



Early Land Plants Today: Index of Liverworts & Hornworts 2015–2016

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Abstract

A widely accessible list of known plant species is a fundamental requirement for plant conservation and has vast uses. An index of published names of liverworts and hornworts between 2015 and 2016 is provided as part of a continued effort in working toward maintaining an updated world checklist of these groups. The list herein includes 64 higher taxon names, 225 specific names, 35 infraspecific names, two infrageneric autonyms and 21 infraspecific autonyms for 2015 and 2016, including also names of fossils and invalid and illegitimate names. Thirty-three older names omitted in the earlier indices are included.

Key words: Liverworts, hornworts, index, nomenclature, fossils, new names

Introduction

Under the auspices of the Early Land Plants Today project, there has been a strong community-driven effort attempting to address the critical need to synthesize the vast nomenclatural, taxonomic and global distributional data for liverworts (Marchantiophyta) and hornworts (Anthocerotophyta) (von Konrat *et al.* 2010a). These endeavors, building on decades of previous efforts, were critical in providing the foundation to develop a working checklist of liverworts and hornworts worldwide published in 2016 (Söderström *et al.* 2016a). This contribution is fundamental toward the development of an online flora of all known plant species (Target 1) under the auspices of the *Convention on Biological Diversity* (CBD) and the *Global Strategy for Plant Conservation* (GSPC). The significance of this target was underscored again by the Conference of the Parties to the Convention on Biological Diversity who have further developed the GSPC into its second phase (2011–2020), taking into account current and emerging environmental challenges for plant diversity (Blackmore *et al.* 2011). The critical need for this target to be achieved and the implications for conservation, taxonomy, and botanical science were recently outlined by Paton *et al.* (2008). Progress towards the achievement of the Targets of the GSPC has been reviewed by Paton & Lughadha (2011).

This index follows on from decades of previous bryophyte specific indices. von Konrat *et al.* (2008a) provided a brief review and assessment of nomenclatural data availability and information needs for liverworts and hornworts. There are many outstanding nomenclatural indexing and similar projects, including: MOSs TROPICOS (<http://www.mobot.org/MOBOT/tropicos/most/iom.shtml>); Index Hepaticarum, (Bonner 1962–1977; Geissler & Bischler 1987–1990) which includes all effectively published liverwort epithets spanning 12 volumes with the closing date of 1973 (see Gradstein, 2006 for an assessment of that publication, now available online at <http://www.ville-ge.ch/musinfo/bd/cjb/hepatic/index.php>); Index of Hepatics by Crosby & Engel (2005) providing an equally valuable nomenclatural resource and catalogue of names published during 1974 to 2000 at all ranks for liverworts and hornworts; and the recent indices of the citations for names published for bryophytes for the years 2001–2004 (Crosby & Magill 2005) and 2005 (Crosby & Magill 2006). The Early Land Plants Today project (von Konrat *et al.* 2010) continued this series in the form of an Index for Liverworts and Hornworts 2006–2008, 2009–2010, 2011–2012 and 2013–2014 (von Konrat *et al.* 2010b, Söderström *et al.* 2012d, 2014, 2016b).

In the current index we list citations for effectively published names for liverworts and hornworts during the period January 1, 2015 through December 31, 2016. We use the date when it was first effectively published, whether it was a preprint online or in a hardcopy. However, in the reference list we give the bibliographic reference to the

printed version wherever possible. In the list we give the effective publication year at the end of the short reference, but the bibliographic year in the citation following it. In the reference there is only the bibliographic information. We also include names of fossils that may be liverworts or hornworts, but where the actual placement is uncertain, thus the inclusion of such a name does not mean that we have accepted it to be a liverwort or hornwort. Valid, illegitimate and invalid names that were overlooked by earlier indices (2000–2014) are also included. A bibliography contains complete citations for the places of publication of the names, their basionyms and of any blocking names, in the cases where a replacement name is needed. The format generally follows that of previous indices, especially Söderström *et al.* (2016b). For fossils we state the geological period. The type taxon is also provided for new higher taxa. All names are arranged alphabetically. Although names that we judge to be invalidly published under the International *Code of Nomenclature (ICN)* (McNeill *et al.* 2012) are included in the list, nomenclaturally they are not accepted by the authors of this index, and therefore not considered to be validly published under the ICN (McNeill *et al.* 2012; “Melbourne Code”). As in previous indices, no disposition is provided to an accepted name or to the taxonomy.

Statistics

This list contains 64 names of higher taxa, 225 specific, and 35 infraspecific names, two infrageneric autonyms and 21 infraspecific autonyms for 2015 and 2016. Twenty-eight of them are fossils, including names of one new order, one new family, four new genera and 22 new species. Thirty-three older names omitted in the earlier indices are included. Thirty-three of the names are invalid, one is illegitimate. Forty-four higher taxa, 102 species and 14 infraspecific taxa were published as new to science, the rest are new combinations or new names for existing taxa.

Format

Authorities and citation abbreviations follow the on-line version of Authors of Plant Names at the Royal Botanic Gardens, Kew, Website (www.ipni.org), which is an updated version of Brummitt & Powell (1992). Nomenclature follows the ICN (McNeill *et al.* 2012).

The following outlines the format for the different categories of names published during the period. Common reasons for the note are superfluous combinations, blocking names, etc., and of the era for fossils.

The name of a *new taxon* published during the period takes the form:

Archilejeunea gradsteinii X.Q.Shi et R.L.Zhu, *Nova Hedwigia* 100 (3-4): 592, 2015 (see Shi & Zhu 2015). TYPE: “Sierra Leone. Kenema District: Kambui Hills. Bambawo. 27 Mar. 1971, *E.W.Jones* 1528 (holotype, E! Barcode: 00018881, female)”.

It is associated with the article in which it was published in the Bibliography: Shi, X.-Q. & Zhu, R.-L. (2015) A revision of *Archilejeunea* s.str. (Lejeuneaceae, Marchantiophyta). *Nova Hedwigia* 100 (3-4): 589–601. DOI: 10.1127/nova_hedwigia/2015/0246

A *new combination* published during the period takes the form:

Acrobolbus africanus (Pearson) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus africanus* Pearson, *Forh. Vidensk.-Selsk. Kristiania* 1887 (9): 14, 1887 (see Pearson 1887).

Corresponding articles from the Bibliography:

Briscoe, L., Engel, J.J., Söderström, L., Hagborg, A. & von Konrat, M.J. (2015) Notes on Early Land Plants Today. 66. Nomenclatural notes on Acrobolbaceae. *Phytotaxa* 202 (1): 58–62. DOI: 10.11646/phytotaxa.202.1.8

Pearson, W.H. (1887) Hepaticae knysnanae. *Forhandling i Videnskabs-Selskabet i Kristiania* 1887 (9): 1–16.

One or two asterisks preceding an entry indicate that the name has been interpreted by us as contrary to the ICN (McNeill *et al.* 2012) being either illegitimate (a single asterisk) or invalid (two asterisks). We give both the article that we based our interpretation on, and a short statement about what we think is wrong. For example:

*****Lejeunea kudremukhensis*** Sushil K.Singh et Pócs, *Pl. Sci. Today* 3 (2): 166, 2016, *nom. inval.* ICN Art. 38.1(a); no description (see Singh & Singh 2016). ORIGINAL MATERIAL: “TN [Tamil Nadu]”.

A dagger, †, preceding an entry indicates a name for a fossil. For example,

†***Anastrophyllum rovnói*** Mamontov, Heinrichs et Váňa, *Arctoa* 24 (1): 45, 2015 (see Mamontov *et al.* 2015a). TYPE: “Klesov. Rovno amber. Late Eocene. SIZK-K-915-F. Syninclusions in K-915-F: Fagaceae stellate hairs; one specimen of Hymenoptera, one of *Aphidinea*, and two of Chironomidae; and in K-916 [originally the same piece as K-915] one specimen of Chironomidae (Figs 1-6)”.

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Acrobolboideae R.M.Schust. ex Briscoe (subfam.), *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASED ON: Acrobolboideae R.M.Schust. (subfam.), *Hepat. Anthocerotae N. Amer.* 4: 543, 1980, nom. inval. (ICN Art. 39.1; no Latin description) (see Schuster 1980).

Acrobolbus africanus (Pearson) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus africanus* Pearson, *Forh. Vidensk.-Selsk. Kristiania* 1887 (9): 14, 1887 (see Pearson 1887).

Acrobolbus anisodontus (Hook.f. et Taylor) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Jungermannia anisodonta* Hook.f. et Taylor, *London J. Bot.* 4: 79, 1845 (see Hooker & Taylor 1845).

Acrobolbus azoricus (Grolle et Perss.) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus azoricus* Grolle et Perss., *Svensk Bot. Tidskr.* 60 (1): 169, 1966 (see Grolle & Persson 1966).

Acrobolbus cuneifolius (Steph.) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus cuneifolius* Steph., *Bull. Herb. Boissier (sér. 2)* 5 (12): 1138 (= *Spec. Hepat.* 3: 10), 1905 (see Stephani 1905).

Acrobolbus epiphytus (Colenso) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Marsupidium epiphytum* Colenso, *Trans. & Proc. New Zealand Inst.* 21: 64, 1889 “*epiphyta*” (see Colenso 1889).

Acrobolbus flavicans (J.J.Engel et Grolle) Briscoe et J.J.Engel, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Marsupidium flavicans* J.J.Engel et Grolle, *J. Hattori Bot. Lab.* 34: 438, 1971 (see Engel & Grolle 1971).

Acrobolbus gradsteinii (Grolle) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Marsupidium gradsteinii* Grolle, *J. Hattori Bot. Lab.* 66: 337, 1989 (see Grolle 1989).

Acrobolbus integrifolius (A.Evans) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus integrifolius* A.Evans, *Trans. Connecticut Acad. Arts* 8 (15): 259, 1891 (see Evans 1891).

Acrobolbus knightii (Mitt.) Briscoe, *Phytotaxa* 202 (1): 59, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Marsupidium knightii* Mitt., *Handb. N. Zeal. fl.* 2: 753, 1867 (see Hooker 1867).

Acrobolbus kunkelii (Hässel et Solari) Briscoe et J.J.Engel, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus kunkelii* Hässel et Solari, *Darwiniana* 17: 574, 1972 (see Hässel & Solari 1972).

Acrobolbus laxis (Lehm. et Lindenb.) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Plagiochila laxa* Lehm. et Lindenb., *Sp. Hepat. (Lindenberg)* 2-4: 68, 1840 (see Lindenberg 1840).

Acrobolbus limbatus (Steph.) Briscoe et J.J.Engel, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus limbatus* Steph., *Kungl. Svenska Vetensk.-Akad. Handl. (n.ser.)* 46 (9): 25, 1911 (see Stephani 1911b).

Acrobolbus madeirensis (Grolle et Perss.) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus madeirensis* Grolle et Perss., *Svensk Bot. Tidskr.* 60 (1): 166, 1966 (see Grolle & Persson 1966).

Acrobolbus papillosus (J.J.Engel et Glenny) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Marsupidium papillosum* J.J.Engel et Glenny, *Nova Hedwigia* 87 (3/4): 289, 2008 (see Engel & Glenny 2008b).

Acrobolbus perpusillus (Colenso) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus perpusillus* Colenso, *Trans. & Proc. New Zealand Inst.* 19: 286, 1887 (see Colenso 1887).

Acrobolbus perpusillus* var. *denticulatus (J.J.Engel et Glenny) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Marsupidium perpusillum* var. *denticulatum* J.J.Engel et Glenny, *Nova Hedwigia* 87 (3/4): 284, 2008 (see Engel & Glenny 2008b). NOTE: This also creates the autonym.

Acrobolbus plagiochiloides (J.J.Engel et Glenny) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Marsupidium plagiochiloides* J.J.Engel et Glenny, *Nova Hedwigia* 87 (3/4): 284, 2008 (see Engel & Glenny 2008b).

Acrobolbus pseudosaccatus (Grolle) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus pseudosaccatus* Grolle, *Nova Hedwigia* 6 (3/4): 391, 1963 (see Grolle 1963).

Acrobolbus renifolius (Hässel et Solari) Briscoe et J.J.Engel, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus renifolius* Hässel et Solari, *Darwiniana* 17: 583, 1972 (see Hässel & Solari 1972).

Acrobolbus ruwenzorensis (S.W.Arnell) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus ruwenzorensis* S.W.Arnell, *Ark. Bot. (n.ser.)* 3 (16): 560, 1956 “*Tylunanthus*” (see Arnell 1956).

Acrobolbus setulosus (Mitt.) Briscoe, *Phytotaxa* 202 (1): 60, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Gymnanthe setulosa* Mitt., *Bot. antarct. voy. II (Fl. Nov.-Zel. 2)*: 144, 1854 (see Mitten 1854).

Acrobolbus sumatranus (Schiffn.) Briscoe, *Phytotaxa* 202 (1): 61, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Lophozia sumatrana* Schiffn., *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 67: 203, 1898 (see Schiffner 1898).

Acrobolbus tenellus var. *diversifolius* (E.A.Hodgs.) Briscoe, *Phytotaxa* 202 (1): 61, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus diversifolius* E.A.Hodgs., *Trans. Roy. Soc. New Zealand* 85 (4): 575, 1958 (see Hodgson 1958). NOTE: This also creates the autonym.

Acrobolbus viridis (Mitt.) Briscoe et J.J.Engel, *Phytotaxa* 202 (1): 61, 2015 (see Briscoe *et al.* 2015). BASIONYM: *Tylimanthus viridis* Mitt., *J. Linn. Soc., Bot.* 15 (84): 197, 1876 (see Mitten 1876).

†*Aequitriradites burgeri* B.E.Wagstaff, S.J.Gallagher et J.K.Trainor, *Rev. Palaeobot. Palynol.* 171: 69, 2012 (see Wagstaff *et al.* 2012). TYPE: “Holotype: Plate I, figs. 9–10. Type locality: Boundary Creek-1A well, Gippsland Basin, Victoria, Australia. Type horizon: Boundary Creek-1A well, 266.53 m, Slide 1, England Finder H32/1”.

Allorgella australiensis (B.M.Thiers) Bechteler, G.E.Lee, Schäf.-Verw. et Heinrichs, *Pl. Syst. Evol.* 302: 199, 2015 (see Bechteler *et al.* 2016a). BASIONYM: *Otolejeunea australiensis* B.M.Thiers, *Brittonia* 44 (2): 162, 1992 (see Thiers 1992).

Allorgella philippinensis (R.L.Zhu et M.L.So) Bechteler, G.E.Lee, Schäf.-Verw. et Heinrichs, *Pl. Syst. Evol.* 302: 199, 2015 (see Bechteler *et al.* 2016a). BASIONYM: *Otolejeunea philippinensis* R.L.Zhu et M.L.So, *Syst. Bot.* 23 (2): 231, 1998 (see Zhu & So 1998).

Allorgella rabenorii (Tixier) Bechteler, G.E.Lee, Schäf.-Verw. et Heinrichs, *Pl. Syst. Evol.* 302: 199, 2015 (see Bechteler *et al.* 2016a). BASIONYM: *Otolejeunea rabenorii* Tixier, *Nova Hedwigia* 46 (3/4): 376, 1988 (see Tixier 1988).

Allorgella semperiana (Steph.) Bechteler, G.E.Lee, Schäf.-Verw. et Heinrichs, *Pl. Syst. Evol.* 302: 199, 2015 (see Bechteler *et al.* 2016a). BASIONYM: *Prionolejeunea semperiana* Steph., *Sp. Hepat. (Stephani)* 5: 227, 1913 (see Stephani 1913).

Allorgella subana (Pócs) Pócs, *Pl. Syst. Evol.* 302: 199, 2015 (see Bechteler *et al.* 2016a). BASIONYM: *Otolejeunea subana* Pócs, *Acta Acad. Ped. Agr., Sect. Biol.* 25: 50, 2004 (see Pócs 2004).

Allorgella zantenii (Grolle) Bechteler, G.E.Lee, Schäf.-Verw. et Heinrichs, *Pl. Syst. Evol.* 302: 199, 2015 (see Bechteler *et al.* 2016a). BASIONYM: *Otolejeunea zantenii* Grolle, *Hausknechtia* 2: 54, 1985 (see Grolle 1985b).

†*Anastrophyllum rovnoi* Mamontov, Heinrichs et Váňa, *Arctoa* 24 (1): 45, 2015 (see Mamontov *et al.* 2015a). TYPE: “Klesov. Rovno amber. Late Eocene. SIZK-K-915-F. Syninclusions in K-915-F: Fagaceae stellate hairs; one specimen of Hymenoptera, one of *Aphidinea*, and two of Chironomidae; and in K-916 [originally the same piece as K-915] one specimen of Chironomidae (Figs 1-6)”.

***Anomylia cuneifolia* subsp. *fragilis* (J.B.Jack et Steph.) R.M.Schust. ex Hässel et Rubies, *Beih. Nova Hedwigia* 134: 31, 2009 (see Hässel & Rubies 2009), *nom. inval.* (ICN Art. 41.5; basionym not cited). BASIONYM: *Leioscyphus fragilis* J.B.Jack et Steph., *Hedwigia* 31 (1): 20, 1892 (see Jack & Stephani 1892).

Anthoceros expansus (Steph.) J.C.Villarreal et Cargill, *Phytotaxa* 208 (1): 92, 2015 (see Villarreal *et al.* 2015). BASIONYM: *Aspiromitus expansus* Steph., *Sp. Hepat. (Stephani)* 5: 961, 1916 (see Stephani 1916).

Apopellia (Grolle) Nebel et D.Quandt, *Taxon* 65 (2): 230, 2016 (see Schütz *et al.* 2016). BASIONYM: *Pellia* subg. *Apopellia* Grolle, *J. Bryol.* 12 (3): 427, 1983 (see Grolle 1983).

Apopellia alpicola (R.M.Schust. ex L.Söderstr., A.Hagborg et von Konrat) Nebel et D.Quandt, *Taxon* 65 (2): 230, 2016 (see Schütz *et al.* 2016). BASIONYM: *Pellia alpicola* R.M.Schust. ex L.Söderstr., A.Hagborg et von Konrat, *Phytotaxa* 76 (3): 39, 2013 (see Söderström *et al.* 2013).

Apopellia endiviifolia (Dicks.) Nebel et D.Quandt, *Taxon* 65 (2): 230, 2016 (see Schütz *et al.* 2016). BASIONYM: *Jungermannia endiviifolia* Dicks., *Fasc. Pl. Crypt. Brit.* 4: 19, 1801 “*endiviaefolia*” (see Dickson 1801).

Apopellia megaspora (R.M.Schust.) Nebel et D.Quandt, *Taxon* 65 (2): 231, 2016 (see Schütz *et al.* 2016). BASIONYM: *Pellia megaspora* R.M.Schust., *J. Bryol.* 11 (3): 419, 1981 (see Schuster 1982).

Archilejeunea gradsteinii X.Q.Shi et R.L.Zhu, *Nova Hedwigia* 100 (3/4): 592, 2015 (see Shi & Zhu 2015). TYPE: “Sierra Leone. Kenema District: Kambui Hills. Bambawo. 27 Mar. 1971, *E.W.Jones* 1528 (holotype, E! Barcode: 00018881, female)”.

Austrolophozioideae R.M.Schust. ex Crand.-Stotl., Váňa et Stotler (subfam.), *Syst. Bot.* 40 (1): 37, 2015 (see Shaw *et al.* 2015). TYPE: *Austrolophozia* R.M.Schust.

Bazzania manczurica Bakalin, *Bot. Pacifica* 5 (1): 39, 2016 (see Bakalin 2016a). TYPE: “Holotype: Russia. Primorsky Territory, Partizansky District, SW-facing slope of Olkhovaya Mt (43°20'42"N 133°40'26"E), 1200 m

alt., mixed Manchurian hemiboreal forest, mesic cliffs, in part shade. Leg. *V.A. Bakalin* 13 Sept. 2014, *P-36-11-14* (VBGI)”.

Bazzania parabidentula Bakalin, *Bot. Pacifica* 5 (1): 35, 2016 (see Bakalin 2016a). TYPE: “Holotype: RUSSIA. Primorsky Territory, Lazovsky Pass (43°29'38"N 133°34'45"E), 915 m alt., 915 m alt., decaying wood in part shade. Leg. *V.A. Bakalin*, 22 Sept. 2011, *P-72-8-11* (VBGI)”.

Bazzania subintegra (Steph.) L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 69, 2015 (see Söderström *et al.* 2015c). BASIONYM: *Mastigobryum subintegrum* Steph., *Bull. Herb. Boissier (sér. 2)* 8 (10): 775 (=Spec. Hepat. 3: 459), 1908 (see Stephani 1908c).

Bazzania wooroonoran Meagher, *Nova Hedwigia* 100 (3/4): 549, 2015 (see Meagher 2015). TYPE: “Bellenden Ker Range (Wooroonoran or ‘Centre Peak’), *Scott s.n.*, 3 September 1986, MELU-116”.

Brevianthus huerlimannii (Váňa et Grolle) M.A.M.Renner et J.J.Engel, *Telopea* 19: 12, 2016 (see Renner *et al.* 2016a). BASIONYM: *Nardia huerlimannii* Váňa et Grolle, *Österr. Bot. Z.* 118 (3): 233, 1970 (see Váňa 1970).

Brevianthus hypocanthidium M.A.M.Renner et J.J.Engel, *PhytoKeys* 50: 46, 2015 (see Renner *et al.* 2015). TYPE: “New Caledonia, Province Sud, Mont Kouakoué, slightly west of base camp at helicopter landing site, without date, *E.A. Brown 2006/17*, holotype: NOU; isotypes: NSW, F”.

Cephalozia conchata (Grolle et Váňa) Váňa, *Syst. Bot.* 40 (1): 38, 2015 (see Shaw *et al.* 2015). BASIONYM: *Jungermannia conchata* Grolle et Váňa, *Fragm. Florist. Geobot.* 37 (1): 3, 1992 (see Grolle & Váňa 1992).

†***Cephalozia veltenii*** T.Katag., *Nova Hedwigia* 101 (3/4): 348, 2015 (see Katagiri 2015a). TYPE: “Inclusion in Baltic amber, *Velten s.n.* (holotype: HIRO-1021464). Age: Eocene, 35–48 Ma”.

†***Cephaloziella nadezhdae*** Mamontov, Heinrichs et Váňa, *Arctoa* 24 (2): 293, 2015 (see Mamontov *et al.* 2015d). TYPE: “HOLOTYPE: Klesov (Pugach quarry). Rovno amber. Late Eocene. SIZK-K-24755-F”.

Cephaloziella tahora Bever. et Glenn, *J. Bryol.* 37 (1): 60, 2016 (see Beveridge *et al.* 2017). TYPE: “New Zealand, Taranaki Ecological Region, Taranaki Ecological District, Forgotten World Highway (SH 43), Ohura Road, Tahora Scenic Reserve, 240 m, on a vertical calcareous sandstone and mudstone rock bank, periodically irrigated by seepage, at the southern road-tunnel entrance, growing with cyanobacterial filaments, *Neolepidozia patentissima* var. *zebrina* (J.J.Engel & G.L.Sm.) E.D.Cooper, *Riccardia papulosa* (Steph.) E.A.Brown and *Heteroscyphus supinus* (Hook.f. & Taylor) R.M.Schust. between tufts of *Bryum clavatum* (Schimp.) Müll.Hal., 39°01.28'S, 174°48.12'E, 11 October 2014, *P Beveridge NR-1*. Holotype: WELT H013299”.

Cephaloziella varians* subsp. *subantarctica (R.M.Schust.) R.M.Schust. ex J.J.Engel et Glenn, *Flora Liverw. Hornw. New Zealand* 1: 602, 2008 (see Engel & Glenn 2008). BASIONYM: *Cephaloziella arctica* subsp. *subantarctica* R.M.Schust., *Nova Hedwigia* 222: 197, 1971 (see Schuster 1971).

Ceratolejeunea bardatii Thouvenot, Gradst. et R.L.Zhu, *Cryptog. Bryol.* 36 (3): 244, 2015 (see Thouvenot *et al.* 2015). TYPE: “New Caledonia, Province Sud, Moindou, “Parc Provincial des Grandes Fougères”, Houé river valley, near Campement Rivalin, 430 m a.s.l., UTM 58K (0577685, 7610349), submontane mesophyllous valley forest, on bark of a palm tree, shaded, 24 September 2008, *L. Thouvenot NC1294* holotype, PC 0736706; isotypes, hb. Thouvenot, HSNU”.

†***Ceratolejeunea palaeomexicana*** (Grolle) G.E.Lee, Schäf.-Verw., A.R.Schmidt et Heinrichs, *Cryptog. Bryol.* 36 (4): 339, 2015 (see Lee *et al.* 2015b). BASIONYM: *Lejeunea palaeomexicana* Grolle, *Stuttgarter Beitr. Naturk., B* 108: 2, 1985 (see Grolle 1985a).

†***Ceratolejeunea sublaetefusca*** Heinrichs, Pócs et Schäf.-Verw., *Rev. Palaeobot. Palynol.* 221: 62, 2015 (see Heinrichs *et al.* 2015c). TYPE: “Holotype: SMNS Mx-443, sterile liverwort gametophyte next to the holotype of *Mastigolejeunea extincta*. Plate III shows the holotype. Repository: The specimen is deposited in the amber collection of the Natural History Museum Stuttgart (SMNS). Stratigraphic range and age: Miocene, about 15–20 Ma”.

Cheilolejeunea* sect. *Anomalolejeunea (Spruce) W.Ye, Gradst. et R.L.Zhu, *Cryptog. Bryol.* 36 (4): 323, 2015 (see Ye *et al.* 2015). BASIONYM: *Lejeunea* subg. *Anomalolejeunea* Spruce, *Forh. Vidensk.-Selsk. Kristiania* 1887 (9): 5, 1887 (see Pearson 1887).

Cheilolejeunea* sect. *Cyrtolejeunea (A.Evans) W.Ye, Gradst. et R.L.Zhu, *Cryptog. Bryol.* 36 (4): 324, 2015 (see Ye *et al.* 2015). BASIONYM: *Cyrtolejeunea* A.Evans, *Bull. Torrey Bot. Club* 30 (10): 553, 1903 (see Evans 1903).

Cheilolejeunea* sect. *Euosmolejeunea (Spruce) W.Ye, Gradst. et R.L.Zhu, *Cryptog. Bryol.* 36 (4): 324, 2015 (see Ye *et al.* 2015). BASIONYM: *Lejeunea* subg. *Euosmolejeunea* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 241, 1884 (see Spruce 1884).

Cheilolejeunea* sect. *Leucolejeunea (A.Evans) W.Ye, Gradst. et R.L.Zhu, *Cryptog. Bryol.* 36 (4): 324, 2015 (see Ye *et al.* 2015). BASIONYM: *Leucolejeunea* A.Evans, *Torrey* 7 (12): 225, 1907 (see Evans 1907).

Cheilolejeunea* sect. *Omphalanthus (Lindenb. et Nees) W.Ye, Gradst. et R.L.Zhu, *Cryptog. Bryol.* 36 (4): 324, 2015 (see Ye *et al.* 2015). BASIONYM: *Omphalanthus* Lindenb. et Nees, *Syn. Hepat.* 2: 303, 1845 (see Gottsche *et al.* 1845a).

Cheilolejeunea* sect. *Paroicae (R.M.Schust.) W.Ye, Gradst. et R.L.Zhu, *Cryptog. Bryol.* 36 (4): 326, 2015 (see Ye *et al.* 2015). BASIONYM: *Leucolejeunea* sect. *Paroicae* R.M.Schust., *Hepat. Anthocerotae N. Amer.* 4: 819, 1980 (see Schuster 1980).

Cheilolejeunea* sect. *Strepsilejeunea (Spruce) W.Ye, Gradst. et R.L.Zhu, *Cryptog. Bryol.* 36 (4): 326, 2015 (see Ye *et al.* 2015). BASIONYM: *Lejeunea* sect. *Strepsilejeunea* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 168, 1884 (see Spruce 1884).

Cheilolejeunea amazonica C.J.Bastos et Zartman, *Phytotaxa* 266 (1): 15, 2016 (see Bastos & Zartman 2016). TYPE: “BRAZIL: Amazonas, Barcelos, Rio Aracá, summit of Serra Aracá, 0°52'04”N, 63°19'56”W, elev. 1300 m, on rocks along stream 1 km southeast from the top of Aracá (El Dorado) waterfall, 18 August 2014, C.E. Zartman 9667 (holotype ALCB; isotype NY)”.

Cheilolejeunea aracaensis C.J.Bastos, A.M.Sierra et Zartman, *Phytotaxa* 277 (1): 36, 2016 (see Bastos *et al.* 2016). TYPE: “BRAZIL: Amazonas, Barcelos, Serra Aracá, elev. 690 m, growing on a rocky seep, 23 Aug. 2014, C. Zartman 9686 (holotype ALCB; isotype INPA)”.

Cheilolejeunea aurifera (R.M.Schust.) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 325, 2015 (see Ye *et al.* 2015). BASIONYM: *Aureolejeunea aurifera* R.M.Schust., *Phytologia* 39 (6): 429, 1978 (see Schuster 1978).

Cheilolejeunea baracoensis (Mustelier, M.E.Reiner et Gradst.) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 325, 2015 (see Ye *et al.* 2015). BASIONYM: *Omphalanthus baracoensis* Mustelier, M.E.Reiner et Gradst., *J. Bryol.* 29 (2): 95, 2007 (see Reiner-Drehwald *et al.* 2007).

Cheilolejeunea caracariensis C.J.Bastos, A.M.Sierra et Zartman, *Phytotaxa* 277 (1): 38, 2016 (see Bastos *et al.* 2016). TYPE: “BRAZIL: Roraima, Caracará, Serra da Mocidade, elev. 600 m, epiphyte at base of tree, 29 Jan. 2016, Mário H.T. Araújo 1217a (holotype ALCB; isotype INPA)”.

Cheilolejeunea cuspidifera C.J.Bastos, A.M.Sierra et Zartman, *Phytotaxa* 277 (1): 39, 2016 (see Bastos *et al.* 2016). TYPE: “BRAZIL: Roraima, Caracará, Serra da Mocidade, elev. 600 m, epiphyte, in forest, 31 Jan. 2016, Mário H.T. Araújo 1245 (holotype ALCB; isotype INPA)”.

Cheilolejeunea filiformis (Sw.) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 325, 2015 (see Ye *et al.* 2015). BASIONYM: *Jungermannia filiformis* Sw., *Prodr. (Swartz)*: 144, 1788 (see Swartz 1788).

Cheilolejeunea filiformis* var. *platycoleus (Herzog) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 325, 2015 (see Ye *et al.* 2015). BASIONYM: *Omphalanthus platycoleus* Herzog, *Feddes Repert. Spec. Nov. Regni Veg.* 57 (1/2): 171, 1955 (see Herzog 1955). NOTE: This also creates the autonym.

Cheilolejeunea filiformis* var. *wallisii (Prantl) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 325, 2015 (see Ye *et al.* 2015). BASIONYM: *Lejeunea wallisii* Prantl, *Hedwigia* 31: xvii, 1892 (see Prantl 1892).

Cheilolejeunea huanucensis (Gottsche) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 325, 2015 (see Ye *et al.* 2015). BASIONYM: *Lejeunea huanucensis* Gottsche, *Syn. Hepat.* 3: 335, 1845 (see Gottsche *et al.* 1845b).

Cheilolejeunea jackii (Prantl) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 325, 2015 (see Ye *et al.* 2015). BASIONYM: *Lejeunea jackii* Prantl, *Hedwigia* 31: xvii, 1892 (see Prantl 1892).

Cheilolejeunea lumae (Herzog) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 326, 2015 (see Ye *et al.* 2015). BASIONYM: *Brachiolejeunea lumae* Herzog, *Beih. Bot. Centralbl.* 60B (1/2): 15, 1939 (see Herzog 1939b).

Cheilolejeunea neesiana Sushil K.Singh et Pócs, *Phytotaxa* 263 (1): 74, 2016 (see Singh & Pócs 2016). NOM. NOV. PRO *Jungermannia sordida* var. β *tenerrima* Nees, *Fl. Bras. (Martius) 1 (1)*: 363, 1833 (see Nees 1833).

Cheilolejeunea ovalis (Lindenb. et Gottsche) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 326, 2015 (see Ye *et al.* 2015). BASIONYM: *Lejeunea ovalis* Lindenb. et Gottsche, *Syn. Hepat.* 5: 754, 1847 (see Gottsche *et al.* 1847).

Cheilolejeunea paramicola (Herzog) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 326, 2015 (see Ye *et al.* 2015). BASIONYM: *Brachiolejeunea paramicola* Herzog, *Hedwigia* 74 (2): 95, 1934 (see Herzog 1935).

Cheilolejeunea quinquecarinata (R.M.Schust.) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 326, 2015 (see Ye *et al.* 2015). BASIONYM: *Aureolejeunea quinquecarinata* R.M.Schust., *Phytologia* 39 (6): 429, 1978 (see Schuster 1978).

Cheilolejeunea roccatii (Gola) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 326, 2015 (see Ye *et al.* 2015). BASIONYM: *Acrolejeunea roccatii* Gola, *Ann. Bot. (Rome)* 6 (2): 275, 1907 (see Gola 1907).

Cheilolejeunea tonduzana (Steph.) W.Ye, R.L.Zhu et Gradst., *Cryptog. Bryol.* 36 (4): 326, 2015 (see Ye *et al.* 2015). BASIONYM: *Archilejeunea tonduzana* Steph., *Sp. Hepat. (Stephani)* 4: 721, 1911 (see Stephani 1911a).

- Cheilolejeunea yanoae*** C.J.Bastos, *Pesquisas, Bot.* 67: 20, 2015, ‘yanoe’ (see Bastos 2015). NOM. NOV. PRO *Strepsilejeunea muscicola* Herzog, *Hedwigia* 74 (2): 96, 1934 (see Herzog 1935).
- Chiastocaulon biserialis*** (Lehm. et Lindenb.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 491, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochila biserialis* Lehm. et Lindenb., *Sp. Hepat. (Lindenberg)* 5: 126, 1843 (see Lindenberg 1843).
- Chiastocaulon braunianum*** (Nees) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 491, 2016 (see Patzak *et al.* 2016). BASIONYM: *Jungermannia brauniana* Nees, *Enum. Pl. Crypt. Javae*: 80, 1830 (see Nees 1830).
- Chiastocaulon caledonicum*** (Steph.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 491, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochila caledonica* Steph., *Rev. Bryol.* 35 (2): 32, 1908 (see Stephani 1908a).
- Chiastocaulon combinatum*** (Mitt.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochila combinata* Mitt., *Fl. vit.*: 408, 1873 (see Mitten 1873).
- Chiastocaulon conjugatum*** (Hook.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Jungermannia conjugata* Hook., *Musci Exot. I*: tab. 91, 1818 (see Hooker 1818).
- Chiastocaulon fimbriatum*** (Mitt.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochila fimbriata* Mitt., *J. Proc. Linn. Soc., Bot.* 5 (18): 97, 1861 (see Mitten 1860).
- Chiastocaulon flamabilis*** M.A.M.Renner, *Austral. Syst. Bot.* 29 (4/5): 379, 2016 (see Renner *et al.* 2016c). TYPE: “Type: New Zealand, North Island, Central Plateau, Maunganuioteao River catchment, Erua Forest, track to Tupapakurua Falls, 39°10'48"S 175°22'23"E, 850 m, 24 Nov. 2013, M.A.M.Renner 6783 (holotype: NSW 898898; isotypes: AK, CHR, F, G)”.
- Chiastocaulon geminifolium*** (Mitt.) M.A.M.Renner, *Austral. Syst. Bot.* 29 (4/5): 382, 2016 (see Renner *et al.* 2016c). BASIONYM: *Plagiochila geminifolia* Mitt., *Fl. vit.*: 408, 1873 (see Mitten 1873).
- Chiastocaulon giulianettii*** (Steph.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochila giulianettii* Steph., *Bull. Herb. Boissier (sér. 2)* 4 (1): 30 (=Spec. Hepat. 2: 402), 1903 (see Stephani 1904).
- Chiastocaulon herzogii*** (Inoue) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochilium herzogii* Inoue, *Bull. Natl. Sci. Mus. Tokyo (n.ser.)* 14 (2): 270, 1971 (see Inoue 1971).
- Chiastocaulon mayebarae*** (S.Hatt.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochilium mayebarae* S.Hatt., *J. Hattori Bot. Lab.* 3: 39, 1950 (see Hattori 1948).
- Chiastocaulon oppositum*** (Reinw., Blume et Nees) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Jungermannia opposita* Reinw., Blume et Nees, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 12 (1): 236, 1824 (see Reinwardt *et al.* 1825).
- Chiastocaulon proliferum*** (Mitt.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochila prolifera* Mitt., *Bot. antarct. voy. II (Fl. Nov.-Zel.* 2): 130, 1854 (see Mitten 1854).
- Chiastocaulon takakii*** (Inoue) M.A.M.Renner, *Austral. Syst. Bot.* 29 (4/5): 399, 2016 (see Renner *et al.* 2016c). BASIONYM: *Plagiochila takakii* Inoue, *Stud. Cryptog. Papua N. Guinea*: 11, 1979 (see Inoue 1979).
- Chiastocaulon theriotanum*** (Steph.) S.D.F.Patzak, M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochila theriotana* Steph., *Sp. Hepat. (Stephani)* 6: 228, 1921 (see Stephani 1921).
- Chiloscyphus* subg. *Aperticaules*** J.J.Engel, *Nova Hedwigia* 103 (3/4): 310, 2016 (see Engel 2016). TYPE: *Chiloscyphus aperticaulis* J.J.Engel.
- Chiloscyphus* sect. *Submarginati*** J.J.Engel, *Nova Hedwigia* 103 (3/4): 310, 2016 (see Engel 2016). TYPE: *Chiloscyphus submarginatus* (Hook.f. et Taylor) J.J.Engel et R.M.Schust.
- Chiloscyphus alpicola*** J.J.Engel, *Phytotaxa* 207 (2): 181, 2015 (see Engel 2015b). TYPE: “Holotype:—New Zealand, South Island, Nelson Prov., Nelson Lakes Natl. Park, E slope of Robert Ridge in vicinity of Mt. Robert Skifield, W end of Lake Rotoiti, SSW of St. Arnaud, 1400–1480 m, Engel 22832 (F!); isotype: (CHR!)”.
- ***Chiloscyphus billardierei* var. *integrifolius*** (Rodway) J.J.Engel, *Nova Hedwigia* 100 (3/4): 565, 2015, *nom.*

inval. ICN Art. 36.1(c); publ. in syn. [sub *Heteroscyphus billardierei* var. *clasmatocoleoides*], ‘*billardierei* var. *integrifolia*’ (see Engel 2015a). BASIONYM: *Chiloscyphus billardierei* f. *integrifolius* Rodway, *Tasm. Bryoph.*: 52, 1916 ‘*billardierei* f. *integrifolia*’ (see Rodway 1917).

Clasmatocolea* sect. *Metaclasmatocolea J.J.Engel, *Nova Hedwigia* 100 (3/4): 579, 2015 (see Engel 2015a). TYPE: *Clasmatocolea navicularis* (Steph.) Grolle.

*****Clasmatocolea tuberculata*** J.J.Engel, *Nova Hedwigia* 100 (3/4): 562, 2015, *nom. inval.* ICN Art. 38.1(a); no description (see Engel 2015a). ORIGINAL MATERIAL: “Mt. Field”. NOTE: Error for *Clasmatocolea verrucosa* (J. Engel, pers. comm.).

****Clevea nana*** (Lindenb.) Crand.-Stotl. et D.G.Long, *Phytotaxa* 252 (1): 79, 2016, *nom. illeg.* ICN Art. 53.1; *hom. illeg.* [non *Clevea nana* (Shimizu et S.Hatt.) Borov. et Bakalin 2013] (see Long et al. 2016). BASIONYM: *Fimbraria nana* Lindenb., *Syn. hepat. eur.*: 109, 1829 (see Lindenberg 1829).

Cololejeunea* subg. *Aphanolejeunea (A.Evans) Pócs, *Phytotaxa* 202 (1): 64, 2015 (see Pócs et al. 2015b). BASIONYM: *Aphanolejeunea* A.Evans, *Bull. Torrey Bot. Club* 38 (6): 272, 1911 (see Evans 1911).

*****Cololejeunea affinis*** Zwickel ex Chuah.Pet., *Polish Bot. J.* 56 (1): 24, 2011 (see Chuah-Petiot 2011), *nom. inval.* (ICN Art. 38.1(a); no description). NOTE: Apparently error for *Taeniolejeunea peraffinis* (Schiffn.) Zwickel.

Cololejeunea andamanensis M.Dey et D.K.Singh, *Cryptog. Bryol.* 37 (2): 150, 2016 (see Dey & Singh 2016). TYPE: “INDIA: Andaman & Nicobar Islands, South Andaman, Motor Bhanji, Chidiatapu, c. 17 m, 11°34’269” N, 92°40’356” E, 04 Feb. 2014, D.K. Singh 61611 (CAL)”.

Cololejeunea cairnsiana Pócs, *Polish Bot. J.* 61 (2): 209, 2016 (see Pócs 2016). TYPE: “Northern QUEENSLAND: Paluma Range National Park, Paluma Dam road, 1.6 km N from the Paluma–Ewan Road, 19°00.02’S, 146°10.67’E, 880 m alt., S. & T. Pócs, A. Cairns, E.A. Brown & Ch. Cargill 01122/Z [holotype: BRI, isotype (microslide only) EGR]”.

Cololejeunea cambodiana Tixier, *Polish Bot. J.* 61 (2): 210, 2016 (see Pócs 2016). BASED ON: *Cololejeunea cambodiana* Tixier, *Rev. Bryol. Lichénol.* 36 (3/4): 577, 1970, *nom. inval.* ICN Art. 37.1; based on more than one gathering (see Tixier 1969).

Cololejeunea dankiaensis Tixier, *Phytotaxa* 220 (2): 199, 2015 (see Söderström et al. 2015d). BASED ON: *Cololejeunea dankiaensis* Tixier, *Rev. Bryol. Lichénol.* 36 (3/4): 581, 1970, *nom. inval.* Art. 37.1; no type indicated (see Tixier 1969).

Cololejeunea ensifera Tixier, *Phytotaxa* 220 (2): 199, 2015 (see Söderström et al. 2015d). BASED ON: *Cololejeunea ensifera* Tixier, *Rev. Bryol. Lichénol.* 36 (3/4): 562, 1970, *nom. inval.* Art. 37.1; no type indicated (see Tixier 1969).

Cololejeunea floccosa* var. *amoena (Benedix) Pócs, *Polish Bot. J.* 61 (2): 220, 2016 (see Pócs 2016). BASIONYM: *Cololejeunea amoena* Benedix, *Feddes Repert. Spec. Nov. Regni Veg. Beih.* 134: 25, 1953 (see Benedix 1953).

Cololejeunea floccosa* var. *fraseriana Pócs, *Polish Bot. J.* 61 (2): 206, 2016 (see Pócs 2016). TYPE: “southern Queensland: Fraser Island (Great Sandy National Park): Pile Valley along Kingfisher Bay–Eurong road, 55 m alt., 25°28.4’S, 153°04.3’E. T. Pócs & H. Streimann 9960/L (holotype: CANB, isotypes EGR, CANB, NSW, BRI, G)”.

Cololejeunea heinarii Pócs, *Polish Bot. J.* 61 (2): 206, 2016, ‘*heinari*’ (see Pócs 2016). TYPE: “Southern Queensland: Fraser Island (Great Sandy National Park), in Wongoolba Creek N of the Central Station, at 45 m alt., 25°28’S, 153°3.7’E. Date: 17 August 1999. T. Pócs & H. Streimann 9963/M [holotype: CANB; isotype (microslide only): EGR]”.

Cololejeunea jamesii (Austin) M.E.Reiner et Pócs, *Phytotaxa* 208 (1): 98, 2015 (see Pócs et al. 2015a). BASIONYM: *Lejeunea jamesii* Austin, *Bull. Torrey Bot. Club* 6 (30): 158, 1877 (see Austin 1877).

Cololejeunea laii J.D.Yang et S.H.Lin, *J. Bryol.* 38 (1): 68, 2016 (see Yang & Lin 2016). TYPE: “Taiwan. Taitung County, Orchid Island, Mt. Chientu, on rock, at 465 m a.s.l., 22°04’26”N, 121°33’24”E, 24 July 1997, *Chi-Da Wu et al.* 794 (holotype TAIE!; isotype TUNG!)”.

Cololejeunea magnilobula* var. *falcidentata Pócs et G.E.Lee, *Cryptog. Bryol.* 37 (1): 41, 2016 (see Pócs & Lee 2016). TYPE: “Malaysia, Kelantan State, above the KUNCI AIR SUNGAI LONG dam, at the high part of the ridge, 840–880 m alt., 05°36.467’N, 101°43.314’E. Epiphyllous in submontane rainforest. S. & T. Pócs, G.E. Lee and D. Tang, 13177/Q, 6. Nov. 2013 (holotype: UKMB)”.

Cololejeunea nosykombae András Szabó et Pócs, *J. Bryol.* 38 (4): 302, 2016 (see Szabó & Pócs 2016). TYPE: “Madagascar: former Antsiranana Province, present Diana Region, Nosy Komba Island. Submontane rainforest remnants in the NW valley of Antaninaomby summit. Epiphyllous mostly on *Marattia fraxinea* Sm. leaflets, at 570–580 m a.s.l. 13°27.3’S, 48°20.2’E. 29 July 1998, Pócs T., Szabó A. & R. Ranaivojaona 9862/P (holotype: EGR, isotypes: BM, G, MO, NY, TANA, herb. Schäfer-Verwimp)”.

Cololejeunea nosykombae* var. *laevis András Szabó et Pócs, *J. Bryol.* 38 (4): 305, 2016 (see Szabó & Pócs 2016). TYPE: “Madagascar: former Antsiranana Province, present Diana Region, Nosy Komba Island. Submontane rainforest remnants in the NW valley of Antaninaomby summit. Epiphyllous mostly on *Marattia fraxinea* leaflets, at 570–580 m a.s.l. 13°27.3’S, 48°20.2’E. 29 July 1998, Pócs T. Szabó A. & R. Ranaivojaona 9862/W (holotype: EGR)”. NOTE: This also creates the autonym.

Cololejeunea obtusifolia* var. *madecassa (Tixier) Pócs, *Phytotaxa* 202 (1): 64, 2015 (see Pócs *et al.* 2015b). BASIONYM: *Cololejeunea androphylla* var. *madecassa* Tixier, *Bull. Acad. Malgache (n.ser.)* 55 (1/2): 216, 1979 (see Tixier 1977).

Cololejeunea obtusifolia* var. *obtusifolia, *Phytotaxa* 202 (1): 64, 2015 (see Pócs *et al.* 2015b).

Cololejeunea renneri Pócs, *Pl. Sci. Today* 2 (4): 127, 2015 (see Pócs 2015c). TYPE: “FIJI, Viti Levu Island, Sovi Basin Natural Reserve. Below Wainiveikoka ridge in the Sovi River Valley 1.5 km N of Nadakuni village at altitude of 50-70 m; S 17°57’55”, E 178°17’49”, on dead, fallen branch in disturbed secondary lowland rainforest. M.A.M. Renner & F. Rakoro 5454, date 31 Aug. 2011. (Holotype NSW 890098, isotype EGR in microslide)”.

Cololejeunea stylilobula Tixier, *Phytotaxa* 202 (1): 65, 2015 (see Pócs *et al.* 2015b). BASED ON: *Cololejeunea stylilobula* Tixier, *Bryophyt. Biblioth.* 27: 119, 1985, *nom. inval.* ICN Art. 40.2; based on more than one gathering (see Tixier 1985).

Colura streimannii Pócs, *Polish Bot. J.* 60 (1): 7, 2015 (see Pócs 2015a). TYPE: “AUSTRALIA, Queensland: Daintree National Park S of Cape Tribulation, 38 km NNE of Mossmann. ‘Botanical Circuit’ along Noah Creek, 16°08.8’S, 145°26.7’E, at 1–2 m a.s.l. Mangrove forest with *Rhizophora* and with *Xylocarpus* (Meliaceae), rich in epiphytes. On peeling bark of *Xylocarpus* cf. *granatum* J. König. Collected by Pócs & Streimann 9990/C (holotype: EGR; isotype: CANB)”.

Cordaea erimona (Steph.) Mamontov, Konstant., Vilnet et Bakalin, *Arctoa* 24 (1): 113, 2015 (see Mamontov *et al.* 2015b). BASIONYM: *Pallavicinia erimona* Steph., *Bull. Herb. Boissier* 5 (2): 102, 1897 (see Stephani 1897). NOTE: *Cordaea* Nees 1833 is an illegitimate generic name (later homonym of *Cordaea* Spreng. 1831, Fabaceae). The specific name is nevertheless legitimate.

Cordaeaceae Mamontov, Konstant., Vilnet et Bakalin (fam.), *Arctoa* 24 (1): 113, 2015 (see Mamontov *et al.* 2015b). TYPE: *Cordaea* Nees.

Cryptolophocolea explanata (Mitt.) Váňa et Crand.-Stotl., *Phytotaxa* 202 (1): 69, 2015 (see Söderström *et al.* 2015c). BASIONYM: *Lophocolea explanata* Mitt., *Fl. vit.*: 404, 1873 (see Mitten 1873).

Cryptolophocolea martiana* var. *perissodonta (Spruce) Gradst., *Phytoneuron* 2015 (22): 1, 2015 (see Bernal *et al.* 2015). BASIONYM: *Lophocolea martiana* var. *perissodonta* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 432, 1885 (see Spruce 1885). NOTE: This also creates the autonym.

Cryptoplagiochila S.D.F.Patzak, M.A.M.Renner et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). TYPE: *Plagiochila radiculosa* Mitt.

Cryptoplagiochila radiculosa (Mitt.) S.D.F.Patzak, M.A.M.Renner et Heinrichs, *Org. Divers. Evol.* 16 (3): 492, 2016 (see Patzak *et al.* 2016). BASIONYM: *Plagiochila radiculosa* Mitt., *Bot. antarct. voy. II (Fl. Nov.-Zel.)* 2: 132, 1854 (see Mitten 1854).

Dibrachiella (Spruce) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 888, 2015 (see Shi *et al.* 2015b). BASIONYM: *Lejeunea* sect. *Dibrachiella* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 90, 1884 (see Spruce 1884).

Dibrachiella africana (Steph.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 888, 2015 (see Shi *et al.* 2015b). BASIONYM: *Archilejeunea africana* Steph., *Sp. Hepat. (Stephani)* 4: 705, 1911 (see Stephani 1911a).

Dibrachiella alata (Steph.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 888, 2015 (see Shi *et al.* 2015b). BASIONYM: *Archilejeunea alata* Steph., *Bull. Soc. Roy. Bot. Belgique, Compt. Rend.* 32 (2): 33, 1893 (see Stephani 1894).

Dibrachiella auberiana (Mont.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 888, 2015 (see Shi *et al.* 2015b). BASIONYM: *Lejeunea auberiana* Mont., *Hist. Phys. Cuba, Bot., Pl. Cell.*: 483, 1842 (see Montagne 1842).

Dibrachiella autoica (Vanden Berghen) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 888, 2015 (see Shi *et al.* 2015b). BASIONYM: *Archilejeunea autoica* Vanden Berghen, *Rev. Bryol. Lichénol.* 20 (1/2): 119, 1951 (see Vanden Berghen 1951).

Dibrachiella bischleriana (Gradst.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 888, 2015 (see Shi *et al.* 2015b). BASIONYM: *Archilejeunea bischleriana* Gradst., *Fl. Neotrop. Monogr.* 62: 62, 1994 (see Gradstein 1994).

Dibrachiella brevilobula (Steph.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 888, 2015 (see Shi *et al.* 2015b). BASIONYM: *Archilejeunea brevilobula* Steph., *Sp. Hepat. (Stephani)* 4: 706, 1911 (see Stephani 1911a).

- Dibrachiella elobulata*** (Steph.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 888, 2015 (see Shi *et al.* 2015b). BASIONYM: *Archilejeunea elobulata* Steph., *Sp. Hepat. (Stephani)* 4: 707, 1911 (see Stephani 1911a).
- Dibrachiella jonesii*** (Vanden Berghen) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). BASIONYM: *Archilejeunea jonesii* Vanden Berghen, *Rev. Bryol. Lichénol.* 20 (1/2): 116, 1951 (see Vanden Berghen 1951).
- Dibrachiella parviflora*** (Nees) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). BASIONYM: *Jungermannia parviflora* Nees, *Fl. Bras. (Martius)* 1 (1): 353, 1833 (see Nees 1833).
- Dinckleria singularis*** (Schiffn.) M.A.M.Renner, Schäf.-Verw. et Heinrichs, *Austral. Syst. Bot.* 29 (2): 112, 2016 (see Renner *et al.* 2016b). BASIONYM: *Plagiochila singularis* Schiffn., *Hep. Fl. Buitenzorg*: 158, 1900 (see Schiffner 1900).
- Diplophyllum kinabaluense*** Furuki et Suleiman, *J. Jap. Bot.* 91 (suppl.): 340, 2016 (see Furuki & Suleiman 2016). TYPE: “MALAYSIA. Borneo, Sabah, Mt. Kinabalu, along Bundu Tuhan View Trail, near the Headquarters, 1650 m alt., on soil on cutting face in evergreen forest, 21 February 2006, T. Furuki and M. Suleiman 21060 (BORH–holotype; CBM–isotype) “.
- Drepanolejeunea fulfordiae*** L.Söderstr., *Phytotaxa* 208 (1): 98, 2015 (see Pócs *et al.* 2015a). NOM. NOV. PRO *Drepanolejeunea papillosa* Fulford, *Mem. New York Bot. Gard.* 23: 843, 1972, *nom. illeg.* ICN Art. 53.1; *hom. illeg.* [non S.W.Arnell 1953] (see Fulford 1972).
- Drepanolejeunea pentadactyla* var. *dactylophoroides*** (Herzog) Pócs, *Acta Biol. Pl. Agr.* 3: 13, 2015 (see Pócs & Váňa 2015). BASIONYM: *Drepanolejeunea micholitzii* var. *dactylophoroides* Herzog, *Ann. Bryol.* 7: 79, 1934 (see Herzog 1934). NOTE: This also creates the autonym.
- Drepanolejeunea submuricata*** R.M.Schust., *Phytotaxa* 208 (1): 98, 2015 (see Pócs *et al.* 2015a). BASED ON: *Drepanolejeunea submuricata* R.M.Schust., *Nova Hedwigia* 62 (1/2): 34, 1996, *nom. inval.* ICN Art. 40.7; no herbarium indicated (see Schuster 1996b).
- Exormotheca brevipedunculata*** (Kashyap) D.G.Long, Crand.-Stotl., L.L.Forrest et J.C.Villarreal, *Phytotaxa* 252 (1): 79, 2016 (see Long *et al.* 2016). BASIONYM: *Stephensiella brevipedunculata* Kashyap, *New Phytol.* 13 (9): 312, 1914 (see Kashyap 1914).
- Folioceros argillaceus*** (Steph.) J.C.Villarreal et Cargill, *Phytotaxa* 208 (1): 93, 2015 (see Villarreal *et al.* 2015). BASIONYM: *Aspiromitus argillaceus* Steph., *Sp. Hepat. (Stephani)* 5: 970, 1916 (see Stephani 1916).
- Folioceros dilatatus*** (Steph.) J.C.Villarreal et Cargill, *Phytotaxa* 208 (1): 93, 2015 (see Villarreal *et al.* 2015). BASIONYM: *Anthoceros dilatatus* Steph., *Bot. Jahrb. Syst.* 8 (2): 95, 1886 (see Stephani 1886).
- Frullania* sect. *Chonanthelia*** (Spruce) Yuzawa ex Hentschel et von Konrat, *Phytotaxa* 220 (2): 129, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Frullania* subg. *Chonanthelia* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 8, 1884 (see Spruce 1884). NOTE: Originally placed under subg. *Chonanthelia*.
- Frullania* sect. *Meteoriopsis*** (Spruce) Uribe, von Konrat et Hentschel, *Phytotaxa* 220 (2): 132, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Frullania* subg. *Meteoriopsis* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 37 (see Spruce 1884). NOTE: Originally placed under subg. *Meteoriopsis*.
- Frullania* sect. *Microfrullania*** (R.M.Schust.) von Konrat et Hentschel, *Phytotaxa* 220 (2): 233, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Neohattoria* sect. *Microfrullania* R.M.Schust., *J. Hattori Bot. Lab.* 33: 288, 1970 (see Schuster 1970). NOTE: Originally placed under subg. *Microfrullania*.
- Frullania* sect. *Pluricarinatae*** (Yuzawa, Mues et S.Hatt.) Hentschel et von Konrat, *Phytotaxa* 220 (2): 129, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Frullania* ser. *Pluricarinatae* Yuzawa, Mues et S.Hatt., *J. Hattori Bot. Lab.* 63: 428, 1987 (see Yuzawa *et al.* 1987). NOTE: Originally placed under subg. *Chonanthelia*.
- Frullania acicularis*** Hentschel et von Konrat, *Phytotaxa* 220 (2): 134, 2015 (see Hentschel *et al.* 2015). NOM. NOV. PRO *Frullania tamarisci* var. *azorica* J.-P.Frahm, *Trop. Bryol.* 27: 102, 2006 (see Frahm 2006).
- Frullania dorsimamillosa*** Mamontov, Hentschel, Sofronova et Potemkin, *Phytotaxa* 227 (1): 5, 2015 (see Potemkin *et al.* 2015). TYPE: “China, NE Sichuan, Minshan Range, Songpan County, valley of R. Fujiang 3 km E of Huanglong hotel, *Picea-Salix-Juniperus* rich fen, lower oroboreal zone, collecting locality 5c, on a trunk, 32°45'N 103°52'E, 2900 m, 15.09.1991, T. Koponen 45098, c.per. (holotype: H; isotypes JE, LE)”.
- Frullania ericoides* var. *verrucosa*** (Kamim.) Hentschel et von Konrat, *Phytotaxa* 220 (2): 134, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Frullania squarrosa* var. *verrucosa* Kamim., *J. Hattori Bot. Lab.* 24: 19, 1961 (see Kamimura 1961).
- Frullania jovetiana*** von Konrat et Hentschel, *Phytotaxa* 220 (2): 135, 2015 (see Hentschel *et al.* 2015). BASED ON: *Frullania pseudericoidea* S.Hatt., *Bull. Natl. Sci. Mus. Tokyo*, B 12 (4): 132, 1986, *nom. illeg.* ICN Art. 53.1; *hom. illeg.* [non S.Hatt. 1982] (see Hattori 1986).

Frullania kunzei* var. *maritima R.M.Schust. ex Hentschel et von Konrat, *Phytotaxa* 220 (2): 135, 2015 (see Hentschel *et al.* 2015). BASED ON: *Frullania kunzei* var. *maritima* R.M.Schust., *J. Hattori Bot. Lab.* 70: 145, 1991, *nom. inval.* ICN Art. 40.7; no herbarium indicated (see Schuster 1991b). NOTE: This also creates the autonym.

Frullania laeviperiantha X.L.Bai et C.Gao, *Phytotaxa* 220 (2): 136, 2015 (see Hentschel *et al.* 2015). BASED ON: *Frullania laeviperiantha* X.L.Bai et C.Gao, *Nova Hedwigia* 70 (1/2): 135, 2000, *nom. inval.* ICN Art. 40.7; no herbarium indicated / “*laevi-periantha*” (see Bai & Gao 2000).

Frullania monocera* var. *acutiloba (Mitt.) Hentschel et von Konrat, *Phytotaxa* 220 (2): 136, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Frullania acutiloba* Mitt., *J. Proc. Linn. Soc., Bot.* 5 (18): 120, 1861 (see Mitten 1860).

Frullania monocera* var. *subhampeana (E.A.Hodgs.) Hentschel et von Konrat, *Phytotaxa* 220 (2): 136, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Frullania subhampeana* E.A.Hodgs., *Trans. & Proc. Roy. Soc. New Zealand* 77 (3): 370, 1949 (see Hodgson 1949).

Frullania monocera* var. *undulata (Kamim.) Hentschel et von Konrat, *Phytotaxa* 220 (2): 136, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Frullania undulata* Kamim., *J. Hattori Bot. Lab.* 24: 50, 1961 (see Kamimura 1961).

Frullania multituberculata Hentschel et von Konrat, *Phytotaxa* 220 (2): 136, 2015 (see Hentschel *et al.* 2015). NOM. NOV. PRO *Frullania kalimantanensis* Piippo et S.Hatt., *J. Hattori Bot. Lab.* 72: 117, 1992, *nom. illeg.* ICN Art. 53.1; *hom. illeg.* [non S.Hatt. 1986] (see Piippo & Tan 1992).

Frullania obscura* var. *spiniloba (Steph.) Hentschel et von Konrat, *Phytotaxa* 220 (2): 136, 2015 (see Hentschel *et al.* 2015). BASIONYM: *Frullania spiniloba* Steph., *Sp. Hepat. (Stephani)* 4: 336, 1910 (see Stephani 1910). NOTE: This also creates the autonym.

Frullania obtusangula Hentschel et von Konrat, *Phytotaxa* 220 (2): 137, 2015 (see Hentschel *et al.* 2015). TYPE: “TAIWAN. s. loc. spec., 1903, *Faurie 44* (G, lectotype designated by Hattori & Lin 1985: 134)”.

Frullania plicata Hentschel et von Konrat, *Phytotaxa* 220 (2): 137, 2015 (see Hentschel *et al.* 2015). NOM. NOV. PRO *Frullania acutiloba* Gerola, *Lav. Bot. Ist. Bot. Univ. Padova* 12: 477, 1947, *nom. illeg.* ICN Art. 53.1; *hom. illeg.* [non Mitt. 1860] (see Gerola 1947).

† ***Frullania riclefgrolleyi*** Mamontov, Heinrichs, Schäfer-Verw., Ignatov et Perkovsky, *Rev. Palaeobot. Palynol.* 223: 32, 2015 (see Mamontov *et al.* 2015c). TYPE: “Holotype: Klesov. Rovno amber. Liverwort inclusion in piece SIZK-K-2012 (Plates I, II).. Repository: The specimen is deposited in the Rovno amber collection of the Schmalhausen Institute of Zoology in Kiev (SIZK)”.

*****Fuscocephalozia*** Vána et L.Söderstr. ex Gradst. et Uribe, *Catal. Pl. Lich. Colombia*: 295 (see Bernal *et al.* 2016), *nom. inval.* (ICN Art. 38.1(a); no description. NOTE: Apparently error for *Fuscocephaloziopsis* Fulford.

*****Fuscocephalozia pleniceps*** (Austin) Vána et L.Söderstr. ex Gradst. et Uribe, *Catal. Pl. Lich. Colombia*: 295 (see Bernal *et al.* 2016), *nom. inval.* (ICN Art. 38.1(a); no description. BASIONYM: *Jungermannia pleniceps* Austin, *Proc. Acad. Nat. Sci. Philadelphia* 21: 222, 1869 (see Austin 1869). NOTE: Apparently error for *Fuscocephaloziopsis pleniceps* (Austin) Vána et L.Söderstr.

Goebeliella glauca M.A.M.Renner, *Telopea* 19: 89, 2016 (see Renner 2016). TYPE: “New Caledonia, Southern Province, Noumea area, Montagne du Sources, along road to Pic Buse area, 22.14966°S 166.59033°E, 600 m, 28 Sep 2012, *B. Shaw 16737* (holotype: NOU; isotypes: DUKE, F, NSW)”.

Gradsteinianthus R.L.Zhu et Jian Wang bis, *Bryophyt. Biblioth.* 65: 29, 2016 (see Wang *et al.* 2016). TYPE: *Gradsteinianthus tridentatus* (R.L.Zhu, Y.M.Weï et Qiong He) R.L.Zhu et Jian Wang bis.

Gradsteinianthus tridentatus (R.L.Zhu, Y.M.Weï et Qiong He) R.L.Zhu et Jian Wang bis, *Bryophyt. Biblioth.* 65: 29, 2016 (see Wang *et al.* 2016). BASIONYM: *Caudalejeunea tridentata* R.L.Zhu, Y.M.Weï et Qiong He, *Bryologist* 114 (3): 469, 2011 (see Zhu *et al.* 2011).

Gymnomitrium crystallocaulon (Grolle) Vána, Crand.-Stotl. et Stotler, *Syst. Bot.* 40 (1): 39, 2015 (see Shaw *et al.* 2015). BASIONYM: *Marsupella crystallocaulon* Grolle, *Khumbu Himal* 1 (4): 281, 1966 (see Grolle 1966).

Gymnomitrium revolutum* subsp. *novoguineanense (R.M.Schust.) Vána, Crand.-Stotl. et Stotler, *Syst. Bot.* 40 (1): 39, 2015, ‘*novoguineanensis*’ (see Shaw *et al.* 2015). BASIONYM: *Apomarsupella revoluta* subsp. *novoguineanensis* R.M.Schust., *J. Hattori Bot. Lab.* 80: 90, 1996 (see Schuster 1996a). NOTE: This also creates the autonym.

Gymnomitrium rubidum (Mitt.) Vána, Crand.-Stotl. et Stotler, *Syst. Bot.* 40 (1): 39, 2015 (see Shaw *et al.* 2015). BASIONYM: *Jungermannia rubida* Mitt., *J. Proc. Linn. Soc., Bot.* 5 (18): 90, 1861 (see Mitten 1860).

Heteroscyphus* subg. *Allodonti J.J.Engel, *Nova Hedwigia* 100 (3/4): 559, 2015 (see Engel 2015a). TYPE: *Heteroscyphus allodontus* (Hook.f. et Taylor) J.J.Engel et R.M.Schust.

Heteroscyphus* sect. *Coaliti J.J.Engel, *Nova Hedwigia* 100 (3/4): 572, 2015 (see Engel 2015a). TYPE: *Heteroscyphus coalitus* (Hook.) Schiffn. NOTE: Originally placed under subg. *Oblongifolii*.

Heteroscyphus* subg. *Cyanolophocolea (R.M.Schust.) J.J.Engel, *Nova Hedwigia* 100 (3/4): 578, 2015 (see Engel 2015a). BASIONYM: *Lophocolea* sect. *Cyanolophocolea* R.M.Schust., *Hepat. Anthocerotae N. Amer.* 4: 238, 1980 (see Schuster 1980).

Heteroscyphus* subg. *Fissistipi J.J.Engel, *Nova Hedwigia* 100 (3/4): 560, 2015 (see Engel 2015a). TYPE: *Heteroscyphus fissistipus* (Hook.f. et Taylor) Schiffn.

Heteroscyphus* subg. *Glauc heteroscyphus J.J.Engel, *Nova Hedwigia* 100 (3/4): 577, 2015 (see Engel 2015a). TYPE: *Heteroscyphus knightii* (Steph.) Grolle.

Heteroscyphus* subg. *Lingulati J.J.Engel, *Nova Hedwigia* 100 (3/4): 573, 2015 (see Engel 2015a). TYPE: *Heteroscyphus lingulatus* (Colenso) J.J.Engel et R.M.Schust. NOTE: Subgenus and section *Lingulati* are published in the same work without any reference to each other, although based on the same type. Thus, we cannot see that one can be a combination of the other, but they are both validly published on their own.

Heteroscyphus* sect. *Lingulati J.J.Engel, *Nova Hedwigia* 100 (3/4): 574, 2015 (see Engel 2015a). TYPE: *Heteroscyphus lingulatus* (Colenso) J.J.Engel et R.M.Schust. NOTE: Originally placed under subg. *Lingulati*.

Heteroscyphus* subg. *Menziesiorum J.J.Engel, *Nova Hedwigia* 100 (3/4): 569, 2015 (see Engel 2015a). TYPE: *Heteroscyphus menziesii* (Mitt.) J.J.Engel.

Heteroscyphus* subg. *Neoheteroscyphus J.J.Engel, *Nova Hedwigia* 100 (3/4): 577, 2015 (see Engel 2015a). TYPE: *Heteroscyphus argutus* (Reinw., Blume et Nees) Schiffn.

Heteroscyphus* subg. *Oblongifolii J.J.Engel, *Nova Hedwigia* 100 (3/4): 571, 2015 (see Engel 2015a). TYPE: *Heteroscyphus oblongifolius* (Hook.f. et Taylor) Schiffn. NOTE: See under *Heteroscyphus* subg. *Lingulati* above.

Heteroscyphus* sect. *Oblongifolii J.J.Engel, *Nova Hedwigia* 100 (3/4): 571, 2015 (see Engel 2015a). TYPE: *Heteroscyphus oblongifolius* (Hook.f. et Taylor) Schiffn. NOTE: Originally placed under subg. *Oblongifolii*.

Heteroscyphus* sect. *Parallelifolii J.J.Engel, *Nova Hedwigia* 100 (3/4): 571, 2015 (see Engel 2015a). TYPE: *Heteroscyphus parallelifolius* J.J.Engel. NOTE: Originally placed under subg. *Oblongifolii*.

Heteroscyphus* sect. *Planiusculi J.J.Engel, *Nova Hedwigia* 100 (3/4): 573, 2015 (see Engel 2015a). TYPE: *Heteroscyphus planiusculus* (Hook.f. et Taylor) J.J.Engel. NOTE: Originally placed under subg. *Lingulati*.

Heteroscyphus* sect. *Polycladi J.J.Engel, *Nova Hedwigia* 100 (3/4): 574, 2015 (see Engel 2015a). TYPE: *Heteroscyphus polycladus* (Hook.f. et Lév.) R.M.Schust. NOTE: Originally placed under subg. *Lingulati*.

Heteroscyphus* subg. *Protoheteroscyphus J.J.Engel, *Nova Hedwigia* 100 (3/4): 559, 2015 (see Engel 2015a). TYPE: *Heteroscyphus cuneistipulus* (Steph.) Schiffn.

Heteroscyphus* subg. *Sinuosi J.J.Engel, *Nova Hedwigia* 100 (3/4): 572, 2015 (see Engel 2015a). TYPE: *Heteroscyphus sinuosus* (Hook.) Schiffn.

Heteroscyphus* sect. *Squamicalex J.J.Engel, *Nova Hedwigia* 100 (3/4): 569, 2015 (see Engel 2015a). TYPE: *Heteroscyphus gunnianus* (Mitt.) J.J.Engel et R.M.Schust. NOTE: Originally placed under subg. *Heteroscyphus*.

Heteroscyphus* subg. *Triacanthi J.J.Engel, *Nova Hedwigia* 100 (3/4): 575, 2015 (see Engel 2015a). TYPE: *Heteroscyphus triacanthus* (Hook.f. et Lév.) Schiffn.

Heteroscyphus billardierei* var. *clasmatocoleoides (J.J.Engel et G.L.Merr.) J.J.Engel, *Nova Hedwigia* 100 (3/4): 565, 2015 (see Engel 2015a). BASIONYM: *Heteroscyphus circumdentatus* var. *clasmatocoleoides* J.J.Engel et G.L.Merr., *Polish Bot. J.* 58 (1): 95, 2013 (see Engel 2013). NOTE: This also creates the autonym.

Heteroscyphus coalitus* var. *simplicifolius J.J.Engel, *Nova Hedwigia* 100 (3/4): 572, 2015 (see Engel 2015a). TYPE: “Tasmania, seaward slopes near Coal Bluff, 0–50 m, *Norris 30287* (F)”. NOTE: This also creates the autonym.

Heteroscyphus multifidus* var. *subintegerrimus J.J.Engel, *Nova Hedwigia* 100 (3/4): 562, 2015 (see Engel 2015a). TYPE: “Holotype: Tasmania, Cradle Mtn.-Lake St. Clair Natl. Park, below saddle between Little Horn and Weindorfers Tower, vicinity of Cradle Mt., 1230–1240 m, *Engel 19573* (F); isotype: (HO)”. NOTE: This also creates the autonym.

Jungermannia calcicola Konstant. et Vilnet, *Phytotaxa* 255 (3): 234, 2016 (see Konstantinova & Vilnet 2016). TYPE: “Russia, Caucasus: Republic of Adygeia, left bank of Kurdzhips River, 44°04'59"N–39°59'59" E, 1495 m elev., in crevices on wet cliff, on limestone rock with admixture of single plants of *Mesoptychia badensis* (Gottsche ex Rabenh.) L.Söderstr. et Váňa, (2012: 52), *Mesoptychia collaris* (Nees) L.Söderstr. et Váňa, 2012: 53, 11 October 2007, *N.A. Konstantinova & A.N. Savchenko #K429-1-07* (holotype KPABG). GenBank # JF421608 (*trnL-trnF* cpDNA), KR063630 (*trnG* intron cpDNA)”.

*****Jungermannia tetragona* var. *kodaikanalensis*** (A.Alam, D.Sharma et So.Yadav) A.Alam, D.Sharma et So.Yadav, *Phytotaxonomy* 12: 68, 2012 (see Alam *et al.* 2012), *nom. inval* (ICN Art. 41.5; basionym not cited). NOTE: Apparently error for *Solenostoma tetragonum* var. *kodaikanalense* A.Alam, D.Sharma et So.Yaday.

- Leiomitra argentea* (Herzog) T.Katag., *J. Bryol.* 37 (4): 304, 2015 (see Katagiri 2015c). BASIONYM: *Trichocolea argentea* Herzog, *Arch. Bot. São Paulo* 1 (2): 40, 1925 (see Herzog 1925).
- Leiomitra patriciana* T.Katag., *Cryptog. Bryol.* 37 (2): 120, 2016 (see Katagiri 2016). TYPE: “Papua New Guinea. Morobe Province, Wau, Mt. Kaindi, mossy forest of northern summit, 2350 m, 5-11 August 1981, *Geissler* 7958 (holotype: G)”.
- Lejeunea duncaniae* (Sim) M.E.Reiner, *Phytotaxa* 208 (1): 98, 2015 (see Pócs *et al.* 2015a). BASIONYM: *Stylolejeunea duncaniae* Sim, *Trans. Roy. Soc. South Africa* 15 (1): 68, 1926 “*Duncani*” (see Sim 1926).
- Lejeunea edentata* L.Söderstr., *Phytotaxa* 208 (1): 98, 2015 (see Pócs *et al.* 2015a). NOM. NOV. PRO *Cyclolejeunea marginata* R.M.Schust., *Phytologia* 39 (6): 430, 1978 (see Schuster 1978). BLOCKING NAME: *Lejeunea marginata* (Lehm. et Lindenb.) Gottsche, Lindenb. et Nees 1845
- Lejeunea falcata* (Pócs et J.Eggers) Pócs, *Phytotaxa* 208 (1): 99, 2015 (see Pócs *et al.* 2015a). BASIONYM: *Papillolejeunea falcata* Pócs et J.Eggers, *Bryobrothera* 5: 163, 1999 (see Pócs & Eggers 1999).
- Lejeunea ghatensis* (P.K.Verma et S.C.Srivast.) Sushil K.Singh et Pócs, *Phytotaxa* 263 (1): 73, 2016 (see Singh & Pócs 2016). BASIONYM: *Taxilejeunea ghatensis* P.K.Verma et S.C.Srivast., *Proc. Natl. Acad. Sci. India, B* 77 (2): 211, 2007 (see Verma & Srivastava 2007).
- †*Lejeunea hamatiloba* G.E.Lee, Schäf.-Verw., M.A.M.Renner et Heinrichs, *Rev. Palaeobot. Palynol.* 238: 147, 2016 (see Lee *et al.* 2017). TYPE: “Holotype: Liverwort amber inclusion MB.Pb.2016/1865, Museum für Naturkunde Berlin [Miocene, Dominican Republic]. Syninclusions: Detritus, poorly preserved Lejeuneaceae fragments, possibly also belonging to *L. hamatiloba*”.
- Lejeunea herminieri* (Steph.) R.L.Zhu, *Phytotaxa* 208 (1): 99, 2015 (see Pócs *et al.* 2015a). BASIONYM: *Archilejeunea herminieri* Steph., *Sp. Hepat. (Stephani)* 4: 714, 1911 (see Stephani 1911a).
- Lejeunea hyalina* (Steph.) L.Söderstr. et A.Hagborg, *Phytotaxa* 220 (2): 188, 2015 (see Söderström *et al.* 2015b). BASIONYM: *Pycnolejeunea hyalina* Steph., *Sp. Hepat. (Stephani)* 5: 614, 1914 (see Stephani 1914).
- Lejeunea koponenii* (Pócs et J.Eggers) Pócs, *Phytotaxa* 208 (1): 99, 2015 (see Pócs *et al.* 2015a). BASIONYM: *Papillolejeunea koponenii* Pócs et J.Eggers, *Bryobrothera* 5: 159, 1999 (see Pócs & Eggers 1999).
- Lejeunea kudremukhensis* Sushil K.Singh et Pócs, *Phytotaxa* 263 (1): 73, 2016 (see Singh & Pócs 2016). NOM. NOV. PRO *Taxilejeunea tenerrima* Steph., *Sp. Hepat. (Stephani)* 6: 406, 1923 (see Stephani 1923).
- ***Lejeunea kudremukhensis* Sushil K.Singh et Pócs, *Pl. Sci. Today* 3 (2): 166, 2016, *nom. inval.* ICN Art. 38.1(a); no description (see Singh & Singh 2016). ORIGINAL MATERIAL: “TN [Tamil Nadu]”.
- Lejeunea liromobana* Singh Deo et D.K.Singh, *Indian J. Forest.* 39 (4): 359, 2016 (see Singh Deo & Singh 2016b). TYPE: “India, Eastern Himalaya, Arunachal Pradesh, West Siang District, Liromoba, 28°04' N 94°29' E, ca 550m, 14.09.2011, S. Singh Deo 51281A (Holotype & Isotype: CAL)”.
- Lejeunea mizoramensis* Sushil K.Singh, *Indian J. Forest.* 39 (1): 69, 2016 (see Singh & Kumar 2016a). TYPE: “India, Mizoram, Lunglei, Thorangtlang WLS, 23°14'57.3" N, 92°33'48.8" E, 609 m, corticolous on *Engelhardtia spicata* Blume, 30.11.2011, *S.K.Singh et al.* 124239 (Holo: ASSAM)”.
- Lejeunea nilgiriensis* (P.K.Verma et S.C.Srivast.) Sushil K.Singh et Pócs, *Phytotaxa* 263 (1): 74, 2016 (see Singh & Pócs 2016). BASIONYM: *Taxilejeunea nilgiriensis* P.K.Verma et S.C.Srivast., *Proc. Natl. Acad. Sci. India, B* 77 (2): 207, 2007 (see Verma & Srivastava 2007).
- Lejeunea pulchriflora* (Pearson) G.E.Lee, Bechteler, Pócs, Schäf.-Verw. et Heinrichs, *Org. Divers. Evol.* 16 (1): 16, 2015 (see Lee *et al.* 2016a). BASIONYM: *Taxilejeunea pulchriflora* Pearson, *Ark. Bot.* 19 (5): 15, 1924 (see Pearson 1924).
- †*Lejeunea resinata* G.E.Lee, Schäf.-Verw., M.A.M.Renner et Heinrichs, *Rev. Palaeobot. Palynol.* 238: 147, 2016 (see Lee *et al.* 2017). TYPE: “Holotype: Liverwort amber inclusion MB.Pb.2016/1866, Museum für Naturkunde Berlin [Miocene, Dominican Republic]”.
- Lejeunea tunquiniensis* M.E.Reiner et Drehwald, *Nova Hedwigia* 100 (3/4): 584, 2015 (see Reiner-Drehwald 2015). TYPE: “Bolivia: dept. La Paz, prov. Nor Yungas, Parque Nacional Cotapata, Estación Biológica Tuquini, subida a la cascada detrás de la estación. S 16°11'44" W 67°52'03" 1553 m, epiphyllous on living leaf, M. Elena Reiner-Drehwald & Uwe Drehwald 10332, 19 Aug 2001 (holotype GOET, isotype LPB; autoicous, c. per., few broken capsules). Idem, epiphyllous on fern, *M. Elena Reiner-Drehwald & Uwe Drehwald* 10337, 19 Aug 2001 (paratypes, GOET, LPB; autoicous, c. per., few broken capsules)”.
- †*Lejeunea urbanioides* G.E.Lee, Schäf.-Verw., M.A.M.Renner et Heinrichs, *Rev. Palaeobot. Palynol.* 238: 148, 2016 (see Lee *et al.* 2017). TYPE: “Holotype: Liverwort amber inclusion MNH372452, National Museum of Natural History of the Smithsonian Institution [Miocene, Dominican Republic]”.

Lejeunea viridis R.M.Schust. ex L.Söderstr. et A.Hagborg, *Phytotaxa* 208 (1): 99, 2015 (see Pócs *et al.* 2015a). BASED ON: *Prionocolea viridissima* R.M.Schust., *J. Hattori Bot. Lab.* 75: 215, 1994, *nom. inval.* ICN Art. 35.1; genus not valid (see Schuster 1994).

Lepidolejeunea auriculata Schäf.-Verw. et Heinrichs, *Taxon* 64 (2): 224, 2015 (see Heinrichs *et al.* 2015b). TYPE: “Holotype: Ecuador, Prov. Loja, Parque Nacional Podocarpus above Cajanuma S of Loja, Sendero El Mirador, 2870 m, 15 Apr 2003, *Schäfer-Verwimp & Preussing* 23265 (STU!; isotypes: JE!, MI!, QCA!)”.

Lepidolejeunea cuspidata (Gottsche) Heinrichs et Schäf.-Verw., *Taxon* 64 (2): 224, 2015 (see Heinrichs *et al.* 2015b). BASIONYM: *Lejeunea cuspidata* Gottsche, *Syn. Hepat.* 3: 351, 1845 (see Gottsche *et al.* 1845b).

Lepidolejeunea novae-caledoniae (Piippo) R.L.Zhu et Frank Müll., *Phytotaxa* 253 (3): 232, 2016 (see Shu *et al.* 2016b). BASIONYM: *Lepidolejeunea bidentula* var. *novae-caledoniae* Piippo, *Acta Bot. Fenn.* 132: 26, 1986 (see Piippo 1986).

Lepidozia cupressina subsp. *africana* (Steph.) Pócs, *Cryptog. Bryol.* 37 (2): 140, 2016 (see Pócs *et al.* 2016). BASIONYM: *Lepidozia africana* Steph., *Sp. Hepat. (Stephani)* 6: 320, 1922 (see Stephani 1922).

***Lepidozia longifissa* Steph. ex J.J.Engel et Glenni, *Flora Liverw. Hornw. New Zealand I*: 201, 2008 (see Engel & Glenni 2008a), *nom. inval.* (ICN Art. 36,1(c)); publ. in syn. [sub *Lepidozia spinosissima*]). NOTE: Apparently error for *Lepicolea longifissa* Steph.

Leptolejeunea latilobula L.Shu, R.L.Zhu et Pócs, *Cryptog. Bryol.* 37 (2): 158, 2016 (see Shu *et al.* 2016a). TYPE: “Fiji. Cakaudrove Province, Central part of Taveuni Island. Northwest side of Des Voeux peak, 16°50.295-445’S, 179°58.037-224’W, 1040-1150 m, on living leaves in a 4-8 m tall mossy elfin forest, 27 Aug. 2003, *S. & T. Pócs* 03279AD (holotype: HSNU!, isotype: EGR!)”.

Leptoscyphus subg. *Blepharoleptoscyphae* J.J.Engel, *Nova Hedwigia* 103 (3/4): 285, 2016 (see Engel 2016). TYPE: *Lophocolea trapezoides* Mont.

Leptoscyphus sect. *Erratici* J.J.Engel, *Nova Hedwigia* 103 (3/4): 304, 2016 (see Engel 2016). TYPE: *Leptoscyphus erraticus* (W.Martin et E.A.Hodgs.) J.J.Engel. NOTE: Originally placed under subg. *Neoleptoscyphus*.

Leptoscyphus subg. *Idiodonti* J.J.Engel, *Nova Hedwigia* 103 (3/4): 287, 2016 (see Engel 2016). TYPE: *Leptoscyphus idiodontus* J.J.Engel.

Leptoscyphus sect. *Incompti* J.J.Engel, *Nova Hedwigia* 103 (3/4): 305, 2016 (see Engel 2016). TYPE: *Leptoscyphus incomptus* J.J.Engel. NOTE: Originally under subg. *Neoleptoscyphus*.

Leptoscyphus subg. *Microphyllidici* J.J.Engel, *Nova Hedwigia* 103 (3/4): 290, 2016 (see Engel 2016). TYPE: *Leptoscyphus microphyllidicus* J.J.Engel.

Leptoscyphus subg. *Neoleptoscyphus* J.J.Engel, *Nova Hedwigia* 103 (3/4): 298, 2016 (see Engel 2016). TYPE: *Leptoscyphus beckettianus* (Steph.) R.M.Schust. ex J.J.Engel. NOTE: See under *Heteroscyphus* subg. *Lingulati* above.

Leptoscyphus sect. *Neoleptoscyphus* J.J.Engel, *Nova Hedwigia* 103 (3/4): 298, 2016 (see Engel 2016). TYPE: *Leptoscyphus beckettianus* (Steph.) R.M.Schust. ex J.J.Engel.

Leptoscyphus subg. *Physanthi* J.J.Engel, *Nova Hedwigia* 103 (3/4): 297, 2016 (see Engel 2016). TYPE: *Leptoscyphus physanthus* (Hook.f. et Taylor) J.J.Engel.

Leptoscyphus compactus (Colenso) J.J.Engel, *Nova Hedwigia* 100 (3/4): 579, 2015 (see Engel 2015a). BASIONYM: *Chiloscyphus compactus* Colenso, *Trans. & Proc. New Zealand Inst.* 21: 63, 1889 “*compacta*” (see Colenso 1889).

Leptoscyphus excipulatus var. *canaliculatus* J.J.Engel, *Nova Hedwigia* 103 (3/4): 299, 2016 (see Engel 2016). TYPE: “Holotype: Tasmania, Cradle Mtn.-Lake St. Clair Natl. Park, above Dove River, off track between Quailes Hill and Pencil Pine Lodge, SE of Pencil Pine Lodge, 880 m, *Engel 19614* -- c. per. + ♂ (F); isotype: (HO)”. NOTE: This also creates the autonym.

Leptoscyphus idiodontus J.J.Engel, *Nova Hedwigia* 103 (3/4): 287, 2016 (see Engel 2016). TYPE: “Holotype: New Zealand, North Is., Gisborne Prov., Urewera Natl. Park, Huiarau Range, summit area of Te Rangaakapua, 1265–1320 m, *Engel 23364* (F); isotype: (AK)”.

Leptoscyphus incomptus J.J.Engel, *Nova Hedwigia* 103 (3/4): 305, 2016 (see Engel 2016). TYPE: “Holotype: Tasmania, just below summit of Collins Bonnet, 1175 m, *Engel 13314* -- c. sporo. (F); isotype: (HO)”.

Leptoscyphus microphyllidicus J.J.Engel, *Nova Hedwigia* 103 (3/4): 203, 2016 (see Engel 2016). TYPE: “Holotype: New Zealand, Auckland Is., Lake Speight, near Coleridge Bay, Carnley Harbour, 5 Jan. 1973, *Common* 2398 (F); isotypes: (CHR, MSC)”.

Leptoscyphus nanophysanthodes J.J.Engel, *Nova Hedwigia* 103 (3/4): 299, 2016 (see Engel 2016). TYPE: “Holotype: New Zealand, North Is., Auckland, NE Waitakere Ranges, Spragg’s Bush, ca. 360 m, *Engel and von Konrat* 26669 (F); isotype: (AK)”.

Leptoscyphus normalis (Steph.) J.J.Engel, *Nova Hedwigia* 100 (3/4): 579, 2015 (see Engel 2015a). BASIONYM: *Lophocolea normalis* Steph., *Sp. Hepat. (Stephani)* 6: 285, 1922 (see Stephani 1922).

Lophocolea novae-zeelandiae var. *grandistipula* (Schiffn.) Váňa, *Cryptog. Bryol.* 36 (4): 357, 2015 (see Váňa et al. 2015b). BASIONYM: *Lophocolea grandistipula* Schiffn., *Leberm., Forschungsr. Gazelle* 4 (4): 12, 1890 (see Schiffner 1890).

Macrodiplrophyllum flaccidum D.H.Wagner, *Phytoneuron* 2016 (57): 8, 2016 (see Wagner 2016). TYPE: “CANADA. British Columbia. Haida Gwaii (Queen Charlotte Islands): Graham Island, along Rennell Sound Forest Service Road, between Rennell Sound and the Queen Charlotte Main Line Junction, W of Phantom Creek, 53° 21' 21" N, 132° 19' 17" W, elev. 244-247 m, 15 Jul 2010, *S. Joya and J. & W. Harpel* 945 (holotype: UBC; isotypes: CAS, E, F, H, MO, NY, OSC, VBGI)”.

Macrodiplrophyllum rubrum D.H.Wagner, *Phytoneuron* 2016 (57): 1, 2016 (see Wagner 2016). TYPE: “USA. Oregon. Coos Co.: Cherry Creek Research Natural Area, ca. 20 mi SE of Coos Bay, streamside terrace, on *Thuja plicata* trunk, 43° 13' 10" N, 123° 56' 5" W, elev. 640 ft (195 m), 13 Jun 2016, *D.H. Wagner m3014* (holotype: OSC; isotypes: CAS, E, F, H, MO, NY, UBC, VBGI, WTU)”.

***Macrolejeunea pallescens* f. *lancifolia* Romanski, *Epiphyt.*: 140, 2007 (see Romanski 2007). *Epiphyt.*: 140, 2007 (see Romanski 2007), nom. inval. (ICN. 38.1(a); no description).

Marchantia subg. *Preissia* (Corda) D.G.Long, Crand.-Stotl., L.L.Forrest et J.C.Villarreal, *Phytotaxa* 252 (1): 78, 2016 (see Long et al. 2016). BASIONYM: *Preissia* Corda, *Gen. hepat.*: 647, 1829 (see Corda 1829).

Marchantia sect. *Protomarchantia* (R.M.Schust.) L.Söderstr., *Phytotaxa* 202 (1): 69, 2015 (see Söderström et al. 2015c). BASIONYM: *Marchantia* subg. *Protomarchantia* R.M.Schust., *Phytologia* 57 (6): 410, 1985 (see Schuster 1985b).

Marchantia longii R.L.Zhu, You L.Xiang et L.Shu, *Bryologist* 119 (3): 285, 2016 (see Xiang et al. 2016). TYPE: “CHINA. YUNNAN: Gongshan Co., Dulongjiang Town, from Qinlangdang Village to the 41 boundary, 27841026.7800N, 98816039.7800E, 1243 m, on rock with a thin layer of soil, 17 Apr. 2016, *You-Liang Xiang, Wei-Ping Zhang, Xiang-Bo Yin* 20160417-20 (holotype: HSNU!”).

Marchantia romanica (Radian) D.G.Long, Crand.-Stotl., L.L.Forrest et J.C.Villarreal, *Phytotaxa* 252 (1): 78, 2016 (see Long et al. 2016). BASIONYM: *Bucegia romanica* Radian, *Bull. Herb. Inst. Bot. Bucarest* 3-4: 4, 1903 (see Radian 1903).

** *Marchantia ruderalis* Duckett et Pressel, *Field Bryology* 116: 72, 2016 (see Duckett & Pressel 2016), nom. inval. (ICN Art. 41.5; basionym not cited). BASIONYM: *Marchantia polymorpha* subsp. *ruderalis* Bischl. et Boissel. *Dub. J. Bryol.* 16 (3): 364 (see Bischler & Boisselier-Bubayle 1991).

Marchesinia nobilis (Gottsche) X.Q.Shi, R.L.Zhu et Gradst., *Phytotaxa* 195 (3): 249, 2015 (see Shi et al. 2015a). BASIONYM: *Lejeunea nobilis* Gottsche, *Abh. Naturwiss. Vereins Bremen* 7: 353, 1882 (see Gottsche 1882).

†*Mastigolejeunea extincta* Heinrichs, Gyarmati et Schäf.-Verw., *Rev. Palaeobot. Palynol.* 221: 62, 2015 (see Heinrichs et al. 2015c). TYPE: “Holotype: SMNSMx-443, single perianth-bearing liverwort gametophyte. Plate II shows the holotype. Repository: The specimen is deposited in the amber collection of the Natural History Museum Stuttgart (SMNS). Stratigraphic range and age: Miocene, about 15–20 Ma”.

Mesoptychia chinensis Bakalin, Vilnet et Y.X.Xiong, *J. Bryol.* 37 (3): 196, 2015 (see Bakalin et al. 2015). TYPE: “Holotype. China, Guizhou Province, Kaijiang County, Xiang Zhi Stream (26°46'59"N 106°54'44"E), 1200 m alt., Leg. *V. Bakalin* 19 November 2013. *China-51-11-13* (VBGI, isotypes in KPABG and MO)”.

Mesoptychia polymorpha subsp. *pakistanica* Bakalin et Vilnet, *J. Bryol.* 37 (3): 198, 2015 (see Bakalin et al. 2015). TYPE: “Holotype. Pakistan. Khyber Pakhtunkhwa Prov., Kahgan Valley, Kamal Ban Forest (~34°54'N 73°38'E), 2040 m alt., Leg. *M. Higuchi* 02 September 1990. *20167* (TNS-98706, isotype in VBGI)”. NOTE: This also creates the autonym.

Metzgeria leptoneura var. *polychaeta* R.M.Schust., *Phytotaxa* 202 (1): 70, 2015 (see Söderström et al. 2015c). BASED ON: *Metzgeria leptoneura* var. *polychaeta* R.M.Schust., *J. Hattori Bot. Lab.* 70: 150, 1991, nom. inval. ICN Art. 40.7; no herbarium specified (see Schuster 1991b).

Metzgeria setigera R.M.Schust. ex Crand.-Stotl. et L.Söderstr., *Phytotaxa* 202 (1): 69, 2015 (see Söderström et al. 2015c). BASED ON: *Metzgeria furcata* var. *setigera* R.M.Schust., *J. Hattori Bot. Lab.* 70: 149, 1991, nom. inval. ICN Art. 40.7; no herbarium specified (see Schuster 1991b).

†*Microlejeunea miocenica* G.E.Lee, Bechteler, Schäf.-Verw. et Heinrichs, *Rev. Palaeobot. Palynol.* 222: 17, 2015 (see Lee et al. 2015a). TYPE: “Holotype: Liverwort amber inclusion SMNS Do-3935-M (Plates I and II). Syninclusions: fragments of bark, detritus, spider threads. Repository: The specimen is deposited in the amber collection of the Museum of Natural History Stuttgart (SMNS)”.

- †*Microlejeunea nyiahae* Heinrichs, G.E.Lee, Schäf.-Verw. et A.R.Schmidt, *PLOS one* 11 (5: E0156301): 5, 2016 (see Heinrichs *et al.* 2016a). TYPE: “Holotype. American Museum of Natural History, AMNH-Tad-441-A”.
- Micropterygium longicellulatum* Uribe et E.L.Linares, *Phytotaxa* 213 (3): 297, 2015 (see Uribe & Linares 2015). TYPE: “COLOMBIA. Chocó, vereda Rionegro, Cerro del Torrá, vertiente oriental, ca. 1920–1950 m, 8 Ago 1988, Philip A. Silverstone-Sopkin, *et al.* 4213 (holotype COL 472563!; isotype, CUVC!)”.
- Mylia* subg. *Anomalae* (R.M.Schust. ex Potemkin) L.Söderstr., *Phytotaxa* 202 (1): 70, 2015 (see Söderström *et al.* 2015c). BASIONYM: *Mylia* sect. *Anomalae* R.M.Schust. ex Potemkin, *Arctoa* 2: 1, 1993 (see Potemkin & Kazanovsky 1993). NOTE: This also creates the autonym.
- Myliineae* J.J.Engel et Braggins (subord.), *Syst. Bot.* 40 (1): 37, 2015 (see Shaw *et al.* 2015). TYPE: *Mylia* Gray.
- †*Naiaditaceae* R.M.Schust. ex T.Katag. et A.Hagborg (fam.), *Phytotaxa* 222 (2): 165, 2015 (see Katagiri & Hagborg 2015). TYPE: *Naiadita* P.B.Brodie.
- †*Naiaditales* R.M.Schust. ex T.Katag. et A.Hagborg (ord.), *Phytotaxa* 222 (2): 166, 2015 (see Katagiri & Hagborg 2015). TYPE: *Naiadita* P.B.Brodie.
- Nardia pacifica* Bakalin, *Bot. Pacifica* 5 (2): 45, 2016 (see Bakalin & Klimova 2016a). TYPE: “RUSSIA. Kamchatka Territory. East Kamchatka, upper course of Nalycheva River, near Pinachevsky Pass (53°26'31"N 158°39'08"E), 900 m alt., alpine belt, moist boulder near stream. Leg. Vadim A. Bakalin, K-67-7-15, 19 August 2015 (VBGI)”.
- Nephelolejeunea bidentata* B.M.Thiers ex L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 65, 2015 (see Pócs *et al.* 2015b). BASED ON: *Austrolejeunea bidentata* B.M.Thiers, *Bryologist* 88 (4): 350, 1986, *nom. inval.* ICN Art. 35.1; genus not valid (see Thiers 1985).
- Nephelolejeunea fragilis* (R.M.Schust.) L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 65, 2015 (see Pócs *et al.* 2015b). BASIONYM: *Cololejeunea fragilis* R.M.Schust., *Phytologia* 56 (7): 458, 1985 (see Schuster 1985a).
- Nephelolejeunea hispida* R.M.Schust. ex L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 66, 2015 (see Pócs *et al.* 2015b). BASED ON: *Austrolejeunea hispida* R.M.Schust., *Phytologia* 47 (4): 305, 1981, *nom. inval.* ICN Art. 35.1; genus not valid (see Schuster 1981).
- Nephelolejeunea jarmaniana* Grolle ex L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 66, 2015 (see Pócs *et al.* 2015b). BASED ON: *Austrolejeunea jarmaniana* Grolle, *Nova Hedwigia* 55 (1/2): 112, 1992, *nom. inval.* ICN Art. 35.1; genus not valid (see Grolle 1992).
- Nephelolejeunea nudipes* (Hook.f. et Taylor) L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 66, 2015 (see Pócs *et al.* 2015b). BASIONYM: *Jungermannia nudipes* Hook.f. et Taylor, *London J. Bot.* 3: 568, 1844 (see Hooker & Taylor 1844).
- Nephelolejeunea occidentalis* Pócs ex L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 66, 2015 (see Pócs *et al.* 2015b). BASED ON: *Austrolejeunea occidentalis* Pócs, *J. Hattori Bot. Lab.* 99: 187, 2006, *nom. inval.* ICN Art. 35.1; genus not valid (see Pócs 2006).
- Nephelolejeunea radulifolia* (C.Massal.) L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 66, 2015 (see Pócs *et al.* 2015b). BASIONYM: *Lejeunea radulifolia* C.Massal., *Nuovo Giorn. Bot. Ital.* 17 (3): 248, 1885 “*radulaefolia*” (see Massalongo 1885).
- Nephelolejeunea secunda* M.A.M.Renner ex L.Söderstr. et A.Hagborg, *Phytotaxa* 202 (1): 66, 2015 (see Pócs *et al.* 2015b). BASED ON: *Austrolejeunea secunda* M.A.M.Renner, *Bryologist* 113 (4): 782, 2010, *nom. inval.* ICN Art. 35.1; genus not valid (see Renner 2010).
- Neurolejeunea breutelii* var. *africana* Pócs, *Herzogia* 28 (1): 63, 2015 (see Pócs *et al.* 2015c). TYPE: “Príncipe Island, slopes along the Rio Papagaio about 2km south of the village of Bella Vista above Santo Antonio beyond end of the road (now abandoned) about 200m above dam. 01°36'11.5"N, 07°24'22.7"E, 110 m alt. Hardwood tropical forest with palm understory. On small hardwood trunk in filtered light. J.R. Shevock, M. Nadel & M. Patacho 40115 (holotype: CAS, isotypes: DR, EGR)”. NOTE: This also creates the autonym.
- Notoscyphaceae* Crand.-Stotl., Váňa et Stotler (fam.), *Syst. Bot.* 40 (1): 38, 2015 (see Shaw *et al.* 2015). BASED ON: Notoscyphoideae R.M.Schust. (subfam.), *Trans. Brit. Bryol. Soc.* 6 (1): 94, 1970 *Trans. Brit. Bryol. Soc.* 6 (1): 94, 1970 (see).
- †*Notoscyphus balticus* Heinrichs, A.R.Schmidt, Schäf.-Verw., Gröhn et M.A.M.Renner, *Rev. Palaeobot. Palynol.* 217: 40, 2015 (see Heinrichs *et al.* 2015a). TYPE: “Liverwort amber inclusion GPIH 4565 (1 shoot, specimen Gröhn 5800); Plates I and II. Repository: The specimen is deposited in the amber collection of the Geological-Palaeontological Institute and Museum Hamburg (GPIH)”.

- †*Notoscyphus grollei* Váňa, Schäf.-Verw. et Heinrichs, *Phytotaxa* 222 (2): 153, 2015 (see Váňa *et al.* 2015c). TYPE: “Germany. Inclusion in Bitterfeld amber [holotype BHU-Palaeo inv. no. SB.M.10.4]”.
- Notothyas frahmii* Chantanaorr., *Cryptog. Bryol.* 36 (3): 254, 2015 (see Chantanaorrapint 2015). TYPE: “Thailand. Tak province: Umphang district, Umphang Wildlife Sanctuary, Tee Lor Su Waterfall, 12 August 2013, Chantanaorrapint & Promma 2735 (holotype PSU!, isotype BKF!)”.
- Odontoschisma yunnanense* K.Feldberg, Váňa, D.G.Long et Heinrichs, *Org. Divers. Evol.* 16 (4): 738, 2016 (see Feldberg *et al.* 2016). TYPE: “China. Yunnan Province. Fugong County, Lumadeng Xiang, Yaping Cun, E slope of Gaoligong Shan (Nu Jiang catchment), Burma/Yunnan border ridge, above lake south of “Yaping Pass”, 27°12'17.2"N, 98°41'48.6"E. Steep alpine slope with block scree, low cliffs and dwarf Rhododendrons; in humid mossy crevices of granite outcrop. Alt. c. 3660 m, 12.08.2005, D. G. Long 34657 (holotype, E 00250469; isotype M)”.
- †*Pallaviciniites oishii* (Huzioka et Takahasi) T.Katag., *Bryologist* 118 (3): 246, 2015 (see Katagiri 2015b). BASIONYM: *Hepaticites oishii* Huzioka et Takahasi, *Trans. & Proc. Palaeontol. Soc. Japan (n.ser.)* 89 (1): 25, 1973 (see Huzioka & Takahasi 1973).
- †*Pallaviciniites sandaolingensis* Rui Y.Li et B.N.Sun, *PalZ* 90 (2): 393, 2016 (see Li *et al.* 2016b). TYPE: “Holotype SDL-J2-093 (a, b) (Fig. 2f, g), a relatively complete thallus. Paratypes SDL-J2-048 (Fig. 3b); SDL-J2-055 (Fig. 3d); SDL-J2-089 (a, b); SDL-J2-090 (Fig. 3c); SDL-J2-226 (Fig. 2a); SDL-J2-275 (a, b) (Fig. 2c, d); SDL-J2-282 (Fig. 3a); SDL-J2-305 (a, b) (Fig. 2e, h); SDL-J2-329 (Fig. 2b). Locality and horizon Sandaoling Coal Field, Turpan-Hami Basin, NW China; Xishanyao Formation, Middle Jurassic”.
- Paraphymatoceros pearsonii* (M.Howe) J.C.Villarreal et Cargill, *Phytotaxa* 208 (1): 94, 2015 (see Villarreal *et al.* 2015). BASIONYM: *Anthoceros pearsonii* M.Howe, *Bull. Torrey Bot. Club* 25 (1): 8, 1898 (see Howe 1898).
- Paraphymatoceros proskaueri* (Stotler, Crand.-Stotl. et W.T.Doyle) J.C.Villarreal et Cargill, *Phytotaxa* 208 (1): 94, 2015 (see Villarreal *et al.* 2015). BASIONYM: *Phaeoceros proskaueri* Stotler, Crand.-Stotl. et W.T.Doyle, *Fieldiana, Bot. (n.ser.)* 47: 232, 2008 (see Crandall-Stotler *et al.* 2008).
- †*Pelliaites* Narkhede et Bhowal, *Bioinfolet* 6(1): 12, 2009 (see Narkhede & Bhowal 2009). TYPE: *Pelliaites deccanii* Narkhede et Bhowal.
- †*Pelliaites deccanii* Narkhede et Bhowal, *Bioinfolet* 6(1): 12, 2009 (see Narkhede & Bhowal 2009). TYPE: “Bry/ Botany Department, Institute of Science, Nagpur; Horizon: Chert, Deccan Intertrappean bed; Locality: Mohgaonkala, MP, India; Age: Upper Cretaceous”.
- Phaeoceros tigrinus* (Gola) J.C.Villarreal, *Phytotaxa* 208 (1): 95, 2015 (see Villarreal *et al.* 2015). BASIONYM: *Anthoceros tigrinus* Gola, *Ann. Bot. (Rome)* 13 (1): 72, 1914 (see Gola 1914).
- Pictolejeuneinae* Bechteler, G.E.Lee, Schäf.-Verw., D.F.Peralta, M.A.M.Renner et Heinrichs (subtrib.), *Phytotaxa* 280 (3): 267, 2016 (see Bechteler *et al.* 2016b). TYPE: *Pictolejeunea* Grolle.
- Plagiochila arunachalensis* S.Majumdar et D.K.Singh, *NeBIO* 6 (4): 8, 2015 (see Majumdar & Singh 2015). TYPE: “India, Eastern Himalaya, Arunachal Pradesh, Anjaw district, on way from Hotspring to Jachhup, 28°12'N, 97°18'E, ca 3400 m, 02.11.1985, D.K. Singh 202/C/1985 (Holotype: CAL; Isotype: ASSAM)”.
- Plagiochila ecuadorica* (Inoue) L.Söderstr., *Phytotaxa* 208 (1): 84, 2015 (see Söderström *et al.* 2015a). BASIONYM: *Steereochila ecuadorica* Inoue, *Mem. New York Bot. Gard.* 45: 279, 1987 (see Inoue 1987b).
- Plagiochila fracta* Pócs, *Phytotaxa* 195 (2): 183, 2015 (see Pócs 2015b). TYPE: “Madagascar. Antsiranana (Diego Suarez) Prov. Réserve spéciale de Manongarivo Ambahatra, cours supérieur; 13°59'S; 48°26'E. Crête entre les deux bras de l'Ambahatra, ca 800 m au N point côte au-dessus du camp 2, elevation: 1250–1300 m. Arête, dans une forêt montagnarde. Substrat: Rocher. (fragments of decaying wood can be observed on the lower side of the specimen). 9 March 1999, P. Geissler 19691/I (holotype: G!, isotypes: EGR!, GOET!)”.
- Plagiochila parvivittata* var. *siangensis* Singh Deo et D.K.Singh, *Pl. Sci. Today* 3 (1): 64, 2016 (see Singh Deo & Singh 2016a). TYPE: “India, Eastern Himalaya, Arunachal Pradesh, West Siang district, Menchukha (between Zupuk and Damingla forests), 28°40'N, 94°03'E, c. 3300 m, 08.05.2011, S. Singh Deo, 50829A (Holotype and isotype: CAL)”. NOTE: This also creates the autonym.
- ***Plagiochila pinnatispina* Gradst., *Rev. Acad. Colomb. Cienc. Ex. Fis. Nat.* 40 (154): 120, 2016, *nom. inval.* (ICN Art. 36.1(c); publ. in syn. [sub *Plagiochila eggertii* Inoue]), (see Gradstein 2016). ORIGINAL MATERIAL: “s.loc.spec.”
- Plagiochila sciophila* subsp. *ciliigera* (R.M.Schust.) L.Söderstr., *Phytotaxa* 208 (1): 84, 2015 (see Söderström *et al.* 2015a). BASIONYM: *Plagiochila japonica* subsp. *ciliigera* R.M.Schust., *Amer. Midl. Naturalist* 62 (2): 354, 1959 (see Schuster 1959). NOTE: This also creates the autonym.
- Plagiochila umbrosioides* L.Söderstr., *Phytotaxa* 208 (1): 85, 2015 (see Söderström *et al.* 2015a). NOM. NOV. PRO *Plagiochila umbrosa* Steph., *Sp. Hepat. (Stephani)* 6: 235, 1921, *nom. illeg.* ICN Art. 53.1; hom. illeg. [non (Schrad.) Mont. et Nees 1838] (see Stephani 1921).

- Plectocolea decolor*** (Schiffn.) Bakalin, *Arctoa* 23:106, 2014 (see Bakalin 2014). BASIONYM; *Jungermannia decolor* Schiffn. *Leberm., Forschungsr. Gazelle* 4 (4): 10 (Schiffner 1890), see Schiffner (1890).
- Plectocolea glauca*** (Amakawa) Bakalin, *Arctoa* 23: 102, 2014 (see Bakalin 2014). BASIONYM: *Jungermannia glauca* Amakawa, *Fl. E. Himalaya*: 511, 1966 (see Hattori 1966).
- Porella campylophylla* var. *integra*** Y.Jia et Qiang He, *Pl. Diversity Resources* 37 (6): 743, 2015 (see Jia & He 2015). TYPE: “China. Yunnan, Weixi Co., Yezhi town, 2800 m, May 8 1982, X. J. Li 123a (Holotype: KUN)”.
- Porella recurviloba*** Y.Jia et Qiang He, *Pl. Diversity Resources* 37 (6): 742, 2015, ‘*recurve-loba*’ (see Jia & He 2015). TYPE: “China. Gansu, Wenxian Co., Bikou town, Shilonggou, on tree trunk, 1190–1660 m, July 5, 2006, Collector. Pei Lin-Yang 1205 (holotype: PE)”.
- Prionolejeunea ciliata*** Ilk.-Borg., *Fl. Neotrop. Monogr.* 116: 46, 2016 (see Ilkiu-Borges 2016). TYPE: “Trinidad & Tobago, Trinidad, Tocuche, sd *H. Crüger s.n.* (holotype, JE)”.
- Prionolejeunea cordiflora*** Grolle ex Ilk.-Borg., *Fl. Neotrop. Monogr.* 116: 49, 2016 (see Ilkiu-Borges 2016). TYPE: “Puerto Rico, Luquillo Mts., Catalina-Yunque trail, 1923, N. L. Britton 7729 (holotype, JE)”.
- Prionolejeunea rotundifolia*** Ilk.-Borg., *Fl. Neotrop. Monogr.* 116: 103, 2016 (see Ilkiu-Borges 2016). TYPE: “Cuba, Oriente [Santiago de Cuba] Sierra Maestra, Pico Turquino, 1850 m, 16 Apr 1915, E. L. Ekman 5462 (holotype S-B72030)”.
- ***Pycnolejeunea obtusifolia*** S.Hatt. ex Sreebha, Kariyappa et A.E.D.Daniels, *Acta Bot. Hung.* 58 (1/2): 178, 2016, *nom. inval.* (ICN Art. 36.1(c); publ. in syn. [sub. *Cheilolejeunea obtusifolia* (Steph.) S.Hatt.] (see Sreebha et al. 2016). ORIGINAL MATERIAL: “Japan, Nichinan, Miyazaki Pref., on branches of trees and shrubs in lowlands in southernmost Japan, ca 30 m, October 16, 1945, Coll.: S. Hattori 12053 (NICH)”. NOTE: Apparently an error for *Pycnolejeunea obtusiloba* S.Hatt.
- Radula aguirrei*** R.M.Schust., *Phytotaxa* 202 (1): 70, 2015 (see Söderström et al. 2015c). BASED ON: *Radula aguirrei* R.M.Schust., *J. Hattori Bot. Lab.* 70: 56, 1991, *nom. inval.* ICN Art. 40.7; no herbarium specified (see Schuster 1991a).
- †***Radula baltica*** Heinrichs, Schäf.-Verw. et M.A.M.Renner, *Rev. Palaeobot. Palynol.* 235: 158, 2016 (see Heinrichs et al. 2016b). TYPE: “Geoscientific collections of the Georg August University Göttingen, Germany, GZG. BST.G3.552, a single, branched *Radula* gametophyte; Type locality: Baltic region; Age and stratigraphic position: Eocene, ~35 Ma [minimum age]”.
- Radula grandilobula*** Promma et Chantanaorr., *Cryptog. Bryol.* 36 (3): 219, 2015 (see Promma & Chantanaorrapint 2015). TYPE: “Thailand. Nakhon Si Thammarat, Noppitam, Khao Nan National Park, Huay Kaew Station, Klong Song, 200 m, on leaving leaves, 25 Jan. 2007, Chantanaorrapint 1364 (holotype: PSU!, isotypes: BKF!, HSNU!)”.
- Radula hainanensis*** L.N.Zhang et R.L.Zhu, *Bryologist* 119 (1): 53, 2016 (see Zhang & Zhu 2016). TYPE: “CHINA. HAINAN: Lingshui Co., Diaoluoshan National Nature Reserve, 18u43938.750N, 109u51950.260E, on tree trunk, 982 m, 10 Aug. 2015, R.-L. Zhu, L.-N. Zhang, L. Shu & X.-B. Yin 20150810-51 (holotype: HSNU!; isotype: HUTB!)”.
- †***Rebouliothallus*** Rui Y.Li et B.N.Sun, *Acta Geol. Sin.* 90 (3): 840, 2016 (see Li et al. 2016a). TYPE: *Rebouliothallus huolinensis* Rui Y.Li et B.N.Sun.
- †***Rebouliothallus huolinensis*** Rui Y.Li et B.N.Sun, *Acta Geol. Sin.* 90 (3): 840, 2016 (see Li et al. 2016a). TYPE: “MDL-K1-013 (A, B). Type locality: Mandula Coal Field in Huolinhe City, Inner Mongolia, northeastern China. Stratigraphic horizon: Lower Cretaceous, Huolinhe Formation”.
- Rectolejeunea versifolia*** (Schiffn.) L.Söderstr. et A.Hagborg, *Phytotaxa* 220 (2): 188, 2015 (see Söderström et al. 2015b). BASIONYM: *Cheilolejeunea versifolia* Schiffn., *Bot. Jahrb. Syst.* 23 (5): 597, 1897 (see Schiffner 1897).
- Riccardia porcina*** (Hewson) L.Söderstr., *Phytotaxa* 202 (1): 70, 2015 (see Söderström et al. 2015c). BASIONYM: *Riccardia bliklika* var. *porcina* Hewson, *Proc. Linn. Soc. New South Wales (ser. 2)* 95 (1): 84, 1970 (see Hewson 1970).
- Riccardia subantarctica*** Grolle et L.Söderstr., *Phytotaxa* 202 (1): 70, 2015 (see Söderström et al. 2015c). NOM. NOV. PRO *Riccardia pauciramea* R.M.Schust., *J. Hattori Bot. Lab.* 67: 102, 1989, *nom. illeg.* ICN Art. 53.1; hom. illeg. [non (Steph.) H.A.Mill. 1963] (see Schuster 1989).
- Riccia boumanii*** Dirkse, Losada-Lima et M.Stech, *J. Bryol.* 38 (2): 96, 2016 (see Dirkse et al. 2016). TYPE: “España, prov. de Santa Cruz de Tenerife, La Gomera, La Fortaleza de Chipude, N slopes and plateau, UTM (28R) 275–3110, elev. 1200–1243 m, G.M. Dirkse, 16 March 1988. Herbarium RIN nr. 015035 (L)”.
- Saccogynidioideae** Crand.-Stotl., Váña et Stotler (subfam.), *Syst. Bot.* 40 (1): 37, 2015 (see Shaw et al. 2015). TYPE: *Saccogynidium* Grolle.

Schistochilopsis obscura Bakalin, *Bot. Pacifica* 5 (2): 52, 2016 (see Bakalin & Klimova 2016b). TYPE: “Russia . Sakhalin Province, middle part of Iturup Island, Goryachaya River upper course (45°04'40”N 147°59'13”E), 200 m alt. Leg. V.A. Bakalin 19 September 2015. Forest belt (lighted *Larix-Betula ermanii* with dense *Sasa* understory community) near to timberline. Moist open cliffs above steaming hot water with high sulfur content (K-79-18-15, VBGI)”

Schistochilopsis pacifica Bakalin, *Bot. Pacifica* 5 (2): 54, 2016 (see Bakalin & Klimova 2016b). TYPE: “Holotype: Russia . Kamchatka Territory. East Kamchatka, Ganalsky Range, Bakening volcano area, upper course of Pravaya Kamchatka River, western slope of Bakening volcano (53°54'58”N 158°01'27”E), 1065 m alt. Leg. Vadim A. Bakalin 6 August 2015. Subalpine belt, on moist boulder near stream (K-49-20-15, VBGI)”

Solenostoma* subg. *Eucalyx (Lindb.) Váňa, Crand.-Stotl. et Stotler, *Syst. Bot.* 40 (1): 38, 2015 (see Shaw *et al.* 2015). BASIONYM: *Nardia* sect. *Eucalyx* Lindb., *Acta Soc. Sci. Fenn.* 10: 525, 1875 (see Lindberg 1875).

Solenostoma* subg. *Metasolenostoma Váňa, Crand.-Stotl. et Stotler, *Syst. Bot.* 40 (1): 38, 2015 (see Shaw *et al.* 2015). TYPE: *Solenostoma gracillimum* (Sm.) R.M.Schust.

†***Solenostoma berendtii*** (Grolle) Váňa, Schäf.-Verw. et Heinrichs, *Cryptog. Bryol.* 36 (3): 287, 2015 (see Váňa *et al.* 2015a). BASIONYM: *Jungermannia berendtii* Grolle, *Feddes Repert.* 91 (7/8): 401, 1980 (see Grolle 1980).

Solenostoma grosseverrucosum (Amakawa et S.Hatt.) Váňa, Crand.-Stotl. et Stotler, *Syst. Bot.* 40 (1): 39, 2015, ‘*grosse-verrucosum*’ (see Shaw *et al.* 2015). BASIONYM: *Horikawaella grosseverrucosa* Amakawa et S.Hatt., *Bull. Univ. Mus. Univ. Tokyo* 8: 216, 1975 “*grosse-verrucosa*” (see Hattori 1975).

Solenostoma longii Bakalin, *Arctoa* 25: 312, 2016 (see Bakalin 2016b). TYPE: “Holotype: China, Yunnan Prov., Fugong County (27°12'11”N 98°41'38”E), 3665 m alt., leg. Long D.G. and J. Shevock 37336 (MO6231188, sub *S. sanguinolentum*)”.

Solenostoma orbicularifolium (Piippo ex C.Gao et X.L.Bai) Váňa, *Phytotaxa* 220 (2): 199, 2015 (see Söderström *et al.* 2015d). BASIONYM: *Jungermannia orbicularifolia* Piippo ex C.Gao et X.L.Bai, *Philipp. Scientist* 38: 129, 2001 (see Gao & Bai 2001).

Solenostoma subacutum (Herzog) Váňa, Crand.-Stotl. et Stotler, *Syst. Bot.* 40 (1): 39, 2015 (see Shaw *et al.* 2015). BASIONYM: *Anastrophyllum subacutum* Herzog, *Ann. Bryol.* 12: 75, 1939 (see Herzog 1939a).

Spruceanthus abbreviatus (Mitt.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). BASIONYM: *Lejeunea abbreviata* Mitt., *J. Proc. Linn. Soc., Bot.* 7 (27): 167, 1863 (see Mitten 1863).

Spruceanthus brachyanthus (J.B.Jack et Steph.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). BASIONYM: *Archilejeunea brachyantha* J.B.Jack et Steph., *Bot. Centralbl.* 60 (4): 104, 1894 (see Jack & Stephani 1894).

Spruceanthus falcatus X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). NOM. NOV. PRO *Archilejeunea falcata* Amakawa, *J. Jap. Bot.* 39 (5): 137, 1964, *nom. illeg.* ICN Art. 53.1; *hom. illeg.* [non Steph. 1895] (see Amakawa 1964).

Spruceanthus kiushianus (Horik.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). BASIONYM: *Lopholejeunea kiushiana* Horik., *J. Sci. Hiroshima Univ., Ser. B, Div. 2, Bot.* 1: 129, 1932 (see Horikawa 1932).

Spruceanthus minutilobulus (Udar et U.S.Awasthi) Sushil K.Singh, *Keanean J. Sci.* 5: 27, 2016, ‘*minutilobula*’ (see Singh & Kumar 2016b). BASIONYM: *Archilejeunea minutilobula* Udar et U.S.Awasthi, *Geophytology* 11: 77, 1981 (see Udar & Awasthi 1981).

Spruceanthus olivaceus (Hook.f. et Taylor) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). BASIONYM: *Jungermannia olivacea* Hook.f. et Taylor, *London J. Bot.* 3: 568, 1844 (see Hooker & Taylor 1844).

Spruceanthus planifolius (Horik.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). BASIONYM: *Leucolejeunea planifolia* Horik., *J. Sci. Hiroshima Univ., Ser. B, Div. 2, Bot.* 1: 199, 1933 (see Horikawa 1933).

Spruceanthus planiusculus (Mitt.) X.Q.Shi, R.L.Zhu et Gradst., *Taxon* 64 (5): 889, 2015 (see Shi *et al.* 2015b). BASIONYM: *Lejeunea planiuscula* Mitt., *J. Proc. Linn. Soc., Bot.* 5 (18): 111, 1861 (see Mitten 1860).

Szygiella renifolia Gradst. et D.P.Costa, *Nova Hedwigia* 103 (1/2): 14, 2016 (see Gradstein & Costa 2016). TYPE: “Brazil, Amazonas State, Santa Izabel do Rio Negro, Parque Nacional do Pico da Neblina, Igarapé Cuiabixi, gallery forest, 00°47'18,9”N 66°01'15,5”W, 2060 m, on fallen trunk in stream, 20 Nov 2012, D.P.Costa *et al.* 5902 (holotype: RB!; isotype: PC!)”.

†***Targioniaites*** Narkhede et S.P.Qureshi, *Gondw. Geol. Mag.* 20(1): 52, 2005 (see Narkhede & Qureshi 2005). TYPE: *Targioniaites heartii* Narkhede et S.P.Qureshi.

†*Targioniaites heartii* Narkhede et S.P.Qureshi, *Gondw. Geol. Mag.* 20(1): 49 (2005) (see Narkhede & Qureshi 2005). TYPE: “SPQ Bry deposited at Botany Department Institute Of Science, Nagpur; Horizon: Chert, Deccan intertrappan bed; Locality: Mohgoankalan, M. P. India; Age: Uppermost Cretaceous”.

Tetracymbaliella subsimplex (Austin) J.J.Engel, *Phytotaxa* 207 (2): 185, 2015 (see Engel 2015b). BASIONYM: *Polyotus subsimplex* Austin, *Bull. Torrey Bot. Club* 6 (7): 46, 1875 (see Austin 1875).

†*Tetralophozia groehnii* Heinrichs, Vána et Schäf.-Verw., *PLOS one* 10 (11:e0140977): 6, 2015 (see Heinrichs et al. 2015d). TYPE: “Holotype: Plant fragment with quadrifid leaves in Baltic amber piece GPIH 4575 (= Coll. Gröhn 5827) of the Geological Palaeontological Institute Hamburg, Germany”.

Thysananthus **subject. Anguiformes** Sukkharak, *Phytotaxa* 193 (1): 37, 2015 (see Sukkharak 2015). TYPE: *Thysananthus anguiformis* (Hook.f. et Taylor) Gottsche, Lindenb. et Nees. NOTE: Originally placed under sect. *Thysananthus*. This also creates the autonym.

***Thysananthus* **ser. Anguiformes** Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 127, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). ORIGINAL MATERIAL: *Thysananthus anguiformis* (Hook. f. et Taylor) Gottsche, Lindenb. et Nees. NOTE: Originally placed under sect. *Thysananthus*.

***Thysananthus* **sect. Dendrolejeunea** (Spruce) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 114, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Lejeunea* subg. *Dendrolejeunea* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 110, 1884 (see Spruce 1884). NOTE: Originally placed under subg. *Thysananthus*.

***Thysananthus* **ser. Dendrolejeunea** (Spruce) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 131, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Lejeunea* subg. *Dendrolejeunea* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 110, 1884 (see Spruce 1884). NOTE: Originally placed under sect. *Dendrolejeunea*.

***Thysananthus* **subg. Mastigolejeunea** (Spruce) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 114, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Lejeunea* subg. *Mastigolejeunea* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 100, 1884 (see Spruce 1884).

Thysananthus **subject. Sandeanthus** (B.M.Thiers et Gradst.) Sukkharak, *Phytotaxa* 193 (1): 43, 2015 (see Sukkharak 2015). BASIONYM: *Thysananthus* subg. *Sandeanthus* B.M.Thiers et Gradst., *Mem. New York Bot. Gard.* 52: 66, 1989 (see Thiers & Gradstein 1989). NOTE: Originally placed under sect. *Vittatae*.

***Thysananthus* **ser. Sandeanthus** (B.M.Thiers et Gradst.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 135, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Thysananthus* subg. *Sandeanthus* B.M.Thiers et Gradst., *Mem. New York Bot. Gard.* 52: 66, 1989 (see Thiers & Gradstein 1989). NOTE: Originally placed under sect. *Dendrolejeunea*.

Thysananthus **subject. Vittatae** (Verd.) Sukkharak, *Phytotaxa* 193 (1): 40, 2015 (see Sukkharak 2015). BASIONYM: *Thysananthus* sect. *Vittatae* Verd., *Ann. Bryol., Suppl.* 4: 182, 1934 (see Verdoorn 1934). NOTE: Originally placed under sect. *Vittatae*.

***Thysananthus auriculatus* (Wilson et Hook.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 144, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Jungermannia auriculata* Wilson et Hook., *Musci Amer. S. States*: no. 170, 1841 (see Wilson 1841).

***Thysananthus calcaratus* (Steph.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 144, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Archilejeunea calcarata* Steph., *Spec. Hepat. (Stephani)* 4:724, 1911 (see Stephani 1911a).

***Thysananthus convolutus* **var. laceratus** (Steph.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 113, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Thysananthus laceratus* Steph., *Sp. Hepat. (Stephani)* 4: 796, 1912 (see Stephani 1912).

Thysananthus convolutus **var. laceratus** (Steph.) Sukkharak, *Phytotaxa* 193 (1): 30, 2015 (see Sukkharak 2015). BASIONYM: *Thysananthus laceratus* Steph., *Sp. Hepat. (Stephani)* 4: 796, 1912 (see Stephani 1912). NOTE: This also creates the autonym.

***Thysananthus floreus* (Mitt.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 145, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Phragmicoma florea* Mitt., *J. Linn. Soc., Bot.* 22 (146): 323, 1886 (see Mitten 1886).

***Thysananthus gottschei* **var. continuus** Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 119, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). ORIGINAL MATERIAL: “MALAYSIA. Sarawak: “Lunda”, Micholitz s.n. (holotype: G!)”.

Thysananthus gottschei var. *continuus* Sukkharak, *Phytotaxa* 193 (1): 33, 2015 (see Sukkharak 2015). TYPE: “MALAYSIA. Sarawak: “Lunda”, without date, *Micholitz s.n.* (holotype G!)”. NOTE: This also creates the autonym.

***Thysananthus humilis* (Gottsche) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 145, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Phragmicoma humilis* Gottsche, *Syn. Hepat.* 2: 299, 1845 (see Gottsche *et al.* 1845a).

***Thysananthus innovans* (Spruce) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 145, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Lejeunea innovans* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 103, 1884 (see Spruce 1884).

***Thysananthus ligulatus* (Lehm. et Lindenb.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 146, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Jungermannia ligulata* Lehm. et Lindenb., *Nov. Stirp. Pug.* 6: 39, 1834 (see Lehmann 1834).

***Thysananthus plicatiflorus* (Spruce) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 147, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Lejeunea plicatiflora* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 144, 1844 (see Spruce 1884).

***Thysananthus repletus* (Taylor) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 147, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Lejeunea repleta* Taylor, *London J. Bot.* 5: 392, 1846 (see Taylor 1846).

***Thysananthus reconditus* (Steph.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 147, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Ptycholejeunea recondita* Steph., *Hedwigia* 35 (3): 122, 1896 (see Stephani 1896).

***Thysananthus recurvifolius* (Mizut.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 147, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Mastigolejeunea recurvifolia* Mizut., *J. Hattori Bot. Lab.* 61: 294, 1987 (see Mizutani 1986).

***Thysananthus retusus* subsp. *sellingii* (Herzog) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 143, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Mastigolejeunea sellingii* Herzog, *Ark. Bot. (n.ser.)* 3 (3): 60, 1953 (see Herzog 1953).

Thysananthus retusus subsp. *sellingii* (Herzog) Sukkharak, *Phytotaxa* 193 (1): 47, 2015 (see Sukkharak 2015). BASIONYM: *Mastigolejeunea sellingii* Herzog, *Ark. Bot. (n.ser.)* 3 (3): 60, 1953 (see Herzog 1953). NOTE: This also creates the autonym.

***Thysananthus truncatus* (Mizut.) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 148, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Mastigolejeunea truncata* Mizut., *J. Hattori Bot. Lab.* 61: 292, 1987 (see Mizutani 1986).

***Thysananthus undulatus* (Gradst. et Grolle) Sukkharak, *Tax. Phylog. Thysananthus (Thesis)*: 148, 2011 (see Sukkharak 2011), *nom. inval.* (ICN Art. 30.8; published in a thesis). BASIONYM: *Mastigolejeunea undulata* Gradst. et Grolle, *Schriftenreihe Mensch, Kultur Umwelt z. Bergl. W Neug.* 7: 13 (see Hiepko & Schultze-Motel 1981).

Vitalianthus aphanellus (Spruce) Bechteler, G.E.Lee, Schäf.-Verw. et Heinrichs, *Pl. Syst. Evol.* 302: 199, 2015 (see Bechteler *et al.* 2016a). BASIONYM: *Lejeunea aphanella* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 290, 1884 (see Spruce 1884).

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