domingo, 3750 m, *RMS & L. Ruiz-Teran 76-904*.

***Lophonardia tristaniana* (S.W.Arnell) L.Söderstr. et Váňa, comb. nov.**

Basionym:—*Jungermannia tristaniana* S.W.Arnell, *Results Norweg. Sci. Exped. Tristan da Cunha* 42: 12, 1958 (Arnell 1958).

Type:—TRISTAN DA CUNHA. No. 788 (type), above Burntwood, 1200 m., together with *Schistochila splachnophylla* etc. (holotype O!, isotypes JE!, S!, UPS!).

≡ *Hypolophozia tristaniana* (S.W.Arnell) Váňa et J.J.Engel, *Mem. New York Bot. Gard.* 105: 64, 2013 (Váňa & Engel 2013).

Acknowledgement

We thank Rob Gradstein (PC) for help with types. The Early Land Plants Today project (ELPT) has been generously supported in part by the Global Biological Information Facility (GBIF) Seed Money Award No.2007-41, activities facilitated in part by funding from the Biodiversity Synthesis Center of the Encyclopedia of Life (BioSynC), partial funding from the National Science Foundation (Award No's 0749762, 1115002), the Warwick Foundation, and the Negaunee Foundation.

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.

References

- Arnell, S. (1956) Hepaticae collected by O. Hedberg et al. on the East African Mountains. *Arkiv för Botanik* 3(16): 517–562.
- Arnell, S. (1958) Hepatics from Tristan da Cunha. *Results of the Norwegian Scientific Expedition to Tristan da Cunha, 1937–1938* 42: 1–76.
- Bakalin, V.A. (2005) *Monograficzeskaya obrabotka roda Lophozia (Dumort.) Dumort. s. str. [Monograph of the genus Lophozia (Dumort.) Dumort. s. str.]*. Nauka, Moscow, 240 pp.
- Dumortier, B.C. (1831) *Sylloge Jungermannidearum Europae indigenarum, earum genera et species systematice complectens*. J. Casterman, Tournay, 100 pp. <http://dx.doi.org/10.5962/bhl.title.22343>
- Dumortier, B.C. (1835) *Recueil d'Observations sur les Jungermanniacées. I. Révision des genres*. J.-A. Blanquart, Tournay, 27 pp. <http://dx.doi.org/10.5962/bhl.title.731>
- Engel, J.J. & Gradstein, S.R. (2003) Studies in Geocalycaceae XIV. *Physotheca* J. J. Engel & Gradst., a new genus of Hepaticae from Ecuador, belonging to a new subfamily, Geocalycaceae subfam. Physothecoideae J. J. Engel & Gradst. *Taxon* 52: 763–773. <http://dx.doi.org/10.2307/3647350>
- Gradstein, S.R. (1999) Hepatics (*In*: Luteyn, J.L., Páramos, a checklist of plant diversity, geographical distribution and botanical literature). *Memoirs of the New York Botanical Garden* 84: 65–73.
- Gradstein, S.R., Pócs, T. & Váňa, J. (1983) Disjunct hepaticae in tropical America and Africa. *Acta Botanica Academiae Scientiarum Hungarica* 29: 127–171.
- Grolle, R. (1964) Miscellanea hepaticologica 11–20. *Journal of Japanese Botany [Shokubutsu kenkyu zasshi]* 39: 173–178.
- Montagne, J.F.C. (1845) Cinquième centurie de plantes cellulaires exotiques nouvelles, décades I à VI. *Annales des Sciences Naturelles, Botanique, ser. 3* 4: 86–123.
- Montagne, J.F.C. (1856) *Sylloge generum specierumque cryptogamarum quas in varii operibus descriptas iconibusque illustratas, nunc ad diagnosum reductas, non nullasque novas interjectas ordine systematico disposuit*. Sumptibus J.-B. Ballière, Paris, 498 pp. <http://dx.doi.org/10.5962/bhl.title.5403>
- Schiffner, V. (1893) Hepaticae (Lebermoose). *In*: Engler, A. & Prantl, K. (Eds), *Die Natürlichen Pflanzenfamilien, Teil. I, Abt. 3*. Engelmann, Leipzig, pp. 1–144.
- Schuster, R.M. (1964) Studies on Hepaticae XIX–XX. *Cephalozia* (Spr.) Schiffn. and *Andrewsianthus* Schust. *Nova Hedwigia* 8: 201–209.
- Schuster, R.M. (1966) Studies in Lophoziaaceae. 1. The genera *Anastrophyllum* and *Sphenolobus* and their segregates. 2. *Cephalolobus* gen. n., *Acrolophozia* gen. n. and *Protomarsupella* gen. n. *Revue Bryologique et Lichénologique* 34: 241–287.
- Schuster, R.M. (1969) *The Hepaticae and Anthocerotae of North America. vol. II*. Columbia University Press, New York, 1062 pp.
- Schuster, R.M. (1978) Studies on Venezuelan Hepaticae. I. *Phytologia* 39: 239–251.
- Söderström, L. Hagborg, A. & von Konrat, M. (2012) Notes on Early Land Plants Today. *Phytotaxa* 65: 41–42.
- Spruce, R. (1881) Musci Praeteriti. *Journal of Botany* 19: 33–40.
- Spruce, R. (1885) Hepaticae Amazonica et Andinae. *Transactions and Proceedings of the Botanical Society. Edinburgh* 15: 309–588.
- Stephani, F. (1895) Hepaticarum species novae VII. *Hedwigia* 34: 43–65.
- Stephani, F. (1900) Beiträge zur Lebermoosflora Westpatagoniens und des südlichen Chile. *Bihang til Kongliga Svenska Vetenskaps-Akademiens Handlingar* 26 (III,6): 1–69.
- Stephani, F. (1901a) Species Hepaticarum 2. *Bulletin de l'Herbier Boissier, série 2* 1: 1022–1140.
- Stephani, F. (1901b) Species Hepaticarum 2. *Bulletin de l'Herbier Boissier, série 2* 1: 1121–1151.
- Stephani, F. (1902a) Species Hepaticarum 2. *Bulletin de l'Herbier Boissier, série 2* 2: 35–48.
- Stephani, F. (1902b) Species Hepaticarum 2. *Bulletin de l'Herbier Boissier, série 2* 2: 157–179.
- Váňa, J. (1980) Some new South and Central American Hepatics. *Journal of the Hattori Botanical Laboratory* 48: 225–234.
- Váňa, J. & Engel, J.J. (2013) The liverworts and hornworts of the Tristan da Cunha group. *Memoirs of the New York Botanical Garden* 105: 1–138.