

## **A checklist of the liverworts and hornworts of Dominica, West Indies**

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**Abstract** – Two hundred eighty eight liverwort species and seven infraspecific taxa in 27 families and 83 genera, and five hornwort species in four families and five genera are currently accepted for Dominica. At least 14 taxa mentioned in the Dominica literature have not been treated in recent revisions and need taxonomic verification, are doubtful records or have been excluded. Genera and species are arranged in alphabetical order. For each accepted taxon the basionym is cited and the synonyms that are based on specimens from Dominica. Furtheron, data on illustrations are presented, and eight new records are incorporated (*Leiosporoceros dussii*, *Phaeoceros carolinianus*, *Aneura pinguis*, *Bazzania cuneistipula*, *Harpalejeunea uncinata*, *Lejeunea huctumalcensis*, *Metzgeria ciliata*, and *Microlejeunea epiphylla*). The list is complemented by some notes on geography, geology and climate, a bryogeographical survey, a short history of hepaticological exploration, and a taxonomic arrangement of the families and genera. Two new combinations, *Riccardia dilatata* (*Aneura dilatata*) and *R. ligulata* (*A. ligulata*) are made.

**check-list / hornworts / liverworts / Dominica / West Indies / new reports**

### **INTRODUCTION**

Dominica is situated in the Eastern Carribean with Guadeloupe and Martinique as neighbouring islands. With an area of 754 km<sup>2</sup>, 47 km in length and 29 km in width, it is the largest (and most northerly) of the Windward Islands. The highest peak is Morne Diablotin at 1447 meters in the central northern part. Several mountains in the southern part are around 1100-1400 m (Morne Trois Pitons, Morne Watt, Morne Micotrin, and Morne Anglais). Geologically, Dominica belongs to the Lesser Antilles volcanic arc that consists mostly of volcanic andesite and rhyolite. Dominica has a tropical wet climate, with average yearly rainfalls from 1,800 mm per year on the west coast to 5,000 mm on the east coast; and up to 9,000 mm per year on exposed mountainsides.

Dominica, the most mountainous island of the Lesser Antilles, is known as “The Nature Island of the Carribean”, still mostly covered by a largely unexploited rain forest and elfin woodland at higher altitudes, many cascading rivers, and natural pools. Dominica’s undisturbed forests are the most extensive in the Eastern Carribean. The natural vegetation on the island consists of swamp forests, dry scrub land, littoral woodland, deciduous forest, rain forest, montane forest, and elfin woodland. Total forest acreage is 130,000 which accounts for 2/3

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of the total land area; of this, 9,210 acres have been set aside as national parks (Ministry of Agriculture 1995, Dominica Country Report).

The first liverwort record from Dominica dates back to 1838 when Montagne described *Lejeunea boryana* based on plant material gathered by Bory. A few years later, Montagne (1843) described further liverwort species from Dominica, namely *Phragmicoma ocellulata* (currently *Stictolejeunea squamata*), *Lejeunea dominicensis* (now *Lepidolejeunea involuta*) and *Lejeunea subsimplex* (actually *Lejeunea cerina*). Three years later, Taylor (1846) described *Plagiochila dominicensis* and *Lejeunea decora* (now *Prionolejeunea decora*) from Dominica based on specimens from Hookers' herbarium. In 1891-1892, W. R. Elliott made extensive collections in Dominica and St. Vincent that were identified by Spruce (1895). Collections made by H. Eggers were published by Stephani (1888). Miss E. Armitage collected in Dominica in 1896; most of their liverwort specimens were determined by Stephani and published by Pearson (1922). In 1896-1897, Elliott collected in Dominica for the second time, and part of this material was published by Stephani (1898-1924), and Fulford (1946, 1963-1976, 1987) who included also collections made by E. Armitage, H. Eggers, F. E. Lloyd, and R. M. Schuster. In more recent times, R. M. Schuster (1966b, 1966c, 1971, 1992, 1996, 2000, 2001, 2002), S. R. Gradstein (1993), J. Eggers (1997, 2004), as well as the author and his wife collected liverworts in Dominica (Schäfer-Verwimp, 1999; single collections also cited in Burghardt & Gradstein, 2008; Gradstein, 1997; Grolle & Heinrichs, 1999; Heinrichs, 2002; Ilkiu-Borges, 2005 & 2006; Ilkiu-Borges & Schäfer-Verwimp, 2005; Reiner-Drehwald & Schäfer-Verwimp, 2008; Schäfer-Verwimp & Reiner-Drehwald, 2009, and others).

Despite these extensive collecting activities, no up-to-date checklist is available for Dominica (Söderström *et al.*, 2008). Only two major publications deal with the liverwort and hornwort flora of Dominica. Spruce (1895) listed 117 liverworts and two hornworts. Fulford (1987) extended Spruces' list and accepted 225 leafy liverworts. However, even from the recent paper of Fulford (1987) 93 taxa (= 41.3%) have been renamed, disappeared in synonymy or, to a lesser extent, are dubious or had to be excluded (82 names or 68.9% of the list by Spruce 1895, the main part in *Lejeunea*).

In the present paper I present an annotated checklist of the liverworts and hornworts of Dominica.

## MATERIALS AND METHODS

The present checklist is based on a survey of the bryological literature, as well as own fieldwork. Specimens collected by ASV in Dominica are deposited in JE. The global distribution of the treated taxa was reconstructed based on the literature related to the topic, and own observations.

The supraspecific taxonomy of Anthocerotophyta is based on Duff *et al.* (2007), supraspecific taxa of Marchantiophyta are named in accordance with Crandall-Stotler *et al.* (2009), with slight alterations; the number of accepted species per genus is given in brackets, subspecies or varieties are indicated with "+".

## RESULTS AND DISCUSSION

## SYNOPSIS OF THE GENERA AND FAMILIES

## ANTHOCEROTOPHYTA

## ANTHOCEROTOPSIDA

## ANTHOCEROTALES

**Anthocerotaceae***Anthoceros* L. (1)

## DENDROCEROTALES

**Dendrocerotaceae***Dendroceros* Nees (1)*Nothoceros* (R.M. Schust.) J. Haseg. (1)

## NOTOTHYLADALES

**Notothyladaceae***Phaeoceros* Prosk. (1)

## LEIOSPOROCEROTOPSIDA

## LEIOSPOROCEROTALES

**Leiosporocerotaceae***Leiosporoceros* Hässel (1)

## MARCHANTIOPHYTA

## HAPLOMITRIOPSIDA

## CALOBRYALES

**Haplomitriaceae***Haplomitrium* Nees (1)

## MARCHANTIOPSIDA

## MARCHANTIALES

**Marchantiaceae***Marchantia* L. (3)**Ricciaceae***Riccia* L. (1)**Monocleaceae***Monoclea* Hook. (1)**Dumortieraceae***Dumortiera* Nees (1)

## JUNGERMANNIOPSIDA

## FOSSOMBRONIALES

**Fossombroniaceae***Fossombronia* Raddi (1)

## PALLAVICINIALES

**Pallaviciniaceae***Pallavicinia* S.F. Gray (1)*Symphyogyna* Nees et Mont. (3)

## METZGERIALES

**Metzgeriaceae***Metzgeria* Raddi (7)**Aneuraceae***Aneura* Dumort. (1)*Riccardia* S.F. Gray (12)

## PORELLALES

**Radulaceae***Radula* Dumort. (20)**Frullaniaceae***Frullania* Raddi (7)**Jubulaceae***Jubula* Dumort. (1)**Lejeuneaceae***Acanthocoleus* R.M. Schust. (1)*Anoplolejeunea* (Spruce) Schiffn. (1)*Blepharolejeunea* S. Arn. (1)*Bromeliophila* R.M. Schust. (1)*Bryopteris* (Nees) Lindenb. (1)*Ceratolejeunea* (Spruce) Schiffn. (8)*Cheilolejeunea* (Spruce) Schiffn. (11)*Cololejeunea* (Spruce) Schiffn. (11)*Colura* (Dumort.) Dumort. (4)*Cyclolejeunea* A. Evans (5)*Dicranolejeunea* (Spruce) Schiffn. (1)*Diplasiolejeunea* (Spruce) Schiffn. (9+1)*Drepanolejeunea* (Spruce) Schiffn. (12)*Harpalejeunea* (Spruce) Schiffn. (5)*Lejeunea* Libert (22)*Lepidolejeunea* R.M. Schust. (1)*Leptolejeunea* (Spruce) Schiffn. (2)*Lopholejeunea* (Spruce) Schiffn. (2)*Macrocolura* R.M. Schust. (1)*Marchesinia* S.F. Gray (1)*Microlejeunea* Steph. (3)*Neurolejeunea* (Spruce) Schiffn. (2)*Odontolejeunea* (Spruce) Schiffn. (1)*Omphalanthus* Lindenb. et Nees (1)*Oryzolejeunea* (R.M. Schust.) R.M. Schust. (1)*Physantholejeunea* R.M. Schust. (1)*Prionolejeunea* (Spruce) Schiffn. (10)*Pycnolejeunea* (Spruce) Schiffn. (1)*Rectolejeunea* A. Evans (2)*Schiffneriolejeunea* Verdoorn (1)*Stictolejeunea* (Spruce) Schiffn. (2)*Symbiezidium* Trevis. (2+1)*Taxilejeunea* (Spruce) Schiffn. (5)

## JUNGERMANNIALES

**Trichocoleaceae***Trichocolea* Dumort. (7+1)**Herbertaceae***Herbertus* S.F. Gray (1+2)**Phycolepidoziaceae***Phycolepidozia* R.M. Schust. (1)**Lepidoziaceae***Bazzania* S.F. Gray (8+1)*Kurzia* G. Martens (1+1)*Lepidozia* (Dumort.) Dumort. (2)*Micropterygium* Lindenb. *et al.* (3)*Monodactyloopsis* R.M. Schust. (1)*Paracromastigum* Fulf. *et J.* Taylor (1)*Telaranea* Spruce *ex* Schiffn. (2)*Zoopsidella* R.M. Schust. (1)**Lophocoleaceae***Chiloscyphus* Corda (5)*Heteroscyphus* Schiffn. (1)*Leptoscyphus* Mitt. (3)**Plagiochilaceae***Plagiochila* (Dumort.) Dumort. (22)**Adelanthaceae***Adelanthus* Mitt. (1)*Pseudomarsupidium* Herzog (1)*Syzygiella* Spruce (3)**Cephaloziaceae***Alobiella* (Spruce) Schiffn. (1)*Alobiellopsis* R.M. Schust. (1)*Cephalozia* (Dumort.) Dumort. (1)*Fuscocephaloziopsis* Fulf. (1)*Nowellia* Mitt. (1)*Odontoschisma* (Dumort.) Dumort. (3)**Cephaloziellaceae***Cephaloziella* (Spruce) Schiffn. (2)*Cephaloziopsis* (Spruce) Schiffn. (1)*Kymatocalyx* Herzog (1)**Scapaniaceae***Scapania* (Dumort.) Dumort. (1)**Balantiopsidaceae***Isotachis* Mitt. (3)*Neesioscyphus* Grolle (1)**Acrobolbaceae***Acrobolbus* Nees (1)*Tylimanthus* Mitt. (1)**Calypogeiaceae***Calypogeia* Raddi (8)*Mnioloma* Herzog (3)**Solenostomataceae***Nardia* S.F. Gray (1)*Solenostoma* Mitt. (2)**ALPHABETICAL LIST OF SPECIES**

\* = new record

## ANTHOCEROTOPHYTA

## ANTHOCEROS L. 1753

## ANTHOCEROTACEAE

*Anthoceros tuberculatus* Lehm. *et* Lindenb., *in* Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 4: 25. 1838.

Spruce 1895: 370.

**Fig.:** Stephani 1985, fig. 907, as *Aspiromitus tuberculatus* (only part of "original" plant); Hässel de Menéndez 1990, pl. 6, fig. 12a-c.*Anthoceros vincentianus* Lehm. *et* Lindenb. 1834 = *Nothoceros vincentianus* (Lehm. *et* Lindenb.) J.C. Villareal 2010.

## DENDROCEROS Nees 1846

## DENDROCEROTACEAE

*Dendroceros crispus* (Sw.) Nees, *in* Gottsche, Lindenb. & Nees, *Syn. Hep.*: 581. 1846.Bas.: *Anthoceros crispus* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 146. 1788.

Spruce 1895: 369; Pagán 1942: 110.

**Fig.:** Hell 1969, pls. 1-3, figs 1, 9, 10, 21, 24, 29, as *D. minarum*; Stephani 1985, fig. 2278; Gradstein *et al.* 2001, fig. 79H-N; Gradstein & Costa 2003, fig. 102F-L; León-Yáñez *et al.* 2006: 101, col. photo; Gradstein & Ilkiu-Borges 2009, fig. 83D-F.

## \*LEIOSPOROCEROS Hässel 1986

## \*LEIOSPOROCEROTACEAE

\**Leiosporoceros dussii* (Steph.) Hässel, *J. Bryology* 14: 255. 1986.

Bas.: *Anthoceros dussii* Steph., *Hedwigia* 32: 142. 1893.

Roseau Valley, rain forest around Trafalgar Falls, on large boulders in brook, 270 m, 18 May 1996, leg. Schäfer-Verwimp & Verwimp 17612 (JE).

**Fig.:** Stephani 1985, fig. 893, as *Anthoceros dussii*, fig. 899, as *A. leiosporus* (in "Content" both under *Aspiromitus*); Hasegawa 1986, figs 1-2, as *Phaeoceros dussii*; Hässel de Menéndez 1986, fig. 1; Gradstein *et al.* 2001, fig. 80M-N; Campos & Uribe 2006, fig. 6; Villarreal & Renzaglia 2006, figs 1-43.

## NOTHOCEROS (R.M. Schust.) J. Hasegawa

## DENDROCEROTACEAE

*Nothoceros vincentianus* (Lehm. *et* Lindenb.) J.C. Villarreal, *Bryologist* 113: 111. 2010.

Bas.: *Anthoceros vincentianus* Lehm. *et* Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 6: 16. 1834.

Pearson 1922: 228, as *Anthoceros vincentianus*, with "?".

**Fig.:** Stephani 1985, fig. 7520 (as *Megaceros vincentianus*, only sterile part of "original" thallus); Gradstein *et al.* 2001, fig. 80A-D, as *M. vincentianus*; Gradstein & Costa 2003, fig. 103A-D, as *M. vincentianus*; Villarreal *et al.* 2010, fig. 2C (fig. 2B as *N. cf. vincentianus*).

## \*PHAEOCEROS Prosk. 1951

## \*NOTOTHYLADACEAE

\**Phaeoceros carolinianus* (Michx.) Prosk., *Bull. Torrey Bot. Club* 78: 347. 1951.

Bas.: *Anthoceros carolinianus* Michx., *Flora Bor.-Amer.* 2: 280. 1803.

Southwestern part, culture zone and secondary vegetation above Giraudel, on shady earth slope, 600 m, 25 May 1996, leg. Schäfer-Verwimp & Verwimp 17913 (JE).

**Fig.:** Hell 1969, pl. 1:3-4, pl. 2: 7-8, 15-18, pl. 3: 25, 27, as *Phaeoceros kuhlmannii*; Hasegawa 1984, fig. 1, as *P. laevis* subsp. *carolinianus*; 1991, fig. 1c-f; Stephani 1985, fig. 607, as *Anthoceros arsenii*, fig. 614, as *A. cubanus* (only copy of a scanty original plant), fig. 621, as *A. kuntzeanus* (only copy of an original plant), fig. 625, as *A. planus*, fig. 935, as *A. tonkinensis* (under *Aspiromitus* in "content"); Hässel de Menéndez 1987, figs 2-3; 1989, pl. 5, fig. 10a-d; Asthana & Srivasthava 1991, pl. 29: 1-14, pl. 47:4-6, as *Phaeoceros laevis* subsp. *carolinianus*; Schuster 1984a, fig. 2; 1992a, figs 1036:6-7, 1038-1039, 1042:1-11, all as *Anthoceros laevis* subsp. *carolinianus*; Piippo 1993, figs 2a-e, 3p.p., as *Phaeoceros laevis* subsp. *carolinianus*; Paton 1999, fig. 309.

## MARCHANTIOPHYTA

## ACANTHOCOLEUS R.M. Schust. 1971 "1970"

## LEJEUNEACEAE

*Acanthocoleus aberrans* (Lindenb. *et* Gottsche) Kruijt, *Bryophyt. Bibl.* 36: 62. pl. 6. 1988. (var. *aberrans*)

Bas.: *Lejeunea aberrans* Lindenb. *et* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.* 751. 1847.

*Dicranolejeunea acuminata* (Lindenb. *et* Gottsche) Steph., *Spec. Hep.* 5: 159. 1912.

*Acanthocoleus fulvus* R.M. Schust., *Bull. Torrey Bot. Club* 97(6): 341. 1971. [**Type:**

**Dominica]**

*Acanthocoleus acuminatus* (Gottsche) R.M. Schust., *J. Hattori Bot. Lab.* 72: 207, 208. 1992, *comb. inval.*

Schuster 1971: 341, as *Acanthocoleus fulvus*; 1992: 208, as *A. acuminatus*; Fulford 1987: 273, as *A. fulvus*; Gradstein 1994: 193; Schäfer-Verwimp 1999: 317.

**Fig.:** Herzog 1951, fig. 8, as *Dicranolejeunea pulchella*; Schuster 1971, fig. 2, as *A. fulvus*; 1984: 1025, fig. 81:1-17, as *A. acuminatus*; Kruijt 1985, fig. 1b-k, as *Dicranolejeunea aberrans*; 1988, pl. 6; Gradstein 1994: 192, fig. 50A-F; Gradstein *et al.* 2001, fig. 37D-F; Gradstein & Costa 2003, fig. 32A-C; Gradstein & Ilkiu-Borges 2009, fig. 27A-B.

*Acanthocoleus acuminatus* (Gottsche) R.M. Schust., *J. Hattori Bot. Lab.* 72: 207, 208. 1992, *nom. inval.* = *Dicranolejeunea acuminata* (Lindenb. *et* Gottsche) Steph. 1912 = *Acanthocoleus aberrans* (Lindenb. *et* Gottsche) Kruijt 1988 (Kruijt, 1988: 62).

*Acanthocoleus fulvus* R.M. Schust. 1971 = *Acanthocoleus aberrans* (Lindenb. *et* Gottsche) Kruijt 1988 (Kruijt, 1988: 62).

ACROBOLBUS Nees *in* Gottsche, Lindenb. & Nees 1844 ACROBOLBACEAE

***Acrobolbus antillanus*** R.M. Schust., *J. Hattori Bot. Lab.* 90: 143. 2001. [**Type: Dominica**]

Schuster 2001: 146, the type.

**Fig.:** Schuster 1983, fig. 54 (map); 1984, fig. 58; 2001, figs 13-14.

ADELANTHUS Mitt. 1864

ADELANTHACEAE

***Adelanthus carabayensis*** (Mont.) Grolle, *J. Hattori Bot. Lab.* 35: 348. 1972.

Bas.: *Plagiochila carabayensis* Mont., *Ann. Sci. Nat. Bot.*, Ser. 4, 5: 348. 1856. (Grolle 1972: 348).

Syn.: *Adelanthus decurvus* Mitt. *ex* Spruce, *Journ. Bot. Brit. Foreign.* N. S. 5: 199. 1876.

Spruce 1876, as *A. decurvus*; Stephani 1908: 383, as *A. decurvus*; Arnell 1956, as *A. decurvus*; Grolle 1972: 351.

**Fig.:** Stephani 1985, fig. 62, as *Adelanthus decurvus*; Grolle 1972, fig. 6; Gradstein & Costa 2003, fig. 10E-G.

*Adelanthus decipiens* (Hook.) Mitt. 1864 = *Pseudomarsupidium decipiens* (Hook.) Grolle 1963.

*Adelanthus decurvus* Mitt. *ex* Spruce 1876 = *Adelanthus carabayensis* (Mont.) Grolle 1972 (Grolle, 1972, *syn. nov.*).

ALICULARIA Corda *in* Opiz 1829 = NARDIA S.F. Gray 1821

SOLENOSTOMATACEAE

*Alicularia succulenta* (Richard *ex* Lehm. *et* Lindenb.) Spruce 1895 = *Nardia succulenta* (Richard *ex* Lehm. *et* Lindenb.) Spruce 1882.

ALOBIELLA (Spruce) Schiffn. 1893

CEPHALOZIACEAE

*Alobiella dominicensis* Spruce 1895 = *Alobiellopsis dominicensis* (Spruce) Fulf. 1968.

***Alobiella husnotii*** (Gottsche) Schiffn., *in* Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 98. 1895.

Bas.: *Jungermannia husnotii* Gottsche, *in* Husnot, *Hep. Antill. Exsicc.* no. 242. 1874.

Spruce 1895: 354; Stephani 1908: 356; Pagán 1939: 37; 1942: 88; Bonner 1953a: 97; Fulford 1968: 381; 1987: 265; Schuster 1969: 670; 2002: 62-63, 67; Schäfer-Verwimp 1999: 327, admixed to *Entosthodon bonplandii*.

**Fig.:** Fulford 1968: 380, pl. 103, fig. 2a-j; Schuster 1969: fig. 1:1-5; 1984, fig. 66; Stephani 1985, figs 105-106; Gradstein *et al.* 2001, fig. 18J-L; Schuster 2002, fig. 234, 236:1-5.

*Alobiella pulvinata* Steph. 1908 = *Fuscocephaloziaopsis pulvinata* Fulf. 1968.

## ALOBIELLOPSIS R.M. Schust. 1965

## CEPHALOZIACEAE

***Alobiellopsis dominicensis*** (Spruce) Fulf., *Mem. New York Bot. Gard.* 11(3): 350. 1968.

Bas.: *Alobiella dominicensis* Spruce, *J. Linn. Soc. Bot.* 30: 355. 1895. [**Type: Dominica**]

Syn.: *Jungermannia dissitifolia* Steph., *Spec. Hep.* 2: 78. 1901.

Spruce 1895: 355, type of *Alobiella dominicensis*; Stephani 1908: 355, as *Alobiella*; Bonner 1953a: 96, as *Alobiella*; Fulford 1968: 352; Schuster 1969: 678; 2002: 67ff; Fulford *et al.* 1970: 66; Grolle 1972a: 547; Váña 1974: 197; Fulford 1987: 265.

**Fig.:** Spruce 1895, pl. 26, figs 5-9, as *Alobiella dominicensis*; Fulford 1968, pl. 91, fig. 2a-i; Schuster 1969: 669, fig. 1:6-8, 681, fig. 3:9-11; 2002, figs 236:6-8, 237:8-13, 237A, 237B; Kis & Pócs 1981, figs 8, 34 (median leaf cells with oil bodies); Stephani 1985, fig. 100, as *Alobiella dominicensis*, fig. 4774, as *Jungermannia dissitifolia*, from Dominica, Elliott 1229; Gradstein *et al.* 2001, fig. 18G-I.

## \*ANEURA Dumort. 1822

## ANEURACEAE

*Aneura cataractarum* Spruce 1889 = *Riccardia cataractarum* (Spruce) Schiffn. 1964.

*Aneura diabolina* Spruce 1895 = *Riccardia diabolina* (Spruce) Pagán 1942.

*Aneura dilatata* Spruce 1895 = *Riccardia dilatata* (Spruce) Schäf.-Verw. *et* Pócs, comb. nov., see below.

*Aneura distans* Spruce 1895 = *Riccardia distans* (Spruce) Pagán 1942.

*Aneura fucoides* (Sw.) Spruce 1895 = *Riccardia fucoides* (Sw.) Mass. 1885.

*Aneura laticostata* Spruce 1895 = *Riccardia laticostata* (Spruce) Schiffn. 1964.

*Aneura ligulata* Steph. 1917 = *Riccardia ligulata* (Steph.) Pócs *et* Schäf.-Verw., comb. nov., see below.

\****Aneura pinguis*** (L.) Dumort., *Comment. Bot.*: 115. 1822.

Bas.: *Jungermannia pinguis* L., *Spec. Pl.* (ed. 1) 2: 1136. 1753.

Morne Diablotin, rain forest on western slope, on humid rotting wood, 1060 m, 26 May 1996, leg. Schäfer-Verwimp & Verwimp 17946, det. M. Nebel (on molecular basis, see also Preussing *et al.*, 2010).

**Fig.:** Kurz & Little 1993, fig. 14, as *Riccardia pinguis*; Frye & Clark 1937: 124, figs 1-5, as *R. pinguis*; Smith 1990, fig. 131:6-9; Schuster 1992, figs 830:8-9, 834, 864:7-8, 865-866, 882:9-10; Paton 1999, fig. 269; Gradstein *et al.* 2001, fig. 68A-D; Gradstein & Costa 2003, fig. 86A-D; for references to further illustrations see Piippo 1990 and Schuster 1992.

*Aneura planifrons* Spruce 1895 = *Riccardia planifrons* (Spruce) Pagán 1942.

*Aneura schwaneckeii* Steph. 1888 = *Riccardia schwaneckeii* (Steph.) Pagán 1939.

*Aneura stipatiflora* Steph. 1893 = *Riccardia stipatiflora* (Steph.) Pagán 1942.

*ANOMYLIA* R.M. Schust. 1959 = *LEPTOSCYPHUS* Mitt. 1851

LOPHOCOLEACEAE

*Anomylia cuneifolia* (Hook.) R.M. Schust. 1959 = *Leptoscyphus cuneifolius* (Hook.) Mitt. 1891 (Grolle, 1962: 28, in syn.).

*ANOPOLEJEUNEA* (Spruce) Schiffn. 1893

LEJEUNEACEAE

*Anopolejeunea conferta* (Meissn.) A. Evans, *Bull. Torrey Bot. Club* 35: 175. 1908. Bas.: *Jungermannia conferta* Meissn. ex Sprengel, in Linné f., *Syst. Veg.* (ed. 16) 4(2): 325. 1827.

Schuster 1992: 247; Schäfer-Verwimp 1999: 323, in mix of *Harpalejeunea emarginata*; Eggers 2004: 20.

**Fig:** Evans 1908a, pl. 8, figs 9-23; 1935, fig. 5E-F; Lorscheitter Baptista 1977, pl. II, pl. XXXIV:3-4 (oil bodies), all as *Anopolejeunea* sp.; Gradstein *et al.* 1981: 236, fig. 1:1, oil bodies; Stephani 1985, figs 567-574; Schuster 1992, fig. 10:6-7, 11:3-4, oil bodies; Reiner-Drehwald 1993: 18, fig. 1A-D; Kürschner & Parolly 1998: 69, fig. 8:11; Gradstein *et al.* 2001, fig. 41A-D; Gradstein & Costa 2003, fig. 33A-D; Gradstein & Ilkiu-Borges 2009, fig. 28D-H.

*APHANOLEJEUNEA* A. Evans 1911 = *COLOLEJEUNEA* (Spruce) Schiffn. 1893

LEJEUNEACEAE

*Aphanolejeunea angustissima* Steph., *Spec. Hep.* 5: 859. 1916, *nom. inval.*, to be rejected *vide* Pócs & Bernecker 2009.

*Aphanolejeunea camillii* (Lehm.) R.M. Schust. 1980. ["*camilli*"] = *Cololejeunea camillii* (Lehm.) A. Evans 1911.

*Aphanolejeunea cingens* Herzog 1952 = *Cololejeunea cingens* (Herzog) Bernecker *et* Pócs 2009.

*Aphanolejeunea costaricensis* Bernecker 1998 = *Cololejeunea costaricensis* (Bernecker) Bernecker *et* Pócs 2009.

*Aphanolejeunea cyathiphylla* Herzog 1952 = *Cololejeunea papillosa* (Goebel) Mizut. 1966 (Pócs 2009, syn. nov.; Pócs & Bernecker 2009, in syn.).

*Aphanolejeunea exigua* A. Evans, *Bull. Torrey Bot. Club* 38(6): 273. 1911 = *Cololejeunea microscopica* (Tayl.) Schiffn. var. *exigua* (A. Evans) Bernecker *et* Pócs 2009.

*Aphanolejeunea gracilis* Ast 1947 = *Cololejeunea gracilis* (Ast) Pócs 2008.

*Aphanolejeunea longifolia* Ast 1947 = *Cololejeunea antillana* Pócs 2009 (Pócs & Bernecker 2009).

*Aphanolejeunea* "*longifolia*-phenotype" R.M. Schust., *J. Hattori Bot. Lab.* 72: 355. 1992, *nom. inval.*

*Aphanolejeunea microscopica* (Tayl.) A. Evans var. *exigua* (A. Evans) A. Lücking *et* Pócs 1997 = *Cololejeunea microscopica* (Tayl.) Schiffn. var. *exigua* (A. Evans) Bernecker *et* Pócs 2009.

*Aphanolejeunea sicaefolia* (Gottsche) A. Evans 1911 = *Cololejeunea sicaefolia* (Gottsche) Pócs *et* Bernecker 2009.

*Aphanolejeunea verrucosa* Ast 1947 = *Cololejeunea microscopica* (Tayl.) Schiffn. var. *africana* (Pócs) Pócs *et* Bernecker 2008.

*ARACHNIOPSIS* Spruce 1882

LEPIDOZIACEAE

*Arachniopsis caduciloba* R.M. Schust., *Nova Hedwigia Beiheft* 118: 449, 457. 2000, *nom. inval.*

*Arachniopsis diacantha* (Mont.) Howe 1902 = *Telaranea diacantha* (Mont.) J.J. Engel *et* Merrill 2004.

*Arachniopsis monodactyla* (Spruce) R.M. Schust. 1965 = *Monodactylopsis monodactyla* (Spruce) R.M. Schust. ex J.J. Engel *et* Merrill 2004.



## BAZZANIA S.F. Gray 1821

## LEPIDOZIACEAE

*Bazzania arcuata* (Lindenb. et Gottsche) Trevis. 1877 = *Bazzania hookeri* (Lindenb.) Trevis. 1877 (Gradstein & Costa 2003, as "possible syn. nov."; Gradstein & Ilkiu-Borges 2009, in syn.).

***Bazzania bidens*** (Lindenb. et Gottsche) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 415. 1877.

Bas.: *Herpetium stoloniferum* var. *bidens* Nees ex Mont., *Ann. Sci. Nat. Bot.*, sér. 2, 14: 333. 1840.

*Mastigobryum bidens* Lindenb. et Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 228. 1845.

Stephani 1908: 440, as *Mastigobryum*; Pagán 1939: 38; Fulford 1946: 11; 1959: 312; 1963: 113; Fulford 1987: 265.

**Fig.:** Fulford 1946, fig. 1; 1963, fig. 1a-h; Kis & Pócs 1981, figs 3, 24; Gradstein & Ilkiu-Borges 2009, fig. 13F-H; Stephani 1985, fig. 6832, as *Mastigobryum*.

*Bazzania breuteliana* (Lindenb. et Gottsche) Trevis. 1877 = *Bazzania hookeri* (Lindenb.) Trevis. 1877 (Gradstein & Costa, 2003, syn. nov.).

\****Bazzania cuneistipula*** (Lindenb. et Gottsche) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*), 4(13): 414. 1877.

Bas.: *Mastigobryum cuneistipulum* Lindenb. et Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 225. 1845.

Valley of Desolation, 700-740 m, Schäfer-Verwimp & Verwimp 17870, 17889 (JE); Morne Trois Pitons, 1050 m, Schäfer-Verwimp & Verwimp 17824 (JE).

**Fig.:** Fulford 1946, figs 4-5; 1963, fig. 4a-f; Stephani 1985, fig. 6835, as *Mastigobryum cuneistipula*, fig. 6844, as *M. tenerum*, fig. 6845, as *M. variabile*, figs 6976-6977, as *M. brevifolium*, fig. 6979, as *M. corticulum*; Gradstein & Ilkiu-Borges 2009, fig. 14A-B.

***Bazzania hookeri*** (Lindenb.) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 414. 1877.

Bas.: *Mastigobryum hookeri* Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 226. 1845.

Syn.: *Bazzania arcuata* (Lindenb. et Gottsche) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 414. 1877.

*Mastigobryum arcuatum* Lindenb. et Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 718. 1847.

*Bazzania breuteliana* (Lindenb. et Gottsche) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 414. 1877.

Stephani 1888: 300, as *B. breutelii*; 1909: 528, as *Mastigobryum arcuatum*; Spruce 1895: 356, as *B. breutelii* and *B. arcuata*; Pagán 1939: 38; Pagán 1942: 89, both as *B. breuteliana*; Fulford 1946: 74, as *B. breuteliana*; 1959: 329, as *B. breuteliana*; 1959a: 402; 1963: 160, as *B. hookeri*, 132, as *B. breuteliana*; 1987: 265, as *B. arcuata*, *B. breuteliana* and *B. hookeri*; Schuster 2000: 305, as *B. hookeri* and *B. arcuata*.

**Fig.:** Stephani 1886, pl. 5, figs 7-9, as *Mastigobryum latidens*; 1916, fig. 164a-c, as *M. douinii*, fig. 164d-e, as *M. hariotii*, fig. 165c-d, as *M. incisostipulum*; 1985, fig. 6982, as *M. douinii*, fig. 6988, as *M. hariotii*, fig. 6990, as *M. incisostipulum*, fig. 7161, as *M. heterocladum*, fig. 7164, as *M. superbum*, figs 7229-7233, as *M. arcuatum*, fig. 7242, as *M. braunianum*, figs 7243-7244, as

*M. breutelii*, fig. 7248, as *M. chimboracense*, fig. 7249, as *M. ecuadorese*, fig. 7250, as *M. guadalupense*, figs 7251-7252, as *B. flavicans*, fig. 7254, as *M. humifusum*, figs 7260-7261, as *M. martianum*, figs 7266-7270, as *M. portoricense*, fig. 7276, as *M. teretiusculum*, fig. 7279, as *M. verrucosum*, fig. 7282, as *M. viridissimum*; Fulford 1946, figs 22-24, as *B. breuteliana*, fig. 30, as *B. latidens*, figs 48-49, as *B. hookeri*, figs 52-53, as *B. teretiuscula*; 1963, fig. 43a-h, as *B. hookeri*; fig. 17a-g, as *B. breuteliana*, fig. 24 a-c, as *B. latidens*, fig. 31a-h, as *B. arcuata*, fig. 47 a-h, as *B. teretiuscula*, fig. 18 a-e, as *B. chimboracensis*; Gradstein *et al.* 1977, pl. 3, fig. 4 (oil bodies); Gradstein 1989: 332, fig. 1, as *B. breuteliana*; Lemos-Michel & Bueno 1992, figs 1-32, as *B. chimboracensis*; Kürschner & Parolly 1998: 51, fig. 7:12, as *B. breuteliana*; Schuster 2000, fig. 113:1-11, as *B. hookeri*, fig. 113: 12-13, as *B. arcuata*; Gradstein *et al.* 2001, fig. 58C-E; Gradstein & Costa 2003, fig. 69G-I; León-Yáñez *et al.* 2006: 97, col. photo; Gradstein & Ilkiu-Borges 2009, fig. 14F-G.

*Bazzania krugiana* Steph. 1888 = *Bazzania longistipula* (Lindenb.) Trevis. 1877 (Fulford, 1946: 81, in syn.; 1963: 137, in syn.).

***Bazzania longa*** (Nees) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 415. 1877. [var. ***longa***]

Bas.: *Jungermannia longa* Nees, *Linnaea* 6: 623. 1831.

Syn.: *Mastigobryum longum* Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 231.1845.

*Mastigobryum speciosum* Gottsche ex Steph., *Hedwigia* 35: 233. 1886.

*Bazzania subfalcata* Spruce, *J. Linn. Soc. Bot.* 30: 356. 1895.

Spruce 1895: 356, as *B. longa* and *B. subfalcata*; Stephani 1908: 472, as *Mastigobryum longum*; 1909: 521, as *M. speciosum*; Pagán 1942: 90; Fulford 1946: 94; 1959: 334; 1963: 140; 1987: 265; Fulford *et al.* 1970: 65.

**Fig.:** Stephani 1886, pl. 1, fig. 1-3, as *Mastigobryum speciosum*, pl. 1, figs 4-6, as *M. subfalcatum*; 1985, fig. 6869, as *M. tenue*, fig. 6986, as *M. gottscheanum*, fig. 6994, as *M. longum*, fig. 7007, as *M. trinitatis*, fig. 7273, as *M. speciosum*, fig. 7274, as *M. subfalcatum*; Fulford 1946, figs 32, 33:1-10; 1963, figs 25a-h.

***Bazzania longa*** (Nees) Trevis. var. ***papillata*** (Steph.) Fulf., *Ann. Crypt. Phytopath.* 3: 94. 1946 [*Bazzania* Centr. S. Am. 94. 1946].

Bas.: *Mastigobryum papillatum* Steph., *Spec. Hep.* 3: 526. 1909. [**Type: Dominica**]

Stephani 1909: 526, type of *Mastigobryum papillatum*; Fulford 1946: 94; 1963: 140; 1987: 265.

**Fig.:** Fulford 1946, fig. 33:11-12; 1963, fig. 25i; Stephani 1985, fig. 7265, as *Mastigobryum papillatum*, from Dominica, Elliott 1215.

***Bazzania longistipula*** (Lindenb.) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 415. 1877.

Bas.: *Mastigobryum longistipulum* Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 228. 1845.

*Bazzania krugiana* Steph., *Hedwigia* 27: 300. 1888.

Spruce 1895: 356 (cited after Fulford 1946: 86); Fulford 1946: 86; Arnell 1956; Fulford 1959: 331; 1963: 137; 1987: 265.

**Fig.:** Stephani 1888, pl. XIII, fig. 40, as *Bazzania krugiana*; 1985, figs 6834, 6978, as *Mastigobryum columbicum*, fig. 6865, as *M. deciduum*, figs 6866-6867, as *M. elegantulum*, fig. 6868, as *M. krugianum*, 6870, as *M. tricuspdatum*, fig. 6987, as *M. hansenii*, figs 6995-6998, as *M. longistipulum*, fig. 7000, as *M. puiggarii*; Fulford 1946, fig. 27, as *B. tricuspdata*, figs 28-29, as *B. longistipula*; 1963, figs 22a-h, as *B. longistipula*, fig. 21 a-d, as *B. tricuspdata*; Fulford *et al.* 1970: 64, figs 11a-b; Gradstein *et al.* 1977, pl. 3, fig. 5 (oil bodies).

**Bazzania schwaneckeana** (Hampe et Gottsche) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 414. 1877.

Bas.: *Mastigobryum schwaneckianum* Hampe et Gottsche, *Linnaea* 25: 345. 1853 "1852".

Stephani 1908: 432, as *Mastigobryum*; Pagán 1939: 39; Pagán 1942: 91; Fulford 1946: 108 ("*schwaneckiana*"); 1959a: 395 ("*schwaneckiana*"); 1963: 148 ("*schwaneckiana*"); 1987: 265 ("*schwaneckiana*").

**Fig.:** Fulford 1946, fig. 38 ("*schwaneckiana*"); 1963, fig. 33a-d ("*schwaneckiana*"); Stephani 1985, fig. 6829, as *Mastigobryum schwaneckei*.

**Bazzania stolonifera** (Sw.) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 415. 1877.

Bas.: *Jungermannia stolonifera* Sw., *Nova Gen. Spec. Pl. Prodr.*: 144. 1788.

*Bazzania vincentina* (Lehm. et Lindenb.) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 414. 1877.

*Mastigobryum vincentinum* (Lehm. et Lindenb.) Gottsche, Lindenb. et Nees, *Syn. Hep.*: 226. 1845.

Spruce 1895: 356, as *Bazzania vincentina*; Stephani 1909: 527, as *Mastigobryum vincentinum*; Pagán 1939: 39, as *Bazzania vincentina*; 1942: 91, as *B. vincentina*; Fulford 1946: 50; 1959: 321; 1963: 124; 1987: 265.

**Fig.:** Fulford 1946, figs 12-14; 1963, fig. 9a-e; Kis & Pócs 1981, fig. 25; Cole 1983, fig. 13e-f; Stephani 1985, figs 6975, 7236, as *Mastigobryum azuayense*, fig. 7001, as *M. quelchii*, fig. 7006, as *M. stoloniferum*, fig. 7258, as *M. leptostipum*, fig. 7280-7281, as *M. vincentinum*.

*Bazzania subfalcata* Spruce 1895 = *Bazzania longa* (Nees) Trevis. 1877 (Fulford, 1946: 90, in syn.; 1963: 139, in syn.).

*Bazzania vincentina* (Lehm. et Lindenb.) Trevis. 1877 = *Bazzania stolonifera* (Sw.) Trevis. 1877 (Fulford, 1946: 44, in syn.).

**Bazzania wrightii** (Gottsche) Steph., *Hedwigia* 27: 279. 1888.

Bas.: *Mastigobryum wrightii* Gottsche ex Steph., *Hedwigia* 25: 237. 1886.

Fulford 1959: 339; 1963: 146; 1987: 265.

**Fig.:** Stephani 1886, pl. 2, figs 24-26, as *Mastigobryum wrightii*; 1985, fig. 7283, as *M. wrightii*; Fulford 1946, fig. 36; 1963, fig. 30a-f.

BLEPHAROLEJEUNEA S. Arn. 1962

LEJEUNEACEAE

**Blepharolejeunea saccata** (Steph.) van Slag. et Kruijt, *Beih. Nova Hedwigia* 80: 138. 1985.

Bas.: *Dicranolejeunea saccata* Steph., *Hedwigia* 35: 78. 1896. [**Type: Dominica**]

Stephani 1912: 169, as *Dicranolejeunea saccata*; Van Slageren & Kruijt 1985: 151; Fulford 1987: 274, as *Dicranolejeunea saccata*; Gradstein 1994: 179.

**Fig.:** Arnell 1962, fig. 1, as *B. harlingii*; Stephani 1985, figs 2355-2356, as *Dicranolejeunea saccata*; Van Slageren & Kruijt 1985, figs 9-10, 13B (map); Van Slageren 1985, pl. IV.

BLYTIA Endlicher 1840 "1839" = PALLAVICINIA S.F. Gray 1821

PALLAVICINIACEAE

*Blytia lyellii* (Hook.) Endlicher 1840 ["*Blytia*"] = *Pallavicinia lyellii* (Hook.) Carruth. 1865.

## BROMELIOPHILA R.M. Schust. 1994

## LEJEUNEACEAE

*Bromeliophila helenae* Gradst., *Cryptogamie, Bryol. Lichénol.* 18(3): 218, fig. 1. 1997.

Gradstein 1997: 218, 220; Gradstein *et al.* 2001: 143.

**Fig.:** Gradstein 1997: 219, fig. 1A-I; Gradstein *et al.* 2001, fig. 41H-L.

## BRYOPTERIS (Nees) Lindenb. 1845

## LEJEUNEACEAE

**Note:** In tropical America, Gradstein (1994) recognized only *B. filicina* and *B. diffusa*, while Stotler & Crandall-Stotler (1974) kept several taxa of the *B. filicina*-complex as distinct species. *Bryopteris filicina* offers a considerable variation at the level of nrITS sequences but the resulting molecular topologies do not correspond to morphologically circumscribed taxa of the *B. filicina* complex (Hartmann *et al.*, 2006).

*Bryopteris filicina* (Sw.) Nees, in Gottsche, Lindenb. *et* Nees, *Syn. Hep.*: 284. 1845.

Bas.: *Jungermannia filicina* Sw., *Nova Gen. Spec. Pl. Prodr.*: 145. 1788.

Syn.: *Bryopteris fruticulosa* Tayl., *London J. Bot.* 5: 382. 1846.

*Lejeunea (Bryo-Lejeunea) longispica* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 114. 1884.

*Bryopteris longispica* (Spruce) Steph., *Spec. Hep.* 5: 6. 1912.

*Bryopteris trinitensis* (Lehm. *et* Lindenb.) Lehm. *et* Lindenb., *Syn. Hep.* 285. 1845.

Spruce 1895: 334, as *Lejeunea longispica*; Stotler & Crandall-Stotler 1974, as *B. trinitensis*; Schuster 1992: 196, as *Bryopteris fruticulosa*; Gradstein 1994: 99; Lücking 1995: 55.

**Fig.:** Hooker 1816, pl. IVA, as *Jungermannia filicina*; Schiffner 1893, fig. 68C, 69A, as *Bryopteris fruticulosa*; Evans 1907a, pl. 33, figs 13-22; 1935, fig. 1; Stotler & Crandall-Stotler 1974, figs 124-136, as *B. filicina*, figs 137-150, as *B. flaccida*, figs 151-169, as *B. fruticulosa*, figs 196-218, as *B. trinitensis*; Lorscheitter Baptista 1977, pl. XI, as *Bryopteris* sp.; Cole 1983, fig. 32a-d, as *B. trinitensis*; Stephani 1985, figs 1127-1128, as *B. brevis*, figs 1132-1133, as *B. filicina*, fig. 1135, as *B. flaccida*, figs 1136-1137, as *B. fruticulosa*, figs 1138-1139, as *B. liebmanniana*, figs 1140-1141, as *B. longispica*, figs 1142-1146, as *B. tenuicaulis*, figs 1147-1150, as *B. trinitensis*; Schuster 1992, fig. 4:2, 5:7 (oil bodies, as *B. fruticulosa* and *B. filicina*); Reiner-Drehwald 1993: 32, figs 6A-E; Gradstein 1994: 97, fig. 27; Lücking 1995: 56, Abb. 22; Kürschner & Parolly 1998: 35, fig. 6:4-5; 21, Foto 2; Gradstein *et al.* 2001, fig. 33I-L; Gradstein & Costa 2003, fig. 37E-H; Equihua & Equihua 2007, fig. 2; Gradstein & Ilkiu-Borges 2009, fig. 30D-H.

*Bryopteris fruticulosa* Tayl. 1846 = *Bryopteris filicina* (Sw.) Nees 1845 (Gradstein, 1994: 96, syn. nov.).

*Bryopteris longispica* (Spruce) Steph. 1912 = *Bryopteris filicina* (Sw.) Nees 1845 (Gradstein, 1994: 98, syn. nov.).

*Bryopteris trinitensis* (Lehm. *et* Lindenb.) Lehm. *et* Lindenb. 1845 = *Bryopteris filicina* (Sw.) Nees 1845 (Gradstein, 1994: 96, syn. nov.).

## CALOBRYUM Nees 1846 = HAPLOMITRIUM Nees 1833

## HAPLOMITRIACEAE

*Calobryum andinum* (Spruce) Steph. 1900 = *Haplomitrium blumii* (Nees) R.M. Schust. 1963 (Bartholomew-Began 1991).

## CALYPOGEIA Raddi 1818

## CALYPOGEIACEAE

*Calypogeia amazonica* (Spruce) Steph. 1908 = *Calypogeia miquelii* Mont. 1845 (Gradstein & Hekking, 1989: 220, with “?”; Uribe & Gradstein (1998: 83); Schuster (2000: 499), however, treated it as a separate species.)

***Calypogeia biapiculata*** (Spruce) Steph., *Spec. Hep.* 3: 403. 1908.

Bas. *Kantia biapiculata* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 414. 1885.

Stephani 1908: 404; Pagán 1942: 92; Bischler 1962b: 85; Schuster 1995: 875; 2000: 499.

**Fig.:** Bischler 1962b, fig. 27; Stephani 1985, fig. 1260, as *C. biapiculata*, fig. 1281, as *C. vincentina*; Schuster 1995, fig. 13:1-8; 2000, fig. 205:1-8.

**Note:** Fulford (1968: 292) listed *Calypogeia biapiculata* as a synonym of *Calypogeia peruviana*; however, Bischler (1962b) and Schuster (1995: 875) kept it as a separate species.

*Calypogeia cellulosa* (Spreng.) Steph. 1908 = *Mnioloma cellulorum* (Spreng.) R.M. Schust. 1995 “*cellulosa*”.

*Calypogeia crenulata* Bischl. 1962 = *Mnioloma crenulatum* (Bischl.) R.M. Schust. 1965 “*crenulata*”.

*Calypogeia elliotii* Steph. 1908 = *Mnioloma elliotii* (Steph.) R.M. Schust. 1995.

***Calypogeia falcata*** Bischler, *Candollea* 18: 112. 1962. [Type: Dominica]

Bischler 1962c: 114, sp. nov.; Fulford 1968: 310; Fulford 1987: 266.

**Fig.:** Bischler 1962c: 113, fig. 37a-f; Fulford 1968: 308, pl. 76, fig. 28a-e.

*Calypogeia gigantea* Steph. 1908 non Steph. 1924 = *Calypogeia peruviana* Nees et Mont. in Mont. 1838 (Fulford, 1968: 293).

***Calypogeia heterophylla*** (Steph.) Steph., *Spec. Hep.* 3: 407. 1908. (non *Spec. Hep.* 6: 448.1924).

Bas.: *Kantia heterophylla* Steph., *Hedwigia* 34: 35. 1895.

Bischler 1962b: 65; Fulford 1987: 266.

**Fig.:** Bischler 1962b, fig. 18; Stephani 1985, figs 1198, 1265; Schuster 1995, fig. 13:9 (oil bodies); 2000: fig. 205: 9 (oil bodies).

**Note:** Fulford (1968: 292) listed *Calypogeia heterophylla* among the synonyms of *C. peruviana*; in 1987, she mentioned again *C. heterophylla* from Dominica as separate species, though citing the same specimen (Elliott 937) also under *C. peruviana*. Schuster (1995: 876) kept *Calypogeia heterophylla* as a separate species.

***Calypogeia laxa*** Gottsche et Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.* 713. 1847.

Fulford 1968: 307; Fulford 1987: 266.

**Fig.:** Bischler 1962c: 115, fig. 38a-f; Fulford 1968: 304, pl. 74, fig. 25a-e; Kis & Pócs 1981, fig. 9 (median leaf cells with oil bodies); Stephani 1985, fig. 1267, as *C. laxa*, fig. 1280, as *C. subtropica*; Schuster 2000, fig. 205:10 (oil bodies); Gradstein & Costa 2003, fig. 13A-D.

***Calypogeia lophocoleoides*** Steph., *Spec. Hep.* 3: 409. 1908. [Type: Dominica]

Stephani 1908: 409, the type; Bischler 1962b: 74; Fulford 1968: 310; 1987: 266; Stephani 1985, in legend of fig. 1271.

**Fig.:** Bischler 1962b: 73, fig. 22a-f; Fulford 1968: 308, pl. 76, fig. 29a-e; Stephani 1985, fig. 1271.

***Calypogeia miquelii*** Mont., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 200. 1845.

Syn.: *Calypogeia amazonica* (Spruce) Steph., *Spec. Hep.* 3: 412. 1908.

Stephani 1908: 412, as *C. amazonica*; Bischler 1962c: 109, as *C. amazonica*; Fulford 1987: 265, as *C. amazonica*.

**Fig.:** Bischler 1962c: 108, fig. 35a-f, as *C. amazonica*; Fulford 1968: 306, pl. 75, fig. 26a-e, as *C. amazonica*, fig. 27a-e, as *C. miquelii*; Griffin 1979, pl. VII, figs 347-348, as *C. amazonica*; Stephani 1985, fig. 1259, as *C. amazonica*, fig. 1273, as *C. miquelii*; Schuster 2000, fig. 205A, as *C. amazonica*; Gradstein & Ilkiu-Borges 2009, fig. 10E-H.

***Calypogeia peruviana*** Nees & Mont., in Mont., *Ann. Sci. Nat. Bot.*, sér. 2, 9: 47. 1838.

Syn.: *Kantia portoricensis* Steph., *Hedwigia* 27: 280. 1888.

*Calypogeia portoricensis* (Steph.) A. Evans, *Bryologist* 10: 30. 1907.

*Calypogeia gigantea* Steph., *Spec. Hep.* 3: 409. 1908 - non Steph., *Spec. Hep.* 6: 447.

1924. [**Type: Dominica**]

Spruce 1895: 356, as *Kantia portoricensis*; Stephani 1908: 405, as *C. portoricensis*, 409, type of *C. gigantea*; Pearson 1922: 225, as *Kantia portoricensis* St.; Pagán 1939: 40, as *Calypogeia portoricensis*; 1942: 93, as *C. portoricensis*; Fulford 1968: 295; Fulford 1968: 295; Fulford 1987: 266; Schuster 1995: 871, 877; 2000: 496; Ilkiu-Borges & Schäfer-Verwimp 2005: 34.

**Fig.:** Stephani 1888, pl. 11, figs 1-3, as *Kantia portoricensis*; Bischler 1962b: 62, fig. 17; Fulford 1968: 294, pl. 70, fig. 13a-n; Breil 1970, figs 17-18; Gradstein *et al.* 1977, pl. 3, fig. 9 (oil bodies); Kis & Pócs 1981, fig. 30 (foto of median leaf cells with oil bodies); Cole 1983, fig. 2:6, fig. 14a-d; Stephani 1985, fig. 1195, 1264, as *C. gigantea* (1264 from Dominica, Elliott 1137), fig. 1275, as *C. peruviana*, fig. 1276, as *C. portoricensis*; Schuster 1995, fig. 14; 2000, fig. 204.

*Calypogeia portoricensis* (Steph.) A. Evans 1907 = *Calypogeia peruviana* Nees & Mont. in Mont. 1838 (Bischler, 1962b: 61).

***Calypogeia rhombifolia*** (Spruce) Steph., *Spec. Hep.* 3: 399. 1908.

Bas.: *Kantia rhombifolia* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 413. 1885.

*Calypogeia suberectifolia* Steph., *Spec. Hep.* 3: 402. 1908. [**Type: Dominica**]

Stephani 1908, type of *C. suberectifolia*; Pagán 1942: 93, as *C. suberectifolia*; Bischler 1962c: 102; Fulford 1968: 301; 1987: 266.

**Fig.:** Bischler 1962c: 103, fig. 33a-g; Fulford 1968: 302, pl. 73, fig. 20a-e; Griffin 1979, pl. VII, figs 353-354; Stephani 1985, figs 1227, as *C. rhombifolia*, 1278, as *C. suberectifolia*.

*Calypogeia suberectifolia* Steph. 1908 = *Calypogeia rhombifolia* (Spruce) Steph. 1908 (Fulford, 1968: 299; Pagán 1942: 93).

CEPHALOZIA (Dumort.) Dumort. 1835

CEPHALOZIACEAE

*Cephalozia caribbeania* Fulf. 1968 = *Cephalozia crassifolia* (Lindenb. *et* Gottsche) Fulf. 1968 (Váña, 1988: 196, syn. nov.).

***Cephalozia crassifolia*** (Lindenb. *et* Gottsche) Fulf., *Mem. New York Bot. Garden* 11(3): 312. 1968.

Bas.: *Jungermannia crassifolia* Lindenb. *et* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 685. 1847.

Syn.: *Cephalozia forficata* Spruce, *On Cephalozia*: 46. 1882.

*Cephalozia caribbeania* Fulf., *Mem. New York Bot. Garden* 11(3): 315. 1968.

Fulford 1968: 315; Fulford *et al.* 1970: 65; Fulford 1987: 266 (all as *C. caribbeania*); Schäfer-Verwimp 1999: 319, admixed to *Arachiopsis diacantha*.

**Fig.:** Herzog 1938: 8, fig. 1f, as *C. forficata*; fig. 1g-h, as *C. subforficata*; Fulford 1968: 316, pl. 8, fig. 3a-e, as *C. caribbeania*; 314, pl. 77, fig. 1a-e; 314, pl. 77, fig. 2a-f, as *C. subforficata*; Cole 1983, fig. 21a-b, as *C. subforficata*; Stephani 1985, fig. 1342, as *C. forficata*; Paton 1999, fig. 41, as *C. hibernica*; Gradstein *et al.* 2001, fig. 18G-H; further illustrations in European floras as *Cephalozia hibernica*, syn. nov. of *C. crassifolia* fide Váňa 1988: 196.

**Note:** Paton (1999: 118) keeps *Cephalozia hibernica* as a separate species and commented the differences between *C. hibernica* and *C. crassifolia*.

*Cephalozia forficata* Spruce, 1882 = *Cephalozia crassifolia* (Lindenb. et Gottsche) Fulf. 1968 (Váňa, 1988: 196, syn. nov.)

*Cephalozia obtusata* Steph., in Duss 1903, *nom. nud.* = *Cephalozia interspersa* (Gottsche) R.M. Schust. 1973 (Fulford, 1987: 266).

*Cephalozia wrightii* (Gottsche ex Spruce) Steph. var. *bicornis* Spruce 1895 = *Nowellia dominicensis* Steph. 1924 (Grolle, 1968: 39, in syn.)

CEPHALOZIELLA (Spruce) Schiffn. 1893

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***Cephalozia antillana*** (Spruce in Besch.) Fulf., *Mem. New York Bot. Gard.* 11(4): 405. 1976.

Bas.: *Cephalozia (Cephalozia) antillana* Spruce, in Besch., *Bull. Soc. Bot. Fr.* 36 (Suppl.): CLXXXIII. 1890 "1889".

Schäfer-Verwimp 1999: 319.

**Fig.:** Fulford 1976: 404, pl. 110, fig. 1a-p; Kis & Pócs 1981, fig. 13 (median leaf cells with oil bodies); Stephani 1985, fig. 1414.

***Cephalozia granatensis*** (J.B. Jack in Steph.) Fulf., *Mem. New York Bot. Gard.* 11(4): 411. 1976.

Bas.: *Cephalozia granatensis* J.B. Jack, in Steph., *Spec. Hep.* 3: 330. 1908.

Schäfer-Verwimp 1999: 319.

**Fig.:** Fulford 1976: 412, pl. 113, fig. 9a-k; Stephani 1985, fig. 1417; Nieuwkoop & Arts 1995: 36, fig. 1:1-10; Gradstein *et al.* 2001, fig. 21F-J; Gradstein & Costa 2003, fig. 16E-G.

CEPHALOZIOPSIS (Spruce) Schiffn. 1893

CEPHALOZIELLACEAE

***Cephalozia interspersa*** (Gottsche) R.M. Schust., *Nova Hedwigia* 22: 183. 1972 "1971".

Bas.: *Jungermannia interspersa* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.* 107. 1844.

Syn.: *Jungermannia schistophila* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 513. 1885.

*Lophozia schistophila* (Spruce) Steph., *Bull. Herb. Boissier* (ser. 2) 1: 1145. 1901. [*Spec. Hep.* 2: 128, 146.]

*Cephalozia obtusata* Steph. in Duss, *Musc. des Antill. franç.* 23: 1903. *nom. nud.*

*Cladopodiella interspersa* (Gottsche) Fulf., *Mem. New York Bot. Gard.* 11(3): 347. 1968.

Spruce 1895: 363, as *Jungermannia schistophila*; Stephani 1901: 146, as *Lophozia schistophila*; Pagán 1939: 9; Pagán 1942: 83, twice as *Lophozia schistophila*; Fulford 1968: 349, as *Cladopodiella interspersa*; Schuster 1972: 186, 244, 246; Fulford 1987: 266.

**Fig.:** Spruce 1895, pl. 29, figs 4-6, as *Jungermannia schistophila*; Fulford 1968: 348, pl. 90, fig. 2a-f, as *Cladopodiella intertexta*; Fulford 1976: 395, pl. 108, fig. 3a-i; Schuster 1972 "1971", pls. 15-16, as *C. schistophila* and *C. intertexta*; 2002, figs 270-271, as *C. intertexta* and *C. schistophila*; Hegewald & Hegewald 1977, figs 2-4; Stephani 1985, figs 1334-1335, as *Cephalozia intertexta* (from Dominica, leg. Elliott 1250, 1236); Gradstein *et al.* 2001, fig. 21K-N; Gradstein & Costa 2003, fig. 16H-K.

CERATOLEJEUNEA (Spruce) Schiffn. 1893

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*Ceratolejeunea amazonica* Steph. 1913 = *Ceratolejeunea cubensis* (Mont.) Schiffn. 1893 (Dauphin, 2003: 49, syn. nov.).

***Ceratolejeunea brevinervis*** (Spruce) A. Evans, *Bull. Torrey Bot. Club* 32: 282. 1905.

Bas.: *Lejeunea* (*Cerato-Lejeunea*) *brevinervis* Spruce, *J. Linn. Soc. Bot.* 30: 342. 1895.

Spruce 1895: 342, as *Lejeunea* (*Ceratolejeunea*) *brevinervis* sp. nov.; Evans 1905: 282; Stephani 1913: 399; Pagán 1939: 45; Pagán 1942: 97; Fulford 1945: 373; Bonner 1953: 169; Fulford 1987: 272; Schuster 1980a: 403; Schuster 1992: 225; Schuster 1996: 42, mixed with *Drepanolejeunea valiae*; Dauphin 2003: 33.

**Fig.:** Spruce 1895, pl. 21, figs 6-9; Fulford 1945: 374, figs 5-8; Bonner 1953: 172, fig. 11A-B, D; Stephani 1985, figs 1562, "1563", partly from Dominica, leg. Elliott; Schuster 1992, fig. 9: 1-2 (oil bodies); Dauphin 2003, fig. 13.

***Ceratolejeunea coarina*** (Gottsche) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 125. 1893.

Bas.: *Lejeunea coarina* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 395. 1845.

Syn.: *Ceratolejeunea connata* Steph., in Urban, *Symb. Ant.* 2: 471. 1901.

*Ceratolejeunea plumula* (Spruce) Steph., *Spec. Hep.* 5: 433. 1913.

Stephani 1913: 403, as *C. connata* sp. nov.; Pagán 1942: 97, as *C. connata*; Bonner 1953: 225; 177, as *C. connata*; Fulford 1987: 273; [not in Dauphin 2003].

**Fig.:** Fulford 1945: 378, figs 16-23, as *C. plumula*; Bonner 1953: 225, fig. 71A, D, as *C. plumula*; 177, fig. 17A, D, F, as *C. connata*; Stephani 1985, fig. 1568, as *C. coarina*, fig. 1571, as *C. connata*, figs 1612, "1612a", as *C. kegelii*, fig. 1630, as *C. monticola*, figs 1644, "1645", as *C. plumula*, fig. 1654, as *C. remotistipula*; Lücking 1995: 62, fig. 26, as *C. plumula*; Ilkiu-Borges 2000, fig. 15; Dauphin 2003, fig. 16; Zartman & Ilkiu-Borges 2007, pl. 4D-F; Gradstein & Ilkiu-Borges 2009, fig. 31A-C.

*Ceratolejeunea connata* Steph. in Urban 1901 = *Ceratolejeunea coarina* (Gottsche) Schiffn. 1893 (Dauphin, 2003: 37, syn. nov.)

***Ceratolejeunea cornuta*** (Lindenb.) Schiffn., *Bot. Jahrb.* 23: 583. 1897.

Bas.: *Jungermannia cornuta* Lindenb., *Nov. Actorum Acad. Caes. Leop.-Carol. German. Nat. Cur.* 14, Suppl.: 23. 1829.

Syn.: *Ceratolejeunea variabilis* (Lindenb.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 125, 1893.

*Ceratolejeunea diversiloba* Steph., *Spec. Hep.* 5: 409. 1913. [**Type: Dominica**]

*Ceratolejeunea furcata* Steph., *Spec. Hep.* 5: 413. 1913. [**Type: Dominica**]

*Ceratolejeunea involvens* (Nees et Mont.) Steph., *Spec. Hep.* 5: 419. 1913.

*Ceratolejeunea maritima* (Spruce) Steph., *Spec. Hep.* 5: 423. 1913.

Spruce 1895: 342, as *Lejeunea* (*Ceratolejeunea*) *variabilis*; Evans 1905: 285, as *C. variabilis*; Stephani 1913: 410, as *C. diversiloba* sp. nov.; 414, as



*C. furcata* sp. nov.; Pagán 1939: 46, as *C. variabilis*; 1942: 98, as *C. variabilis*; Bonner 1953: 180; 187, as *C. diversiloba*; 195, as *C. furcata*; 203, as *C. involvens*; 251, as *C. variabilis*; Fulford 1987: 272, also as *C. diversiloba*; 273, as *C. furcata*, *C. involvens* and *C. variabilis*; Dauphin 2003: 46.

**Fig.:** Herzog 1942, fig. 2, as *C. litoralis*; Fulford 1945, figs 74-81; 69-73, as *C. grandibracteolata*; figs 53-59, as *C. maritima*; Bonner 1953: 175, figs 14A, B, D, as *C. ceratantha*; 179, fig. 19A-D, as *C. cornuta*; 187, fig. 28A, D-F, as *C. diversiloba*; 195, fig. 36A, B, D, as *C. fuliginosa*; 196, fig. 37A-D, as *C. furcata*; 205, fig. 47A-B, as *C. involvens*; 212, fig. 55A-B, as *C. maritima*; 212, fig. 56A, D, as *C. martiana*; 248, fig. 96A-B, D-F, as *C. variabilis*; Clark 1953, as *C. lobata*; Bischler 1966: 610, pl. 1:5; Griffin 1979, pl. IX, figs 457-459; Cole 1983, fig. 31d (perianth); Stephani 1985, fig. 1553, as *C. andicola*, fig. 1560, as *C. brevicornuta*, fig. 1564, as *C. bullatiloba*, figs 1574, "1575", as *C. cornuta*, fig. 1584, as *C. diversiloba*, fig. 1590, as *C. fuliginosa*, fig. 1592, as *C. furcata*, fig. 1605, as *C. hylophila*, fig. 1609, as *C. involvens*, fig. 1613, as *C. latiflora*, fig. 1620, as *C. maritima*, fig. 1622, as *C. martiana*, fig. 1624, as *C. megalophysa*, fig. 1626, as *C. microrhegma*, fig. 1628, as *C. miradorensis*, fig. 1656, as *C. rionegrensis*, fig. 1660, as *C. rufo-pellucida*, fig. 1666, as *C. sintenisii*, fig. 1671, as *C. splitgerberiana*, fig. "1678", as *C. valida*, fig. 1679, as *C. variabilis*; Lücking 1995, fig. 24-25, as *C. maritima*; Ilkiu-Borges 2000, fig. 16; Gradstein *et al.* 2001, fig. 42A-D; Gradstein & Costa 2003, fig. 38H-K; Dauphin 2003, fig. 19; Gradstein & Ilkiu-Borges 2009, fig. 32A-C.

***Ceratolejeunea cubensis*** (Mont.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 125. 1893.

Bas.: *Lejeunea cubensis* Mont., in Ramón de la Sagra, *Hist. Phys. Pol. et Nat. Cuba*: 481. 1842.

Syn.: *Ceratolejeunea amazonica* Steph., *Spec. Hep.* 5: 395. 1913.

Bonner 1953: 164, as *C. amazonica*; Fulford 1987: 272, as *C. amazonica*.

**Fig.:** Montagne 1845, pl. 18, figs 2, as *Lejeunea cubensis*; Fulford 1945, figs 107-114; Frye & Clark 1947: 854, figs 1-8; Bonner 1953, fig. 21A,B,D E, fig. 63A,B,D, as *C. mosenii*; fig. 4A-D, as *C. amazonica*; Schuster & Hattori 1954, pl. VI, figs 4, 4a (oil bodies and ocelli); Schuster 1980, figs 681, 682: 3-10; Stephani 1985, fig. 1551, as *C. amazonica*, fig. 1569, as *C. conmixta*, fig. 1576, as *C. cubensis*, fig. 1594, as *C. granatensis*, fig. 1599, as *C. guadalupensis*, fig. 1632, as *C. mosenii*, fig. 1636, as *C. parisii*, fig. 1650, as *C. pyriformis*, fig. 1675, as *C. tenuicornuta*; Kürschner & Parolly 1998: 35, Abb. 6: 7; Gradstein & Costa 2003, fig. 38L-O; Dauphin 2003, fig. 21, map: fig. 22; Zartman & Ilkiu-Borges 2007, pl. 4G-H; Gradstein & Ilkiu-Borges 2009, fig. 32D-F.

*Ceratolejeunea diversiloba* Steph. 1913 = *Ceratolejeunea cornuta* (Lindenb.) Steph. 1895 (Dauphin, 2003: 44, syn. nov.).

*Ceratolejeunea dominicensis* Steph. 1913 = *Ceratolejeunea spinosa* (Gottsche) Schiffn. 1897 (Dauphin, 2000: 87; 2003: 77, syn. nov.).

***Ceratolejeunea fallax*** (Lehm. et Lindenb.) Bonner, *Candollea* 14: 189. 1953.

Bas.: *Jungermannia fallax* Lehm. et Lindenb., in Lehmann, *Nov. Min. Cogn. Stirp. Pugillus* 5: 17. 1833.

Bonner 1953: 190; Fulford 1987: 273.

**Fig.:** Bonner 1953: 190, fig. 31A-B; 191, fig. 32A, C-D; Stephani 1985, fig. 1557, as *C. brasiliensis*, fig. 1640, as *C. peruviana*; Dauphin 2003, fig. 26A-D.

***Ceratolejeunea filaria*** (Taylor ex Lehm.) Steph., *Spec. Hep.* 5: 412. 1913.

Bas.: *Lejeunea filaria* Taylor ex Lehm., *Pugillus* 8: 28. 1844.

Syn.: *Ceratolejeunea flagelliformis* (Steph.) Fulf., *Bull. Torrey Bot. Club* 71: 637. 1944, *nom. inval.*

*Ceratolejeunea schwaneckeii* Steph., *Hedwigia* 34: 237. 1895.

Fulford 1987: 273, as *C. flagelliformis*; Schuster 1996: 226, as *C. schwaneckeii*;

Schäfer-Verwimp 1999: 319, as *C. flagelliformis*; Dauphin 2003: 60.

**Fig.:** Evans 1905, pl. 20, figs 1-18, as *C. schwaneckeii*; Herzog 1942, fig. 1, as *C. sacculosa*; Fulford 1945: 381, figs 29-37, as *C. flagelliformis*; Bonner 1953: 193, fig. 34A, as *C. flagelliformis*; 237, fig. 84A-D, F, as *C. schwaneckeii*; Fulford *et al.* 1970: 64, figs 10a-b, as *C. flagelliformis*; Stephani 1985, fig. 1588, as *C. filaria*, fig. 1614, as *C. longicornis*, fig. 1664, as *C. schwaneckeii*; Schuster 1992, fig. 9:4-5 (oil bodies, as *C. schwaneckeii*); Kürschner & Parolly 1998: 51, fig. 7:3, as *C. flagelliformis*; Dauphin 2003, fig. 26E-I.

*Ceratolejeunea flagelliformis* (Steph.) Fulf. 1944, *nom. inval.* = *Ceratolejeunea filaria* (Taylor ex Lehm.) Steph. 1913 (Dauphin, 2003: 59).

*Ceratolejeunea furcata* Steph. 1913 = *Ceratolejeunea cornuta* (Lindenb.) Steph. 1895 (Dauphin, 2003: 44, *syn. nov.*).

*Ceratolejeunea involvens* (Nees et Mont.) Steph. 1913 = *Ceratolejeunea cornuta* (Lindenb.) Steph. 1895 (Dauphin, 2003: 44, *syn. nov.*).

*Ceratolejeunea maritima* (Spruce) Steph. 1913 = *Ceratolejeunea cornuta* (Lindenb.) Steph. 1895 (Dauphin, 2003: 42, *syn. nov.*).

***Ceratolejeunea patentissima*** (Hampe et Gottsche) A. Evans, *Bull. Torrey Bot. Club* 32: 286. 1905.

Bas.: *Lejeunea patentissima* Hampe et Gottsche, *Linnaea* 25: 355. 1852.

Schuster 1980a: 403; Schuster 1992: 223; Schäfer-Verwimp 1999: 320.

**Fig.:** Evans 1905, pl. 20, figs 19-26; Fulford 1945: 381, figs 38-44; Stephani 1985, fig. 1681, as *C. wallisii*; Schuster 1992: 224, fig. 8: 1-7; Dauphin 2003, fig. 35.

*Ceratolejeunea plumula* (Spruce) Steph. 1913 = *Ceratolejeunea coarina* (Gottsche) Schiffn. 1893 (Dauphin, 2003: 37, *syn. nov.*).

*Ceratolejeunea scaberula* (Spruce) Steph. 1913 = *Prionolejeunea scaberula* (Spruce) Steph. 1913 (Zwickel, 1933, cited after Bonner, 1953: 236; Fulford, 1945; Dauphin, 2003: 81; Ilkiu-Borges, 2006: 153).

*Ceratolejeunea schwaneckeii* Steph. 1895 = *Ceratolejeunea filaria* (Taylor ex Lehm.) Steph. 1913 (Dauphin, 2003: 59, *syn. nov.*).

***Ceratolejeunea spinosa*** (Gottsche) Schiffn., *Bot. Jahrb. Syst.* 23: 595. 1897.

Bas.: *Lejeunea spinosa* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 402. 1845.

Syn.: *Ceratolejeunea dominicensis* Steph., *Spec. Hep.* 5: 410. 1913. [**Type: Dominica**]

Spruce 1895: 342, as *Lejeunea* (*Ceratolejeunea*) *spinosa*; Evans 1905: 280;

Stephani 1913: 411, as *C. dominicensis*; Pagán 1939: 46; Pagán 1942: 98; Fulford 1945: 376; Bonner 1953: 188, as *C. dominicensis*, 240; Fulford 1987: 272, as *C. dominicensis*, 273; Schuster 1992: 225; Dauphin 2003: 79.

**Fig.:** Evans 1905, pl. 19, figs 1-11; Fulford 1945, figs 9-15; Herzog 1951, fig. 16a-d; Bonner 1953, fig. 87A, A<sup>1</sup>, B, 87A-B, 88D; 29A-B, D, as *C. dominicensis*; Stephani 1985, fig. 1586, as *C. dominicensis*, fig. 1603, as *C. heteroloba*, fig. 1642, as *C. platyceras*, figs 1668, "1669", as *C. spinosa*; Schuster 1992, fig. 9:3, 6 (oil bodies and ocellus); Dauphin 2003, fig. 39.

*Ceratolejeunea variabilis* (Lindenb.) Schiffn. 1893 = *Ceratolejeunea maritima* (Spruce) Steph. 1913 *fide* Jovet-Ast (1947: 26) = *Ceratolejeunea cornuta* (Lindenb.) Steph. 1895 *fide* Dauphin (2003: 42).

## CHEILOLEJEUNEA (Spruce) Schiffn. 1893

## LEJEUNEACEAE

***Cheilolejeunea acutangula*** (Nees) Grolle, *J. Hattori Bot. Lab.* 45: 173. 1979.

Bas.: *Jungermannia acutangula* Nees, in Martius, *Fl. Brasil.* 1: 357. 1833.

*Lejeunea* (*Strepsilejeunea*) *kunthiana* Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 353. 1845.

*Strepsilejeunea kunthiana* (Lindenb.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 127. 1893.

Spruce 1895: 341, as *Lejeunea* (*Strepsilejeunea*) *kunthiana*; Fulford 1987: 273.

**Fig.:** Stephani 1985, fig. 9751, as *Strepsilejeunea acutangula*; fig. 9756, as *S. gabrielensis*; fig. 9760, as *S. kunthiana*; fig. 9765, as *S. lobulata*; fig. 9766, as *S. oblongifolia*; Gradstein *et al.* 2001, fig. 42J-L; Gradstein & Costa 2003, fig. 39J-L.

***Cheilolejeunea adnata*** (Kunze) Grolle, *J. Bryol.* 9: 529. 1977. [var. *adnata*]

Bas.: *Jungermannia adnata* Kunze ex Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 6: 46. 1834.

Schäfer-Verwimp 1999: 320.

**Fig.:** Evans 1906, pl. 1, figs 1-9, as *Cheilolejeunea decidua*; Frye & Clark 1947: 830, figs 1-7, as *Cheilolejeunea decidua*; Schuster 1980a, figs 668: 13-14, 679; 1992, fig. 13: 5 (oil bodies); Stephani 1985, figs 1758-1759, as *C. decidua*, figs 8394-8395, as *Pycnolejeunea adnata*; Lücking 1995: 63, Abb. 27; Gradstein *et al.* 2001, fig. 42I; Gradstein & Costa 2003, fig. 39M; Zartman & Ilkiu-Borges 2007, pl. 5E-G, 6A-B; Gradstein & Ilkiu-Borges 2009, fig. 34H-I.

***Cheilolejeunea clausa*** (Nees et Mont.) R.M. Schust., *Hepat. Anthoc. N. Amer.* 4: 863. 1980.

Bas.: *Lejeunea clausa* Nees et Mont., in Mont., *Ann. Sci. Nat., Bot.*, ser. 2, 14: 337. 1840.

*Euosmolejeunea clausa* (Nees et Mont.) A. Evans, *Bryologist* 11: 69. 1908.

Spruce 1895: 346, as *Lejeunea* (*Euosmolejeunea*) *clausa*; Fulford 1987: 274, as *Euosmolejeunea clausa*.

**Fig.:** Evans 1902, pl. 19, figs 1-11, as *Euosmolejeunea opaca*; Frye & Clark 1947: 823, figs 1-9, as *E. clausa*; Schuster & Hattori 1954, pl. VII, figs 3-5 (oil bodies, as *E. clausa*); Breil 1970, figs 152-153, habit and oil bodies; Schuster 1980a: figs, 668:11-12, 669-670; Geissler & Gradstein 1981, pl. 3c (oil bodies); Stephani 1985, figs 2775-2780, as *E. clausa*; Reiner-Drehwald 1998, fig. 1; Gradstein & Ilkiu-Borges 2009, fig. 36A-D.

***Cheilolejeunea holostipa*** (Spruce) Grolle et R.L. Zhu, *Taxon* 50: 1071. 2001.

Bas.: *Lejeunea holostipa* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 171. 1884.

Syn.: *Cyrtolejeunea holostipa* (Spruce) A. Evans, *Bull. Torrey Bot. Club* 30: 553. 1903.

Schäfer-Verwimp 1999: 321, as *Cyrtolejeunea*.

**Fig.:** Evans 1903a, pl. 21, figs 10-23, as *Cyrtolejeunea*; Stephani 1985, fig. 2245, as *Cyrtolejeunea*; Schuster 1992, fig. 10: 8, 11: 5 (oil bodies); Lücking 1995, fig. 39, as *Cyrtolejeunea*; Ilkiu-Borges 2000, fig. 26A-H, as *Cyrtolejeunea*; Gradstein *et al.* 2001, fig. 43K-O, as *Cyrtolejeunea*; Grolle *et al.* 2001, fig. 1; Ilkiu-Borges & Lisboa 2002b, fig. 1A-H, as *Cyrtolejeunea*; Gradstein & Costa 2003, fig. 40A-E; Gradstein & Ilkiu-Borges 2009, fig. 36E-G.

***Cheilolejeunea inflexa*** (Hampe ex Lehm.) Grolle, *J. Hattori Bot. Lab.* 45: 174. 1979.

Bas.: *Lejeunea inflexa* Hampe ex Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 7: 22. 1838 (see Grolle 1979: 174).

*Strepsilejeunea inflexa* (Hampe ex Lehm.) Steph., *Bihang Kungl. Svenska Vet.-Akad. Handl.* 3. Afd., 23(2): 24. 1897.

Pearson 1922: 223, as *Strepsilejeunea inflexa*; Grolle 1979: 174; Fulford 1987: 273.

**Fig.:** Stephani 1985, figs 10243-10244, as *Trachylejeunea inflexa*; Ye & Zhu 2009, figs 2, 3c-d; Gradstein & Ilkiu-Borges 2009, fig. 37D-F.

***Cheilolejeunea lineata*** (Lehm. et Lindenb.) Steph., *Hedwigia* 29: 82. 1890.

Bas.: *Jungermannia lineata* Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 4: 53. 1832.

*Lejeunea lineata* (Lehm. et Lindenb. Nees, *Naturgesch. Eur. Leberm.* 3: 271. 1838.

*Cystolejeunea lineata* (Lehm. et Lindenb.) A. Evans, *Bull. Torrey Bot. Club* 33: 17, pl. 3, figs 1-19. 1906.

Spruce 1895: 341, as *Lejeunea (Cheilolejeunea) lineata*; Evans 1906: 18, as *Cystolejeunea*; Pearson 1922: 223, as *Cystolejeunea*; Pagán 1939: 47, as *Cystolejeunea*; 1942: 100, as *Cystolejeunea*; Fulford et al. 1970: 68, as *Cystolejeunea*; Fulford 1987: 274, as *Cystolejeunea*; Schuster 1992: 249; 1996: 34, as *Cystolejeunea*, mixed with the type of *Drepanolejeunea submuricata*.

**Fig.:** Evans 1906, pl. 3, figs 1-19, as *Cystolejeunea*; 1935, fig. 6I, as *Cystolejeunea*; Stephani 1985, figs 2246, as *Cystolejeunea*; Schuster 1992, fig. 10: 1-2 (oil bodies, as *Cystolejeunea*); Gradstein et al. 2001, fig. 44A-D, as *Cystolejeunea*; Gradstein & Costa 2003, fig. 46A-D, as *Cystolejeunea*; Gradstein & Ilkiu-Borges 2009, fig. 37A-C.

***Cheilolejeunea oncophylla*** (Ångstr.) Grolle et M.E.Reiner, *J. Bryology* 19(4): 781, figs 1-2. 1997.

Bas.: *Lejeunea oncophylla* Ångstr., in *Öfvers. Förh. Kongl. Svenska Vetensk.-Akad.* 33(7): 86 (in footnote). "1876" 1877.

*Trachylejeunea dominicensis* Steph., *Spec. Hep.* 5: 303. 1913. [**Type: Dominica**]

Stephani 1913: 303, type of *Trachylejeunea dominicensis*; Thiers 1986: 275, as *T. dominicensis*; Fulford 1987: 277, as *T. dominicensis*; Grolle & Reiner-Drehwald 1997: 782.

**Fig.:** Herzog 1949, fig. 14, as *Harpalejeunea verrucosa*; Stephani 1985, fig. 10241, as *Trachylejeunea dominicensis* (from Dominica, Elliott 1663); Grolle & Reiner-Drehwald 1997, figs 1-2; Gradstein & Costa 2003, fig. 41A-B; Zartman & Ilkiu-Borges 2007, pl. 5A-D.

***Cheilolejeunea papillata*** Solari, *Comun. Mus. Argent. Cienc. Nat. Bot. "Bernardino Rivadavia"* 2(11): 72, fig. 3. 1981.

Schuster 1980a: 403, in footnote 39; 1996: 42, mixed with *Drepanolejeunea valiae*.

**Fig.:** Solari 1981, fig. 3.

**Note:** The occurrence of this southern South American species on Dominica seems unlikely.

*Cheilolejeunea papillifera* R.M. Schust., *J. Hattori Bot. Lab.* 72: 238. 1992, *nom. inval.*

**Fig.:** Schuster 1992, fig. 13: 3-4 (oil bodies).

*Cheilolejeunea pililoba* (Spruce) A. Evans 1902 = *Lejeunea pililoba* Spruce 1895 "1894" = *Lejeunea trinitensis* Lindenb. 1845 (Grolle, 1981: 90).

***Cheilolejeunea rigidula*** (Nees ex Mont.) R.M. Schust., *Castanea* 36: 102. 1971.

Bas.: *Lejeunea rigidula* Nees ex Mont., *Ann. Sci. Nat., Bot.*, sér. 2, 14: 336. 1840.

*Lejeunea duriuscula* Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 364. 1845.

*Euosmolejeunea rigidula* (Nees et Mont.) Steph., *Spec. Hep.* 5: 582. 1914.

Fulford 1987: 274, as *Euosmolejeunea rigidula*; Schäfer-Verwimp 1999: 323, admixed to *Harpalejeunea emarginata*.

**Fig.:** Evans 1902, pl. 18, figs 12-23, as *Euosmolejeunea duriuscula*; 1912b, fig. 32, as *E. duriuscula*; Kurz & Little 1933, fig. 62, as *E. duriuscula*; Frye & Clark 1947: 822, figs 1-11, as *E. duriuscula*; Bonner 1953: 232, fig. 79A, C, as *Ceratolejeunea rigidula*; Schuster & Hattori 1954, pl. VII, figs 6-8 (oil bodies, as *Euosmolejeunea rigidula*); Breil 1970, figs 150-151, habit and oil bodies; Schuster 1980: 852, fig. 668: 7-10, 895, fig. 676: 6-11, 897, fig. 677: 1-11, 900, fig. 678: 1-10; Stephani 1985, fig. 2764, as *E. duriuscula*, figs 2765-2766, as *E. incerta*, fig. 2767, as *E. neglecta*, fig. 2770, as *E. rigidula*; Lücking 1995: 65, fig. 28; Kürschner & Parolly 1998: 35, fig. 6: 6; Reiner-Drehwald 1998, fig. 3; Ilkiu-Borges 2000, fig. 20; Gradstein *et al.* 2001, fig. 42E-H; Gradstein & Costa 2003, fig. 39F-I; Zartman & Ilkiu-Borges 2007, pl. 6E-G; Gradstein & Ilkiu-Borges 2009, fig. 38A-D.

***Cheilolejeunea trifaria*** (Reinw., Blume *et* Nees) Mizut., *J. Hattori Bot. Lab.* 27: 132. 1964.

Bas.: *Jungermannia trifaria* Reinw., Blume *et* Nees, *Nov. Actorum Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 12: 226. 1824.

Syn.: *Euosmolejeunea trifaria* (Reinw., Blume *et* Nees) Steph., *Hedwigia* 27: 292. 1888.

*Lejeunea trifaria* (Reinw., Blume *et* Nees) Gottsche, Lindenb. & Nees, *Syn. Hep.*: 361. 1845

Spruce 1895: 345, as *Lejeunea (Euosmolejeunea) trifaria*; Fulford 1987: 274, as *Euosmolejeunea trifaria*.

**Fig.:** Evans 1903a, pl. 22, figs 1-10, as *Euosmolejeunea trifaria*; 1935, fig. 6J, as *E. trifaria*; Horikawa 1934: 270, fig. 56, as *E. latifolia*; Bischler 1966: 620, pl. III:17-19, as *E. trifaria*; Mizutani 1972: 402, fig. II; 1982: 169, fig. 8a-t; Griffin 1979: 63, pl. IX, fig. 460-463; Stephani 1985, figs 2812-2814, as *E. trifaria*; Schuster 1992, fig. 13:1 (oil bodies); Kürschner & Parolly 1998: 35, fig. 6: 11; Reiner-Drehwald 1998, fig. 4; Ilkiu-Borges 2000, fig. 21; Zhu & So 2001, fig. 44; Gradstein & Costa 2003, fig. 41C-E; Wigginton 2004, fig. 200A-K; Zartman & Ilkiu-Borges 2007, pl. 6C-D; Gradstein & Ilkiu-Borges 2009, fig. 38E-G.

***Cheilolejeunea xanthocarpa*** (Lehm. *et* Lindenb.) I. Malombe, *Acta Bot. Hungarica* 51: 326. 2009.

Bas.: *Jungermannia xanthocarpa* Lehm. *et* Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 5: 8. 1833.

Syn.: *Lejeunea xanthocarpa* (Lehm. *et* Lindenb.) Gottsche, Lindenb. *et* Nees, *Syn. Hep.*: 370. 1845.

*Leucolejeunea xanthocarpa* (Lehm. *et* Lindenb.) A. Evans, *Torreya* 7: 225. 1907.

Spruce 1895: 336, as *Lejeunea (Archilejeunea) xanthocarpa*; Evans 1908a: 173, as *Leucolejeunea xanthocarpa*; Fulford 1987: 275, as *L. xanthocarpa*.

**Fig.:** Evans 1908a, pl. 7, figs 12-23, as *Leucolejeunea xanthocarpa*; 1935, fig. 3O, as *L. xanthocarpa*; Frye & Clark 1947: 915, figs 1-13, as *L. xanthocarpa*; Schuster & Hattori 1954, pl. I, fig. 16 (oil bodies), pl. V, fig. 6 (oil bodies), all as *L. xanthocarpa*; Mizutani 1961, fig. II:31, fig. XIV:1-20, all as *L. xanthocarpa*; Jones 1974: 546, fig. 1 a-c, as *L. xanthocarpa*; Lorscheitter Baptista 1977, pl. III, pl. XXXIV:2 (oil bodies, as *L. xanthocarpa*); Schuster 1980: 834, fig. 664: 9-10, 843, fig. 666: 1-13, 847, fig. 667: 1-16; 1992, fig. 12: 11 (oil bodies), all as *L. xanthocarpa*; Stephani 1916, fig. 202, as *Archilejeunea involuta*; 1985, figs 805-806, as *Archilejeunea involuta*, fig. 5475, as *L. xanthocarpa*; Kis & Pócs 1997, pl. XIX:120-121 (oil bodies, as *L. xanthocarpa*); Zhu & So 2001, fig. 41, as *L. xanthocarpa*; Gradstein *et al.* 2001, fig. 48A-E, as *L. xanthocarpa*; Gradstein & Costa 2003, fig. 57A-E, as *L. xanthocarpa*; Wigginton 2004, fig. 7L (oil bodies), fig. 238A-D, all as *L. xanthocarpa*; Gradstein & Ilkiu-Borges 2009, fig. 65A-D, as *L. xanthocarpa*; further references to additional illustrations in Pippo 1990 and Wigginton & Grolle 1996, both under *Leucolejeunea xanthocarpa*.

## CHILOSCYPHUS Corda 1829

## LOPHOCOLEACEAE

**Note:** Crandall-Stotler *et al.* (2009) kept *Lophocolea* as distinct; however, molecular studies by Hentschel *et al.* (2006a, 2006b) showed that the earlier named genus *Chiloscyphus* is nested in *Lophocolea*.

***Chiloscyphus breutelii*** (Gottsche in Gottsche, Lindenb. & Nees) J.J. Engel et R.M. Schust., *Nova Hedwigia* 39: 412. 1985 “1984”.

Bas.: *Lophocolea breuteliana* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.* 154. 1845.

Syn.: *Lophocolea trapezoidea* Mont., *Ann. Sci. Nat., Bot.*, ser. 2, 19: 251. 1843 “trapezoides”.

Spruce 1895: 357, as *Lophocolea breutelii*; Stephani 1907: 163, as *L. trapezoidea*; Pagán 1942: 82; 81 as *L. breutelii*; Fulford 1976: 437, as *L. trapezoidea*; 1987: 268, as *L. trapezoidea*; Stephani 1985, in legend of fig. 5918, as *L. trapezoidea*.

**Fig.:** Fulford 1976: 434, pl. 121, fig. 10a-k, 436, pl. 122, fig. 10m-s, all as *Lophocolea trapezoidea*; Stephani 1985, fig. 5901, as *Lophocolea breutelii*; figs 5918-5919, as *L. trapezoidea* (5918 from Dominica, Elliott 2275); Gradstein *et al.* 2001, fig. 24D-E, as *L. trapezoidea*; Gradstein & Costa 2003, fig. 21D-E, as *L. trapezoidea*.

***Chiloscyphus connatus*** (Sw.) J.J. Engel et R.M. Schust., *Nova Hedwigia* 39: 413. 1985 “1984”.

Bas.: *Jungermannia connata* Sw., *Nova Gen. Spec. Pl. Prodr.*: 143. 1788.

*Lophocolea connata* (Sw.) Mont. et Nees, *Ann. Sci. Nat., Bot.*, ser. 2, 12: 51. 1839.

Spruce 1895: 357, as “*Lophocolea connata?*”; Fulford 1976: 448, as *L. connata*; 1987: 267, as *L. connata*.

**Fig.:** Fulford 1976: 447, pl. 125, fig. 17a-e, as *Lophocolea connata*; Stephani 1985, fig. 5840, as *L. connata*.

*Chiloscyphus elliottii* Steph. 1908 = *Heteroscyphus elliottii* (Steph.) Pagán 1939 (Fulford, 1976: 487).

*Chiloscyphus gibbosus* Tayl. 1846 = *Leptoscyphus gibbosus* (Tayl.) Mitt. 1851 (Grolle, “1962” 1963)

***Chiloscyphus liebmannianus*** (Gottsche) J.J. Engel et R.M. Schust., *Nova Hedwigia* 39: 418. 1985 “1984”.

Bas.: *Lophocolea liebmanniana* Gottsche, *Mexik. Leverm.*: 113. 1863.

Fulford 1976: 427, as *Lophocolea*; Fulford 1987: 268, as *Lophocolea*.

**Fig.:** Gottsche 1863, pl. 18, figs 1-5, as *Lophocolea*; Fulford 1976: 426, pl. 117, fig. 2a-e, as *Lophocolea*; Griffin 1979, pl. VII, figs 357-358, as *Lophocolea*; Stephani 1985, fig. 5895, as *Lophocolea*; Gradstein & Costa 2003, fig. 20D-E, as *Lophocolea*; Gradstein & Ilkiu-Borges 2009, fig. 21F-G.

***Chiloscyphus martianus*** (Nees) J.J. Engel et R.M. Schust., *Nova Hedwigia* 39: 419. 1985 “1984”.

Bas.: *Lophocolea martiana* Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 152. 1845.

Spruce 1895: 357, as *Lophocolea*; Fulford 1976: 442, as *Lophocolea*; Fulford 1987: 268, as *Lophocolea*.

**Fig.:** Kurz & Little 1933, fig. 57, as *Lophocolea*; Frye & Clark 1943: 262, figs 1-8, as *Lophocolea*; Schiffner & Arnell 1964, pl. XI, fig. 128a-b, 129a-d, 130a-c, all as *Lophocolea*; Breil 1970, figs 41-43, as *Lophocolea*; Fulford 1976: 440, pl. 123, fig. 13a-e, as *Lophocolea*; Griffin 1979, pl. VII, figs 362-363, as *Lophocolea*; Kis &

Pócs 1981, fig. 32 (foto of median leaf cells with oil bodies, as *Lophocolea*); Cole 1983, fig. 19d-e, as *Lophocolea*; Stephani 1985, figs 5858-5859, as *Lophocolea*; Gradstein *et al.* 2001, fig. 24A-E; Gradstein & Costa 2003, fig. 21A-C, as *Lophocolea*; Wigginton 2004, fig. 104A-J, as *Lophocolea*; Gradstein & Ilkiu-Borges 2009, fig. 22A-C; references to further illustrations in Wigginton & Grolle 1996, under *Lophocolea martiana*.

***Chiloscyphus perissodontus*** (Spruce) J.J. Engel *et* R.M. Schust., *Nova Hedwigia* 39: 421. 1985 “1984”.

Bas.: *Lophocolea martiana* var. *perissodonta* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 432. 1885.

*Lophocolea perissodonta* (Spruce) Steph., *Bull. Herb. Boissier*, ser. 2, 7: 63. “1907” 1908.

Fulford 1976: 446, as *Lophocolea*; Fulford 1987: 268, as *Lophocolea*.

**Fig.:** Fulford 1976: 444, pl. 124, fig. 16a-f, as *Lophocolea*; Griffin 1979, pl. VII, figs 359-361, as *Lophocolea*; Cole 1983, fig. 19a-c, as *Lophocolea*; Stephani 1985, figs 5863-5864, as *Lophocolea*.

#### CLADOPODIELLA Buch 1927

#### CEPHALOZIACEAE

*Cladopodiella intertexta* (Gottsche) Fulf. 1968 = *Cephalozipsis intertexta* (Gottsche) R.M. Schust. 1972 (“1971”).

#### COLOLEJEUNEA (Spruce) Schiffn. 1893

#### LEJEUNEACEAE

***Cololejeunea antillana*** Pócs, in Pócs & Bernecker, *Polish Bot. J.* 54: 3. 2009.

Bas.: *Aphanolejeunea longifolia* Ast, *Rev. Bryol. Lichénol.* 16: 23, fig. III. 1947, non *Cololejeunea longifolia* Schiffn., *Hedwigia* 39: 200. 1900.

Schuster 1992: 355 (as “*longifolia* phenotype”); Eggers 1998: 82, as *Aphanolejeunea longifolia*.

**Fig.:** Jovet-Ast 1947: 24, fig. III, as *Aphanolejeunea longifolia*; Lücking 1995, fig. 18, as *A. longifolia*, Campos & Uribe-M. 2006, fig. 4A-B, as *A. longifolia*.

***Cololejeunea camillii*** (Lehm.) A. Evans, *Bryologist* 15: 59, pl. II, figs 6-14. 1912.

Bas.: *Lejeunea camillii* Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 10: 15. 1857.

*Aphanolejeunea camillii* (Lehm.) R.M. Schust., *Hepat. Anthoc. N. Am.* 4: 1297. 1980. [“*camillii*”]

Schäfer-Verwimp 1999: 317, as *Aphanolejeunea camillii*.

**Fig.:** Evans 1912a, pl. II, figs 6-14; Reiner-Drehwald 1995, fig. 1, as *Aphanolejeunea misionensis*; Pócs 2003, fig. 33H-J, as *A. camillii*; Zartman & Ilkiu-Borges 2007, pl. 1A-B, as *A. camillii*.

***Cololejeunea cardiocarpa*** (Mont.) Steph., *Hedwigia* 29: 91. 1890.

Bas.: *Lejeunea cardiocarpa* Mont., in Sagra, *Hist. Phys. Cuba* 9: 476. 1842.

Schuster 1980a: 1280; Eggers 1998: 82.

**Fig.:** Montagne 1845, pl. 18, fig. 4, as *Lejeunea cardiocarpa*; Evans 1902, pl. 22, figs 9-20, as *Cololejeunea Jooriana*; 1911, pl. 12, figs 1-3; Kurz & Little 1933, fig. 39, as *Leptocolea cardiocarpa*; Frye & Clark 1947: 891, figs 1-13; Schuster & Hattori 1954, pl. XV, figs 6-10 (oil bodies, as *Leptocolea cardiocarpa*); Schuster 1955, fig. V, as *Leptocolea cardiocarpa*; 1980a, figs 755:3-10, 765; Breil 1970, fig. 173; Vanden Berghen 1972, fig. 58; Stephani 1985, fig. 12245, as *Physocolea cardiocarpa*, fig. 12305, as *P. jooriana*; Tixier 1985, fig. 19:1-6; Perold 1992, figs 1-3; Reiner-Drehwald 1994a: 85, fig. 2A-K; Braggins 1999, figs 1-3; Gradstein *et al.* 2001, fig. 55I-L; Wigginton 2004, fig. 268A-J; Zartman & Ilkiu-Borges 2007, pl. 7A-D; Pócs 2009, fig. 39H-K.

***Cololejeunea cingens*** (Herz.) Bernecker *et* Pócs, in Pócs & Bernecker, *Polish Bot. J.* 54: 4. 2009.

Bas.: *Aphanolejeunea cingens* Herzog, *Svensk Bot. Tidskr.* 46: 104, fig. 25a-e. 1952  
Schäfer-Verwimp 1999: 318, as *Aphanolejeunea cingens*; Pócs & Bernecker 2009.

**Fig.:** Herzog 1952, fig. 25a-e, as *Aphanolejeunea cingens*; Lücking 1995, fig. 13, as *Aphanolejeunea cingens*.

***Cololejeunea costaricensis*** (Bernecker) Bernecker *et* Pócs, in Pócs & Bernecker, *Polish Bot. J.* 54: 5. 2009.

Bas.: *Aphanolejeunea costaricensis* Bernecker, *Nova Hedwigia* 66: 164, fig. 1. 1998.  
Schäfer-Verwimp 1999: 318, as *Aphanolejeunea costaricensis*.

**Fig.:** Lücking 1995: 46, fig. 14, as *Aphanolejeunea costaricensis*; Bernecker-Lücking 1998a, fig. 1, as *Aphanolejeunea costaricensis*.

*Cololejeunea* “dominicana phenotype” R.M. Schust., *J. Hattori Bot. Lab.* 72: 351. 1992, *nom. nud.*

***Cololejeunea gracilis*** (Ast) Pócs, in Dauphin *et al.*, *Cryptogamie, Bryol.* 29(3): 233. 2008.

*Aphanolejeunea gracilis* Jovet-Ast, *Rev. Bryol. Lichénol.* 16: 21, fig. II. 1947.

Eggers 1998: 82, as *Aphanolejeunea gracilis*; Schäfer-Verwimp 1999: 317, as *A. gracilis*.

**Fig.:** Jovet-Ast 1947, fig. II (1-12), as *Aphanolejeunea gracilis*; Schuster 1992, fig. 33:5, oil bodies, as *A. gracilis*; Lücking 1995, fig. 17, as *Aphanolejeunea gracilis*; Ilkiu-Borges 2000, fig. 50, as *A. gracilis*; Pócs 2003, fig. 34D, as *A. gracilis*; Ilkiu-Borges & Lisboa 2004, fig. 2, as *A. gracilis*; Zartman & Ilkiu-Borges 2007, pl. 2A-B, as *A. gracilis*.

***Cololejeunea microscopica*** (Tayl.) Schiffn. var. ***africana*** (Pócs) Pócs *et* Bernecker, in Dauphin *et al.*, *Cryptogamie, Bryologie* 29: 234. 2008.

Bas.: *Aphanolejeunea exigua* A. Evans var. *africana* Pócs, *Cryptogamie, Bryol. Lichénol.* 5: 247. 1984.

*Aphanolejeunea verrucosa* Jovet-Ast, *Rev. Bryol. Lichénol.* 16: 25, fig. IV. 1947.

Schäfer-Verwimp 1999: 318, as *Aphanolejeunea verrucosa*.

**Fig.:** Jovet-Ast 1947, fig. IV, as *Aphanolejeunea verrucosa*; Pócs 1984, pl. III: 25-31, as *Aphanolejeunea exigua* var. *africana*; 2009, fig. 44D-F, as *Cololejeunea verrucosa*.

***Cololejeunea microscopica*** (Tayl.) Schiffn. var. ***exigua*** (A. Evans) Pócs, in Gradstein & Ilkiu-Borges, *Mem. New York Bot. Gard.* 76: 73. 2009.

Bas.: *Aphanolejeunea exigua* A. Evans, *Bull. Torrey Bot. Club* 38: 273, pl. 12, figs 4-10. 1911.

*Aphanolejeunea microscopica* (Tayl.) A. Evans var. *exigua* (A. Evans) A. Lücking *et* Pócs, *Haussknechtia Beiheft* 7: 26. 1997.

Schuster 1992: 357, as *Aphanolejeunea exigua*.

**Fig.:** Evans 1911, pl. 12, figs 4-10, as *A. exigua*; Pócs 1984, pl. II, III: 22-24, XII: 89, as *Aphanolejeunea exigua* var. *exigua*; Stephani 1985, fig. 749, as *A. exigua*; Schuster 1992, fig. 33:7, oil bodies, as *A. exigua*; Wigginton 2004, fig. 248A-N, as *Aphanolejeunea microscopica* var. *exigua*; Pócs 2009, fig. 42A-D.



***Cololejeunea papillosa*** (Goebel) Mizut., *J. Hattori Bot. Lab.* 29: 156. 1966.

Bas.: *Physocolea (Aphanolejeunea) papillosa* Goebel, *Ann. Jard. Bot. Buitenzorg* 39: 41. 1928.

*Aphanolejeunea angustissima* Steph., *Spec. Hep.* 5: 859. 1916.

*Aphanolejeunea cyathiphylla* Herzog, *Svensk Bot. Tidskr.* 46: 105, fig. 25f. 1952.

Schäfer-Verwimp 1999: 318, as *Aphanolejeunea cyathiphylla*.

**Fig.:** Herzog 1950, fig. 37, as *Aphanolejeunea microscopica* var. *borneensis*; 1952, fig. 25f, as *A. cyathiphylla*; Stephani 1985, fig. 746, as *A. angustissima*.

***Cololejeunea sicaefolia*** (Gottsche) Pócs et Bernecker, *Polish Bot. J.* 54: 8. 2009.

Bas.: *Lejeunea (Cololejeunea) sicaefolia* Gottsche, in Steph., *Hedwigia* 27: 290, pl. 12, fig. 21-24. 1888.

*Aphanolejeunea sicaefolia* (Gottsche) A. Evans, *Bull. Torrey Bot. Club* 38(6): 277, pl. 12, fig. 18-26. 1911.

Schuster 1970: 343, as *Aphanolejeunea sicaefolia*, "mixed with the type of *Dactylolejeunea acanthifolia*"; Schäfer-Verwimp 1999: 318, as *Aphanolejeunea sicaefolia*; Ilkiu-Borges & Schäfer-Verwimp 2005: 34, as *A. sicaefolia*.

**Fig.:** Stephani 1888, pl. XII, figs 21-24, as *Lejeunea (Cololejeunea) sicaefolia*; 1985, fig. 751, as *Aphanolejeunea sicaefolia*; Evans 1911, pl. 12, figs 17-26, as *A. sicaefolia*; Frye & Clark 1947: 889, figs 1-10; Schuster & Hattori 1954, pl. XV, fig. 11 (oil bodies, as *A. sicaefolia*); Griffin 1979, pl. XI, figs 512-513, as *A. sicaefolia*; Schuster 1955, fig. I:1-2, as *A. sicaefolia*; 1980a, fig. 770:1-2, as *A. sicaefolia*; Zartman & Ilkiu-Borges 2007, pl. 2C-D, as *A. sicaefolia*.

***Cololejeunea sintenisii*** (Steph.) Pócs, *Cryptogamie, Bryol.* 29: 235. 2008.

Bas.: *Lejeunea (Cololejeunea) sintenisii* Steph., *Hedwigia* 27: 291. 1888.

*Aphanolejeunea sintenisii* (Steph.) Steph., *Spec. Hep.* 5: 861. 1916.

Schäfer-Verwimp & Reiner-Drehwald 2009: 360.

**Fig.:** Stephani 1888, Tafel XIII, fig. 27; 1985, fig. 752, as *Aphanolejeunea sintenisii*; Horikawa 1932, fig. 15, as *Aphanolejeunea angustiloba*; Allorge & Jovet-Ast 1950, figs 1-2, as *Aphanolejeunea teotonii*; Schuster 1955, fig. I:3-8, fig. II:1-9, fig. IV:6, all as *Aphanolejeunea ephemeroides*; 1980a, figs 764:11, 770:3-8, 771, 773:6, all as *A. ephemeroides*; Lücking 1995: 48, fig. 16, as *A. ephemeroides*; Gradstein *et al.* 2001, fig. 55A-D, as *A. ephemeroides*; Campos & Uribe-M. 2006, fig. 4C-F, as *A. ephemeroides*.

COLURA (Dumort.) Dumort. 1835.

LEJEUNEACEAE

***Colura cylindrica*** Herzog, *Svensk Bot. Tidskr.* 46: 106, fig. 26. 1952.

Schäfer-Verwimp 1999: 320.

**Fig.:** Herzog 1952, fig. 26; Jovet-Ast 1954, fig. 34; Gradstein & Ilkiu-Borges 2009, fig. 45A-D.

*Colura lyrata* Steph. in Urban 1901 = *Macrocolura lyrata* (Steph.) R.M. Schust. 1994 = *Macrocolura sagittistipula* (Spruce) R.M. Schust. 1994 (Grolle & Zhu, 2002, syn. nov.).

***Colura rhynchophora*** Ast, *Rev. Bryol. Lichénol.* 17: 27. 1948.

Eggers 1998: 82; Schäfer-Verwimp 1999: 321.

**Fig.:** Jovet-Ast 1948: 28, fig. II:1-22; 1954, figs 2:1-3, 4, 29.

***Colura tenuicornis*** (A. Evans) Steph., *Spec. Hep.* 5: 942. 1916.

Bas.: *Colurolejeunea tenuicornis* A. Evans, *Trans. Connecticut Acad. Arts Sci.* 10: 455. 1900.

Eggers 1998: 82; Schäfer-Verwimp 1999: 321.

**Fig.:** Evans 1900, pl. LIX, figs 17-21, as *Colurolejeunea tenuicornis*; Horikawa 1934, fig. 63, as *Colura pseudocalyptrifolia*; Jovet-Ast 1954, fig. 30; Mizutani 1961, fig. XXVII:1-2; Lorscheitter Baptista 1977, pl. XXXI, as *Colura* sp.; Schuster 1992, fig. 32:4-5, oil bodies; Lücking 1995, fig. 31A-C; Kis & Pócs 1997, pl. XXIII: 154-155 (oil bodies); Zhu & So 2001, fig. 89; Gradstein & Costa 2003, fig. 45A-C; Wigginton 2004, fig. 273A-K; further references to illustrations in Piippo 1990 and Wigginton & Grolle 1996.

***Colura tortifolia*** (Nees et Mont.) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 402. 1877.

Bas.: *Lejeunea tortifolia* Nees et Mont., in Mont., *Ann Sci. Nat., Bot.*, sér. 2, 19: 265. 1843.

Eggers 1998: 82.

**Fig.:** Jovet-Ast 1949, fig. II; 1954, figs 11:5, 37; Hegewald & Hegewald 1977: 740, fig. 9-10; Lücking 1995, fig. 31D; Ilkiu-Borges 2000, fig. 54; Gradstein *et al.* 2001, fig. 56A-E; Gradstein & Costa 2003, fig. 44F-H; Ilkiu-Borges & Lisboa 2004, fig. 6; Zartman & Ilkiu-Borges 2007, pl. 8G; Gradstein & Ilkiu-Borges 2009, fig. 46.

**CROSSOTOLEJEUNEA** (Spruce) Schiffn. 1893 = LEJEUNEA Libert 1820  
LEJEUNEACEAE

*Crossotolejeunea boryana* (Mont.) Schiffn. 1895 = *Lejeunea boryana* Mont. 1838.

*Crossotolejeunea controversa* (Gottsche) Steph. 1913 = *Lejeunea controversa* Gottsche 1873 "1872".

**CYCLOLEJEUNEA** A. Evans 1904 LEJEUNEACEAE

***Cyclolejeunea accedens*** (Gottsche) A. Evans, *Bull. Torrey Bot. Club* 31: 201, pl. 9, figs 17-23. 1904.

Bas.: *Lejeunea accedens* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 339. 1845.

Syn.: *Cyclolejeunea papillata* Steph., *Spec. Hep.* 5: 193. 1913. [**Type: Dominica**]

*Cyclolejeunea grandistipula* Steph., *Spec. Hep.* 5: 191. 1913. [**Type: Dominica**]

*Prionolejeunea luxurians* Gottsche, in Steph., *Spec. Hep.* 5: 221. 1913. [**Type: Dominica**]

Spruce 1895: 337, as *Lejeunea (Odontolejeunea) accedens*; Evans 1904: 202; Stephani 1913: 192, as *C. grandistipula*, 193, as *C. papillata*, 222, as *Prionolejeunea luxurians*; Pearson 1922: 221; Pagán 1939: 46; Pagán 1942: 99; Fulford *et al.* 1970: 67; Fulford 1987: 273, 276, as *C. accedens*, *C. grandistipula*, *C. papillata* and *Prionolejeunea luxurians*; Grolle 1991: 185; Schuster 1992: 313; Schäfer-Verwimp 1999: 322, admixed to *Drepanolejeunea crucianella*.

**Fig.:** Stephani 1888, pl. XIV, figs 34-37, as *Lejeunea (Odontolejeunea) accedens*; Stephani 1985, figs 2220-2221, figs 2222-2224, as *C. affixa*, fig. 2231, as *C. grandistipula*, figs 2236-2238, as *C. papillata*; fig. 8173, as *Prionolejeunea luxurians*; Evans 1904, pl. 9, figs 17-23; Fulford *et al.* 1970: 62, fig. 7a-b; Onraedt 1988: 53, fig. 1:1-10; Schuster 1992, fig. 30:8, oil bodies; Lücking 1995, fig. 32; 1998, fig. 1.

*Cyclolejeunea angulistipa* sensu A. Evans 1904 = *Cyclolejeunea luteola* (Spruce) Grolle 1984 (Grolle, 1984: 761).

*Cyclolejeunea angulistipa* (Steph.) A. Evans, *Bull. Torrey Bot. Club* 31: 203. 1904, *nom. illeg.* = *Prionolejeunea denticulata* (F. Weber) Schiffn. 1893 (syn. *vide* Grolle, 1984: 761).

***Cyclolejeunea chitonía*** (Taylor) A. Evans, *Bull. Torrey Bot. Club* 31: 194, pl. 8, figs 16-23. 1904.

Bas.: *Lejeunea chitonía* Taylor ex Lehm. in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 8: 27. 1844 “*clitonia*”.

*Lejeunea chitonía* Taylor in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 339. 1845, nom. inval.

Schäfer-Verwimp 1999: 321.

**Fig.:** Evans 1904, pl. 8, figs 16-23; 1935, fig. 5G; Stephani 1985, figs 2227-2228; Onraedt 1988, fig. 3: 7-9; Schuster 1992, fig. 21:7-8 (oil bodies); Lücking 1995, figs 33-34; Bernecker-Lücking 1998, fig. 2; Gradstein & Costa 2003, fig. 45F-H; Gradstein & Ilkiu-Borges 2009, fig. 47A-D.

***Cyclolejeunea convexistipa*** (Lehm. et Lindenb.) A. Evans, *Bull. Torrey Bot. Club* 31: 198, pl. 9, figs. 1-16. 1904.

Bas.: *Jungermannia convexistipa* Lehm. et Lindenb., in Lehmann, *Nov. Min. Cogn. Stirp. Pugillus* 6: 43. 1834.

*Cyclolejeunea sacculata* Steph., *Spec. Hep.* 5: 188. 1913.

Spruce 1895: 337, as *Lejeunea (Odontolejeunea) convexistipa*; Stephani 1913: 188, as *C. sacculata*; Pearson 1922: 220; Grolle 1984: 760; Fulford 1987: 273, as *C. convexistipa* and *C. sacculata*; Schuster 1992: 311; Lücking 1995: 75; Schäfer-Verwimp 1999: 318, admixed to *Aphanolejeunea cingens*.

**Fig.:** Evans 1904, pl. 9, figs 1-16; 1935, fig. 5I; Herzog 1952: 90, fig. 17: f-m; Fulford et al. 1970: 62, fig. 8; Stephani 1985, fig. 2216, as *C. sacculata*, figs 2205-2209; Onraedt 1988: 55, fig. 4: 1-8; Schuster 1992, fig. 29:3, 30:1-3 (oil bodies); Lücking 1995, fig. 35-36; Bernecker-Lücking 1998, fig. 3; Ilkiu-Borges 2000, fig. 24; Gradstein et al. 2001, fig. 43F-J; Gradstein & Costa 2003, fig. 45D-E; Ilkiu-Borges & Lisboa 2004a, fig. 1; Zartman & Ilkiu-Borges 2007, pl. 10C-E; Gradstein & Ilkiu-Borges 2009, fig. 47E-H.

*Cyclolejeunea dentistipula* Steph. 1923 = *Cyclolejeunea luteola* (Spruce) Grolle 1984 (Grolle, 1984: 761).

*Cyclolejeunea elliottii* Steph. 1913 = *Odontolejeunea lunulata* (Web.) Schiffn. 1893 (Teeuwen, 1989: 15, syn. nov.).

*Cyclolejeunea “exocellata phenotype”* R.M. Schust., *J. Hattori Bot. Lab.* 72: 310. 1992, nom. inval.

*Cyclolejeunea grandistipula* Steph. 1913 = *Cyclolejeunea accedens* (Gottsche) A. Evans 1904 (Grolle, 1991: 185, syn. nov.).

***Cyclolejeunea luteola*** (Spruce) Grolle, *Wiss. Zeitschr. Fr.-Schiller-Univ. Jena, Naturw. Reihe* 33: 761. 1984.

Bas.: *Lejeunea luteola* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 205. 1884.

*Cyclolejeunea dentistipula* Steph., *Spec. Hep.* 6: 386. 1923. [**Type: Dominica**]

Stephani 1923: 386, the type of *C. dentistipula*; Grolle 1984: 762; Fulford 1987: 273, as *C. angulistipa*; Schuster 1992: 312, as *C. angulistipa*; Schuster 1992: 312, as *C. angulistipa*; Ilkiu-Borges & Schäfer-Verwimp 2005: 34.

**Fig.:** Evans 1904, pl. 10, figs 1-17, as *C. angulistipa*; Bonner 1953: 210, fig. 53A-B, D, as *Ceratolejeunea luteola*; Stephani 1985, fig. 1616, as *Ceratolejeunea luteola*, fig. 2229, as *Ceratolejeunea dentistipula*; Onraedt 1988, fig. 5:1-10; Schuster 1992, fig. 29:4-5, 30:9, oil bodies; Bernecker-Lücking 1998, fig. 4; Ilkiu-Borges 2000, fig. 25; Ilkiu-Borges & Lisboa 2004a, fig. 2; Gradstein & Ilkiu-Borges 2009, fig. 48A-F.

*Cyclolejeunea mimula* (Steph.) Steph. 1913 = *Cyclolejeunea peruviana* (Lehm. et Lindenb.) A. Evans 1904 (Grolle, 1988a: 404, syn. nov.).

*Cyclolejeunea papillata* Steph. 1913 = *Cyclolejeunea accedens* (Gottsche) A. Evans 1904 (Grolle, 1991: 185, syn. nov.).

***Cyclolejeunea peruviana*** (Lehm. et Lindenb.) A. Evans, *Bull. Torrey Bot. Club* 31: 196. 1904.

Bas.: *Jungermannia peruviana* Lehm. et Lindenb., in Lehmann, *Nov. Min. Cogn. Stirp. Pugillus* 5: 18. 1833.

Syn.: *Cyclolejeunea mimula* (Steph.) Steph., *Spec. Hep.* 5: 192. 1913.

Spruce 1895: 337, as *Lejeunea* (*Odontolejeunea*) *peruviana*; Stephani 1913, as *C. mimula*; Pearson 1922: 221, 222 as *C. mimula*; Fulford 1987: 273, also as *C. mimula*; Schuster 1992: 312 (incl. cf. *peruviana* “*serrulata*-phenotype”); Schäfer-Verwimp 1999: 318, admixed to *Aphanolejeunea cingens*.

**Fig.:** Evans 1935, fig. 5H; Stephani 1985, fig. 2233, as *C. mimula*, figs 2239-2242; Onraedt 1988, fig. 3:1-9; Schuster 1992, fig. 30:10-11, oil bodies; Lücking 1995, fig. 37-38; Bernecker-Lücking 1998, fig. 5; Gradstein & Costa 2003, fig. 45I-K; Zartman & Ilkiu-Borges 2007, pl. 10A-B; Gradstein & Ilkiu-Borges 2009, fig. 48G-J.

*Cyclolejeunea* cf. *peruviana* Steph. [“*serrulata*” phenotype] (Schuster, 1992: 312, *nom. inval.*).

*Cyclolejeunea sacculata* Steph. 1913 = *Cyclolejeunea convexistipa* (Lehm. et Lindenb.) Evans 1904 (Grolle, 1984: 760).

**CYRTOLEJEUNEA** A. Evans 1903 = **CHEILOLEJEUNEA** (Spruce) Schiffn. 1893  
LEJEUNEACEAE

*Cyrtolejeunea antillana* R.M. Schust. 1971 “1970” = *Oryzolejeunea saccatiloba* (Steph.) Gradst. 1998 (Grolle in Dauphin et al., 1998).

*Cyrtolejeunea dominicensis* (R.M. Schust.) Thiers, *Nova Hedwigia* 42: 270. 1986, *nom. inval.*

Schuster 1996: 42, mixed with *Drepanolejeunea valiae*.

**Note:** Grolle et al. (2001) did not treat *Cyrtolejeunea dominicensis* and did not combine it under *Cheilolejeunea*.

*Cyrtolejeunea holostipa* (Spruce) A. Evans 1903 = *Cheilolejeunea holostipa* (Spruce) Grolle & R.L. Zhu 2001.

**CYSTOLEJEUNEA** A. Evans 1906 = **CHEILOLEJEUNEA** (Spruce) Schiffn. 1893  
LEJEUNEACEAE

*Cystolejeunea lineata* (Lehm. et Lindenb.) A. Evans 1906 = *Cheilolejeunea lineata* (Lehm. et Lindenb.) Steph. 1890.

**DACTYLOLEJEUNEA** R.M. Schust. 1971 = **LEJEUNEA** Libert 1820  
LEJEUNEACEAE

*Dactylolejeunea acanthifolia* R.M. Schust. 1971 = *Lejeunea paucidentata* (Steph.) Grolle 1991 (Reiner-Drehwald & Goda, 2000: 37, syn. nov.).

**DICRANOLEJEUNEA** (Spruce) Schiffn. 1893  
LEJEUNEACEAE

***Dicranolejeunea axillaris*** (Nees et Mont.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 128. 1893.

Bas.: *Lejeunea axillaris* Nees et Mont., *Ann. Sci. Nat., Bot.*, sér. 2, 5: 59. 1836.  
Schäfer-Verwimp 1999: 322.

**Fig.:** Stephani 1916, fig. 213, as *Dicranolejeunea pulcherrima*; 1985, figs 2736-2737, as *D. axillaris*, fig. 7991, as *Peltolejeunea galapagona*; Evans 1935, fig. 5B; Kruijt 1988, pls. 3-5; Schuster 1992, fig. 5: 8-10 (oil bodies); Gradstein 1994, fig. 48, map: fig. 49; Gradstein *et al.* 2001, fig. 38H-J.

*Dicranolejeunea dominicensis* Steph., *Spec. Hep.* 5: 165. 1912 = *Odontolejeunea* spec. (Kruijt, 1988: 113).

[Stephani, 1912: 165; Fulford, 1987: 274. – not treated by Teeuwen (1989) and Gradstein (1994)].

Fig.: Stephani 1985, fig. 2342, from Dominica, Elliott 1910.

*Dicranolejeunea saccata* Steph. 1896 = *Blepharolejeunea saccata* (Steph.) van Slag. *et* Kruijt 1985.

#### DIPLASIOLEJEUNEA (Spruce) Schiffn. 1893

#### LEJEUNACEAE

***Diplasiolejeunea alata*** Ast, *Rev. Bryol. Lichénol.* 17: 31, fig. III. 1948.

Schuster 1970: 352; Fulford 1987: 274; Schäfer-Verwimp 1999: 322.

**Fig.:** Jovet-Ast 1948: 30, fig. III; Schuster 1970, figs 5-6; 1992: 352, fig. 12 (oil bodies).

*Diplasiolejeunea allorgeorum* Ast 1947 = *Diplasiolejeunea armatiloba* Steph. 1896 (Tixier, 1985: 368, in syn.).

***Diplasiolejeunea armatiloba*** Steph., *Hedwigia* 35: 80. 1896.

*Diplasiolejeunea allorgeorum* Ast, *Rev. Bryol. Lichénol.* 16: 31, fig. VII: 1-23. 1947.

Stephani 1916: 922; Reyes 1982: 150; Tixier 1985: 370; Fulford 1987: 274; Schuster 1992, as *D. allorgeorum*; Schäfer-Verwimp & Reiner-Drehwald 2009: 363.

**Fig.:** Jovet-Ast 1947: 32, fig. VII: 1-23, as *D. allorgeorum*; Stephani 1985, figs 2380-81 (+ 82?); Tixier 1985: 369, fig. 10; Schuster 1992, fig. 1:9, oil bodies.

***Diplasiolejeunea caribea*** Tixier, *Bryophyt. Biblioth.* 27: 377. 1985.

Tixier 1985: 378.

**Fig.:** Tixier 1985: fig. 14; fig. 15, as *D. caribea* subsp. *microstipulata*; fig. 16, as *D. caribea* subsp. *subcaribea*; fig. 17:1-9, as *D. caribea* subsp. *latetruncata*; fig. 7, as *D. arietina*; fig. 12, as *D. caricae*; fig. 13, as *D. crassidentata*; Tixier 1991, fig. 17, as *D. reyesiana* (“*reyesana*”).

***Diplasiolejeunea cavifolia*** Steph., *Bot. Jahrb. Syst.* 20: 318. 1895.

Reyes 1982: 155.

**Fig.:** Evans 1912, pl. 16, fig. 10-18, as *D. brachyclada*; Herzog 1950, fig. 38f-k, as *D. javanica*; Vanden Berghen 1960, fig. 4; 1977, fig. 7; Arnell 1963, fig. 118; Mizutani 1970: 88, fig. 4j; Lorscheitter Baptista 1977, pl. XXX, as *Diplasiolejeunea* sp.; Wu & Lin 1978, fig. 8:1-14, map: fig. 3, as *D. brachyclada*; Reyes 1982, fig. 5, map: fig. 6; Cole 1983, fig. 33e-g; Thiers 1984: 35, fig. 2; Tixier 1985: 404, fig. 26; 402, fig. 25, as *D. matoubae*; fig. 24, as *D. zacatepecensis*; Thiers 1984: 35, fig. 2, as *D. cavifolia*; Stephani 1985, fig. 2385, as *D. brachyclada*, 2368-69, as *D. cavifolia*, 2373, as *D. ocellata*; Kis & Pócs 1997, pl. XXVI:172 (oil bodies); Zhu & So 2001, fig. 88; Schäfer-Verwimp 2003, fig. 47A-C; Wigginton 2004, fig. 278A-L; Gradstein & Schäfer-Verwimp 2009, fig. 49D-F.

***Diplasiolejeunea leiocarpa*** Ast, *Rev. Bryol. Lichénol.* 16: 34, fig. VIII. 1947.

Schäfer-Verwimp & Reiner-Drehwald 2009: 364.

**Fig.:** Jovet-Ast 1947, fig. VIII:1-27; Tixier 1985: 372, fig. 11.

*Diplasiolejeunea malleiformis* (A. Evans) Tixier 1985 = *Diplasiolejeunea pellucida* var. *malleiformis* A. Evans 1912.

*Diplasiolejeunea malleiformis* subsp. *bernardii* Tixier 1985 = *Diplasiolejeunea pellucida* var. *malleiformis* A. Evans 1912 (Schäfer-Verwimp & Reiner-Drehwald 2009, syn. nov.).

***Diplasiolejeunea pellucida*** (Meissn. em. A. Evans) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 121. 1895.

Bas.: *Jungermannia pellucida* Meissn. ex Sprengel, in Linné f., *Syst. Veg.* (ed. 16) 4(2): 325. 1827.

*Lejeunea pellucida* (Meissn. ex Spreng.) Gottsche, Lindenb. et Nees, *Syn. Hep.*: 393. 1845.

Spruce 1895: 349, as *Lejeunea (Diplasiolejeunea) pellucida*; Grolle 1966: 81; Reyes 1982: 165; Fulford 1987: 274.

**Fig.:** Evans 1912: pl. 16, figs 1-9 + p. 223, fig. 2; Evans 1935, fig. 7C (cross section of stem); Reyes 1982, fig. 12, map: fig. 13; Stephani 1985, fig. 2394; Tixier 1985: 350, fig. 1; Lücking 1995: 83, fig. 41; Gradstein *et al.* 2001, fig. 56F-J; Schäfer-Verwimp 2003, fig. 46E-H; Zartman & Ilkiu-Borges 2007, pl. 11A-B; Gradstein & Schäfer-Verwimp 2009, fig. 50A-C.

***Diplasiolejeunea pellucida*** var. *malleiformis* A. Evans, *Bull. Torrey Bot. Club* 39: 215. 1912.

Syn.: *Diplasiolejeunea malleiformis* (A. Evans) Tixier, *Bryophyt. Biblioth.* 27: 351. 1985. Evans 1912: 215; Pagán 1939: 48; Reyes 1982: 167; Tixier 1985, as *D. malleiformis* subsp. *bernardii*; Fulford 1987: 274.

**Fig.:** Evans 1912: 215, fig. 1; Reyes 1982, fig. 14 (map); Tixier 1985: 353, fig. 2, as *D. malleiformis*; fig. 3, as *D. malleiformis* subsp. *elongata*; fig. 4, as *D. malleiformis* subsp. *balnearia*; fig. 5, as *D. malleiformis* subsp. *bernardii*; Schuster 1992, fig. 33:1, oil bodies.

***Diplasiolejeunea pocsii*** Reyes, *Acta Bot. Acad. Scient. Hung.* 28: 173, fig. 19. 1982.

Eggers 1997: 182.

**Fig.:** Reyes 1982, fig. 19.

***Diplasiolejeunea rudolphiana*** Steph., *Hedwigia* 35: 79. 1896.

Stephani 1916: 927; Reyes 1982: 170; Fulford 1987: 274.

**Fig.:** Montagne 1845, pl. 19, fig. 2, as *Lejeunea unidentata*; Evans 1912, pl. 17, figs 13-17; Frye & Clark 1947: 922, figs 1-5; Schuster & Hattori 1954, pl. XIII, figs 1-4 (oil bodies); Griffin 1979, pl. XI, figs 507-511; Schuster 1980, figs 753-754; Reyes 1982, fig. 15, map: fig. 16; Stephani 1985, fig. 2397, 2400 (erroneously as *D. unidentata*); Tixier 1991, fig. 15, as *D. lacostei*; Zhu & So 2001, fig. 87; Schäfer-Verwimp 2003, fig. 47F-J; Gradstein & Schäfer-Verwimp 2009, fig. 50D-E.

***Diplasiolejeunea unidentata*** (Lehm. et Lindenb.) Schiffn., *Bot. Jahrb. Syst.* 23: 583. 1897.

Bas.: *Jungermannia unidentata* Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 6: 48. 1834.

Evans 1912: 218; Pagán 1939: 48; Pagán 1942: 101; Fulford *et al.* 1970: 68; Reyes 1982: 173; Fulford 1987: 274.

**Fig.:** Evans 1912, pl. 17, figs 1-12; 1935, fig. 7B (cross section of stem); Fulford *et al.* 1970: 62, figs 6a-b; Reyes 1982, fig. 17, map: fig. 18; Stephani 1985, fig. 2398 (?2399, ?2401; fig. 2400 belongs to *D. rudolphiana*).

## DREPANOLEJEUNEA (Spruce) Schiffn. 1893

## LEJEUNEACEAE

***Drepanolejeunea anoplantha*** (Spruce) Steph., *Spec. Hep.* 5: 325. 1913.

Bas.: *Lejeunea anoplantha* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 189. 1884 (“*Drepano-Lejeunea*”).

Schuster 1996: 28.

**Fig.:** Evans 1903, pl. 1, figs 10-19; Bischler 1964, fig. 27; Stephani 1985, fig. 2452 p.p. (female inflorescence only, see Bischler 1964), fig. 2483, as *D. subulata*; Schuster 1996, figs 6-7.

**Note:** *Fide* Bischler (1964: 139), the records of Spruce 1895 “1894” (p. 340, as *Lejeunea (Drepanolejeunea) anoplantha*) and Evans 1903: 25, as *Lejeunea (Drepano-Lej.) anoplantha*, belong to *Drepanolejeunea crassiretis*.

*Drepanolejeunea anoplantha* (Spruce) Steph. trans. ad *crassiretis* A. Evans (Schuster, 1992: 333).

*Drepanolejeunea* cf. *biocellata* var. *triocellata* R.M. Schust., *J. Hattori Bot. Lab.* 72: 329. 1992, *nom. nud.*

*Drepanolejeunea bispinulosa* A. Evans 1903 = *Drepanolejeunea lichenicola* (Spruce) Steph. 1913 (Bischler, 1964: 83, in syn.).

***Drepanolejeunea campanulata*** (Spruce) Steph., *Spec. Hep.* 5: 328. 1913.

Bas.: *Lejeunea campanulata* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 192. 1884 (“*Drepano-Lejeunea*”).

Pearson 1922: 222; Fulford 1987: 274 “*complanata*”, referring to Pearson 1922.

**Fig.:** Bischler 1964, fig. 13a-i; Stephani 1985, fig. 2457, as *D. campanulata*, figs 2458-2459, as *D. capulata* (see Bischler 1964).

*Drepanolejeunea* “*complanata* (Spruce) Steph.”

Fulford 1987: 274, referring to Pearson 1922 who is citing only *D. campanulata*.

***Drepanolejeunea crassiretis*** A. Evans, *Bull. Torrey Bot. Club* 30: 25. 1903.

Spruce 1895: 340, as *Lejeunea (Drepanolejeunea) anoplantha fide* Bischler 1964: 139; Bischler 1964: 142; Fulford 1987: 274; Schäfer-Verwimp 1999: 323, admixed to *Harpalejeunea emarginata*.

**Fig.:** Evans 1903, pl. 2, figs 1-13; Bischler 1964, fig. 28a-h; Stephani 1985, fig. 2461, 2452, as *D. anoplantha*, excl. female inflorescence (see Bischler 1964).

***Drepanolejeunea crucianella*** (Taylor) A. Evans, *Bull. Torrey Bot. Club* 30: 33. 1903.

Bas.: *Lejeunea crucianella* Taylor, *London J. Bot.* 5: 393. 1846.

Eggers 1997: 182; Schäfer-Verwimp 1999: 322.

**Fig.:** Evans 1903, pl. 4, figs 8-17; Bischler 1964: 89, fig. 15a-l; Stephani 1985, fig. 2462, as *D. crucianella*, fig. 2485, as *D. trifida*; Ilkiu-Borges 2000, fig. 27K-Q; Ilkiu-Borges & Lisboa 2002b, fig. 1I-Q; Zartman & Ilkiu-Borges 2007, pl. 13:F-G, I; Gradstein & Ilkiu-Borges 2009, fig. 51E-H.

***Drepanolejeunea inchoata*** (Meissn.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 126. 1893.

Bas.: *Jungermannia inchoata* Meissn. ex Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stürp. Pugillus* 5: 19. 1833.

*Lejeunea inchoata* (Meissn. ex Lehm. et Lindenb.) Gottsche, *Lindenb. et Nees* 1845.

Spruce 1895: 340, as *Lejeunea (Drepanolejeunea) inchoata*; Pearson 1922: 223; Bischler 1964: 41, 44; Fulford 1987: 274; Schuster 1992: 332, “phase 1 and phase 2”; Schäfer-Verwimp 1999: 324, admixed to *Leptolejeunea elliptica*.

**Fig.:** Evans 1903, pl. 6; 1935, fig. 6O; Bischler 1964, figs 2a-i, 3a-k; Stephani 1985, figs 2468-2469; Schuster 1992, figs 27:3-4, 28:1, oil bodies; Lücking 1995: 86, fig. 43; Gradstein & Ilkiu-Borges 2009, fig. 52F-H.

*Drepanolejeunea inchoata* (Meissn.) Schiffn. 1893 var. *perissodonta* Spruce “1894” 1895 = *Drepanolejeunea perissodonta* (Spruce) Bischl. 1964

***Drepanolejeunea infundibulata*** (Spruce) Steph., *Spec. Hep.* 5: 333. 1913 [*non* Evans, *Bull. Torrey Bot. Club* 30: 35. 1903].

Bas.: *Lejeunea infundibulata* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 191. 1884 (“*Drepano-Lejeunea*”).

Bischler 1964: 52; Fulford 1987: 274.

**Fig.:** Evans 1903, pl. 5; Bischler 1964, figs 5a-k; Lücking 1995: 87, fig. 44.

***Drepanolejeunea lichenicola*** (Spruce) Steph., *Spec. Hep.* 5: 335. 1913.

Bas.: *Lejeunea lichenicola* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 191. 1884 (“*Drepano-Lejeunea*”).

*Drepanolejeunea bispinulosa* A. Evans, *Bull. Torrey Bot. Club* 30: 32. 1903.

Schuster 1992: 331 “as *Drepanolejeunea bispinulosa* Evs., s. amplo”; Schäfer-Verwimp 1999: 322.

**Fig.:** Evans 1903, pl. 4, figs 1-7, as *D. bispinulosa*; Jovet-Ast 1950, fig. II, as *D. bispinulosa*; Bischler 1964, figs 14a-m [with reference to further illustrations]; Stephani 1985, fig. 2456, as *D. bispinulosa*; Schuster 1992, figs 26:9, 27:2, as *D. bispinulosa* Evs. s. amplo”; Lücking 1995, fig. 45; Gradstein & Ilkiu-Borges 2009, fig. 53A-C.

***Drepanolejeunea perissodonta*** (Spruce) Bischl., *Rev. Bryol. Lichénol.* 33: 73. 1964.

Bas.: *Drepanolejeunea inchoata* (Meissn.) Schiffn. 1893 var. *perissodonta* Spruce, in Gepp, *J. Linn. Soc., Bot.* 30: 340. “1894” 1895. [**Type: Dominica**]

Spruce 1895: 340, as *D. inchoata* var. *perissodonta*; Bischler 1964: 75.

**Fig.:** Bischler 1964: 75, fig. 11a-g.

***Drepanolejeunea pinnatiloba*** Schiffn., *Bot. Jahrb. Syst.* 23: 591. 1897.

*Drepanolejeunea pinnifolia* Steph., *Spec. Hep.* 5: 336. 1913.

Schäfer-Verwimp 1999: 323.

**Fig.:** Bischler 1964: 95, fig. 16a-i; Stephani 1985, fig. 2479, as *D. pinnifolia*; Bastos & Yano 2004, fig. 1;

**Note:** *Drepanolejeunea pinnifolia* Steph. [= *D. pinnatiloba*] has been excluded from the Dominican heptaica flora by Bischler (1964: 94) and subsequently by Fulford (1987: 274), citing Bischler (1964) because the record by Stephani (1913) was based on two misdetermined Elliott collections.

*Drepanolejeunea pinnifolia* Steph. 1913 = *Drepanolejeunea pinnatiloba* Schiffn. 1897 (Bischler, 1964: 92, in syn.).

[*Drepanolejeunea* “*submuricata* phenotype” R.M. Schust. (Schuster, 1992: 333)]

[*Drepanolejeunea* cf. *subulata* Steph. (Schuster, 1992: 329)]

***Drepanolejeunea submuricata*** R.M. Schust., *Nova Hedwigia* 62: 34. 1996. [**Type: Dominica**]

Schuster 1996: 34, the type.

**Fig.:** Schuster 1996, fig. 8.



***Drepanolejeunea trigonophylla*** Steph., *Hedwigia* 35: 85. 1896.

Bischler 1964: 66; Fulford 1987: 274.

**Fig.:** Bischler 1964, figs 9a-h; Stephani 1985, fig. 2486.

***Drepanolejeunea valiae*** Ast, *Rev. Bryol. Lichénol.* 18: 38, fig. III. 1949.

Schuster 1992: 335, as *D. valiae* [“*asperrima* phenotype”]; Schuster 1996: 42.

**Fig.:** Jovet-Ast 1949, fig. III; Schuster 1992, fig. 28:5-6, oil bodies; 1996, figs 9:13-17, 10.

#### DUMORTIERA Nees 1824

#### DUMORTIERACEAE

***Dumortiera hirsuta*** (Sw.) Nees, in Reinw., Blume & Nees, *Nov. Actorum Phys. Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 12: 410. 1824.

Bas.: *Marchantia hirsuta* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 145. 1788.

Stepahni 1888: 300; Spruce 1895: 369; Pearson 1922: 228.

**Fig.:** Kurz & Little 1933, fig. 15; Frye & Clark 1937: 92, figs 1-6; Hässel de Menendez 1963, figs 66-68, pl. IX, fig. 1; Hell 1969, pls. 5-8, figs 35, 38, 42, 46, 54, 57, 58; Breil 1970, figs 229-232; Vanden Berghen 1972, fig. 78; Schuster 1984, fig. 94:1-7; 1992b, figs 978, 979:7, 980:1-10; Stephani 1985, figs 2536-2537; Smith 1990, fig. 138:1-6; Paton 1999, fig. 285; Gradstein et al. 2001, fig. 75J-L; Gradstein & Costa 2003, fig. 97G-I; Wigginton 2004, fig. 19A-K; León-Yáñez *et al.* 2006: 97, col. photo; further references to illustrations in Frye & Clark 1937, Piippo 1990, and Wigginton & Grolle 1996.

***ECHINOCOLEA*** R.M. Schust. 1963 = ***LEJEUNEA*** Libert 1820

#### LEJEUNEACEAE

*Echinocolea dilatata* (A. Evans) R.M. Schust. 1980 = *Lejeunea subspathulata* Spruce 1884 (Ilkiu-Borges, 2005: 63, syn. nov.)

*Echinocolea dilatata* subsp. *antillana* R.M. Schust. 1980 = *Lejeunea subspathulata* Spruce 1884 (Ilkiu-Borges, 2005: 63, syn. nov.)

***EUOSMOLEJEUNEA*** (Spruce) Schiffn. 1893 = ***CHEILOLEJEUNEA*** (Spruce) Schiffn. 1893

#### LEJEUNEACEAE

*Euosmolejeunea clausa* (Nees et Mont.) A. Evans 1908 = *Cheilolejeunea clausa* (Nees et Mont.) R.M. Schust. 1980.

*Euosmolejeunea rigidula* (Nees et Mont.) Steph. 1914 = *Cheilolejeunea rigidula* (Nees et Mont.) R.M. Schust. 1971.

*Euosmolejeunea trifaria* (Reinw., Blume et Nees) Steph. 1888 = *Cheilolejeunea trifaria* (Reinw. *et al.*) Mizut. 1964.

#### FOSSOMBRONIA Raddi 1818

#### FOSSOMBRONIACEAE

*Fossombronia brasiliensis* Steph. 1900 = *Fossombronia porphyrorhiza* (Nees) Prosk. 1955, syn. nov. *fide* R. & B. Stotler in Gradstein & Costa (2003: 245).

***Fossombronia porphyrorhiza*** (Nees) Prosk., *Bryologist* 58: 197. 1955.

Bas.: *Jungermannia porphyrorhiza* Nees, in Martius, *Fl. Brasil.* 1: 343. 1833.

Syn.: *Fossombronia brasiliensis* Steph., *Spec. Hep.* 1: 382. 1900.

Stephani 1900: 383, as *F. brasiliensis*; Schäfer-Verwimp 1999: 323, as *F. brasiliensis*; Freire & Stotler 2007: 818, as *F. brasiliensis*.

**Fig.:** Frye & Clark 1937: 161, fig. 3, as *F. brasiliensis*; Schiffner & Arnell 1964, pl. III, figs 23-24, as *F. brasiliensis*; Breil 1970, figs 184-186, as *F. brasiliensis*; Schuster 1992a, figs 843: 16-18, 844: 1-6, 845, all as *F. brasiliensis*; Gradstein & Costa 2003, fig. 90A-B.

## FRULLANIA Raddi 1818

## FRULLANICACEAE

*Frullania arietina* Tayl. 1845 = *Frullania riojaneirensis* (Raddi) Ångstr. 1876 (Yuzawa, 1991: 252, in syn.; Schuster, 1992a: 254, in syn.) [for differentiation of *F. arietina* and *F. riojaneirensis*, see Schuster, 1992a: 259-260, with key]

***Frullania atrata*** (Sw.) Dumort., *Recueil Observ. Jungerm.*: 13. 1835.

Bas.: *Jungermannia atrata* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 144. 1788.

Spruce 1895: 333; Fulford 1987: 272; Schuster 1980a: 403; Schuster 1996: 42, mixed with *Drepanolejeunea valiae*; Uribe & Gradstein 2003: 199.

**Fig.:** Clark & Svihla 1945a, figs 1-20; Stotler 1969: 487, pl. 4, fig. 30A, 491, pl. 6, fig. 46, 493, pl. 7, fig. 48; Stephani 1985, figs 3785-3786; Yuzawa 1991, fig. 11d, spore surface only; Uribe & Gradstein 2003, fig. 1-2; Gradstein & Costa 2003, fig. 26A-C.

***Frullania breuteliana*** Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 461. 1845.

Fulford 1987: 272.

**Fig.:** Stotler 1969: 515, pl. 18, figs 160-167; Lemos-Michel 1980: 120, pl. IV:1-13; Stephani 1985, fig. 3928.

**Note:** treated as doubtful by Gradstein *et al.* (2003), but accepted by Gradstein & Costa (2003.)

***Frullania caulisequa*** (Nees) Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.* 448. 1845.

Bas.: *Jungermannia caulisequa* Nees, in Mart., *Fl. Brasil.* 1: 373. 1833.

Syn.: *Frullania parasitica* Hampe, in Lehm. & Lindenb., *Nov. Min. Cogn. Stirp. Pugillus* 7: 11. 1838.

Spruce 1895: 334; Stephani 1911: 631, as *F. parasitica*; Pagán 1942: 109, as *F. parasitica*; Clark & Svihla 1948, as *F. parasitica*; Fulford 1987: 272, as *F. caulisequa* and *F. parasitica*.

**Fig.:** Evans 1899, pl. XV, as *Frullania caroliniana*; Kurz & Little 1933, fig. 18, as *F. kunzei*; Frye & Clark 1947: 761, figs 1-6, as *F. obcordata*; Clark & Svihla 1948a, figs 1-17, as *F. gymnotis*; Breil 1970, figs 106-107, as *F. obcordata*; Lemos-Michel 1980: 134, pl. XVI:1-13, as *F. caroliniana*; 1983, figs 1-13, as *F. caroliniana*, figs 14-26, as *F. gymnotis*; Stephani 1985, fig. 3256, as *F. parasitica*, fig. 3259, as *F. amoena*, figs 3260-3261, fig. 3265, as *F. gymnotis*, figs 3266-3267, as *F. martiana*, figs 3268-3269, as *F. obcordata*, figs 3272-3273, as *F. caroliniana*; Yuzawa 1988: 443, fig. 4a-m, 445, fig. 5a-p, 446, fig. 6a-m, 448, fig. 7a-p; Yuzawa & Koike 1989: 348, fig. 4, as *F. caulisequa*, figs 5-6, as *F. gymnotis*; Schuster 1992a, figs 789:9-10, 791, as *F. obcordata*; Gradstein & Costa 2003, fig. 251-K; Gradstein & Ilkiu-Borges 2009, fig. 24G, I.

*Frullania cuencensis* Tayl., *London J. Bot.* 5: 406. 1846.

Erroneously cited for Dominica by Yuzawa (1991: 209), and subsequently by Reiner (1992: 536), the locality belongs to the Dominican Republic.

Fig.: Yuzawa 1991: 210, fig. 15; Reiner 1992, figs 1-2.

*Frullania dusenii* Steph., *Arch. Mus. Nat. Rio de Janeiro* 13: 115. 1903.

Erroneously cited for Dominica by Yuzawa (1991: 214), and subsequently by Dauphin (2005); the cited locality belongs to the Dominican Republic.

*Frullania eliottiana* Steph. 1911 = *Frullania neesii* Lindenb. 1845 (Stotler, 1969: 450, in syn.) = *Frullania kunzei* (Lehm. et Lindenb.) Lehm. et Lindenb. 1845 (Gradstein & Costa, 2003: 87, syn. nov.).

***Frullania kunzei*** (Lehm. et Lindenb.) Lehm. et Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.* 449. 1845.

Bas.: *Jungermannia kunzei* Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stirpius Pugillus* 6: 50. 1834.

Syn.: *Frullania neesii* Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.* 450. 1845.

*Frullania spatuliflora* Spruce, *J. Linn. Soc., Bot.* 30: 333, 1895. [Type: Dominica]

*Frullania eliottiana* Steph., *Spec. Hep.* 4: 527. 1911. [Type: Dominica]

Spruce 1895: 333, as *F. spatuliflora*; Stephani 1911: 525, as *F. spatuliflora*, 527, as *F. eliottiana*; Stotler 1969: 451, as *F. neesii*; Fulford 1987: 272.

**Fig.:** Spruce 1895, pl. 20, figs 1-4, as *Frullania spatuliflora*; Evans 1899, pl. XIV:1-17; Frye & Clark 1947: 759, figs 1-9; Clark & Svihla 1952, figs 1-14, as *F. magniflora* var. *wrightii*; Stotler 1969: 493, pl. 7, fig. 54, 511, pl. 16, figs 136-148, as *F. neesii*; Breil 1970, figs 108-109; Griffin 1979, pl. VIII, figs 411-414, as *F. neesii*; Lemos-Michel 1980: 124, pl. VIII:1-13, as *F. neesii*; Stephani 1985, fig. 3274, as *F. kunzei*, fig. 4031, as *F. eliottiana*, figs 4044-4045, as *F. neesii*, fig. 4052, as *F. spathuliflora*, fig. 4054, as *F. urbanii*; Gradstein & Costa 2003, fig. 27A-D; Yano & Peralta 2009, fig. 9f-j, as *F. neesii*; Gradstein & Ilkiu-Borges 2009, fig. 25F-G.

***Frullania nodulosa*** (Reinw., Blume et Nees) Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 433. 1845.

Bas.: *Jungermannia nodulosa* Reinw., Blume et Nees, *Nov. Actorum Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 12: 217. 1824.

Clark & Svihla 1948.

**Fig.:** Schiffner 1893, fig. 70B; Hattori 1980, figs 1a-h, r, 2j-o, 28-29, 41e-g; Stephani 1985, figs 3744-3745; Jones 1990: 39, fig. 3e; Kis & Pócs 1997, pl. XII:74 (trigones and oil bodies); Gradstein et al. 2001, fig. 28A-C; Gradstein & Costa 2003, fig. 28A-C; Wigginton 2004, fig. 157A-Q; Gradstein & Ilkiu-Borges 2009, fig. 26A-C; further references to additional illustrations in Piippo 1990.

*Frullania parasitica* Hampe, in Lehm. & Lindenb. 1838 = *Frullania caulisequa* (Nees) Nees 1845 (Gradstein & Costa, 2003, syn. nov.).

***Frullania riojaneirensis*** (Raddi) Ångstr., *Öfvers. Kongl. Vet.-Akad. Förh.* 33(7): 88. 1876.

Bas: *Frullanoides riojaneirensis* Raddi, *Atti Soc. Ital. Modena* 19: 37. 1822.

Syn.: *Frullania arietina* Taylor, in Gottsche, Lindenb. & Nees, *Syn. Hep.* 413. 1845.

Spruce 1895: 333; Fulford 1987: 272, both as *Frullania arietina*; Yuzawa 1991: 254.

**Fig.:** Evans 1899, pl. I:1-6, as *F. arietina*; Clark & Svihla 1945: 59, figs 1-16; Frye & Clark 1947: 779, figs 1-10; Lemos-Michel 1980: 132, pl. XV:1-11; Stephani 1985, fig. 3091, as *F. arietina*, fig. 3138, as *F. riojaneirensis*, fig. 3147, as *F. warmingiana*; Yuzawa 1991: 253, figs 2a, 5a, 6b, 7d, 8a+d, 9c-d, 10e, 11b, 37-39; (+ map 1 p. 280); Schuster 1992a, figs 815:1-3, 816-817; Gradstein et al. 2001, fig. 27A-C; Gradstein & Costa 2003, fig. 24F-H; Wigginton 2004, fig. 148A-L; Gradstein & Ilkiu-Borges 2009, fig. 26D-F.

*Frullania spatuliflora* Spruce 1895 = *Frullania neesii* Lindenb. 1845 (Stotler, 1969: 450, in syn.) = *Frullania kunzei* (Lehm. et Lindenb.) Lehm. et Lindenb. 1845 (Gradstein & Costa, 2003, syn. nov.)

***Frullania subtilissima*** (Nees et Mont.) Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 443. 1845.

Bas.: *Frullania atrata* (Sw.) Dumort. 1835 var. *subtilissima* Nees ex Mont., *Ann. Sci. Nat., Bot.*, ser. 2, 14: 333. 1840.

Fulford *et al.* 1970: 67.

**Fig.:** Stephani 1985, figs 3257-3258; Yano & Peralta 2008, fig. 5.

**Note:** *Fide* Gradstein & Hekking (1989: 209), the treatment of this taxon in Clark & Svihla (1948) is erroneous.

#### FUSCOCEPHALOZIOPSIS Fulf. 1968

#### CEPHALOZIACEAE

***Fuscocephaloziopsis pulvinata*** Fulf., *Mem. New York Bot. Garden* 11: 355. 1968.

Bas.: *Alobiella pulvinata* Steph., *Spec. Hep.* 3: 356. 1908. [**Type: Dominica**]

Stephani 1908: 356, the type of *Alobiella pulvinata*; Bonner 1953a: 97, as *Alobiella*; Fulford 1968: 357; Schuster 1969: 665, as *Alobiella*; Fulford 1987: 266; Schuster 2002: 42.

**Fig.:** Fulford 1968: 357, pl. 94, fig. 2a-e; Stephani 1985, figs 112-113, as *Alobiella*.

#### GYMNANTHE Taylor ex Lehm. 1844 = ACROBOLBUS Nees 1844

#### ACROBOLBACEAE

*Gymnanthe laxa* (Lindenb.) Gottsche 1864 = *Tylimanthus laxus* (Lindenb.) Spruce 1885.

#### HAPLOMITRIUM Nees 1833

#### HAPLOMITRIACEAE

*Haplomitrium andinum* (Spruce) R.M. Schust. 1963 = *Haplomitrium blumii* (Nees) R.M. Schust. 1963 (Bartholomew-Began, 1991: 250).

***Haplomitrium blumii*** (Nees) R.M. Schust., *J. Hattori Bot. Lab.* 26: 225. 1963.

Bas.: *Calobryum blumii* Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 507. 1846.

Syn.: *Scalia andina* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 532. 1885.

*Calobryum andinum* (Spruce) Steph., *Spec. Hep.* 1: 400. 1900.

*Haplomitrium andinum* (Spruce) R.M. Schust., *J. Hattori Bot. Lab.* 26: 225. 1963.

Spruce 1895: 364, as *Scalia andina*; Pagán 1942: 81, as *Calobryum andinum*; Fulford 1963: 22, as *Calobryum andinum*; Schuster 1966b: 56, as *Haplomitrium andinum*; Stephani 1985, in legend of fig. 1160-1161, as *Calobryum andinum*; Grolle 1993: 81; Schäfer-Verwimp 1999: 323.

**Fig.:** Schiffner 1893, fig. 35D-E, as *Calobryum blumei*; Spruce 1895, pl. 30, figs 1-6, as *Scalia andina*; Fulford 1963, fig. 1a-g, as *Calobryum andinum*; Stephani 1985, figs 1160-1162, as *Calobryum andinum*, figs 1163-1166, as *Calobryum blumii*; Bartholomew-Began 1991, figs 63-67, 326-330, as *H. andinum*, figs 56-62, 331-332, as *H. blumii*; Grolle 1993, figs 1-2; Gradstein *et al.* 2001, fig. 14A-C; further references to illustrations in Piippo 1990 and Grolle 1993.

#### HARPALEJEUNEA (Spruce) Schiffn. 1893

#### LEJEUNEACEAE

***Harpalejeunea emarginata*** Ast, *Rev. Bryol. Lichénol.* 16: 38. 1947.

Schäfer-Verwimp 1999: 323; Grolle & Reiner-Drehwald 1999: 37.

**Fig.:** Jovet-Ast 1947: 39, fig. IX.

*Harpalejeunea heterodonta* A. Evans 1903 = *Harpalejeunea tridens* (Besch. *et* Spruce 1890) Steph. 1913 (Gradstein, 1989: 346; Grolle & Reiner-Drehwald, 1999).

***Harpalejeunea molleri*** (Steph.) Grolle, *Taxon* 38: 89. 1989.Bas.: *Lejeunea molleri* Steph., *Hedwigia* 26: 3. 1887.*Harpalejeunea ovata* auct., non (Dicks.) Schiffn. 1893Fulford 1987: 274, as *H. ovata*.**Fig.:** Stephani 1887, pl. 1, fig. 2, as *Lejeunea molleri*; Frye & Clark 1947: 863, figs 1-10, as *H. ovata*; Schuster & Hattori 1954, pl. IX, figs 9-10 (oil bodies and ocelli); Stephani 1985, fig. 4278; Schuster 1980, fig. 744: 1-7, as *H. ovata* subsp. *ovata*; 1983, fig. 30 (map); Smith 1990, fig. 116:1-6, as *H. ovata*; Paton 1999, fig. 239.*Harpalejeunea ovata* auct., non (Dicks.) Schiffn. 1893 = *Harpalejeunea molleri* (Steph.) Grolle 1989 (Grolle, 1989: 89; Grolle & Reiner-Drehwald, 1999: 38).***Harpalejeunea subacuta*** A. Evans, *Bull. Torrey Bot. Club* 30: 547. 1903.

Schäfer-Verwimp 1999: 323.

**Fig.:** Evans 1903a, pl. 20, figs 1-11.***Harpalejeunea tridens*** (Besch. et Spruce) Steph., *Spec. Hep.* 5: 263. 1913.Bas.: *Lejeunea (Harpalejeunea) tridens* Besch. et Spruce, *Bull. Soc. Bot. France* 36 (Suppl.): CLXXXI. 1890 "1889".*Harpalejeunea heterodonta* A. Evans, *Bull. Torrey Bot. Club* 30: 551. 1903.Spruce 1895: 341, as *Lejeunea (Harpalejeunea) tridens*; Stephani 1913: 263; Pagán 1942: 102; Fulford 1987: 275; Schuster 1992: 325, as *H. heterodonta*; Grolle & Reiner-Drehwald 1999: 40.**Fig.:** Bescherelle & Spruce 1890, pl. 13, as *Lejeunea (Harpalejeunea) tridens*; Evans 1903a, pl. 21, figs 1-9, as *Harpalejeunea heterodonta*; Jovet-Ast 1947: 40, fig. X, as *H. heterodonta*; Stephani 1985, fig. 4241, as *H. heterodonta*, fig. 4249, as *H. praeacuta*, figs 4257-4258, as *H. tridens* (from Dominica, leg. Elliott 1681); Schuster 1992, fig. 26:1-4, 6, oil bodies only, as *H. heterodonta*; Lücking 1995: 94, fig. 49K-N, as *H. heterodonta*; Gradstein & Ilkiu-Borges 2009, fig. 57D-K.**\**Harpalejeunea uncinata*** Steph., *Hedwigia* 35: 97. 1896.

Morne Trois Pitons, epiphyllous on fern frond, 630 m, 21 May 1996, leg. Schäfer-Verwimp &amp; Verwimp 17744/C (JE).

**Fig.:** Evans 1903, pl. 20:12-24; Stephani 1985, fig. 4260; Lücking 1995, fig. 49E-H; Oliveira e Silva & Yano 1998, figs 6-10.**HERBERTA** S.F. Gray 1821 mut. Lindb. 1875 = **HERBERTUS** S.F. Gray 1821**HERBERTACEAE***Herberta armitagei* Pears. 1922 = *Herbertus pensilis* (T. Taylor) Spruce 1885 (Fulford, 1987: 266) = *Herbertus juniperoideus* (Sw.) Grolle subsp. *pensilis* (T. Taylor) Feldberg et Heinrichs 2006.*Herberta juniperina* (Sw.) Spruce 1885 = *Herbertus juniperoideus* (Sw.) Grolle 1961.**HERBERTUS** S.F. Gray 1821**HERBERTACEAE***Herbertus elliottii* (Spruce) Fulf. 1987 = *Herbertus juniperoideus* subsp. *bivittatus* (Spruce) Feldberg et Heinrichs 2006.

***Herbertus juniperoideus*** (Sw.) Grolle, *Rev. Bryol. Lichénol.* 30: 80. 1961 “*Herberta juniperoidea*”. [subsp. ***juniperoideus***]

Bas.: *Jungermannia juniperoidea* Sw., *Nova Gen. Spec. Pl. Prodr.*: 144. 1788.

Syn.: *Sendtnera juniperina* (Sw.) Nees in Gottsche, *Lindenb. & Nees, Syn. Hep.*: 239. 1845.

*Herberta juniperina* (Sw.) Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 342. 1885.

Spruce 1895: 352, as *Sendtnera juniperina*; Pagán 1939: 41; 1942: 93, both as *Herberta juniperina*; Fulford 1987: 266.

**Fig.:** Schiffner 1893, fig. 59; Fulford 1963: 93, fig. 1a-p, as *Herberta juniperoidea*; Kis & Pócs 1981, figs 1, 19-20; van Reenen 1982, figs 17-21, as *Herbertus colombianus*; Stephani 1985, figs 9377-9379, as *Schisma juniperinum*; Gradstein *et al.* 2001, fig. 26A-E; Gradstein & Costa 2003, fig. 23E-H; Feldberg & Heinrichs 2006, figs 4-5, 12A.

***Herbertus juniperoideus*** (Sw.) Grolle subsp. ***bivittatus*** (Spruce) Feldberg *et* Heinrichs, *Bot. J. Linn. Soc.* 151: 328. 2006

Bas.: *Herbertus bivittatus* Spruce, *Trans. Proc. Bot. Soc. Edinb.* 15: 343. 1885 “*Herberta bivittata*”.

Syn.: *Sendtnera elliottii* Spruce, *J. Linn. Soc., Bot.* 30: 352. 1895. [**Type: Dominica**]

*Herbertus elliottii* (Spruce) Steph., *Spec. Hep.* 4: 19. 1909.

*Schisma elliottii* (Spruce) Steph., *Spec. Hep.* 4: 19. 1909.

Spruce 1895: 352, type of *Sendtnera elliottii*; Stephani 1909: 19, as *Schisma elliottii*; Fulford 1987: 266, as *Herbertus elliottii*.

**Fig.:** Spruce 1895, pl. 25, figs 4-10, as *Sendtnera elliottii*; Fulford 1963, fig. 3a-e, as *Herberta divergens*, fig. 8 a-g, as *Herberta angustivittata*, fig. 9a-f, as *Herberta bivittata*; Lorscheitter 1973, figs 17-24, as *Herberta cf. angustivittata*; Kis & Pócs 1981, fig. 18, as *H. divergens*; Stephani 1985, fig. 9364, as *Schisma angustevittatum*, fig. 9365, as *S. bivittatum*, fig. 9371, as *S. divergens*, fig. 9373, as *S. elliottii*, from Dominica, Elliott s.n., fig. 9381, as *S. lacerifolium*, fig. 9392, as *S. simplex*; Kürschner & Parolly 1998: 69, fig. 8: 4, as *H. divergens*; Gradstein & Costa 2003, fig. 23I, as *Herbertus angustevittatus*; Feldberg & Heinrichs 2006, figs 8, 12C; Gradstein & Ilkiu-Borges 2009, fig. 16C-F, as *Herbertus bivittatus*.

***Herbertus juniperoideus*** (Sw.) Grolle subsp. ***pensilis*** (T. Taylor) Feldberg *et* Heinrichs, *Bot. J. Linn. Soc.* 151: 329. 2006.

Bas.: *Sendtnera pensilis* T. Taylor, *London J. Bot.* 5: 372. 1846.

Syn.: *Herbertus pensilis* (T. Taylor) Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 342. 1885 “*Herberta*”.

*Herberta armitagei* Pears., *J. Bot. London* 60: 224. 1922.

Pearson 1922: 224, as *Herberta armitagei* sp. nov.; Fulford 1963: 96; 1987: 266; Fulford *et al.* 1970: 63, all as *Herbertus* [or *Herberta*] *pensilis*; Feldberg & Heinrichs 2006: 329.

**Fig.:** Fulford 1963, fig. 2a-k, as *Herberta pensilis*; Cole 1983, fig. 2:4-5, fig. 6a-d, as *Herberta pensilis*; Stephani 1985, fig. 9363, as *Schisma angustifolium*, fig. 9369, as *S. commutatum*, fig. 9370, as *S. costaricense*, fig. 9375, as *S. grandifolium*, fig. 9386, as *S. pensile*, fig. 9391, as *S. setaceum*, fig. 9395, as *S. subserratum*, fig. 9396, as *S. trabeculatum*; Gradstein & Costa 2003, fig. 23A-D, as *Herbertus pensilis*; Feldberg & Heinrichs 2006, fig. 9-10, 12D-F.

*Herbertus pensilis* (T. Taylor) Spruce 1885 “*Herberta*” = *Herbertus juniperoideus* (Sw.) Grolle subsp. *pensilis* (T. Taylor) Feldberg *et* Heinrichs (2006).

## HETEROSCYPHUS Schiffn. 1910

## LOPHOCOLEACEAE

***Heteroscyphus elliottii*** (Steph.) Pagán, *Bryologist* 42: 7. 1939.

Bas.: *Chiloscyphus elliottii* Steph., *Spec. Hep.* 3: 231. 1908. [Type: Dominica]

Stephani 1908: 231, the type of *Chiloscyphus elliottii*; Pagán 1939: 7, c. n.; Fulford *et al.* 1970: 66; Fulford 1976: 487; Fulford 1987: 267.

**Fig.:** Fulford 1976: 488, pl. 142, fig. 1a-f; Stephani 1985, fig. 1855, as *Chiloscyphus elliottii*, from Dominica, leg. Elliott 1885.

## HYGROLEJEUNEA (Spruce) Schiffn. 1893 = LEJEUNEA Libert 1820

## LEJEUNEACEAE

*Hygrolejeunea cerina* (Lehm. *et* Lindenb.) Steph. 1914 = *Lejeunea cerina* (Lehm. *et* Lindenb.) Gottsche, Lindenb. *et* Nees 1845.

*Hygrolejeunea corynantha* (Spruce) Steph. 1914 = *Lejeunea corynantha* Spruce "1894" 1895 (Reiner-Drehwald, 1999: 30).

*Hygrolejeunea cuspidata* (Gottsche) Steph. 1914 = *Lepidolejeunea involuta* (Gottsche) Grolle 1984 (Reiner-Drehwald, 2006: 481, syn. nov.).

*Hygrolejeunea frangibilis* (Spruce) Steph. 1914 = *Lepidolejeunea involuta* (Gottsche) Grolle 1984 (Reiner-Drehwald, 2006: 481, syn. nov.).

*Hygrolejeunea leiantha* Spruce 1895 "1894" = *Taxilejeunea leiantha* (Spruce) Steph. 1914 (Fulford, 1987: 275).

*Hygrolejeunea matteola* (Spruce) Steph. 1914 = *Lejeunea anomala* Lindenb. *et* Gottsche 1852 (Reiner-Drehwald, 2003: 156, syn. nov.).

ISOTACHIS Mitt. *in* Hook. 1854

## BALANTIOPSISIDACEAE

***Isotachis aubertii*** (Schwaegr.) Mitt., *J. Proc. Linn. Soc., Bot.* 22: 322. 1886 "1887".

Bas.: *Jungermannia aubertii* Schwaegr., *Hist. Musc. Hep. Prodr.*: 19. 1814.

Pagán 1942: 93.

**Fig.:** Hatcher 1961, figs 259-314; Fulford 1963: 74, fig. 7a-d; Váňa 1982, figs 1-5; Stephani 1985, figs 4489-4499; Gradstein & Costa 2003, fig. 11H-J; Wigginton 2004, fig. 124A-Q.

***Isotachis erythrorhiza*** (Lehm. *et* Lindenb.) Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 338. 1885.

Bas.: *Jungermannia erythrorhiza* Lehm. *et* Lindenb., *in* Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 4: 44. 1832.

Syn.: *Isotachis subtruncata* Steph., *Spec. Hep.* 3: 662. 1909. [Type: Dominica]

Spruce 1895: 352; Stephani 1909: 662, type of *I. subtruncata*, 665, as *I. erythrorhiza*; Pearson 1922: 224; Pagán 1939: 41; 1942: 94; Hatcher 1960: 586; Fulford 1963: 68; Fulford 1987: 267.

**Fig.:** Hatcher 1961, figs 89-115; Fulford 1963, fig. 3a-e; Stephani 1985, figs 4508-4511, as *I. erythrorhiza* (4508-4509 from Dominica, leg. Armitage s.n. and leg. Elliott 1219), fig. 4532, as *I. subtruncata*, from Dominica, Elliott 1145.

*Isotachis haematodes* (Lehm. *et* Lindenb.) Gottsche 1864 = *Isotachis serrulata* (Sw.) Gottsche 1864 (Gradstein *et al.*, 1977: 400; León-Yáñez *et al.*, 2006: 47, in syn.)

***Isotachis serrulata*** (Sw.) Gottsche, *Ann. Sci. Nat., Bot.*, sér. 5, 1: 121. 1864.

Bas.: *Jungermannia serrulata* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 143. 1788.

Syn.: *Isotachis haematodes* (Lehm. *et* Lindenb.) Gottsche, *Ann. Sci. Nat., Bot.*, sér. 5, 1: 122. 1864.

Spruce 1895: 350; Stephani 1904, as *I. haematodes*; Hatcher 1960: 599, as *I. haematodes*; Fulford 1963: 71-72, as *I. serrulata* and *I. haematodes*; Fulford 1987: 267, as *I. serrulata* and *I. haematodes*.

**Fig.:** Herzog 1942a, fig. 4a-I, as *I. piliflora*, fig. 4k-s, as *I. woronowii*; Hatcher 1961, figs 315-319, 325-392, as *I. serrulata*; figs 320-324, 393-441, as *I. haematodes*, figs 578-650, as *I. madida*; Fulford 1963, fig. 4a-e, as *I. madida*, fig. 5a-e, as *I. serrulata*, fig. 6a-d, as *I. haematodes*; Cole 1983, fig. 8e-i; Stephani 1985, fig. 4500, as *I. aequifoliata*, fig. 4507, as *I. ecuadorensis*, figs 4512-4513, as *I. guadalupensis*, figs 4514-4516, as *I. haematodes*, fig. 4517, as *I. hahnii*, fig. 4529, as *I. paucidens*, fig. 4533, as *I. swartziana*, fig. 4539, as *I. urbanii*; Gradstein *et al.* 2001, fig. 17E-F.

*Isotachis serrulata* (Sw.) Gottsche 1864 var. *purpurea* (Hook.) Spruce, *J. Linn. Soc. Bot.* 3: 350. 1895.

Spruce 1895: 350.

**Note:** A specimen of this variety is mentioned by Hatcher (1960: 599) under *Isotachis haematodes*; however, the status of this variety remains unclear.

*Isotachis subtruncata* Steph. 1909 = *Isotachis erythrorhiza* (Lehm. *et* Lindenb.) Spruce 1885 (Hatcher, 1960: 585, in syn.).

*JAMESONIELLA* (Spruce) Lees 1881 = *SYZYGIELLA* ADELANTHACEAE

*Jamesoniella rubricaulis* (Nees) Grolle 1968 = *Syzygiella rubricaulis* (Nees) Steph. 1902 (see Feldberg *et al.*, 2010).

JUBULA Dumort. 1835

JUBULACEAE

*Jubula hutchinsiae* (W.J. Hook.) Dumort. subsp. *bogotensis* (Steph.) Verdoorn, *Ann. Cryptog. Exot.* 1: 215. 1928.

Bas.: *Jubula bogotensis* Steph., *Spec. Hep.* 4: 687. 1911.

Fulford 1987: 272, as *J. pennsylvanica*.

**Fig.:** Guerke 1978, figs 47-56, map: fig. 57, as *Jubula pennsylvanica* subsp. *bogotensis*; Crandall-Stotler & Guerke 1980, figs 37, 64B, as *J. pennsylvanica* subsp. *bogotensis*; Stephani 1985, fig. 3708, as *Frullania jamaicensis*, fig. 4698, as *Jubula bogotensis*.

**Note:** In accordance with Schuster (1992a: 280) and recent studies on *Jubula* by Pättsch *et al.* (2010), the record of *Jubula pennsylvanica* by Fulford (1987) is considered to belong to *J. hutchinsiae* subsp. *bogotensis*; see also distribution map in Guerke (1978).

*Jubula hutchinsiae* (W.J. Hook.) Dumort. subsp. *pennsylvanica* (Steph.) Verdoorn, *Ann. Cryptog. Exot.* 1: 215. 1928.

Fulford 1987: 272, as *Jubula pennsylvanica*.

**Fig.:** Guerke 1978, figs 38-46, map: fig. 57, as *Jubula pennsylvanica* subsp. *pennsylvanica*; Schuster 1992a, figs 776: 7-15; 820-823.

See note under *Jubula hutchinsiae* subsp. *bogotensis*.

*Jubula pennsylvanica* (Steph.) A.Evans 1905 = *Jubula hutchinsiae* (W.J.Hook.) Dumort. subsp. *pennsylvanica* (Steph.) Verdoorn 1928 (Pättsch *et al.*, 2010).



## JUNGERMANNIA L. 1753

## JUNGERMANNIACEAE

*Jungermannia callithrix* Lindenb. et Gottsche 1847 = *Solenostoma callithrix* (Lindenb. et Gottsche) Steph. 1901.

*Jungermannia dissitifolia* Steph. 1901 = *Alobiellopsis dominicensis* (Spruce) Fulf. 1968 (Grolle, 1972a: 547, syn. nov.; Váña, 1974: 197).

*Jungermannia dominicensis* Spruce 1895 = *Kymatocalyx dominicensis* (Spruce) Váña 1970.

*KANTIA* S.F. Gray 1821 (*KANTIUS*) mut. Lindb. 1875 =

CALYPOGEIA Raddi 1818

## CALYPOGEIACEAE

*Kantia portoricensis* Steph. 1888 = *Calypogeia peruviana* Nees et Mont. 1838 (Bischler, 1962b; Fulford, 1968).

## KURZIA G. Martens 1870

## LEPIDOZIACEAE

***Kurzia capillaris*** (Sw.) Grolle, *Rev. Bryol. Lichénol.* 32: 173. 1964 “1963” subsp. ***capillaris*** var. ***capillaris***.

Bas.: *Jungermannia capillaris* Sw., *Nova Gen. Spec. Pl. Prodr.*: 144. 1788.

Syn.: *Microlepidozia capillaris* (Sw.) Fulf., *Brittonia* 14: 122. 1962.

Fulford 1966: 226, as *Microlepidozia capillaris*; 1987: 267.

**Fig.:** Fulford 1962, figs 59-61, as *Microlepidozia capillaris*; 1966: 227, pl. 49, figs 1a-m, as *M. capillaris*; Stephani 1985, figs 4999-5000, as *Lepidozia capillaris*; Gradstein *et al.* 2001, fig. 58J-L; Gradstein & Costa 2003, fig. 71A-C.

***Kurzia capillaris*** (Sw.) Grolle 1964 “1963” subsp. ***capillaris*** var. ***verrucosa*** (Steph.) Pócs, in Váña, *Proc. Third Meeting Bryol. C. & E. Europe* 111. 1984.

Bas.: *Lepidozia verrucosa* Steph., *Hedwigia* 24: 167. 1885.

*Microlepidozia verrucosa* (Steph.) Fulf., *Contr. Sci.Nat. Hist. Mus. Los Angeles County* 26: 2. 1958.

*Kurzia verrucosa* (Steph.) Grolle, *Rev. Bryol. Lichénol.* 32: 173. 1964 “1963”.

Stephani 1909: 564, as *Lepidozia verrucosa*; Arnell 1956: 274, as *L. verrucosa*; Fulford 1966: 228, as *Microlepidozia verrucosa*; Stephani 1985, in legend of fig. 5017, as *L. verrucosa*.

**Fig.:** Stephani 1885, pl. IV, figs 1-11, as *Lepidozia verrucosa*; 1916, fig. 168c, as *L. herzogiana*; 1985, figs 5017-5019, as *L. verrucosa*; Fulford 1966: 227, pl. 49, 2a-r, as *Microlepidozia verrucosa*; Griffin 1979, pl. VIII, figs 387-389, as *M. verrucosa*; Yano & Peralta 2009, fig. 10p, as *Kurzia capillaris*.

*Kurzia verrucosa* (Steph.) Grolle “1963” 1964 = *Kurzia capillaris* (Sw.) Grolle 1964 “1963” subsp. *capillaris* var. *verrucosa* (Steph.) Pócs 1984.

## KYMATOCALYX Herzog 1949

## CEPHALOZIELLACEAE

***Kymatocalyx dominicensis*** (Spruce) Váña, *Österr. Bot. Zeitschr.* 118: 575. 1970.

Bas.: *Jungermannia dominicensis* Spruce, *J. Linn. Soc. Bot.* 30: 363. 1895. [**Type: Dominica**]

Spruce 1895: 363, type of *Jungermannia dominicensis*; Stephani 1905: 518, as *Jungermannia*; Pagán 1939: 9, as *Jungermannia*; Váña 1970: 578; Váña 1974: 198; Fulford 1976: 396; Fulford 1987: 267; Gradstein 1993: 81, 83; Gradstein & Váña 1999: 163; Schuster 2002: 166.

**Fig.:** Spruce 1895, pl. 29, figs 1-3, as *Jungermannia dominicensis*; Herzog 1949, fig. 7, as *K. stoloniferus*; Schiffner & Arnell 1964, pl. IV, figs 38-39, as

*Solenostoma apertum*; Grolle 1967, fig. 1e, as *Kymatocalyx stoloniferus* (seta cross section); Vána 1970, figs 1-15; Fulford 1976: 395, pl. 108, fig. 1 a-e, as *K. stoloniferus*; Stephani 1985, fig. 4773, as *Jungermannia cubensis*, fig. 4786, as *J. dominicensis*; Gradstein & Florschütz-de Waard 1989, fig. 3, type of *Stenorhipis grollei*; Oliveira e Silva & Yano 1998, figs 1-5; Gradstein & Vána 1999, fig. 3; Gradstein *et al.* 2001, fig. 22A-C; Schuster 2002, figs 272-273; Gradstein & Costa 2003, fig. 17G-I; Gradstein & Ilkiu-Borges 2009, fig. 12D-E.

**LEIOMITRA** Lindb. 1875 = **TRICHOCOLEA** TRICHOCOLEACEAE

*Leiomitra flaccida* Spruce 1885 = *Trichocolea flaccida* (Spruce) Jack *et* Steph. 1892.

**LEIOSCYPHUS** Mitt. 1854 = **LEPTOSCYPHUS** Mitt. 1851

LOPHOCOLEACEAE

*Leioscyphus gibbosus* (Tayl.) Duss 1903 = *Leptoscyphus gibbosus* (Tayl.) Mitt. 1851.

*Leioscyphus ovatus* Spruce 1895 = *Leptoscyphus ovatus* (Spruce) Grolle 1962.

**LEJEUNEA** Libert 1820

LEJEUNEACEAE

***Lejeunea adpressa*** Nees, *in* Gottsche, Lindenb. & Nees, *Syn. Hep.*: 380. 1845.

*Syn.*: *Lejeunea caespitosa* sensu Schuster 1980.

Eggers 2004: 20, as *L. caespitosa*; Reiner-Drehwald 2009.

**Fig.**: Evans 1918, fig. 3, as *Lejeunea longifissa*; Frye & Clark 1947: 801, figs 1-6, as *L. longifissa*; Schuster 1957a, figs 42-44, as *L. longifissa*; 1980, figs 709-710, as *L. caespitosa*; Stephani 1985, fig. 2576, as *L. adpressa*, fig. 2580, as *L. artocarp*, figs 2582-2583, as *L. carolensis*, figs 2584-2585, as *L. cauapunensis*, fig. 2590, as *L. coffeae*, fig. 2598, as *L. drymophila*; fig. 2621, as *L. limbata*; fig. 2622, as *L. longifissa*; fig. 2633, as *L. orbicularis*; fig. 2650, as *Eulejeunea setistipa*; Oliveira e Silva & Yano 1998, figs 11-15, as *L. caespitosa*; Ilkiu-Borges & Lisboa 2002, fig. 1, as *L. caespitosa*; Ilkiu-Borges 2000, fig. 31, as *L. caespitosa*; Gradstein & Costa 2003, fig. 52I-K, as *L. caespitosa*; Reiner-Drehwald 2009a, fig. 62A-D, as *L. longifissa*; 2009, figs 1-29.

***Lejeunea anomala*** Lindenb. *et* Gottsche, *Linnaea* 24: 636. 1852.

*Syn.*: *Lejeunea matteola* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 240. 1884 “*Hygro-Lejeunea*”.

*Hygrolejeunea matteola* (Spruce) Steph., *Spec. Hep.* 5: 537. 1914.

Spruce 1895: 345, with “?”, as *Hygro-Lejeunea matteola*; Fulford 1987: 275, citing Spruce 1895, as *Hygrolejeunea matteola*.

**Fig.**: Stephani 1985, fig. 4351, as *Hygrolejeunea matteola*, figs 1555, “1556”, as *Ceratolejeunea anomala*.

*Lejeunea (Drepanolejeunea) anoplantha* Spruce 1884 = *Drepanolejeunea anoplantha* (Spruce) Steph. 1913.

***Lejeunea aphanes*** Spruce, *J. Bot.* 19: 36. 1881.

*Lejeunea filipes* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 275. 1884 “*Eu-Lejeunea*”.

Schäfer-Verwimp 1999: 323, as *Lejeunea filipes*.

**Fig.**: Schuster 1980a, figs 716-717, 719:15-17, as *Lejeunea autoica* (= *syn. nov. fide* Reiner-Drehwald 2000: 86, with “?”); Stephani 1985, fig. 2600, as *L. filipes*, fig. 7714, as *Microlejeunea aphanes*; Reiner-Drehwald 2000, fig. 2, as *Lejeunea filipes*; 2009a, fig. 60D-F, as *L. filipes*; Bastos & Yano 2004, fig. 4, as *L. filipes*.

***Lejeunea asperima*** Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 160. 1884.

Ilkiu-Borges 2005: 56.

**Fig.:** Kachroo 1967, figs 2, 3, as *Cryptolejeunea*; Ilkiu-Borges 2000, fig. 28, as *Echinocolea*; Gradstein & Costa 2003, fig. 50A-E, as *Echinocolea*; Ilkiu-Borges 2005, fig. 5; Zartman & Ilkiu-Borges 2007, pl. 11:F-G; Reiner-Drehwald 2009a, fig. 58A-G.

***Lejeunea asprella*** Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 175. 1884.

Ilkiu-Borges 2005: 57.

**Fig.:** Ilkiu-Borges 2005, fig. 6.

***Lejeunea bermudiana*** (A. Evans) R.M. Schust., *Hepat. Anthoc. N. Amer.* 4: 1105. 1980.

Bas.: *Crossotolejeunea bermudiana* A. Evans, *Bull. Torrey Bot Club* 33: 132. 1906.

Schäfer-Verwimp & Reiner-Drehwald 2009: 366.

**Fig.:** Kurz & Little 1933, fig. 60, as *Crossotolejeunea*; Evans 1906, pl. 6, as *Crossotolejeunea*; Frye & Clark 1947: 846, figs 1-11, as *Crossotolejeunea*; Breil 1970, figs 156-157, as *Crossotolejeunea*; Schuster 1980, figs 686:8, 729-732; Reiner-Drehwald & Goda 2000, fig. 2.

***Lejeunea boryana*** Mont., *Ann. Sci. Nat., Bot. sér. 2*, 9: 47. 1838. [**Type: Dominica**]

Syn.: *Crossotolejeunea boryana* (Mont.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 127. 1895.

Montagne 1838: 47; Gottsche *et al.* 1845: 341; Stephani 1890: 70 (as *Crossoto-Lejeunea boryana*); Fulford 1987: 273, as *Crossotolejeunea boryana*; Reiner-Drehwald & Goda 2000: 9, 12.

**Fig.:** Gottsche & Rabenhorst 1855-1879 (Hep. Europ. [Exs.] n° 554 as *Lejeunea boryana* and *L. funckiana* [not seen – cited after Reiner-Drehwald & Goda 2000: 13]; Griffin 1979, pl. X, fig. 464-466, as *Crossotolejeunea boryana*; Grolle 1988, fig. 2g-h; Ilkiu-Borges 2000, fig. 22, as *Crossotolejeunea boryana*; Reiner-Drehwald & Goda 2000, figs 3, 20A-B; Gradstein *et al.* 2001, fig. 43A-E, as *Crossotolejeunea boryana*; Gradstein & Costa 2003, fig. 53A-E; Zartman & Ilkiu-Borges 2007, pl. 8C-D; Reiner-Drehwald 2009a, fig. 58H-N.

*Lejeunea (Ceratolejeunea) brevinervis* Spruce 1895 = *Ceratolejeunea brevinervis* (Spruce) A. Evans 1905.

*Lejeunea caespitosa* sensu Schuster 1980 = *Lejeunea adpressa* Nees 1845 (Reiner-Drehwald, 2009).

***Lejeunea cerina*** (Lehm. et Lindenb.) Gottsche, Lindenb. et Nees, *Syn. Hep.*: 391. 1845.

Bas.: *Jungermannia cerina* Lehm. et Lindenb., in Lehmann, *Nov. Min. Cogn. Stirp. Pugillus* 5: 16. 1833.

Syn.: *Hygrolejeunea cerina* (Lehm. et Lindenb.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 125. 1893.

*Lejeunea subsimplex* Nees et Mont., in Mont., *Ann. Sci. Nat., Bot.*, sér. 2, 5: 264. 1843. [**Type: Dominica**]

*Macrolejeunea subsimplex* (Nees et Mont.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 125. 1893.

*Macrolejeunea cerina* (Lehm. et Lindenb.) Gradst., *Bryologist* 92: 345. 1989.

Montagne 1843: 264, type of *Lejeunea subsimplex*; Spruce 1895: 343, as *L. cerina* and as *L. subsimplex*; Pagán 1942: 103; Fulford 1987: 275, both as *Macrolejeunea subsimplex*; Grolle 1987: 440; Grolle 1988: 174.

**Fig.:** Evans 1935, fig. 6H, as *Hygrolejeunea cerina*; Stephani 1985, figs 4366-4367, as *Hygrolejeunea cerina*, figs 6243-6244, as *Macrolejeunea subsimplex*; Thiers 1986, fig. 4b, as *M. subsimplex*; Ilkiu-Borges *et al.* 2009, fig. 3; Reiner-Drehwald 2009a, fig. 59E-G.

*Lejeunea (Odonto-Lejeunea) chaerophylla* Spruce 1884 var. *paroica* Spruce “1894” 1895 = *Odontolejeunea lunulata* (F. Web.) Schifffn. 1893 ( Fulford, 1987: 276; Teeuwen, 1989: 15).

*Lejeunea (Euosmolejeunea) clausa* Nees et Mont. in Mont. 1840 = *Cheilolejeunea clausa* (Nees et Mont.) R.M. Schust. 1980.

***Lejeunea controversa*** Gottsche, in Gottsche & Rabenh., *Hep. Eur.* [Exsicc.] n. 556. “1872” 1873.

Syn.: *Crossotolejeunea controversa* (Gottsche) Steph., *Spec. Hep.* 5: 230. 1913.

Grolle 1988: 175; Reiner-Drehwald & Goda 2000: 17, referring to Grolle 1988.

**Fig.:** Gottsche & Rabenhorst 1855-1879 (*Hep. Europ.* [Exs.] n° 556 – not seen, cited after Reiner-Drehwald & Goda 2000: 19; Herzog 1951, fig. 9, as *Crossotolejeunea lindeniana* var. *connivens*, fig. 10, as *C. obtusiuscula*; Arnell 1962, fig. 3, as *C. lindeniana*; Winkler 1976, fig. 5a-c, as *C. angulata*; Grolle 1988a: 173, fig. 2b-f; Ilkiu-Borges 2000, fig. 23, as *C. controversa*; Reiner-Drehwald & Goda 2000, figs 5, 6, 20C; Zartman & Ilkiu-Borges 2007, pl. 17F-G; Reiner-Drehwald 2009a, fig. 60A-C.

***Lejeunea corynantha*** Spruce, *J. Linn. Soc., Bot.* 30: 344. “1894” 1895. [**Type: Dominica**]

Syn.: *Hygrolejeunea corynantha* (Spruce) Steph., *Spec. Hep.* 5: 533. 1914.

Spruce 1895: 344, the type; Stephani 1914: 519, 533, as *Hygrolejeunea*; Fulford 1987: 275, as *Hygrolejeunea*; Reiner-Drehwald & Schäfer-Verwimp 2008.

**Fig.:** Spruce 1895, pl. 22, figs 4-9; Stephani 1985, fig. 4339, as *Hygrolejeunea*, from Dominica, leg. Elliott; Reiner-Drehwald & Schäfer-Verwimp 2008, fig. 4.

*Lejeunea cuspidata* Gottsche 1845 = *Lepidolejeunea involuta* (Gottsche) Grolle 1984 (Reiner-Drehwald, 2006: 481, syn. nov.).

*Lejeunea decora* Tayl. 1846 = *Prionolejeunea decora* (Tayl.) Steph. 1913 (Grolle, 1991: 192).

*Lejeunea dominicensis* Nees & Mont. 1843 = *Lepidolejeunea involuta* (Gottsche) Grolle 1984 (Reiner-Drehwald, 2006: 481, syn. nov.).

*Lejeunea duriuscula* Nees 1845 = *Cheilolejeunea rigidula* (Nees et Mont.) R.M. Schust. 1971 (Schuster, 1980a: 893).

*Lejeunea elliottii* Spruce 1895 = *Lejeunea sporadica* Besch. et Spruce 1890 (Schäfer-Verwimp & Reiner-Drehwald, 2009, syn. nov.).

*Lejeunea (Inflatolejeunea) erostrata* R.M. Schust., *Bull. Torr. Bot. Club* 97(6): 338. 1970, *nom. inval.*

*Lejeunea filiformis* (Sw.) Nees 1839 = *Omphalanthus filiformis* (Sw.) Nees 1845.

*Lejeunea filipes* Spruce 1884 “*Eu-Lejeunea*” = *Lejeunea aphanes* Spruce 1881 (Schäfer-Verwimp & Reiner-Drehwald, 2009, syn. nov.).

***Lejeunea flava*** (Sw.) Nees, *Naturg. Europ. Leberm.* 3: 277. 1838.

Bas.: *Jungermannia flava* Sw., *Prodr. Fl. Ind. Occid.*: 144. 1788.

Spruce 1895: 347; Fulford 1987: 275; Schäfer-Verwimp 1999: 321, admixed to *Cyclolejeunea chitonia*.

**Fig.:** Evans 1902, pl. 20, figs 14-26, as *Lejeunea americana*; 1935, fig. 6L, 8A-G; Kurz & Little 1933, fig. 38; Frye & Clark 1947: 794, figs 1-7; Schuster &

Hattori 1954, pl. II, figs 22-23 (oil bodies), pl. X, figs 1-2 (oil bodies); Schuster 1957, figs 25-26; 1980a, figs 685:5, 688:5-7, 689-690; Mizutani 1961, fig. XX:1-6; Breil 1970, figs 164-165; Vanden Berghen 1972, fig. 47; Stephani 1985, fig. 2577, as *Eulejeunea albida*, fig. 2605, as *Eulejeunea glaucophylla*, fig. 2661, as *E. symphoreta*, fig. 8887, as *Rectolejeunea gaudichaudii*; Gradstein 1989: 332, fig. 4; Smith 1990, fig. 118: 9-15; Lücking 1995: 99, fig. 52; Ilkiu-Borges 2000, fig. 32; Reiner-Drehwald 2000, figs 3, 4; 2003, fig. 52F-H; Zhu & So 2001, fig. 3h; Ilkiu-Borges & Lisboa 2002, fig. 2; Gradstein *et al.* 2001, fig. 47F-H; Wigginton 2004, fig. 224A-H, as *L. flava* subsp. *flava*; Zartman & Ilkiu-Borges 2007, pl. 14D-F; Yano & Peralta 2009, fig. 10i-l; Reiner-Drehwald 2009a, fig. 61A-E.

*Lejeunea frangibilis* Spruce, in Gepp, "1894" 1895 = *Lepidolejeunea involuta* (Gottsche) Grolle 1984 (Reiner-Drehwald, 2006: 481, syn. nov.).

***Lejeunea glaucescens*** Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 378. 1845.

Fulford 1987: 275.

**Fig.:** Kurz & Little 1933, fig. 40; Frye & Clark 1947: 803, figs 1-12; Schuster & Hattori 1954, pl. XI, figs 4-5 (oil bodies); Breil 1970, fig. 166; Schuster 1980a, figs 685:4, 686:3, 688:1-2, 702-703; Stephani 1985, fig. 2604.

\****Lejeunea huctumalcensis*** Lindenb. *et* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 762. 1847.

Syn.: *Ceratolejeunea dussiana* (Steph.) G. Dauphin, *Fl. Neotr. Monogr.* 90: 54. 2003.

Roseau Valley, between Laudat and Valley of Desolation, epiphyllous on fern fronds in rain forest, admixt to *Prionolejeunea aemula* and *Prionolejeunea denticulata*, 700 m, 24 May 1996, leg. Schäfer-Verwimp & Verwimp 17859/C, det A. L. Ilkiu-Borges (under 17859/B, as *Ceratolejeunea dussiana*) (JE); -, between Laudat and Middleham Falls, epiphyllous in rain forest, 520 m, 20 May 1996, leg. Schäfer-Verwimp & Verwimp 17685.

**Fig.:** Stephani 1985, fig. 1578, as *Ceratolejeunea dentato-cornuta*, fig. 7925, as *Otigoniolejeunea acanthotis*, fig. 7933, as *O. schizotis*, figs 8406-8407, as *Pycnolejeunea dussiana*; Ilkiu-Borges 2000, fig. 48, as *Trachylejeunea* sp.; Dauphin 2003, fig. 25, as *Ceratolejeunea dussiana*; Reiner-Drehwald & Ilkiu-Borges 2007, figs 1-3, with references to further illustrations; Gradstein & Ilkiu-Borges 2009, fig. 33C-G, as *Ceratolejeunea dussiana*.

*Lejeunea (Drepanolejeunea) inchoata* (Meissn. *ex* Lehm. *et* Lindenb.) Gottsche, Lindenb. *et* Nees 1845 = *Drepanolejeunea inchoata* (Meissn.) Schiffn. 1893.

*Lejeunea inchoata* (Meissn. *ex* Lehm. *et* Lindenb.) Gottsche, Lindenb. *et* Nees 1845 var. *perissodonta* Spruce "1894" 1895 = *Drepanolejeunea perissodonta* (Spruce) Bischl. 1964 (Bischler, 1964: 73; Fulford, 1987: 274).

*Lejeunea infundibulata* Spruce 1884 ("Drepano-*Lejeunea*") = *Drepanolejeunea infundibulata* (Spruce) Steph. 1913 [*non* Evans, *Bull. Torrey Bot. Club* 30: 35. 1903].

*Lejeunea (Strepsilejeunea) involuta* Gottsche in Gottsche, Lindenb. & Nees 1845 = *Lepidolejeunea involuta* (Gottsche) Grolle 1984.

*Lejeunea (Strepsilejeunea) kunthiana* Lindenb. 1845 = *Cheilolejeunea acutangula* (Nees) Grolle 1979 (Grolle, 1979: 173, syn. nov.).

*Lejeunea (Prionolejeunea) laciniato-alata* Spruce *ex* Gepp, *J. Linn. Soc., Bot.* 30: 338. "1894" 1895, *nom. inval.* (Art. 33.1) = *Prionolejeunea laciniato-alata* (Spruce) Fulford, *Mem. New York Bot. Gard.* 45: 276. 1987, *nom. inval.*

***Lejeunea laetevirens*** Nees et Mont., in Sagra, *Hist. Phys. Cuba, Bot. Pl. Cell.*: 469. 1842.

Syn.: *Lejeunea lucens* Tayl., *London J. Bot.* 5: 399. 1846.

Stephani 1890: 87 (as *Eu-Lejeunea laetevirens*); Spruce 1895: 348, as *L. lucens*; Fulford 1987: 275; Schuster 1962: 15; Schuster 1980a: 1096; Lücking 1995: 100; Schäfer-Verwimp 1999: 324, admixed to *Microlejeunea acutifolia*.

**Fig.:** Evans 1902, pl. 21, figs 1-10, as *Microlejeunea lucens*; Kurz & Little 1933, fig. 35, as *M. laetevirens*; Frye & Clark 1947: 818, figs 1-9, as *M. laetevirens*; Schuster & Hattori 1954, pl. XII, figs 2-4 (oil bodies, as *M. laetevirens*); Schuster 1962: 14, figs LIII, LIV, LV; 1966a, figs 64: 6-11, 66:9; 1980a, figs 727-728; 1984: 889, fig. 35:13 (elater); Breil 1970, figs 162-163; Stephani 1985, fig. 2605, as *Eulejeunea glaucophylla*, fig. 2616, as *Eulejeunea laetevirens*, figs 7729-7731, as *Microlejeunea laetevirens*, fig. 7740, as *M. glaucophylla*; Lücking 1995: 100, Abb. 53; Reiner-Drehwald 2000, fig. 7; Gradstein *et al.* 2001, fig. 47O-Q; Gradstein & Costa 2003, fig. 52O-Q; Reiner-Drehwald 2009a, fig. 61F-H.

*Lejeunea (Hygrolejeunea) leiantha* Spruce 1895 “1894” = *Taxilejeunea leiantha* (Spruce) Steph. 1914 “1913” (Stephani, 1914: 470; Fulford, 1987: 275).

*Lejeunea lichenicola* Spruce 1884 (“*Drepano-Lejeunea*”) = *Drepanolejeunea lichenicola* (Spruce) Steph. 1913.

*Lejeunea lineata* (Lehm. et Lindenb.) Nees 1838 = *Cheilolejeunea lineata* (Lehm. et Lindenb.) Steph. 1890.

*Lejeunea (Bryo-Lejeunea) longispica* Spruce 1884 = *Bryopteris filicina* (Sw.) Nees 1845 (Stotler & Crandall-Stotler, 1974: 131, as *B. trinitensis*; Gradstein, 1994: 98, syn. nov.).

*Lejeunea lucens* Tayl. 1846 = *Lejeunea laetevirens* Nees et Mont. 1845 (Evans, 1908b: 68, syn. nov. of *Microlejeunea laete-virens*).

*Lejeunea lunulata* (Web.) Nees 1845 = *Odontolejeunea lunulata* (Web.) Schiffn. 1893.

*Lejeunea matteola* Spruce 1884 “*Hygro-Lejeunea*” = *Lejeunea anomala* Lindenb. et Gottsche 1852 (Reiner-Drehwald, 2003: 156, syn. nov.).

***Lejeunea paucidentata*** (Steph.) Grolle, *J. Hattori Bot. Lab.* 69: 191. 1991.

Bas.: *Crossotolejeunea paucidentata* Steph., *Hedwigia* 35: 76. 1896.

Syn.: *Dactylolejeunea acanthifolia* R.M. Schust., *Bull. Torrey Bot. Club* 97: 343. 1971 “1970”. [**Type: Dominica**]

Schuster 1971, as *Dactylolejeunea acanthifolia*; Thiers 1986: 270, as *D. acanthifolia*; Fulford 1987: 274, as *D. acanthifolia*; Schäfer-Verwimp 1999: 321, as *D. acanthifolia*, 324, as *Lejeunea paucidentata*; Reiner-Drehwald & Goda 2000: 41f.

**Fig.:** Stephani 1985, fig. 2464, as *Drepanolejeunea eggersiana*; Schuster 1971, fig. 3, as *Dactylolejeunea acanthifolia*; Reiner-Drehwald & Goda 2000, figs 16-18; Gradstein *et al.* 2001, fig. 44H-I, as *D. acanthifolia*.

*Lejeunea (Diplasiolejeunea) pellucida* (Meissn. ex Spreng.) Gottsche, Lindenb. et Nees 1845 = *Diplasiolejeunea pellucida* (Meissn. ex Spreng.) Schiffn. 1895.

***Lejeunea phyllobola*** Nees et Mont. ex Mont., in Sagra, *Hist. Phys. Cuba Bot. Pl. Cell.*: 471. 1842

Syn.: *Rectolejeunea phyllobola* (Nees et Mont.) Evans, *Bull. Torrey Bot. Club* 33: 15. 1906.

Fulford 1987: 276, as *Rectolejeunea phyllobola*.

**Fig.:** Reiner-Drehwald 2000, figs 10-11.

**Note:** Reiner-Drehwald (2000: 103ff.) considers *L. phyllobola* Nees & Mont. as distinct from *L. phyllobola* sensu Evans (1902, as *Cheilolejeunea phyllobola*) as well as sensu Schuster (1980, as *Rectolejeunea phyllobola*). “... las plantas autoicas descritas por Evans

(1902) y Schuster (1980, como *Rectolejeunea phyllobola*) no representan *Lejeunea phyllobola*; la identidad de estas plantas no está aclarada por el momento.” (Reiner-Drehwald, 2000: 107).

*Lejeunea pililoba* Spruce 1895 “1894” = *Lejeunea trinitensis* Lindenb. in Gottsche, Lindenb. & Nees 1845 (Grolle, 1981: 90).

***Lejeunea pulverulenta*** (Gottsche ex Steph.) M.E.Reiner, *Cryptogamie, Bryologie* 26(1): 60. 2005.

Bas.: *Taxilejeunea pulverulenta* Gottsche ex Steph., *Spec. Hep.* 5: 477. 1914 “1913”.  
Fulford 1987: 277, as *Taxilejeunea*.

**Fig.:** Stephani 1985, figs 10055-57, as *Taxilejeunea*; Reiner-Drehwald 2005, figs 1-2.

*Lejeunea (Microlejeunea) ruthii* subsp. *jamaicensis* R.M. Schust., *J. Hattori Bot. Lab.* 72: 269. 1992, *nom. inval.*

*Lejeunea (Ceratolejeunea) spinosa* Gottsche in Gottsche, Lindenb. & Nees 1845 = *Ceratolejeunea spinosa* (Gottsche) Schiffn. 1897.

***Lejeunea sporadica*** Besch. et Spruce, *Bull. Soc. Bot. France* 36 (Suppl.): CLXXX. “1889” 1890.

Syn.: *Lejeunea elliottii* Spruce, *J. Linn. Soc. Bot.* 30: 346. 1895.

Reiner-Drehwald & Goda 2000: 23, as *L. elliottii*;

**Fig.:** Spruce 1895, pl. 23, figs 1-3, 5, as *L. elliottii*; Schiffner 1893, fig. 69C, as *Trachylejeunea prionocalyx*; 1897, pl. XV, figs 8-12, as *T. prionocalyx*; Stephani 1985, fig. 4252, as *Harpalejeunea sporadica*; Reiner-Drehwald & Goda 2000, figs 9, 20D, as *L. elliottii*; Bastos & Yano 2004, figs 2-3, as *L. elliottii*.

*Lejeunea squamata* (Willd. ex Web.) Nees 1845 = *Stictolejeunea squamata* (Willd. ex Web.) Schiffn. 1893 (Gradstein, 1994: 144, in syn.).

*Lejeunea squamata* (Willd. ex Web.) Nees var. *squamata* (“*willdenowia* Gott.”) f. *α ocellulata* (Nees et Mont.) Gottsche, Lindenb. et Nees 1845 = *Stictolejeunea squamata* (Willd. ex Web.) Schiffn. 1893 (Gradstein, 1985: 204; Gradstein, 1994: 144).

*Lejeunea subsimplex* Nees et Mont., in Mont. 1843 = *Lejeunea cerina* (Lehm. et Lindenb.) Gottsche, Lindenb. et Nees 1845 (Grolle, 1987: 440, syn. nov.; Grolle, 1988: 174).

***Lejeunea subspathulata*** Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 173. 1884.

Syn.: *Trachylejeunea dilatata* A. Evans, *Bull. Torrey Bot. Club* 35: 372. 1908. [**Paratype: Dominica**]

*Prionolejeunea glauca* Steph., *Spec. Hep.* 5: 219. 1913. [**Type: Dominica**]

*Echinocolea dilatata* (A. Evans) R.M. Schust., *Phytologia* 45: 426. 1980. [**Paratype: Dominica**]

*Echinocolea dilatata* subsp. *antillana* R.M. Schust., *Phytologia* 45(5): 426. 1980. [**Type: Dominica**]

*Prionolejeunea immersa* Steph., *Spec. Hep.* 5: 220. 1913. [**Type: Dominica**]

Evans 1908: 373, paratype of *Trachylejeunea dilatata*; Stephani 1913: 303, as *T. dilatata*; 220, as *Prionolejeunea glauca*; 221, as *P. immersa*; Jovet-Ast 1947: 44, as *Trachylejeunea dilatata*; 1948: 34, as *T. dilatata*; Fulford 1987: 276, as *Prionolejeunea glauca* and *P. immersa*; 277, as *Trachylejeunea dilatata*; Schuster 1992: 315, as *Echinocolea dilatata*; Lücking 1995: 90, as *E. dilatata*; Ilkiu-Borges 2005.

**Fig.:** Evans 1908, pl. 26, figs 1-13, as *Trachylejeunea dilatata*; Stephani 1985, fig. 8168, as *Prionolejeunea glauca* (from Dominica, Elliott 1701), fig. 8170, as *P. immersa* (from Dominica, Elliott 1702), fig. 10252, as *Trachylejeunea dilatata*,

partly from Dominica; Schuster 1992, fig. 23: 1-14, as *Echinocolea dilatata*; Lücking 1995: 91, fig. 47; Ilkiu-Borges 2005, figs 9-10, map: fig. 11.

*Lejeunea (Taxilejeunea) sulphurea* (Lehm. et Lindenb.) Spruce 1885 = *Taxilejeunea sulphurea* (Lehm. et Lindenb.) Schiffn. 1893.

***Lejeunea tapajosensis*** Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 223. 1884. “*Taxi-Lejeunea*”.

Schäfer-Verwimp 1999: 324.

**Fig.:** Stephani 1985, fig. 10124, as *Taxilejeunea tapajosensis*; Reiner-Drehwald 2000: 119, fig. 17; 2009a, fig. 63G-J; Ilkiu-Borges 2000, fig. 33; Ilkiu-Borges & Lisboa 2002, fig. 3.

*Lejeunea trachyodes* Spruce “1894” 1895 = *Prionolejeunea trachyodes* (Spruce) Steph. 1913.

*Lejeunea (Harpalejeunea) tridens* Besch. et Spruce, *Bull. Soc. Bot. France* 36 (Suppl.): CLXXXI [= 181] 1890 “1889” = *Harpalejeunea tridens* (Besch. et Spruce) Steph. 1913.

*Lejeunea trifaria* (Reinw., Blume et Nees) Gottsche, Lindenb. et Nees 1845 = *Cheilolejeunea trifaria* (Reinw., Blume et Nees) Mizut. 1964.

***Lejeunea trinitensis*** Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 381. 1845. Syn.: *Lejeunea pililoba* Spruce, *J. Linn. Soc., Bot.* 30: 346. 1895 “1894”. [**Type: Dominica**]

*Cheilolejeunea pililoba* (Spruce) A. Evans, *Bull. Torrey Bot. Club* 8: 147. 1902.

*Stylolejeunea pililoba* (Spruce) A. Evans, *Bryologist* 43: 3. 1940.

*Rectolejeunea pililoba* (Spruce) R.M. Schust., *Hepat. Anthoc. N. Amer.* 4: 1153. 1980.

*Stylolejeunea trinitensis* (Lindenb.) Fulf., *Mem. New York Bot. Gard.* 45: 277. 1987.

Spruce 1895: 347, the type of *Lejeunea (Eulejeunea) pililoba*; Stephani 1914: 661, as *Cheilolejeunea pililoba*; Stephani 1915: 751, as *Lejeunea pililoba*; Pagán 1939: 72, as *Lejeunea pililoba*; Evans 1940: 3, as *Stylolejeunea pililoba*; Schuster 1962: 78, as *Lejeunea pililoba*; 1980: 1155, as *Rectolejeunea pililoba*; Grolle 1981: 90; Stephani 1985, legend of fig. 2635, as *Eulejeunea pililoba*; Fulford 1987: 277, as *Stylolejeunea trinitensis*.

**Fig.:** Spruce 1895, pl. 23, figs 6-8, as *Lejeunea (Eulejeunea) pililoba*; Frye & Clark 1947: 861, figs 1-3, as *Stylolejeunea pililoba*; Herzog 1951: 167, fig. 29a-d, as *Cheilolejeunea pililoba* f. *varians*; Schuster 1962, fig. LXIII, as *Lejeunea pililoba*; 1980a: 1154, fig. 741:1-11, as *Rectolejeunea pililoba*; Stephani 1985, fig. 2635, as *Eulejeunea pililoba*, fig. 12274, as *Physocolea spiniloba*; Reiner-Drehwald 1995: 160, fig. 36A-J; 2000: 121, fig. 18; Gradstein et al. 2001, fig. 47A-E; Gradstein & Costa 2003, fig. 52A-E.

*Lejeunea ulicina* (Tayl.) Tayl. subsp. *bullata* (Tayl.) R.M. Schust. 1962 = *Microlejeunea bullata* (Tayl.) Steph. 1890.

***Lejeunea urbanii*** (Steph.) Spruce, *J. Linn. Soc., Bot.* 30: 347. 1895.

Bas.: *Lejeunea urbanii* Steph., *Hedwigia* 27: 301. 1888 “*Eulejeunea*”.

Fulford 1987: 275.

**Fig.:** Stephani 1888, pl. XI, figs 10-14, as *Eulejeunea urbani*; 1985, fig. 2666, as *E. urbani*.

*Lejeunea validiuscula* Spruce “1894” 1895 = *Prionolejeunea denticulata* (F. Weber) Schiffn. 1893 (Ilkiu-Borges, 2006, syn. nov.).



*Lejeunea* (*Ceratolejeunea*) *variabilis* Lindenb. 1845 = *Ceratolejeunea variabilis* (Lindenb.) Schiffn. 1893 = *Ceratolejeunea maritima* (Spruce) Steph. 1913 (Jovet-Ast, 1947: 26) = *Ceratolejeunea cornuta* (Lindenb.) Steph. 1895 (Dauphin, 2003: 42).

*Lejeunea vincentina* Gottsche 1845 = *Symbiezidium transversale* var. *hookerianum* (Gottsche) Gradst. et van Beek 1985 (Gradstein & van Beek, 1985: 238).

*Lejeunea vulcanica* Spruce "1894" 1895 = *Prinolejeunea aemula* (Gottsche) A. Evans 1904 (Evans, 1904: 219).

*Lejeunea xanthocarpa* (Lehm. et Lindenb.) Gottsche, Lindenb. et Nees 1845 = *Leucolejeunea xanthocarpa* (Lehm. et Lindenb.) A. Evans 1907.

## LEPIDOLEJEUNEA R.M. Schust. 1963

## LEJEUNEACEAE

*Lepidolejeunea dominicensis* R.M. Schust. 1980 = *Lepidolejeunea involuta* (Gottsche) Grolle 1984 (Grolle, 1984a: 504, syn. nov.).

***Lepidolejeunea involuta*** (Gottsche) Grolle, *J. Hattori Bot. Lab.* 55: 504. 1984.

Bas.: *Lejeunea involuta* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 350. 1845.

Syn.: *Lejeunea dominicensis* Nees et Mont., in Mont., *Ann. Sci. Nat. Bot. sér. 2*, 19: 263. 1843. [**Type: Dominica**]

*Lejeunea dominicensis* Mont. et Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 351. 1845.

*Lepidolejeunea dominicensis* R.M. Schust., *Phytologia* 45: 425. 1980. [**Type: Dominica**]

*Lejeunea cuspidata* Gottsche in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 351. 1845.

*Hygrolejeunea cuspidata* (Gottsche) Steph., *Spec. Hep.* 5: 544. 1914.

*Lejeunea frangibilis* Spruce, in Gepp, *J. Linn. Soc., Bot.* 30: 344. "1894" 1895.

[**Type: Dominica**]

*Hygrolejeunea frangibilis* (Spruce) Steph., *Spec. Hep.* 5: 546. 1914.

*Strepsilejeunea involuta* (Gottsche) Steph., *Spec. Hep.* 5: 282. 1913.

Montagne 1843: 263, type of *Lejeunea dominicensis*; Spruce 1895: 341, as *Lejeunea* (*Strepsilejeunea*) *involuta*, 344, as *Lejeunea frangibilis*; Stephani 1914: 519, 546, as *Hygrolejeunea frangibilis*; Fulford et al. 1970: 68, as *Strepsilejeunea involuta*; Schuster 1980: 425, as *Lepidolejeunea dominicensis* sp. nov.; Grolle 1984a: 505; Fulford 1987: 275, also as *Hygrolejeunea cuspidata* and *H. frangibilis*; Piippo 1986: 45; Reiner-Drehwald 2006: 481.

**Fig.** Evans 1900, pl. L, figs 10-14, as *Harpalejeunea owaihiensis*; Herzog 1951: 163, fig. 27, as *Hygrolejeunea punctata*; Lorscheitter Baptista 1977, pl. XXIV, as *Lepidolejeunea* sp.; Schuster 1980: 804 (cladograph; fig. 659: 12); 1992, fig. 24:5-6, oil bodies, as *Lepidolejeunea punctata*; Mizutani 1981: 316, fig. 6, as *Ceratolejeunea cuspidata*; Stephani 1985, fig. 4369, as *Hygrolejeunea cuspidata*, fig. 4376, as *H. frangibilis* (from Dominica, leg. Elliott 885), figs 9758-9759, as *Strepsilejeunea involuta*; Piippo 1986, p. 6, fig. 2d, p. 42, fig. 12a-n, p. 43, fig. 13a-g, p. 61, fig. 20b (map), with references to further illustrations (p. 41); Kürschner & Parolly 1998: 35, fig. 6:12-14; Reiner-Drehwald 1998, fig. 5; Ilkiu-Borges 2000, fig. 34; Gradstein & Costa 2003, fig. 55F-I; Ilkiu-Borges & Lisboa 2004a, fig. 5; Zartman & Ilkiu-Borges 2007, pl. 18E-G; Gradstein & Ilkiu-Borges 2009, fig. 63A-F.

## LEPIDOZIA (Dumort.) Dumort. 1835

## LEPIDOZIACEAE

***Lepidozia patens*** Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 202. 1845.

Spruce 1895: 356; Arnell 1956; Fulford 1966: 186; Fulford et al. 1970: 65; Fulford 1987: 267.

**Fig.** Fulford 1966: 185, pl. 40, fig. 1a-c; Stephani 1985, figs 5002-5004, as *L. commutata*, figs 5008-5010, as *L. patens*; Gradstein et al. 2001, fig. 59D;

***Lepidozia reptans*** (L.) Dumort., *Recueil Observ. Jungerm.*: 19. 1835. “reptans”.

Bas.: *Jungermannia reptans* L., *Spec. Plant.* ed. 1: 1153. 1753.

Fulford 1966: 188; Fulford 1987: 267.

**Fig.:** Schiffner 1893, fig. 56E; Evans 1912b, fig. 8; Frye & Clark 1946: 654, figs 1-8; Fulford 1966: 185, pl. 40, fig. 5a-c; Smith 1990, fig. 9:1-9; Paton 1999, fig. 15; for further references to illustrations see Piippo 1990.

*Lepidozia verrucosa* Steph. 1885 = *Kurzia capillaris* subsp. *capillaris* var. *verrucosa* (Steph.) Pócs 1984.

LEPTOLEJEUNEA (Spruce) Schiffn. 1893

LEJEUNEACEAE

***Leptolejeunea elliptica*** (Lehm. & Lindenb.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 126. 1893.

Bas.: *Jungermannia elliptica* Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 5: 13. 1833.

Schäfer-Verwimp 1999: 324.

**Fig.:** Schiffner 1893, fig. 69B; Evans 1902a, pl. 23:1-7; 1906a, pl. VII, figs 1-9, as *L. subacuta*; 1935, fig. 6P; Frye & Clark 1947: 869, figs 1-7; Schuster & Hattori 1954, pl. II, figs 15-16, oil bodies and ocellus, as *L. subacuta*, pl. IX, figs 7-8 (oil bodies and ocelli); Mizutani 1961, pl. XXVI:1-15, as *L. subacuta*; Bischler 1969, fig. I, 1, 3-5, 10-11, 14-18, fig. II: 1-5, fig. III:1-15, fig. IV:1-12, fig. V:1-9; Schuster 1980: 1210, fig. 751:1-10, 1214, fig. 752:1-8; Stephani 1985, figs 5412-5414; Ilkiu-Borges 2000, fig. 35; Zhu & So 2001, figs 4d, 5a, 6:4, 8m, 80; Ilkiu-Borges & Lisboa 2002a, fig. 1; Gradstein *et al.* 2001, fig. 46J-N; Gradstein & Costa 2003, fig. 55J-N; Zartman & Ilkiu-Borges 2007, pl. 16A; Gradstein & Ilkiu-Borges 2009, fig. 64A-C; for references to further illustrations see Piippo 1990.

***Leptolejeunea radicata*** (Nees ex Mont.) Grolle, *J. Hattori Bot. Lab.* 45: 178. 1979.

Bas.: *Lejeunea radicata* Nees ex Mont., in Sagra, *Hist. Phys. Cuba, Bot. Pl. Cell.*: 475. 1842.

Eggers 1997: 182; Schäfer-Verwimp 1999: 324.

**Fig.:** Bischler 1969, pl. XI + carte IV, as *L. obovata*.

LEPTOSCYPHUS Mitt. 1851

LOPHOCOLEACEAE

***Leptoscyphus cuneifolius*** (Hook.) Mitt. subsp. ***fragilis*** (Jack et Steph.) Grolle, *Nova Acta Leop.*, N. F. 25(161): 28. 1963 “1962”.

Bas.: *Leioscyphus fragilis* Jack et Steph., *Hedwigia* 31: 20. 1892.

Grolle 1963: 31, 32; Fulford 1976: 509; Schuster 1980: 403; 1980a: 278; 1996: 42, mixed with *Drepanolejeunea valiae*, as *Anomylia cuneifolia*.

**Fig.:** Bescherelle & Spruce 1890, pl. 14, as *Mylia antillana*; Grolle 1963, pls. 3-5 + map 2; Fulford 1976: 508, pl. 150, fig. 1a-h; Schuster 1980a, fig. 534, as *Leptoscyphus cuneifolius*; Stephani 1985, fig. 4836, as *Leioscyphus antillanus*, figs 4838-4839, as *Leioscyphus fragilis*.

**Note:** Grolle (1969) is recognizing only the main species *L. cuneifolius* which was accepted also by Schuster (1980a); however, Vanderpoorten *et al.* (2010) keep the subspecies *fragilis* as distinct.

***Leptoscyphus gibbosus*** (Taylor) Mitt., *Hooker's J. Bot. Kew Garden Misc.* 3: 358. 1851.

Bas.: *Chiloscyphus gibbosus* Taylor, *London J. Bot.* 5: 283. 1846.

*Leioscyphus gibbosus* (Taylor) Duss, *Enum. Méth. Musc. Antilles Franc., Hep.*: 25. 1903.

Stephani 1906: 232, as *Leioscyphus gibbosus*; Grolle 1963: 47; Bonner 1963: 738, as *Chiloscyphus gibbosus*; Fulford 1976: 517; Fulford 1987: 267; Vanderpoorten & Long 2006: 75.

**Fig.:** Grolle 1963, pls. 14-15 + map 4; Fulford 1976: 518, pl. 153, fig. 8a-e; Stephani 1985, figs 4909-4910, as *Leioscyphus gibbosus*; Gradstein *et al.* 2001, fig. 23I-K; Gradstein & Costa 2003, fig. 19A-D.

*Leptoscyphus jackii* (Steph.) Grolle, *Nova Acta Leop.* 25(161): 48. "1962" 1963. Spruce 1895: 357, as *Leioscyphus jackii*; Fulford 1987: 267.

**Note:** *Fide* Grolle (1963: 50), *L. jackii* is known with certainty only from Colombia! Vanderpoorten & Long (2006) reported it from Ecuador. *L. jackii* should therefore be excluded from the hepatic flora from Dominica.

***Leptoscyphus ovatus*** (Spruce) Grolle, *Nova Acta Leop.* 25(161): 45. 1963 "1962". Bas.: *Leioscyphus ovatus* Spruce, *J. Proc. Linn. Soc., Bot.* 30: 357. 1895. [**Type: Dominica**]

*Mylia ovata* (Spruce) Pagán, *Bryologist* 45: 82. 1942.

Spruce 1895: 357, as *Leioscyphus ovatus* sp. nov.; Stephani 1906: 231, as *Leioscyphus ovatus*; Pagán 1942: 82, as *Mylia ovata*; Grolle 1963: 46; Fulford 1976: 513; Fulford 1987: 267.

**Fig.:** Spruce 1895, pl. 27, figs 5-9, as *Leioscyphus ovatus*; Grolle 1963, pl. 13 + map 3; Fulford 1976: 512, pl. 151, fig. 5a-c; Stephani 1985, fig. 4911, as *Leioscyphus guadalupensis*, figs 4917-4918, *Leioscyphus ovatus* (4918 from Dominica, Elliott s.n.); Kis & Pócs 1981, fig. 16 (median leaf cells with oil bodies).

## LETHOCOLEA Mitt. 1867

## ACROBOLBACEAE

*Lethocolea amplexifolia* (Hampe *ex* Lehm.) Grolle 1969 = *Solenostoma amplexifolium* (Hampe *ex* Lehm.) Vána *et* Schäfer-Verwimp 2009 "*amplexifolia*" (Schäfer-Verwimp & Pócs, 2009).

***LEUCOLEJEUNEA*** A. Evans 1907 = **CHEILOLEJEUNEA** (Spruce)

Schiffn. 1893

## LEJEUNEACEAE

**Note:** Malombe (2009) reduced *Leucolejeunea* to *Cheilolejeunea* (but obviously failed to do it formally) and proposed the following new combination:

*Leucolejeunea xanthocarpa* (Lehm. *et* Lindenb.) A. Evans 1907 = *Cheilolejeunea xanthocarpa* (Lehm. *et* Lindenb.) Malombe 2009.

***LOPHOCOLEA*** (Dumort.) Dumort. 1835 = **CHILOSCPHYUS** Corda 1829

## LOPHOCOLEACEAE

*Lophocolea breuteliana* Gottsche, *in* Gottsche, Lindenb. & Nees 1845 ["*breutelii*" *in* Index Hep. 10: 83] = *Lophocolea trapezoidea* Mont. 1843 (Fulford 1976: 435, 1987: 267) = *Chiloscyphus breutelii* (Mont.) J.J. Engel *et* R.M. Schust. 1984.

*Lophocolea connata* (Sw.) Mont. *et* Nees 1839 = *Chiloscyphus connatus* (Sw.) J.J. Engel *et* R.M. Schust. 1985 "1984".

*Lophocolea liebmanniana* Gottsche 1863 = *Chiloscyphus liebmannianus* (Gottsche) J.J. Engel *et* R.M. Schust. 1985 "1984".

*Lophocolea martiana* Nees *in* Gottsche, Lindenb. & Nees 1845 = *Chiloscyphus martianus* (Nees) J.J. Engel *et* R.M. Schust. 1985 "1984".

*Lophocolea perissodonta* (Spruce) Steph. "1907" 1908 = *Chiloscyphus perissodonta* (Spruce) J.J. Engel *et* R.M. Schust. 1985 "1984".

*Lophocolea trapezoidea* Mont. 1843 "*trapezoides*" = *Chiloscyphus breutelii* (Gottsche *in* Gottsche, Lindenb. & Nees) J.J. Engel *et* R.M. Schust. 1985 "1984".

## LOPHOLEJEUNEA (Spruce) Schiffn. 1893

## LEJEUNEACEAE

*Lopholejeunea atroviridis* (Spruce) A. Evans 1911 = *Lopholejeunea nigricans* (Lindenb.) Schiffn. 1898 (Gradstein 1994: 112, syn. nov.).

***Lopholejeunea nigricans*** (Lindenb.) Schiffn., *Consp. Hep. Archip. Ind.*: 293. 1898.  
Bas.: *Lejeunea nigricans* Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 316. 1845.

*Lopholejeunea atroviridis* (Spruce) A. Evans, *Bryologist* 14: 88. 1911.

Fulford 1987: 275, as *Lopholejeunea atroviridis*; Gradstein 1994: 115; Lücking 1995: 114.

**Fig.:** Spruce 1895, pl. 20, figs 5-10, as *Lejeunea atroviridis*; Evans 1907, pl. 4, figs 1-8, as *L. muelleriana*; Kurz & Little 1933, fig. 61, as *L. muelleriana*; Frye & Clark 1947: 909, figs 1-8, as *L. muelleriana*; Schuster & Hattori 1954, pl. IV, figs 4-7 (oil bodies, as *L. muelleriana*); Breil 1970, figs 132-134, as *L. muelleriana*; Schuster 1980a: 744, fig. 648, 750, fig. 649, as *L. muelleriana*; Gradstein 1984: 113, fig. 30A-F; 1994, fig. 30; Stephani 1985, fig. 6028, as *L. apiahyna*, figs 6029-6030, as *L. atroviridis* (from Dominica, Elliott 942), figs 6034-6036, as *L. muelleriana*, figs 6039-6040, as *L. rivularis*, fig. 6043, as *L. spinosa*, fig. 7802, as *Neurolejeunea lechleri*; Lücking 1995: 114, fig. 62; Gradstein *et al.* 2001, fig. 35A-C; Gradstein & Costa 2003, fig. 57H-J; Wigginton 2004, fig. 171A-Z; Zhu & Gradstein 2005, figs 1j, 2b, 4d, 5f.g, 16-20, and a long list of references to further illustrations; Gradstein & Ilkiu-Borges 2009, fig. 65A, B, E.

*Lopholejeunea sagraeana* (Mont.) Schiffn. 1893 = *Lopholejeunea subfusca* (Nees) Schiffn. 1897 (Gradstein, 1994: 118, in syn.)

***Lopholejeunea subfusca*** (Nees) Schiffn., *Bot. Jahrb. Syst.* 23: 593. 1897.

Bas.: *Jungermannia subfusca* Nees, *Enum. Pl. Crypt. Jav.*: 36. 1830.

*Lopholejeunea sagraeana* (Mont.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 129. 1893.

Fulford 1987: 275, as *L. sagraeana*.

**Fig.:** Montagne 1845, pl. 18, fig. 1, as *Phragmicoma sagraeana*; Evans 1907, pl. 3, figs 10-20, as *L. sagraeana*; Frye & Clark 1947: 907, figs 1-10, as *Lopholejeunea sagraeana*; Schuster & Hattori 1954, pl. IV, fig. 8 (oil bodies); Mizutani 1961, fig. XII:14-23; Gradstein 1975, pl. XXIII, figs 11-12, as *L. sagraeana* and *L. subfusca* (trigones and oil bodies); Griffin 1979, pl. IX, figs 453-456; Schuster 1980a: 753, fig. 650; Geissler & Gradstein 1981, pl. 1a (oil bodies); Stephani 1985, figs 6041-6042, as *L. sagraeana*; Reiner-Drehwald 1993: 34, figs 7E-H; Kürschner & Parolly 1998: 35, fig. 6:8; Ilkiu-Borges 2000, fig. 10K-P; Zhu & So 2001, figs 7:5, 39; Wigginton 2004, fig. 173A-R; Zhu & Gradstein 2005, figs 1a, b, h-i, 3a-d, f, 4c, n, 28, and a long list of references to additional illustrations; Gradstein & Ilkiu-Borges 2009, fig. 66C, D, F.

## LOPHOZIA (Dumort.) Dumort. 1835

## SCAPANACEAE

*Lophozia schistophila* (Spruce) Steph. 1901 = *Cephaloziopsis intertexta* (Gottsche) R.M. Schust. 1972 ("1971") (Fulford, 1987: 266, in syn. as *Jungermannia schistophila*).

## MACROCOLURA R.M. Schust. 1994

## LEJEUNEACEAE

*Macrocolura lyrata* (Steph.) R.M. Schust. 1994 = *Macrocolura sagittistipula* (Spruce) R.M. Schust. 1994 (Grolle & Zhu, 2002, syn. nov.).

***Macrocolura sagittistipula*** (Spruce) R.M. Schust., *J. Hattori Bot. Lab.* 75: 233. 1994.

Bas.: *Lejeunea sagittistipula* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15 : 304. 1884.

Syn.: *Colura sagittistipula* (Spruce) Steph., *Spec. Hep.* 5: 933. 1916.

*Colura lyrata* Steph. in Urban, *Symb. Antillanae* 2: 471. 1901.

*Macrocolura lyrata* (Steph.) R.M. Schust., *J. Hattori Bot. Lab.* 75: 233. 1994.

Schuster 1992: 345, as *Macrocolura lyrata*; Eggers 1997: 182, as *M. lyrata*; Schäfer-Verwimp 1999: 320, as *Colura lyrata*; Grolle & Zhu 2002: 186.

**Fig.:** Jovet-Ast 1953, as *Colura lyrata*; Cole 1983, fig. 33a-d, as *Colura clavigera*; Frahm & Kürschner 1992: 63, Bild 5 (colour photo, as *Colura lyrata*); Schuster 1992, fig. 32:1, oil bodies, as *Macrocolura lyrata*; Grolle & Zhu 2002, figs 1a-b, 2 (with reference to further illustrations).

**MACROLEJEUNEA** (Spruce) Schiffn. 1893 = **LEJEUNEA** Libert 1820

**LEJEUNEACEAE**

*Macrolejeunea cerina* (Lehm. et Lindenb.) Gradst. 1989 = *Lejeunea cerina* (Lehm. et Lindenb.) Gottsche, Lindenb. et Nees 1845 (Reiner-Drehwald, 1999: 25).

*Macrolejeunea subsimplex* (Nees et Mont.) Schiffn. 1893 = *Lejeunea cerina* (Lehm. et Lindenb.) Gottsche, Lindenb. et Nees 1845 (Grolle, 1987: 440, syn. nov.; Grolle, 1988: 174).

**MARCHANTIA** L. 1753

**MARCHANTIACEAE**

***Marchantia chenopoda*** L., *Spec. Pl.* (ed. 1): 1137. 1753.

Spruce 1895: 369; Pearson 1922: 228; Bischler 1984: 86, 116.

**Fig.:** Hässel de Menendez 1963, figs 62-65; Hell 1969, pl. 4, 6-8, figs 30, 32, 33, 40, 44, 45, 47, 49, 59; Bischler 1984, figs 31-35 + map (fig. 36); Stephani 1985, figs 6552-6553, as *M. brasiliensis*, figs 6622-6623, as *M. chenopoda*; Vianna 1985, pls. XXXIII-XXXVII; Schuster 1992a: 282, fig. 1:11-25, 285, fig. 2:1-11; [1992c: 364, fig. 976:11-25, identical with 1992a: 282, fig. 1:11-25]; Gradstein *et al.* 2001, fig. 76L-M; León-Yáñez *et al.* 2006: 98, col. photos.

*Marchantia domingensis* Lehm. et Lindenb., in Lehm. 1834 = *Marchantia paleacea* Bertol. 1817 (Svihla, 1941, syn. nov.; Bischler 1984: 55).

*Marchantia elliotii* Steph. 1899 = *Marchantia inflexa* Nees et Mont. 1838 (Bischler, 1984: 86).

***Marchantia inflexa*** Nees et Mont. in Mont., *Ann. Sci. Nat., Bot.*, sér. 2, 9: 43. 1838.

Syn.: *Marchantia elliotii* Steph., *Spec. Hep.* 1: 172. 1899. [**Type: Dominica**]

*Marchantia papillata* Raddi *em.* Nees subsp. *inflexa* (Nees et Mont.) R.M. Schust., *Hepat. Anthoc. N. Amer.* 6: 354. 1992.

Stephani 1888: 302, erroneously as *M. linearis*, see Bischler 1984: 92; 1899: 172, type of *M. elliotii*; Bischler 1984: 120; Schuster 1992b: 356, as *M. papillata* subsp. *inflexa*.

**Fig.:** Bischler 1984, figs 37-41 + map; Stephani 1985, figs 6510-6511, as *M. elliotii* (from Dominica, Elliott 1292), fig. 6514, as *M. papillata*; Schuster 1992b, figs 971, 974:1-11, 975, as *Marchantia papillata* subsp. *inflexa*.

*Marchantia linearis* Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 4: 8. 1832.

**Note:** *Fide* Bischler (1984: 92) all records of *M. linearis* from the Neotropics belong to *M. inflexa* Nees et Mont.

***Marchantia paleacea*** Bertol., *Opusc. Sci. (Bologna)* 1: 242. 1817.

Syn.: *Marchantia domingensis* Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 6: 22. 1834.

Stephani 1899: 171, as *M. domingensis*; Pearson 1922: 228, as *M. domingensis*; [not cited for Dominica by Bischler 1984].

**Fig.:** Kurz & Little 1933, fig. 5, as *M. domingensis*; Frye & Clark 1937: 101, figs 6; Breil 1970, figs 220-223, as *M. paleacea*, figs 224-228, as *M. domingensis*; Bischler 1984, fig. 16-19, map: fig. 20; Stephani 1985, figs 6508-6509, as *M. domingensis*, fig. 6558, as *M. paleacea*; Schuster 1992b, figs 972-973, 974:12-16; Wigginton 2004, fig. 3E (cross section of thallus); for further references to illustrations see (among others) Frye & Clark 1937, Piippo 1990, and Wigginton & Grolle 1996.

*Marchantia papillata* Raddi em. Nees subsp. *inflexa* (Nees et Mont.) R.M. Schust. 1992 = *Marchantia inflexa* Nees et Mont., in Mont. 1838.

MARCHESINIA S.F. Gray 1822

LEJEUNEACEAE

***Marchesinia brachiata*** (Sw.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 128. 1893.

Bas.: *Jungermannia brachiata* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 144. 1788.

Syn.: *Lejeunea brachiata* (Sw.) Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 313. 1845.

Spruce 1895: 336, as *Lejeunea (Homalolejeunea) brachiata*; Evans 1907a: 548; Fulford 1987: 275.

**Fig.:** Evans 1907a, pl. 32, figs 1-23; Gradstein 1975, pl. XXIII, fig. 13 (trigones and oil bodies); Geissler & Gradstein 1981, pl. 1b (oil bodies); Cole 1983, fig. 30a-d; Stephani 1985, figs 6664-6668, as *M. brachiata*, fig. 6672, as *M. cubensis*, fig. 8287, as *Ptychocoleus dentilobus*; Reiner-Drehwald 1993: 39, figs 9A-C; Geissler & Maier 1999, fig. 1: 9-12, fig. 2: 6, 7, 16, 17, fig. 5: 5-6; Gradstein *et al.* 2001, fig. 35D-G; Gradstein & Costa 2003, fig. 58A-D; Gradstein & Ilkiu-Borges 2009, fig. 67A-D.

MARSUPIDIUM Mitt. 1867

ACROBOLBACEAE

*Marsupidium brevifolium* Steph. 1908 = *Adelanthus decipiens* (Hook.) Mitt. 1864 (Engel & Grolle, 1971: 444, syn. nov.) = *Pseudomarsupidium decipiens* (Hook.) Grolle 1963.

MASTIGOBRYUM Lindenb. et Gottsche 1845 = BAZZANIA S.F. Gray 1821

LEPIDOZIACEAE

*Mastigobryum arcuatum* Lindenb. et Gottsche 1847 = *Bazzania hookeri* (Lindenb.) Trevis. 1877 (Gradstein & Costa, 2003; Gradstein & Ilkiu-Borges, 2009, in syn.).

*Mastigobryum bidens* (Nees) Gottsche et Lindenb. 1845 = *Bazzania bidens* (Nees) Trevis. 1877.

*Mastigobryum papillatum* Steph. 1909 = *Bazzania longa* (Nees) Trevis. var. *papillata* (Steph.) Fulf. 1963.

*Mastigobryum schwaneckianum* Hampe et Gottsche 1853 "1852" = *Bazzania schwaneckeana* (Hampe et Gottsche) Trevis. 1877.

*Mastigobryum speciosum* Gottsche ex Steph. 1886 = *Bazzania longa* (Nees) Trevis. 1877 (Fulford, 1946: 90, in syn.).

*Mastigobryum vincentinum* (Lehm. et Lindenb.) Gottsche, Lindenb. et Nees 1845 = *Bazzania stolonifera* (Lehm. et Lindenb.) Trevis. 1877 (Fulford, 1946: 44, in syn.).

## METZGERIA Raddi 1818

## METZGERIACEAE

*Metzgeria armitagei* Pears. 1922 = *Metzgeria claviflora* Spruce 1885 (Kuwahara, 1983: 156).

\**Metzgeria ciliata* Raddi, *Critt. Brasil.* 17: 1822.

Southwestern part, culture zone above Giraudel, epiphytic on solitary tree, 650 m, 25 May 1996, leg. Schäfer-Verwimp & Verwimp 17906/B (JE); Morne Diablotin, rain forest, on fern stem, 860 m, 26 May 1996, leg. Schäfer-Verwimp & Verwimp 17940 (JE).

**Fig.:** Evans 1906a, pl. VI, figs 1-5, as *M. quadriseriata*; 1910, fig. 5, as *M. quadriseriata*; 1923, figs 6-7, as *Metzgeria decipiens*; Stephani 1985, fig. 7562, as *M. perrotana*, fig. 7576, as *M. dussiana*, fig. 7577, as *M. glaberrima*, fig. 7580, as *M. nuda*, fig. 7590, as *M. subnuda*, fig. 7640, as *M. caledonica*, fig. 7666, as *M. lutescens*; Kuwahara 1966, figs 11d, 21e-g, map: fig. 4, as *M. decipiens*; 1986, fig. 68e-f, map: fig. 70, as *M. decipiens*; Costa 1999, fig. 30, as *M. decipiens*; 2008, fig. 23, map: fig. 24.

*Metzgeria claviflora* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 552, 556. 1885 “*clavaeflora*”.

Syn.: *Metzgeria armitagei* Pears., *J. Bot.* 60: 227. 1922.

Pearson 1922: 227, as *M. armitagei*; Kuwahara 1983: 156; 1986: 199; Costa 2008: 64 (no specimen seen).

**Fig.:** Stephani 1916, fig. 88, as *M. boliviana*; fig. 89a, as *M. gigantea*; 1985, fig. 7602, as *M. boliviana*, fig. 7604, as “*clavaeflora*”; Kuwahara 1986, fig. 32, as *M. gigantea*, map: fig. 34a, as *M. gigantea*, fig. 33a-b, map: fig. 34b; Costa 2008, fig. 25, map: fig. 26.

*Metzgeria dominicensis* Steph., *Icones Hepaticarum*, fig. 7575. 1985, *nom. inval.*

[**Origin: Dominica**]

**Fig.:** Stephani 1985, fig. 7575, from Dominica, Elliott s.n., “olim *M. longitexta*, *nom. occupatum*”.

**Note:** Not in INDEX OF HEPATICS 1974-2000 (Crosby & Engel, 2006), and not mentioned by Costa (2008).

*Metzgeria furcata* (L.) Dumort., *Recueil Obs. Jungerm.*: 26. 1835.

Bas.: *Jungermannia furcata* L., *Spec. Pl.* (ed. 1): 1136. 1753.

Syn.: *Metzgeria planiuscula* Spruce, *Bull. Soc. Bot. France* 36 (suppl.): CCII. 1890 “1889”.

Spruce 1895: 368, as *M. planiuscula*.

**Fig.:** Evans 1910, fig. 4; Kuwahara 1966, fig. 11b, map: fig. 9; 1968a, figs 7-15, as *M. grollei*; 1973, figs 6-8; 1976, fig. 15, as *M. thomeensis*; Hell 1969, pls. 14, 16, 17, figs 103, 105, 114, 115, 119, 125, 126, 130, 131; Breil 1970, fig. 204; Stephani 1985, fig. 7562, as *M. perrotana*, fig. 7567, as *M. tabularis*, fig. 7568, as *M. thomeensis*, fig. 7585, as *M. radicans*, fig. 7666, as *M. lutescens*, fig. 7674, as *M. planifrons*; Costa & Yano 1988, figs 16-19; Smith 1990, fig. 134:1-8; Schuster 1983, fig. 9 (map); 1992a, figs 886:4-5; Paton 1999, fig. 278; So 2004, fig. 1F-G; Wigginton 2004, fig. 51A-H; Costa 1999, fig. 36; 2008, fig. 43, map: fig. 42 (for Neotropics); further references to illustrations from Asia and Africa in So 2003 & 2004.

**Note:** The name *Metzgeria planiuscula* is lacking in Costa (2008) and *M. furcata* is not mentioned from Dominica and the Lesser Antilles by Costa (2008). There are records from neighbouring Guadeloupe by Pagán (1942) and Jovet-Ast (1947). However, the New

World distribution of this species is insufficiently known. Recent phylogenetic analyses provide evidence for genetic divergence correlated with geographic distribution and existence of cryptic lineages in *M. furcata* (Fuselier *et al.*, 2009).

***Metzgeria herminieri*** Schiffn., *Österr. Bot. Zeitschr.* 61: 261. 1911.

Kuwahara 1986: 211, 215; Costa 2008: 101.

**Fig.:** Jovet-Ast 1947: 18, fig. I:1-9; Schiffner & Arnell 1964, pl. II, fig. 18a-c, as *Metzgeria grandiretis*; Kuwahara 1986, figs 90, 91, 92a; Costa 1999, fig. 40; 2008, fig. 47, map: fig. 48.

***Metzgeria leptoneura*** Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 555. 1885.

Syn.: *Metzgeria hamata* auct., non Lindb., *Acta Soc. Fauna Fl. Fenn.* 12: 25. 1877, nom. inval.

*Metzgeria papulosa* Steph., *Bull. Herb. Boiss.* 7: 946. 1899.

Spruce 1895: 369; Stephani 1899: 298, as *M. hamata*; Kuwahara 1986: 142, 218, as *M. papulosa*; Costa 2008: 114.

**Fig.:** Stephani 1916, fig. 90a, as *M. nudicosta*, fig. 90f, as *M. villosicosta*; 1985, fig. 7552, as *M. allanii*, fig. 7565, as *M. recurva*, fig. 7566, as *M. renauldii*, fig. 7579, as *M. leptoneura*, fig. 7581, as *M. nudicosta*, fig. 7582, as *M. pilosa*, fig. 7591, as *M. tuerckheimii*, fig. 7600, as *M. villosicosta*, fig. 7601, as *M. wallisiana*, fig. 7645, as *M. curviseta*, fig. 7676, as *M. sandei*; Evans 1923, fig. 10, as *M. hamata*; Frye & Clark 1937: 132, figs 1-3, as *M. hamata*; Hell 1969, pls. 15-17, figs 109, 112, 129, as *M. hamata*; Kuwahara 1966, fig. 12b, as *M. hamata*, fig. 19b-c, as *M. sandei*, maps: figs 3, 5, as *M. sandei* and *M. hamata*; 1969, pl. 5d-e, as *M. papulosa*; 1986b, fig. 57a-b, map: fig. 58; fig. 50a-b, as *M. wallisiana*, fig. 57c-e, map: fig. 59, as *M. papulosa*; fig. 55, as *M. ecuadorensis*; fig. 50c, as *M. sandei*; Engel 1976, fig. 1 (map); Gradstein 1989: 332, fig. 5; Smith 1990, fig. 135:1-5; Piippo 1991, figs 9, 11, 12; Schuster 1992a: 726, fig. 897; Paton 1999, fig. 280; Costa 1999, fig. 44; 2008, fig. 53, map: fig. 54 (for Neotropics); Gradstein *et al.* 2001, fig. 69D-F; So 2003, fig. 3d; 2004, fig. 1H-I; Wigginton 2004, fig. 52A-F; Gradstein & Ilkiu-Borges 2009, fig. 8F-H; for further references to illustrations see Piippo 1990, Wigginton & Grolle 1996, and So 2003 & 2004.

***Metzgeria longitexta*** Steph., *Spec. Hep.* 1: 288. 1899. [**Type: Dominica**]

Stephani 1899: 288, the type; Kuwahara 1968: 48; 1984: 39; 1986: 227.

**Fig.:** Costa 2008, map: fig. 59.

*Metzgeria papulosa* Steph. 1899 = *Metzgeria leptoneura* Spruce 1885 (Piippo, 1991: 16, syn. nov.).

*Metzgeria planiuscula* Spruce 1890 "1889" = *Metzgeria furcata* (L.) Dumort. 1835 (Stephani, 1899: 289, in syn.; Schuster, 1992a, in syn.; Gradstein & Costa, 2003, in syn.).

***Metzgeria procera*** Mitt., in J.D. Hook., *Fl. Nova-Zel.* 2: 166. 1855.

Stephani 1899: 294; Pagán 1942: 78.

**Fig.:** Kuwahara 1969, pl. 5c; Stephani 1985, fig. 7584; Kuwahara 1986, figs 62a-b, 63 (map); Costa 2008, fig. 70, map: fig. 69; Schäfer-Verwimp & Pócs 2009, fig. 15;

**Note:** Not mentioned from Dominica by Kuwahara (1984: 34; 1986: 219f.), and Costa (2008).

MICROLEJEUNEA Steph. 1888

LEJEUNEACEAE

***Microlejeunea acutifolia*** Steph., *Hedwigia* 35: 113. 1896.

Schäfer-Verwimp 1999: 324.



**Fig.:** Bischler *et al.* 1963, pl. 59; Stephani 1985, fig. 7712; Lücking 1995: 105, fig. 57A-G, as *Lejeunea (Microlejeunea) acutifolia*; Schuster 1992, fig. 16: 4 (oil bodies, as *Lejeunea (Microlejeunea) acutifolia*); Ilkiu-Borges 2000, fig. 37A-K; Ilkiu-Borges & Lisboa 2002, fig. 4A-K; Zartman & Ilkiu-Borges 2007, pl. 16:F; Gradstein & Ilkiu-Borges 2009, fig. 69D-F.

***Microlejeunea bullata*** (Taylor) Steph., *Hedwigia* 29: 90. 1890.

Bas.: *Lejeunea bullata* Taylor, *London J. Bot.* 5: 398. 1846.

Syn.: *Lejeunea ulicina* (Taylor) Taylor subsp. *bullata* (Taylor) R.M. Schust., *J. Hattori Bot. Lab.* 25: 55. 1962.

Schuster 1980a: 1077, as *Lejeunea ulicina* subsp. *bullata*; Fulford 1987: 275.

**Fig.:** Evans 1902, pl. 21, figs 20-29; 1935, fig. 6N; Kurz & Little 1933, fig. 37; Frye & Clark 1947: 812, figs 1-9; Schuster 1962, fig. LIX:1-6, LX; 1980, figs 721:1-6, 722, all as *Lejeunea ulicina* subsp. *bullata*; Breil 1970, figs 158, as *Microlejeunea ulicina* subsp. *bullata*; Stephani 1985, figs 7717-7720; Lücking 1995: 105, fig. 57H-M, as *Lejeunea (Microlejeunea) bullata*; Bischler 1963, pl. 61; Gradstein *et al.* 2001, fig. 49C-E; Gradstein & Costa 2003, fig. 59C-E; Zartman & Ilkiu-Borges 2007, pl. 14:I-J. Further references to illustrations in Schuster (1962: 57).

*Microlejeunea eggersiana* Steph. ex S. Arn. 1959, *nom. inval.* = *Microlejeunea stricta* (Gottsche, Lindenb. et Nees) Steph. 1890, *fide* Bischler *et al.* (1963).

\****Microlejeunea epiphylla*** Bischl., *Nova Hedwigia* 5: 378. 1963.

Syn.: *Lejeunea dimorphophylla* R.M. Schust., *Hepat. Anthoc. N. Amer.* 4: 1080. 1980.

Northern slope of Morne Trois Pitons, epiphyllous in rain forest, 620 m, 21 May 1996, leg. Schäfer-Verwimp & Verwimp 17748/B (JE); southwestern part of the island, culture zone between Soufrière and Sulphur Springs, on old mango tree, 60 m, 25 May 1995, leg. Schäfer-Verwimp & Verwimp 17895 (JE); rain forest between Cochrane and Middleham Falls, epiphyllous on fern frond, 620 m, 27 May 1996, leg. Schäfer-Verwimp & Verwimp 18009/A (JE).

**Fig.:** Bischler *et al.* 1963, pl. 65; Schuster 1980a, figs 723-725, as *Lejeunea dimorphophylla*; Ilkiu-Borges 2000, fig. 37L-T; Ilkiu-Borges & Lisboa 2002, fig. 4L-T; Gradstein & Costa 2003, fig. 59H-J; Yano & Peralta 2009, fig. 10m-n; Gradstein & Ilkiu-Borges 2009, fig. 69G-J.

*Microlejeunea stricta* (Gottsche, Lindenb. et Nees) Steph., *Hedwigia* 29: 90. 1890.

*Microlejeunea eggersiana* Steph. ex S. Arn., *Svensk Bot. Tidskr.* 53: 501. 1959, *nom. inval.*

Bischler *et al.* 1963.

**Fig.:** Bischler *et al.* 1963, pl. 68; Stephani 1985, fig. 7726 (as *M. eggersiana*, from Eggers 14, Sto. Domingo, see note), fig. 7734.

**Note:** The record by Bischler *et al.* (1963) is based on a single collection from Eggers (“*Microlejeunea eggersiana* Steph.”, herbarium name) referred to Santo Domingo [= Dominican Republic] (Bischler *et al.*, 1963: 388) and also to Dominica (Bischler *et al.*, 1963: 405). As Stephani (1985) is referring this specimen to the Dominican Republic, it seems best to exclude this species from the hepatic flora from Dominica.

**MICROLEPIDOZIA** (Spruce) Jorg. 1893 = **KURZIA** v. Martens 1870

LEPIDOZIACEAE

*Microlepidozia capillaris* (Sw.) Fulf. 1962 = *Kurzia capillaris* (Sw.) Grolle 1964 “1963”.

*Microlepidozia verrucosa* (Steph.) Fulf. 1958 = *Kurzia capillaris* (Sw.) Grolle 1964 “1963” var. *verrucosa* (Steph.) Pócs 1984.

## MICROPTERYGIUM Lindenb. 1845

## LEPIDOZIACEAE

***Micropterygium carinatum*** (Grev.) Reimers, *Hedwigia* 76: 166. 1936.

Bas.: *Jungermannia carinata* Grev., *Ann. Lyceum Nat. Hist. New York* 1: 276, pl. 23, figs 1-4. 1825.

*Micropterygium cymbifolium* (Hook. ex Lehm. et Lindenb.) Nees, Lindenb. et Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 234. 1845, *nom. illeg.*

*Micropterygium portoricense* Steph., *Hedwigia* 27: 294. 1888.

Spruce 1895: 357, as *M. portoricense*; Stephani 1909: 546, as *M. cymbifolium*, 547, as *M. portoricense*; Reimers 1933: 161, as *M. cymbifolium*; Pagán 1939: 40, as *M. portoricense*; Pagán 1942: 91; Fulford 1966: 257; Fulford et al. 1970: 65; Fulford 1987: 268.

**Fig.:** Spruce 1895, pl. 27, figs 1-4, as *Micropterygium portoricense*; Stephani 1888, pl. XIII, figs 29-30, as *Micropterygium portoricense*; Reimers 1933: 160, figs 7: 1-7, as *M. cymbifolium*; 164, figs 8:1-7, as *Micropterygium portoricense*; Fulford 1966: 255, pl. 57, fig. 5a-e; Kis & Pócs 1981, fig. 4 (median leaf cells with oil bodies); Stephani 1985, fig. 7785, as *M. cymbifolium*, fig. 7791, as *M. portoricense*.

*Micropterygium cymbifolium* (Hook. ex Lehm. et Lindenb.) Nees, Lindenb. et Gottsche 1845, *nom. illeg.* = *Micropterygium carinatum* (Grev.) Reimers 1936 (Fulford, 1966: 256).

***Micropterygium exalatum*** Steph., *Spec. Hep.* 3: 547. 1909. [**Type: Dominica**]

Stephani 1909: 547, the type; Reimers 1933: 166; Pagán 1939: 40; Fulford 1966: 257; Fulford 1987: 268.

**Fig.:** Reimers 1933: 167, figs 9:1-10; Fulford 1966, pl. 57, fig. 6; Kis & Pócs 1981, fig. 4 (median leaf cells and oil bodies); Stephani 1985, fig. 7786, from Dominica, Elliott 1936.

**Note:** *Fide* Gradstein (1989: 344), *Micropterygium exalatum* is very similar to *M. carinatum* and may be a synonym.

*Micropterygium portoricense* Steph. 1888 = *Micropterygium carinatum* (Grev.) Reimers 1936 (Fulford, 1966: 256).

***Micropterygium trachyphyllum*** Reimers, *Hedwigia* 73: 186. 1933.

Fulford 1966: 266; Fulford 1987: 268.

**Fig.:** Reimers 1933: 188, figs 15:1-3, as *M. trachyphyllum* var. *cubense*; 189, figs 16:1-5, as *M. trachyphyllum* var. *jamaicense*; 191, figs 17:1-5, as *M. trachyphyllum* var. *guadeloupense*; 194, figs 18:1-5, as *M. trachyphyllum* var. *guyanense*; 196, figs 19:1-6, as *M. trachyphyllum* var. *brasiliense*; Fulford 1966: 267, pl. 61, figs 13a-g; Griffin 1979, pl. VI, figs 341-343; Kis & Pócs 1981, fig. 5 (median leaf cells with oil bodies); Schuster 2000, fig. 198; Gradstein & Ilkiu-Borges 2009, fig. 15D-F.

## MNILOLOMA Herzog 1930

## CALYPOGEIACEAE

***Mnioloma cellulolum*** (Spreng.) R.M. Schust., *Fragm. Florist. Geobot.* 40: 836. 1995. "*cellulosa*"

Bas.: *Jungermannia cellulosa* Spreng., *Syst. Veget.* 4: 232. 1827.

*Calypogeia cellulosa* (Spreng.) Steph., *Spec. Hep.* 3: 398. 1908.

Stephani 1908: 399, as *Calypogeia cellulosa*; Fulford 1968: 282; Fulford et al. 1970: 65; Fulford 1987: 266, all as *Calypogeia*; Schuster 1995: 938; 2000: 505, 510.

**Fig.:** Bischler 1962a: 32, fig. 7, as *Calypogeia*; Fulford 1968: 283, pl. 66, fig. 2a-e, as *Calypogeia*; Fulford *et al.* 1970: 64, figs 12a-b, as *Calypogeia*; Stephani 1985, fig. 1188, as *Calypogeia*; Schuster 1995, fig. 1; 2000, fig. 209.

***Mnioloma crenulatum*** (Bischl.) R.M. Schust., *Fragm. Florist. Geobot.* 40: 839. 1995. “*crenulata*”

Bas.: *Calypogeia crenulata* Bischl., *Candollea* 18: 25. 1963 [“1962”].

Bischler 1962a: 37, as *Calypogeia*; Fulford 1987: 266, as *Calypogeia*.

**Fig.:** Bischler 1962a: 36, fig. 9, as *Calypogeia*; Fulford 1968: 284, pl. 67, fig. 6a-d, as *Calypogeia*;

**Note:** Fide Schuster (1995: 838-839), *M. crenulatum* is “almost certainly a synonym of *Mnioloma cellulsum*”.

***Mnioloma elliotii*** (Steph.) R.M. Schust., *Fragm. Florist. Geobot.* 40: 841. 1995.

Bas.: *Calypogeia elliotii* Steph., *Spec. Hep.* 3: 395. 1908. [**Type: Dominica**]

Stephani 1908: 395, type of *Calypogeia elliotii*; Pagán 1942: 92, as *Calypogeia*; Bischler 1962a: 43, as *Calypogeia*; Fulford 1968: 285, as *Calypogeia*; Fulford *et al.* 1970: 65, as *Calypogeia*; Fulford 1987: 266, as *Calypogeia*; Schuster 1995: 841, 842; 2000: 505.

**Fig.:** Bischler 1962a, fig. 12, as *Calypogeia*; Fulford 1968: 284, pl. 67, fig. 4a-d, as *Calypogeia*; Stephani 1985, fig. 1193, as *Calypogeia*; Schuster 1995, fig. 2:7-11 & 3; 2000, fig. 208:7-11, 210.

#### MONOCLEA Hook. 1820

#### MONOCLEACEAE

*Monoclea forsteri* Hook., *Musci Exot.* 2: 27, tab. 174. 1820.

The neotropical material of *Monoclea* belongs to *M. gottschei* subsp. *elongata* fide Gradstein *et al.* (1992).

***Monoclea gottschei*** Lindb. subsp. *elongata* Gradst. *et Mues*, *Pl. Syst. Evol.* 180: 133. 1992.

Spruce 1895: 365, as *M. forsteri*; Gradstein *et al.* 1992: 134 (“... and presumably other islands of the lesser Antilles, e. g., Dominica, ...; no material seen”).

**Fig.:** Hell 1969, pls. 5, 6, 8, figs 36, 37, 43, 50, 55, 56, as *M. forsteri*; Schuster 1984, fig. 89:1-7, 10, 14, as *M. gottschei*; Stephani 1985, fig. 7796, as *M. gottschei*; Gradstein *et al.* 1992: 129, figs 4c, 5; Gradstein *et al.* 2001, fig. 72A-F; Gradstein & Costa 2003, fig. 94E-J, as *M. gottschei*; León-Yáñez *et al.* 2006: 99, col. photo; Gradstein & Ilkiu-Borges 2009, fig. 6F-L; Schäfer-Verwimp & Pócs 2009, fig. 16.

#### MONODACTYLOPSIS (R.M. Schust.) R.M. Schust. 1993 LEPIDOZIACEAE

***Monodactylopsis monodactyla*** (Spruce) R.M. Schust. *ex Engel et Merrill*, *Fieldiana Bot.*, N. S. 44: 241. 2004.

Bas.: *Cephalozia monodactyla* Spruce, *On Cephalozia*: 28. 1882.

Syn.: *Arachniopsis monodactyla* (Spruce) R.M. Schust., *Nova Hedwigia* 10: 30. 1965.

Schuster 1966c: 440, as *Arachniopsis monodactyla*, admixed to the type of *Phycolepidozia exigua*; Schäfer-Verwimp 1999: 319, admixed to *Arachniopsis diacantha*.

**Fig.:** Fulford 1968, pl. 95, fig. 2a-c, as *Regredicaulis monodactylus*; Stephani 1985, fig. 10424, as *Zoopsis monodactyla*; Schuster 1999, fig. 33; 2000, fig. 186A; Gradstein *et al.* 2001, fig. 57H, as *Arachniopsis*; Costa & Silva 2003, fig. 2 (as *Arachniopsis*); Gradstein & Costa 2003, fig. 69D; Alvarenga *et al.* 2007, fig. 14; Zartman & Ilkiu-Borges 2007, pl. 3:I, as *Arachniopsis monodactyla*;

## MYLIA S.F. Gray 1821

## MYLIACEAE

*Mylia ovata* (Spruce) Pagán 1942 = *Leptoscyphus ovatus* (Spruce) Grolle "1962" 1963.

## NARDIA S.F. Gray 1821

## SOLENOSTOMATACEAE

*Nardia succulenta* (Richard ex Lehm. et Lindenb.) Spruce, *On Cephalozia*: 4. 1882.

Bas.: *Jungermannia succulenta* Richard ex Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 4: 43. 1832.

*Alicularia succulenta* (Richard ex Lehm. et Lindenb.) Spruce, *J. Linn. Soc. London* 30: 364. 1895.

Spruce 1895: 364, as *Alicularia*; Stephani 1901: 69, as *Jungermannia*; Fulford 1987: 268; Vána 1976: 409.

**Fig.:** Vána 1976, fig. 10: 19-22, fig. 11-12; Stephani 1985, figs 4740-4742, as *Jungermannia succulenta* (fig. 4740b from Dominica, Elliott 1242); Gradstein et al. 2001, fig. 31E-H; Schuster 2002, fig. 346.

## NEESIOSCYPHUS Grolle 1964

## BALANTIOPSISIDACEAE

*Neesioscyphus bicuspidatus* (Steph.) Grolle, *Rev. Bryol. Lichénol.* 34: 182. 1966.

Bas.: *Isotachis bicuspidata* Steph., in Urban, *Symb. Ant.* 2: 471. 1901.

Fulford 1987: 268.

**Fig.:** Grolle 1966, fig. 1a-k and key to the genus *Neesioscyphus*; Schuster 1983, fig. 53 (map); Stephani 1985, fig. 4503-4505, as *Isotachis bicuspidata*.

## NEUROLEJEUNEA (Spruce) Schiffn. 1893

## LEJEUNEACEAE

*Neurolejeunea breutelii* (Gottsche) A. Evans, *Bull. Torrey Bot. Club* 34: 13. 1907.

Bas.: *Lejeunea breutelii* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 324. 1845.

Spruce 1895: 334, as *Lejeunea breutelii*; Evans 1907: 14; Pagán 1939: 75; Pagán 1942: 104; Fulford 1987: 276; Schuster 1980a: 789; Schuster 1992: 218; Gradstein 1994: 156; Lücking 1995: 116.

**Fig.:** Evans 1907, pl. 1, figs 17-23; 1935, fig. 3C-G; Schuster & Hattori 1954, pl. VI, fig. 1 (oil bodies); Schiffner & Arnell 1964, pl. XIV, fig. 153a-h, as *Marchesinia schiffneri*; Breil 1970, figs 129-131; Lorscheitter Baptista 1977, pl. XIII, as *Neurolejeunea* sp.; Schuster 1980a: 788, fig. 656; 1992, fig. 4: 7, 6: 9 (oil bodies); Stephani 1985, fig. 1582, as *Ceratolejeunea devexa*, fig. 1677, as *C. uleana*, fig. 7800; Gradstein 1994: 153, fig. 39A, H; Lücking 1995: 116, fig. 63; Gradstein & Costa 2003, fig. 60K-M; Gradstein & Ilkiu-Borges 2009, fig. 70H-K.

*Neurolejeunea catenulata* (Nees) Schiffn. in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 131. 1893.

Bas.: *Phragmicoma catenulata* Nees, *Naturg. Eur. Leberm.* 3: 248. 1838 (*nom. nudum*).

*Lejeunea catenulata* Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 323. 1845.

Fulford 1987: 276; Gradstein 1994: 152; 154, distr. map.

**Fig.:** Evans 1907, pl. 2, figs 1-12; Stephani 1985, fig. 7801.

## NOWELLIA Mitt. in Godman 1870

## CEPHALOZIACEAE

*Nowellia bicornis* (Spruce) Fulf. 1968 = *Nowellia dominicensis* Steph. 1924 (Grolle, 1968; Fulford, 1987: 268).

***Nowellia dominicensis*** Steph., *Spec. Hep.* 6: 443. 1924.

Syn.: *Cephalozia wrightii* (Gottsche ex Spruce) Steph. var. *bicornis* Spruce, *J. Linn. Soc., Bot.* 30: 354. 1895.

*Nowellia bicornis* (Spruce) Fulf., *Mem. New York Bot. Gard.* 11(3): 331. 1968.

Spruce 1895: 354, as *Cephalozia wrightii* var. *bicornis*; Stephani 1924: 443; Grolle 1968: 40; Fulford 1968: 331, as *Nowellia bicornis*; Fulford et al. 1970: 65; Fulford 1987: 268; Schuster 2002: 40.

**Fig.:** Spruce 1895, pl. 26, figs 1-4, as *Cephalozia wrightii* var. *bicornis*; Grolle 1968: 38, fig. 6f-k + map 2; Fulford 1968: 330, pl. 84, fig. 4a-d, as *Nowellia bicornis*; Stephani 1985, fig. 7853, as *N. wrightii* var. *bicornis* (from Dominica, leg. Elliott); Schuster 1983, fig. 63 (map); 2002, fig. 227:10-12.

*Nowellia wrightii* (Gottsche ex Spruce) Steph., *Spec. Hep.* 3: 349. 1908.

Pagán 1942: 89.

**Fig.:** Grolle 1968: 41, fig. 7a-k + map 2; Stephani 1985, fig. 7852.

**Note:** *Fide* Grolle (1968), this species is endemic to Cuba and should therefore be excluded from the hepatic flora of Dominica.

#### ODONTOLEJEUNEA (Spruce) Schiffn. 1893

#### LEJEUNEACEAE

*Odontolejeunea angustifolia* Steph. 1912 = *Odontolejeunea lunulata* (Web.) Schiffn. 1893 (Teeuwen, 1987: 14, syn. nov.; Gradstein, 1994: 201).

*Odontolejeunea armitagei* Pears. 1922 = *Odontolejeunea lunulata* (Web.) Schiffn. 1893 (Gradstein, 1994: 201).

*Odontolejeunea chaerophylla* (Spruce) Schiffn. 1893 = *Odontolejeunea lunulata* (Web.) Schiffn. 1893 (Gradstein, 1994: 201).

***Odontolejeunea lunulata*** (Web.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 128. 1893.

Bas.: *Jungermannia lunulata* Web., *Hist. Musc. Hep. Prodr.*: 33. 1815.

Syn.: *Lejeunea lunulata* (Web.) Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 326. 1845.

*Lejeunea (Odonto-Lejeunea) chaerophylla* Spruce 1884 var. *paroica* Spruce, *J. Linn. Soc. Bot.* 30: 336. "1894" 1895.

*Odontolejeunea chaerophylla* (Spruce) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 127. 1893.

*Odontolejeunea sieberiana* (Gottsche) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 127. 1893.

*Odontolejeunea angustifolia* Steph., *Spec. Hep.* 5: 176. 1912. [**Type: Dominica**]

*Odontolejeunea armitagei* Pears., *J. Bot.* 60: 217. 1922. [**Type: Dominica**]

*Cyclolejeunea elliotii* Steph., *Spec. Hep.* 5: 185. 1913. [**Type: Dominica**]

Spruce 1895: 336, as *Lejeunea (Odontolejeunea) l.* and *Lejeunea (Odontolejeunea) chaerophylla* var. *paroica*; Evans 1904: 189, as *O. sieberiana*; Stephani 1913: 185, as *Cyclolejeunea elliotii*; Pearson 1922: 217, as *O. lunulata* and *O. armitagei*; Pagán 1939: 76, as *O. sieberiana*; Fulford 1987: 276; Teeuwen 1989: 16, 22; Schuster 1992: 216; Gradstein 1994: 203; Lücking 1995: 118; Schäfer-Verwimp 1999: 318 (mix).

**Fig.:** Spruce 1885: Tab. XXI, as *Odontolejeunea chaerophylla*; Evans 1904, pl. 8, figs 1-15; Herzog 1957: 53, fig. 1 a-e, 55, fig. 2 a-f, as *Odontolejeunea sieberiana*; 56, fig. 3 a-h, as *Odontolejeunea lunulata* var. *calcarata*, 58, fig. 5 a-g, as *Odontolejeunea lunulata* and *O. sieberiana*; Schiffner & Arnell 1964, pl. XIV, fig. 155a-f, as *O. sieberiana* var. *spinosa*; Griffin 1979, pl. IX, figs 432-434; Cole 1983, fig. 30e-g; Stephani 1985, fig. 2210, as *Cyclolejeunea elliotii*, fig. 7855, as *O. sieberiana*, fig. 7858, as *O. tortuosa*, fig. 7859, as *O. angustifolia*, fig. 7860, as

*O. calcarata*, fig. 7861, as *O. chaerophylla*, fig. 7862, as *O. cubensis*, figs 7866-7867, as *O. ecuadorensis*, figs 7871-7872, as *O. lunulata*, figs 7873-7874, as *O. levistipula*, fig. 7876, as *O. martinicensis*, figs 7877-7878, as *O. nigrescens*, figs 7880-7881, as *O. paranensis*, fig. 7884, as *O. spiniloba*; Onraedt 1988: 58, fig. 7: 1-7, 59, fig. 8:1-7, as *O. lunulata* var. *calcarata*, 61, fig. 10: 1-9, as *O. sieberiana*; Teeuwen 1989: 18, pl. 2A-E, 20, pl. 3A-M; Schuster 1992, figs 5: 12, 30: 5-6, oil bodies, as *O. lunulata*, figs 30: 4, 7, oil bodies, as *O. sieberiana*; Reiner-Drehwald 1993: 42, figs 10A-D; Gradstein 1994, fig. 54; Lücking 1995: 120, fig. 66; Kis & Pócs 1997, pl. XVI:92-93 (oil bodies); Gradstein *et al.* 2001, fig. 39A-B; Gradstein & Costa 2003, fig. 61A-B; Wigginton 2004, fig. 7G (oil bodies), fig. 189A-H; Zartman & Ilkiu-Borges 2007, pl. 18A-D; Gradstein & Ilkiu-Borges 2009, fig. 72A-C.

*Odontolejeunea sieberiana* (Gottsche) Schiffn. 1893 = *Odontolejeunea lunulata* (Web.) Schiffn. 1893 (Teeuwen, 1989: 16; Gradstein, 1994: 201).

ODONTOSCHISMA (Dumort.) Dumort. 1835

CEPHALOZIACEAE

***Odontoschisma denudatum*** (Nees) Dumort., *Recueil Observ. Jungerm.* 19. 1835.

Bas.: *Jungermannia denudata* Nees in Mart., *Fl. Crypt. Erlang.*: xiv. 1817.

*Odontoschisma subrotundifolium* Steph., *Spec. Hep.* 3: 372. 1908. [**Syntype: Dominica**]

Pagán 1942: 89, as *Odontoschisma subrotundifolium*; Stephani 1908: 372, syntype of *O. subrotundifolium*; Fulford 1968: 341; Fulford 1987: 268; Schuster 1974: 837.

**Fig.:** Evans 1903b, pl. 19, figs 35-38; Kurz & Little 1933, figs 65, 67; Frye & Clark 1945: 469, figs 1-14; Fulford 1968: 342, pl. 88, fig. 6a-d, pl. 89, fig. 10a-c, as *O. atropurpureum*; Breil 1970, figs 86-88; Schuster 1974, figs 467-468, with reference to further illustrations; 2002, fig. 241; Kis & Pócs 1981, fig. 11, 35 (median leaf cells with oil bodies); Stephani 1985, figs 7888-7889, as *O. denudatum*, fig. 7893, as *O. atropurpureum*, fig. 7900, as *O. guadelupense*, figs 7908-7909, as *O. subrotundifolium*; Smith 1990, fig. 29:1-7; Paton 1999, fig. 48; Zhu & So 2001, fig. 21; Gradstein *et al.* 2001, fig. 20K-N; Gradstein & Costa 2003, fig. 15D-G; references to further illustrations in Piippo 1990.

***Odontoschisma longiflorum*** (Taylor) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 419. 1877.

Bas.: *Sphagnoecetis longiflora* Taylor, *London J. Bot.* 5: 281. 1846.

*Odontoschisma planifolium* Steph., *Spec. Hep.* 3: 370. 1908. [**Type: Dominica**]

Stephani 1908: 370, the type of *O. planifolium*; Fulford 1968: 337; 1987: 268.

**Fig.:** Fulford 1968: 336, pl. 86, fig. 1a-c; Gradstein *et al.* 1977, pl. 5, fig. 27 (oil bodies); Kis & Pócs 1981, fig. 12 (median leaf cells with oil bodies); Cole 1983, fig. 24a-d; Stephani 1985, fig. 7899, as *O. glaziovii*, fig. 7903, as *O. planifolium*; Gradstein & Costa 2003, fig. 15I.

*Odontoschisma planifolium* Steph. 1908 = *Odontoschisma longiflorum* (Tayl.) Steph. 1908 (Fulford, 1968: 335, in syn.)

***Odontoschisma prostratum*** (Sw.) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4(13): 419. 1877.

Bas.: *Jungermannia prostrata* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 143. 1788.

Spruce 1895: 355.

**Fig.:** Evans 1903b, pl. 19, figs 42-54, pl. 20, figs 55-64; Kurz & Little 1933, figs 63, 68; Frye & Clark 1945: 470, figs 1-13; Fulford 1968: 336, pl. 86, fig. 2a-e; Breil 1970, figs 89-92; Schuster 1974, figs 473:8-11, 474-475, with reference to further illustrations; 2002, fig. 240; Stephani 1985, fig. 7905; Schumacker & Váña 1999, fig. 1.

**Note:** Not cited by Fulford 1968: 338 from Dominica; two of the three collections cited by Spruce (1895) are filed under *Odontoschisma denudatum* (Elliott 665, 680); also, Schuster 1(974: 865) did not list Dominica among its range.

*Odontoschisma subrotundifolium* Steph. 1908 = *Odontoschisma denudatum* (Nees) Dumort. 1835 (Fulford, 1968: 340, in syn.).

OMPHALANTHUS Lindenb. et Nees 1845

LEJEUNEACEAE

***Omphalanthus filiformis*** (Sw.) Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 304. 1845.

Bas.: *Jungermannia filiformis* Sw., *Nova Gen. Spec. Pl. Prodr.*: 144. 1788.

Syn.: *Lejeunea filiformis* (Sw.) Nees, in Montagne, in: D'Orbigny, *Voy. Amér. Mérid.*, *Bot.* 7(2): 64. 1839.

Spruce 1895: 334, as *Lejeunea filiformis*; Evans 1907: 20; Pagán 1939: 76; Pagán 1942: 104; Fulford 1987: 276; Schuster 1980a: 403; 1992: 233; 1996: 42, mixed with *Drepanolejeunea valiae*;

**Fig.:** Evans 1907, pl. 3, figs, 1-9; 1935, fig. 3H-N; Lorscheitter Baptista 1977, pl. V, pl. XXXIV:1 (oil bodies); Gradstein *et al.* 1977, pl. 5, fig. 28 (oil bodies); Stephani 1985, figs 7920-7921; Schuster 1992, figs 1:1, 10: 5, 12: 1-5 (oil bodies and cladographs); Reiner-Drehwald 1993: 21, figs 2A-D; Kürschner & Parolly 1998: 51, fig. 7: 13; Gradstein *et al.* 2001, fig. 49J-L; Gradstein & Costa 2003, fig. 61C-E.

ORYZOLEJEUNEA (R.M. Schust.) R.M. Schust. 1992

LEJEUNEACEAE

*Oryzolejeunea antillana* (R.M. Schust.) R.M. Schust. 1992 = *Oryzolejeunea saccatiloba* (Steph.) Gradst. 1998, syn. nov. *fide* Grolle in Dauphin *et al.* (1998: 77).

***Oryzolejeunea saccatiloba*** (Steph.) Gradst., in Dauphin *et al.*, *Lindbergia* 23: 77. 1998.

Bas.: *Archilejeunea saccatiloba* Steph., *Hedwigia* 34: 61. 1895.

Syn.: *Cyrtolejeunea antillana* R.M. Schust., *Bull. Torrey Bot. Club* 97: 336. 1971 "1970".

[**Type: Dominica**]

*Oryzolejeunea antillana* (R.M. Schust.) R.M. Schust., *J. Hattori Bot. Lab.* 72: 249. 1992. Schuster 1970, as *Cyrtolejeunea antillana*; Thiers 1986: 270, as *C. antillana*; Fulford 1987: 273, as *C. antillana*; Lücking 1995: 123, as *Oryzolejeunea antillana*.

**Fig.:** Schuster 1971, fig. 1, as *Cyrtolejeunea antillana*; 1992: 250, fig. 14, as *O. antillana*; Stephani 1985, fig. 817, as *Archilejeunea saccatiloba*, fig. 819, as *A. subinermis*; Lücking 1995: 124, fig. 69, as *O. antillana*; Gradstein *et al.* 2001, fig. 50A-D; Campos & Uribe-M., 2006, fig. 11-J.

PALLAVICINIA S.F. Gray 1821

PALLAVICINIACEAE

***Pallavicinia lyellii*** (Hook.) S.F. Gray, *Nat. Arr. Brit. Pl.* 1: 775. 1821.

Bas.: *Jungermannia lyellii* Hook., *Brit. Jungerm.*, pl. 77. 1816.

*Blyttia lyellii* (Hook.) Endlicher, *Gen. Pant. Vindob.*: 1339. 1840 "Blytia".

Spruce 1895: 365, as *Blyttia lyellii*; Stephani 1900: 318, as *Pallavicinius*.

**Fig.:** Goebel 1906, fig. 135, as *Blyttia lyellii*; Kurz & Little 1933, fig. 4; Frye & Clark 1937: 147, figs 1-5; Hässel de Menéndez 1961, figs 1-2; Hell 1969, pl. 10, figs 69-70, pl. 11, figs 76, 78, 85, pl. 13, fig. 99; Breil 1970, figs 191-193; Vanden Berghen 1972, fig. 63; Inoue & Hibino 1984, pl. III/6 (SEM micrograph of spore); Stephani 1985, fig. 7966 (“*Pallavicinius*”); Smith 1990, fig. 129:5-8; Schuster 1966a: 462, fig. 38:1; 1992a, figs 832:8; 856-857; Paton 1999, fig. 265; Gradstein *et al.* 2001, fig. 70G-M; Gradstein & Costa 2003, fig. 92G-M; Wigginton 2004, fig. 42A-J; references to further illustrations in Frye & Clark 1937, Piippo 1990, and Wigginton & Grolle 1996.

PARACROMASTIGUM Fulford *et J. Tayl.* 1961

LEPIDOZIACEAE

*Paracromastigum bifidum* (Steph.) R.M. Schust. subsp. *densum* (Pears.) R.M. Schust., *Nova Hedwigia Beiheft* 118: 361. 2000, *nom. inval.*

*Paracromastigum dominicensis* R.M. Schust. [subsp. *dominicensis*], *Nova Hedwigia Beiheft* 118: 369. 2000, >

*Paracromastigum dominicensis* subsp. *borinquena* R.M. Schust., *Nova Hedwigia Beiheft* 118: 369. 2000, *nom. inval.*

***Paracromastigum pachyrhizum*** (Nees) Fulf., *Mem. New York Bot. Gard.* 11: 390. 1968.

Bas.: *Jungermannia pachyrhiza* Nees, in Martius, *Fl. Brasil.* 1: 339. 1833.

*Paracromastigum bifidum* (Steph.) R.M. Schust. subsp. *densum* (Pears.) R.M. Schust., *Nova Hedwigia Beiheft* 118: 361. 2000, *nom. inval.*

*Paracromastigum dominicensis* R.M. Schust. [subsp. *dominicensis*], *Nova Hedwigia Beiheft* 118: 369. 2000, *nom. inval.*

*Paracromastigum dominicensis* subsp. *borinquena* R.M. Schust., *Nova Hedwigia Beiheft* 118: 369. 2000, *nom. inval.*

Schuster 2000: 361ff, as *P. bifidum* subsp. *densum*, also as *P. dominicensis* subsp. *borinquena* and subsp. *dominicensis*.

**Fig.:** Fulford 1968, pl. 105, fig. 1a-n, as *Leucosarmentum portoricense*; pl. 106, fig. 2a-k, as *Leucosarmentum bifidum*; pl. 107, fig. 2a-k, as *P. pachyrhizum*; Crandall-Stotler 1974, figs 1-26, as *Leucosarmentum portoricense*; Stephani 1985, fig. 96, as *Alobiella bifida*; Schuster 2000, figs 144-145, as *P. bifidum* subsp. *densum*; Gradstein & Costa 2003, fig. 73D-F.

**Note:** Gradstein & Costa (2003: 211) synonymized *Paracromastigum bifidum* with *P. pachyrhizum* and noted that “*Paracromastigum bifidum* (Steph.) R.M. Schust., described from the West Indies, is a form of *P. pachyrhizum* with elliptical leaves and rectangular cells.”

PHRAGMICOMA Dumort. 1822 = MARCHESINIA S.F. Gray 1821

LEJEUNEACEAE

*Phragmicoma ocellulata* Nees *et* Mont. 1843 = *Stictolejeunea squamata* (Willd. *ex* Web.) Schiffn. 1893 (Gradstein, 1985: 204; Gradstein, 1994: 145).

PHYCOLEPIDOZIA R.M. Schust. 1966

PHYCOLEPIDOZIACEAE

***Phycolepidozia exigua*** R.M. Schust., *Bull. Torrey Bot. Club* 93: 440. 1966. [**Type: Dominica**]

Schuster 1966c: 440; 2000: 486; Fulford 1968: 384; 1987: 268; Gradstein *et al.* 2001: 187.

**Fig.:** Schuster 1966c, figs 1-2; 1984, fig. 63:6; 2000, fig. 201; Fulford 1968: 388, pl. 106, fig. 1a-d; Schuster 1984: 997, fig. 63:6; Gradstein *et al.* 2001, fig. 60H-I.

**Note:** Known only from the type collection, endemic species and genus to Dominica.



## PHYSANTHOLEJEUNEA R.M. Schust. 1978

## LEJEUNEACEAE

***Physantholejeunea portoricensis*** (Hampe et Gottsche) R.M. Schust., *Phytologia* 39(6): 429. 1978.

Bas.: *Lejeunea portoricensis* Hampe et Gottsche, *Linnaea* 25: 352. 1852.

Jovet-Ast 1947: 28, as *Ceratolejeunea portoricensis*; Schuster 1992: 231; Gradstein *et al.* 2001: 164.

**Fig.:** Jovet-Ast 1947, fig. V, as *Ceratolejeunea portoricensis*; Stephani 1985, figs 7803-7804, as *Neurolejeunea portoricensis*; Schuster 1992, fig. 4: 5-6 (ocelli and lipid droplets); Gradstein *et al.* 2001, fig. 50E-I.

## PLAGIOCHILA (Dumort.) Dumort. 1835

## PLAGIOCHILACEAE

***Plagiochila abrupta*** Lehm. et Lindenb., in Lindenb., *Spec. Hep.* (fasc. 2-4): 106. 1840.

Stephani 1905: 512; Pagán 1939: 9; Fulford 1987: 268.

**Fig.:** Stephani 1985, fig. 11146.

***Plagiochila adiantoides*** (Sw.) Lindenb., *Spec. Hepat.* (fasc. 2-3): 77. 1840.

Bas.: *Jungermannia adiantoides* Sw., *Prod. Nov. Gen. Spec.*: 142. 1788, “*adianthoi-*”

*Plagiochila procera* Lindenb., *Spec. Hep.* (fasc. 2-4): 40. 1840.

Spruce 1895: 359; Pagán 1942: 85, as *P. procera*; Fulford 1987: 268; Heinrichs 2002: 126.

**Fig.:** Stephani 1985, fig. 11147, as *P. adiantoides*, fig. 11150, as *P. angulifolia*, fig. 11444, as *P. saladona*, fig. 11225, as *P. procera*; Heinrichs *et al.* 1998, figs 1-3; Heinrichs 2002, pls. 30, 31A, 53C-D, with references to further illustrations; Gradstein & Ilkiu-Borges 2009, fig. 17A-D.

**Note:** Fig. 2 in Gradstein (1989) belongs to *P. superba* *vide* Heinrichs (2002).

***Plagiochila aerea*** Tayl., *London J. Bot.* 5: 263. 1846.

*Plagiochila bursata* (Desv.) Lindenb., *Spec. Hepat.* (fasc. 2-4): 88. 1840, *nom. illeg.*

Spruce 1895: 359, as *P. bursata*; Fulford 1987: 269, as *P. bursata*; Grolle & Heinrichs 1999: 516; Heinrichs 2002: 140.

**Fig.:** Gottsche 1863, pl. 4, as *P. aerea*, pl. 15, as *P. bursata*; Schiffner 1893, fig. 47F, as *P. bursata*; Stephani 1916, fig. 132e, as *P. lineari-cuspidata*, fig. 149, as *P. trilobata*; 1985, figs 11098, 11728, as *P. subpilifolia*, fig. 11530, as *P. alpina*, 11575, as *P. subtenuis*, figs 11578, 11672, as *P. trilobata*, 11592, as *P. goethardii*, figs 11626-11627, as *P. aerea*, figs 11634-11635, as *P. bursata*, fig. 11650, as *P. lineari-cuspidata*, fig. 11653, as *P. macvicarii*, fig. 11662, as *P. quitensis*, fig. 11776, as *P. pungens*; Herzog 1952, fig. 1a, as *P. bursata*, 1b as *P. aerea*; Heinrichs *et al.* 1998, fig. 6; Grolle & Heinrichs 1999, figs 1-4; Gradstein *et al.* 2001, fig. 62L-M; Heinrichs 2002, pls. 1A-B, 34, 35, 48D, 54C, with references to further illustrations; Alvarenga *et al.* 2007, figs 15-17; Gradstein & Ilkiu-Borges 2009, fig. 17E-G.

*Plagiochila antillarum* Mont. ex Gottsche 1857, *nom. inval.* = *Plagiochila breuteliana* Lindenb. 1843, *syn. nov. vide* Heinrichs (2002: 75).

*Plagiochila arguta* Steph. 1911 = *Plagiochila hookeriana* Lindenb. 1839 (Hässel de Menéndez, 2004, *syn. nov.*).

***Plagiochila bicornis*** Hampe et Gottsche, *Linnaea* 25: 338. 1853 “1852”.

*Tylimanthus marginatus* Steph., *Spec. Hep.* 3: 5. 1905.

Spruce 1895: 359; Stephani 1905: 5, as *Tylimanthus marginatus*; Pagán 1939: 9, as *P. bicornis*, 37, as *T. marginatus*; 1942: 88, as *T. marginatus*; Fulford 1987: 268, as *P. bicornis*, 272, as *T. marginatus*; Grolle 1991: 192.

**Fig.:** Stephani 1985, fig. 10357, as *Tylimanthus marginatus*, figs 11155-11156, as *P. bicornis*.

***Plagiochila bidens*** Gottsche, *Ann. Sci. Nat., Bot.*, sér. 4, 8: 322. 1857.

Spruce 1895: 359; Stephani 1902: 227; Carl 1931: 47 (cited after Schuster 1980a: 403); Pagán 1939: 9; Pagán 1942: 83; Arnell 1956; Fulford *et al.* 1970: 66; Fulford 1987: 268; Schuster 1980a: 403 (“... it is probable that my Dominican material should be referred here.”); Groth *et al.* 2002: 679.

**Fig.:** Inoue 1980: 123, fig. 4:8-12; Groth *et al.* 2002, figs 2F, I, 3A-C, 4C-D.

***Plagiochila breuteliana*** Lindenb., *Spec. Hepat.* (fasc. 5): 150. 1843.

Syn.: *Plagiochila breuteliana* Lindenb. var.  $\beta$  *guadelupensis* Gottsche, *Ann. Sci. Nat., Bot.*, sér. 4, 8: 337. 1857.

*Plagiochila elliotii* Spruce, *J. Linn. Soc., Bot.* 30: 359. 1895. [**Type: Dominica**]

*Plagiochila antillarum* Mont. ex Gottsche, *Ann. Sci. Nat., Bot.*, sér. 4, 8: 337. 1857, *nom. inval.*

Spruce 1895: 360, as *P. breuteliana* var. *guadelupensis* and *P. elliotii*; Stephani 1905: 518; Pagán 1939: 9; Pagán 1942: 83; Fulford 1987: 269, also as *P. breuteliana* var. *guadelupensis* and *P. elliotii*; Heinrichs 2002: 75, 78.

**Fig.:** Spruce 1895, pl. 28:1-5, as *P. elliotii*; Stephani 1985, fig. 11159, as *P. breuteliana*, fig. 11170, as *P. conspicua*, fig. 11255, as *P. urbanii*; Heinrichs 2002, pls. 6, 7, with reference to further illustrations.

*Plagiochila breuteliana* var.  $\beta$  *guadelupensis* Gottsche 1857 = *Plagiochila breuteliana* Lindenb. 1843, syn. nov. *vide* Heinrichs (2002: 75).

*Plagiochila bursata* (Desv.) Lindenb. 1840, *nom. illeg.* = *Plagiochila aerea* Tayl. 1846 (Grolle & Heinrichs, 1999: 512, in syn.)

*Plagiochila confundens* Lindenb. ex Hampe et Gottsche 1853 “1852” = *Plagiochila simplex* (Sw.) Lindenb. 1840 (Heinrichs *et al.*, 1998: 26, syn. nov.).

***Plagiochila divaricata*** Lindenb., *Spec. Hepat.* (fasc. 5): 147. 1843.

Spruce 1895: 359; Stephani 1902: 206; Pagán 1942: 84; Fulford 1987: 269.

**Fig.:** Stephani 1985, figs 11547-11549 (11547 from Dominica, Elliott 1987).

***Plagiochila dominicensis*** Tayl., *London J. Bot.* 5: 270. 1846. [**Type: Dominica**]

Taylor 1846: 270 (type); Spruce 1895: 359; Stephani 1905: 577; Pagán 1939: 10; Pagán 1942: 84; Fulford *et al.* 1970: 66; Fulford 1987: 269; Heinrichs 2002: 90, 92.

**Fig.:** Herzog 1952, figs 2a, as *P. pichinchensis* var. *basidentata*; Stephani 1985, figs 11398-11400 (11400 from Dominica, leg. Armitage 1896); Heinrichs 2002, pls. 2B, 14, 52A.

*Plagiochila duriei* Gottsche et Rabenh. 1873 = *Plagiochila simplex* (Sw.) Lindenb. 1840 (Heinrichs *et al.*, 1998: 26, syn. nov.).

***Plagiochila eggersii*** Inoue, *Bull. Nat. Sci. Mus., Tokyo, Ser. B*, 14(4): 138. 1988. [**Type: Dominica**]

Inoue 1988: 138, the type.

**Fig.:** Inoue 1988, fig. 3-5.

*Plagiochila elliotii* Spruce, *J. Linn. Soc., Bot.* 1895 = *Plagiochila breuteliana* Lindenb. 1843, syn. *vide* Stephani (1905: 517), and Carl (1931: 52), confirmed by Heinrichs (2002: 75).

*Plagiochila exigua* (Taylor) Taylor, *London J. Bot.* 5: 264. 1846.

Schuster (1980a: 403), as *P. corniculata* (“The collection is too sparing to be absolutely identifiable. Since *P. bidens* G. is reported from the Andes near Quito, Ecuador, north to Dominica ..., it is probable that my Dominican material should be referred here.”).

**Fig.:** Schuster 1980a, fig. 561:1-9, 562, as *P. corniculata*;

*Plagiochila flaccida* Lindenb. 1840 = *Plagiochila macrostachya* Lindenb. 1840 (Heinrichs, 2002: 103, syn. nov.).

*Plagiochila guadalupensis* Gottsche ex Steph. 1905 = *Plagiochila stricta* Lindenb. 1839 (Lindner *et al.*, 2004: 264).

***Plagiochila gymnocalycina*** (Lehm. *et* Lindenb.) Mont., in d’Orbigny, *Voy. Amér. Mérid., Bot.* 7 (2): 81. 1839.

Bas.: *Jungermannia gymnocalycina* Lehm. *et* Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 5: 28. 1833.

*Plagiochila remotifolia* Hampe *et* Gottsche, *Linnaea* 25: 340. 1853 “1851”.

Spruce 1895: 358; (Stephani 1902: 250, however, with *P. rutilans* as synonym); Schiffner & Arnell 1964, in legend of pl. V, fig. 54, and in legend of pl. VI, fig. 64.

**Fig.:** Lindenberg 1839-1844, fig. 10; Herzog 1932, fig. 3g-h, as *P. rutilans* var. *angustifolia*; 59 c-f, 64 a-f, 65 a-d, 66 a-b; Heinrichs *et al.* 1998, fig. 14C-H; Gradstein & Costa 2003, fig. 80E-G; Alvarenga *et al.* 2007, figs 18-20; Gradstein & Ilkiu-Borges 2009, fig. 18A-C.

***Plagiochila herminieri*** Steph., *Spec. Hep.* 2: 547. 1905.

Heinrichs 2002: 134.

**Fig.:** Stephani 1985, fig. 11332; Heinrichs 2002, pl. 33.

*Plagiochila hookeriana* Lindenb., *Spec. Hepat.* XXVII, 81, pl. XV, fig. 1-5. 1839.

Syn.: *Plagiochila arguta* Steph., *Kongl. Svenska Vetenskapsakad. Handl.* (n.s.) 46(9): 27. 1911.

Pearson 1922: 227, as “*P. arguta* Gottsche”.

**Note:** The combination in Pearson (1922) does not exist, *P. arguta* Steph. is a Patagonian species and has recently been synonymized with *Plagiochila hookeriana* by Hässel de Menéndez (2004). *Plagiochila hookeriana* is known only from southern South America (Chile and Argentina) and should therefore be excluded from the hepatic flora of Dominica.

***Plagiochila husnotii*** Steph., *Spec. Hep.* 2: 506. 1905.

Stephani 1905: 507; Pearson 1922: 227; Pagán 1939: 11; Pagán 1942: 85; Fulford 1987: 269; Heinrichs 2002: 100, 102.

**Fig.:** Stephani 1985, fig. 11103, as *P. amoena*, fig. 11122; Heinrichs 2002, pls. 18, 19, 48A-B.

***Plagiochila macrostachya*** Lindenb., *Spec. Hep.* (fasc. 2-4): 75. 1840.

Syn.: *Plagiochila flaccida* Lindenb., *Spec. Hep.* (fasc. 2-4): 78. 1840.

Stephani 1888: 302; Fulford 1987: 269, both as *P. flaccida*; [no specimen from Dominica seen by Heinrichs 2002].

**Fig.:** Spruce 1884-1885, fig. XVII, as *P. zygophylla*; Inoue 1975, fig. 8, as *P. scoparia*; Stephani 1985, figs 11425-11426; Heinrichs 2002, pls. 20, 50E-F, with reference to further illustrations; Gradstein & Costa 2003, fig. 79E-G.

*Plagiochila magdalanae* Gottsche ex Dugas 1928, *nom. inval.* = *Plagiochila superba* (Nees ex Spreng.) Mont. et Nees 1839 [var. *superba*] (Heinrichs, 2002: 111, syn. nov.).

**Note:** Pearson (1922: 225), and Fulford (1987: 269), are citing: “*Plagiochila magdalanae* Gottsche in Steph. 1905”; however, this combination is not given either in Stephani (1905), Index Hepaticarum (11: 199) or in Heinrichs (2002: 111).

***Plagiochila perrottetiana*** Mont. et Gottsche, in Mont., *Ann. Sci. Nat., Bot.*, sér. 4, 6: 195. 1856.

Spruce 1895: 359; Stephani 1902: 228; Pagán 1942: 85; Arnell 1956; Fulford 1987: 269.

**Fig.:** Stephani 1985, figs 11659-11661.

*Plagiochila procera* Lindenb. 1840 = *Plagiochila adiantoides* (Sw.) Lindenb. 1840 (Heinrichs et al., 1998: 2, syn. nov.).

*Plagiochila remotifolia* Hampe & Gottsche 1853 “1851” = *Plagiochila rutilans* Lindenb. 1840 (Stephani, 1902: 250; Heinrichs et al., 2001: 351, synonymy conf.).

***Plagiochila rutilans*** Lindenb., *Spec. Hepat.* (fasc. 2-4): 47. 1840. [var. *rutilans*]

Syn.: *Plagiochila remotifolia* Hampe et Gottsche, *Linnaea* 25: 340. 1853 “1851”.

Spruce 1895: 358, as *P. remotifolia*; [Stephani 1902: 250, however, with *P. gymnocalycina* as synonym]; Pagán 1939: 11; Arnell 1956; Fulford et al. 1970: 66; Fulford 1987: 269.

**Fig.:** Gottsche 1863, pl. 6; Schiffner & Arnell 1964, pl. V, figs 53 a-b, 54 a, pl. VI, figs 56, 57; Griffin 1979, pl. VII, figs 364-367; Stephani 1985, figs 11120, 11647, as *P. harrisana*, fig. 11465, as *P. farlowii*; Heinrichs et al. 1998, figs 4-5, as *P. harrisana*; 2001, figs 2-5, map: fig. 6, and references to further illustrations; Gradstein & Costa 2003, fig. 80A-D; Gradstein & Ilkiu-Borges 2009, fig. 19C-F.

***Plagiochila simplex*** (Sw.) Lindenb., *Spec. Hepat.*: 54. 1840.

Bas.: *Jungermannia simplex* Sw., *Prod. Nov. Gen. Spec.*: 143. 1788.

Syn.: *Plagiochila confundens* Lindenb. ex Hampe et Gottsche, *Linnaea* 25: 337. 1853 “1852”.

*Plagiochila duriei* Gottsche et Rabenh., *Hep. Eur. [Exsicc.]* n. 553. 1873.

Spruce 1895: 358, as *P. confundens*; Pagán 1939: 10, as *P. confundens*; 1942: 84, as *P. duriei* “*durieui*”; Fulford 1987: 269, as *P. confundens*.

**Fig.:** Schiffner & Arnell 1964, pl. VI, fig. 59 a-b, fig. 60 a-d, 61 a-c, 62 a-d, as *P. erronea*; Stephani 1985, fig. 11401, as *P. “durii”*, partly from Dominica, figs 11795-11796, as *P. simplex*; Heinrichs et al. 1998, figs 12, 13, 14A-B; Gradstein & Costa 2003, fig. 80H-J; Gradstein & Ilkiu-Borges 2009, fig. 19G-I.

***Plagiochila steyermarkii*** Robinson, *Bryologist* 68: 93. 1965.

Grolle & Heinrichs 1999: 523; Schäfer-Verwimp 1999: 325.

**Fig.:** Robinson 1965, figs 1-2.

***Plagiochila stricta*** Lindenb., *Spec. Hepat.* (fasc. 1): 20. 1839.

Syn.: *Plagiochila guadalupensis* Gottsche ex Steph., *Spec. Hep.* 2: 562. 1905.

Spruce 1895: 358; Pagán 1942: 85; Fulford 1987: 269 – all as *P. guadalupensis*.

**Fig.:** Stephani 1985, fig. 11415, as *P. guadalupensis*; Heinrichs et al. 1998, fig. 7; Rycroft et al. 2002, fig. 2; Lindner et al. 2004, fig. 1, map: fig. 4; Heinrichs et al. 2004, fig. 1A, E, F.

***Plagiochila superba*** (Nees ex Spreng.) Mont. et Nees, in d'Orbigny, *Voy. Amér. Mérid., Bot.* 7 (2): 81. 1839. [var. ***superba***]

Bas.: *Jungermannia superba* Nees ex Spreng., in Linné f., *Syst. Veg.* (ed. 16) 4(2): 326. 1827.

*Plagiochila trinitensis* Steph., *Spec. Hep.* 2: 531. 1905.

*Plagiochila magdalena* Gottsche ex Dugas, *Contrib. Étude Plagiochila*: 157. 1928, *nom. inval.*

Spruce 1895: 359; Stephani 1905: 531, as *P. trinitensis*; Pagán 1939: 11; Pagán 1942: 86; Fulford 1987: 269, also as *P. trinitensis*; Heinrichs 2002: 113.

**Fig.:** Stephani 1985, fig. 11158, as *P. bradeana*, 11186, as *P. frontinensis*, 11227-11229, as *P. quelchii*, 11253, as *P. trinitensis*, 11256-11257, as *P. verapazana*; Gradstein 1989, fig. 2, as *P. adiantoides*; Heinrichs 2002, pls. 22-25, 47C, 52E-F, with reference to further illustrations.

***Plagiochila symmetrica*** Steph., *Spec. Hep.* 2: 245. 1902. [**Type: Dominica**]

Stephani 1902: 245, the type.

**Fig.:** Stephani 1985, fig. 11731 (from Dominica, Elliott s.n.).

**Note:** Not treated in a recent revision, the taxonomic status of this taxon needs to be clarified.

***Plagiochila tamariscina*** Steph., *Spec. Hep.* 2: 222. 1902. [**Syntype: Dominica**]

Stephani 1902: 223; Pagán 1939: 11; Pagán 1942: 86; Fulford 1987: 269.

**Fig.:** Schiffner & Arnell 1964, pl. VII, fig. 80a-c; Stephani 1985, figs 11668-11669; Pócs 2006, figs 76-78, 91-92.

***Plagiochila tenuis*** Lindenb., *Spec. Hepat.* (fasc. 2-4): 50. 1840.

Spruce 1895: 359; Stephani 1902: 226; Pearson 1922: 227; Pagán 1939: 11; Pagán 1942: 86; Fulford 1987: 269.

**Fig.:** Gradstein & Ilkiu-Borges 2009, fig. 20C-E.

*Plagiochila trinitensis* Steph. 1905 = *Plagiochila superba* (Nees ex Spreng.) Mont. et Nees 1839 [var. *superba*], *syn. nov. fide* Heinrichs (2002: 110).

***Plagiochila vincentina*** Lindenb., *Spec. Hepat.* (fasc. 2-4): 39. 1840.

Fulford 1987: 269; Heinrichs 2002: 122.

**Fig.:** Spruce 1884-1885, fig. XVIII, as *P. hylacoetis*; Stephani 1985, fig. 11123, as *P. hylacoetis*, fig. 11258, as *P. vincentina*, fig. 11460, as *P. variifolia*; Heinrichs 2002, pls. 28, 29, 49B, D, F, with references to further illustrations; León-Yáñez *et al.* 2006: 99, col. photo.

**PLATYLEJEUNEA** (Spruce) Schiffn. 1893 = **SYMBIEZIDIUM** Trevis. 1877

**LEJEUNEACEAE**

*Platylejeunea transversalis* (Sw.) Schiffn. 1893 = *Symbiezidium transversale* (Sw.) Trevis. 1877 var. *transversale*.

*Platylejeunea vincentina* (Gottsche) Schiffn. 1893 = *Symbiezidium transversale* (Sw.) Trevis. var. *hookeriana* (Gottsche) Gradst. et van Beek 1985 (Gradstein & van Beck, 1985: 238).

**PRIONOLEJEUNEA** (Spruce) Schiffn. 1893

**LEJEUNEACEAE**

***Prionolejeunea aemula*** (Gottsche) A. Evans, *Bull. Torrey Bot. Club* 31: 219. 1904.

Bas.: *Lejeunea aemula* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 338. 1845.

Syn.: *Lejeunea vulcanica* Spruce, in Gepp, *J. Linn. Soc. Bot.* 30: 337. “1894” 1895. [**Type: Dominica**]

*Prionolejeunea vulcanica* (Spruce) Schiffn., *Bot. Jahrb. Syst.* 23: 590. 1897.

*Prionolejeunea alata* Steph., *Spec. Hep.* 5: 204. 1913. [**Type: Dominica**]

Spruce 1895: 337, as *Lejeunea* (*Prionolejeunea*) *vulcanica* sp. nov.; Evans 1904: 220; Pagán 1939: 76; Pagán 1942: 104; Fulford *et al.* 1970: 68; Fulford 1987: 276, incl. *P. alata*; Schuster 1992: 304, as “cf. *aemula*”; Ilkiu-Borges 2006: 58.

**Fig.:** Spruce 1895, pl. 21, figs 1-3, as *Lejeunea* (*Prionolejeunea*) *vulcanica*; Evans 1904, pl. 11, figs 18-28; Fulford *et al.* 1970: 64, figs 13a-b; Stephani 1985, fig. 8124, as *P. aemula*, fig. 8126, as *P. alata* (from Dominica, Elliott 1693 p.p.), fig. 8158, as *P. vulcanica* (from Dominica, Elliott s.n.); Ilkiu-Borges 2000, fig. 39A-L; Gradstein & Costa 2003, fig. 63A-D; Ilkiu-Borges 2006, figs 6-8; Gradstein & Ilkiu-Borges 2009, fig. 73D-L.

*Prionolejeunea aequitexta* A. Evans 1904 = *Prionolejeunea denticulata* (F. Web.) Schiffn. 1893 (syn. *fide* Ilkiu-Borges, 2006).

*Prionolejeunea alata* Steph. 1913 = *Prionolejeunea aemula* (Gottsche) A. Evans 1904 (syn. nov. *fide* Ilkiu-Borges, 2006).

***Prionolejeunea ampliretis*** Herzog, *Feddes Repert.* 57: 178. 1955.

Ilkiu-Borges 2006: 61.

**Fig.:** Herzog 1955, fig. 13; Ilkiu-Borges 2006, figs 10-11.

***Prionolejeunea arguta*** (Nees) Steph., *Spec. Hep.* 5: 204. 1913.

Bas.: *Lejeunea arguta* Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 338. 1845.

Ilkiu-Borges 2006: 68.

**Fig.:** Ilkiu-Borges 2006, figs 12-14; Gradstein & Ilkiu-Borges 2009, fig. 74A-H.

***Prionolejeunea decora*** (Tayl.) Steph., *Spec. Hep.* 5: 207. 1913.

Bas.: *Lejeunea decora* Tayl., *London J. Bot.* 5: 393. 1846. [**Type: Dominica**]

*Priono-Lejeunea decora* (Tayl.) Steph., *Hedwigia* 29: 69. 1890, *nom. inval.*

Stephani 1890: 69, as *Priono-Lejeunea decora*; 1913: 208; Pagán 1942: 105; Schuster 1970: 343, mixed with the type of *Dactylolejeunea acanthifolia*; Fulford 1987: 276; Grolle 1991: 192; Schuster 1992: 303; Ilkiu-Borges 2006: 82.

**Fig.:** Stephani 1985, figs 8128, 8130, as *P. bicristata*, fig. 8134-8135, as *P. decora* (from Dominica, original); Schuster 1992, fig. 22:4, oil bodies; Ilkiu-Borges 2006, figs 20-21.

*Prionolejeunea denticulata* (Spruce) Fulf., *Mem. New York Bot. Gard.* 45: 276. 1987, *nom. inval.* = *P. denticulata* (F. Web.) Schiffn. 1893.

***Prionolejeunea denticulata*** (F. Web.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 127. 1893.

Bas.: *Jungermannia denticulata* F. Weber, *Hist. Musc. Hep. Prodr.* 30: 1815.

Syn.: *Prionolejeunea denticulata* (Spruce) Fulf., *Mem. New York Bot. Gard.* 45: 276. 1987, *nom. inval.*

*Lejeunea validiuscula* Spruce, in Gepp, *J. Linn. Soc., Bot.* 30: 339. “1894” 1895.

[**Syntype: Dominica**]

*Prionolejeunea validiuscula* (Spruce) Steph., *Hedwigia* 35: 119. 1886.

*Prionolejeunea aequitexta* A. Evans, *Bull. Torrey Bot. Club* 31: 217. 1904.

*Prionolejeunea schimperiana* Gottsche *ex* Steph., *Spec. Hep.* 5: 215, 1913.

*Prionolejeunea innotata* (Gottsche) Steph., *Bull. Herb. Boissier* 5: 842. 1897.

*Prionolejeunea innovata* A. Evans, *Bull. Torrey Bot. Club* 31: 215. 1904.

Spruce 1895: 339, as *Lejeunea* (*Prionolejeunea*) *validiuscula*; Stephani 1913: 215, as *P. schimperiana*; Pearson 1922: 222; Fulford 1987: 276, also as *P. aequitexta*, *P. schimperiana* and *P. validiuscula*; Schuster 1992, as *P. aequitexta*, *Prionolejeunea* “*exinnovata*” Evans ? (with interrogation!), “*cf. microdonta*” [“*subobscura* phenotype”]; Ilkiu-Borges & Schäfer-Verwimp 2005: 34; Ilkiu-Borges 2006: 93f.

**Fig.:** Evans 1904, pl. 11, figs 1-17, as *P. aequitexta*; Stephani 1985, fig. 8125, as *P. aequitexta*, fig. 8138, as *P. denticulata*, fig. 8156, as *P. schimperiana*, fig. 8161, as *P. innovata*, fig. 8175, as *P. microdonta*, fig. 8180, as *P. validiuscula*; Schuster 1992: 302, fig. 22: 3 (oil bodies, as *P. aequitexta*); Lücking 1995, fig. 72; fig. 71, as *P. aequitexta*; Ilkiu-Borges 2000, fig. 39M-V; fig. 40, as *P. microdonta*; Ilkiu-Borges 2006, figs 23-26; Gradstein & Ilkiu-Borges 2009, fig. 74I-S.

*Prionolejeunea evansii* R. M. Schuster, *J. Hattori Bot. Lab.* 72: 301, *nom. nud.*

*Prionolejeunea glauca* Steph. 1913 = *Trachylejeunea dilatata* A. Evans 1908 (Jovet-Ast, 1949: 42) = *Echinocolea dilatata* (A. Evans) R.M. Schust. 1980 = *Lejeunea subspathulata* Spruce 1884 (Ilkiu-Borges, 2005: 63, *syn. nov.*; Ilkiu-Borges, 2006: 169).

***Prionolejeunea grollei*** Ilkiu-Borges et Schäfer-Verwimp, *Cryptogamie, Bryol.* 26: 29, figs 1-43. 2005. [**Type: Dominica**]

Ilkiu-Borges & Schäfer-Verwimp 2005.

**Fig.:** Ilkiu-Borges & Schäfer-Verwimp 2005, figs 1-43; Ilkiu-Borges 2006, figs 37-39.

***Prionolejeunea guadalupensis*** (Lindenb.) Steph., *Spec. Hep.* 5: 198, 211. 1913.

Bas.: *Lejeunea guadalupensis* Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 340. 1845.

Spruce 1895: 339, as *Lejeunea* (*Prionolejeunea*) *g.*; Pagán 1942: 105; Thiers 1986: 274; Fulford 1987: 276; Ilkiu-Borges 2006: 123.

**Fig.:** Stephani 1985, fig. 8146; Ilkiu-Borges 2006, figs 41-42.

*Prionolejeunea immersa* Steph. 1913 = *Lejeunea subspathulata* Spruce 1884 (Ilkiu-Borges, 2005: 63, *syn. nov.*; Ilkiu-Borges, 2006: 169.).

*Prionolejeunea innovata* A. Evans 1904 = *Prionolejeunea denticulata* (F. Weber) Schiffn. 1893 (*syn. nov. fide* Ilkiu-Borges, 2006).

*Prionolejeunea laciniato-alata* (Spruce) Fulford, *Mem. New York Bot. Gard.* 45: 276. 1987, *nom. inval.* = *Lejeunea laciniato-alata* Spruce, in Gepp, *J. Linn. Soc., Bot.* 30: 338. “1894” 1895, *nom. inval.* (Art. 33.1) (Reiner-Drehwald, 1999: 52; not in Stephani, *Spec. Hep.* 5, not in INDEX HEP., and not in Ilkiu-Borges, 2006).

[Spruce, 1895: 338, as *Lejeunea* (*Prionolejeunea*) *laciniato-alata*; Fulford, 1987: 276.]

*Prionolejeunea luxurians* Gottsche in Steph. 1913 = *Cyclolejeunea accedens* (Gottsche) A. Evans 1904 (Grolle, 1991: 185, *syn. nov.*; Ilkiu-Borges, 2006: 170.).

*Prionolejeunea microdonta* (Gottsche) Steph. 1897 = *Prionolejeunea denticulata* (F. Weber) Schiffn. 1893 (*syn. nov. fide* Ilkiu-Borges, 2006).

*Prionolejeunea microstipulata* R.M. Schust., *J. Hattori Bot. Lab.* 72: 305. 1992, *nom. nud.*

***Prionolejeunea mucronata*** (Sande Lac.) Steph., *Hedwigia* 35: 119. 1896.

Bas.: *Lejeunea mucronata* Sande Lac., *Verh. Kon. Ned. Akad. Wetensch., Afd. Natuurk.* 5: 106. “1856” 1857.

Ilkiu-Borges 2006: 139.

**Fig.:** Herzog 1955, fig. 14, as *Prionolejeunea circinulata*; Stephani 1985, figs 8148-8149; Gradstein & Costa 2003, fig. 63E-G; Ilkiu-Borges 2006, figs 48-49.

*Prionolejeunea “pseudevansii phenotype”* R.M. Schust., *J. Hattori Bot. Lab.* 72: 301. 1992, *nom nud.*

***Prionolejeunea scaberula*** (Spruce) Steph., *Spec. Hep.* 5: 198, 214. 1913.

Bas.: *Lejeunea scaberula* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 159. 1884.

Syn.: *Ceratolejeunea scaberula* (Spruce) Steph., *Spec. Hep.* 5: 439. 1913.

Stephani 1913: 214; Pagán 1942: 98, as *Ceratolejeunea scaberula*; Fulford 1987: 276; Ilkiu-Borges 2006: 157.

**Fig.:** Stephani 1985, figs 1662, “1663”, as *Ceratolejeunea*, fig. 8153, as *Prionolejeunea scaberula*; Ilkiu-Borges 2006, figs 58-59; Gradstein & Ilkiu-Borges 2009, fig. 75L-Q.

*Prionolejeunea schimperiana* Gottsche ex Steph. 1913 = *Prionolejeunea denticulata* (F. Weber) Schiffn. 1893 (syn. nov. *fide* Ilkiu-Borges, 2006).

***Prionolejeunea trachyodes*** (Spruce) Steph., *Spec. Hep.* 5: 198, 215. 1913.

Bas.: *Lejeunea trachyodes* Spruce, in Gepp, *J. Linn. Soc. Bot.* 30: 338. “1894” 1895.

[**Type: Dominica**]

Spruce 1895: 339, as *Lejeunea (Prionolejeunea) trachyodes*; Stephani 1913: 216; Fulford 1987: 276; Ilkiu-Borges 2006: 165.

**Fig.:** Stephani 1985, fig. 8157 (from Dominica, Elliott 1225 p.p.); Ilkiu-Borges 2006, fig. 63; Gradstein & Ilkiu-Borges 2009, fig. 75R-X.

*Prionolejeunea validiuscula* (Spruce) Steph. 1896 = *Prionolejeunea denticulata* (F. Weber) Schiffn. 1893 (syn. nov. *fide* Ilkiu-Borges, 2006).

*Prionolejeunea vulcanica* (Spruce) Schiffn. 1897 = *Prionolejeunea aemula* (Gottsche) A. Evans 1904 (syn. *fide* Evans, 1904; Stephani, 1913: 202; Ilkiu-Borges, 2006: 55).

#### PSEUDOMARSUPIDIUM Herzog 1953

#### ADELANTHACEAE

***Pseudomarsupidium decipiens*** (Hook.) Grolle, *Trans. Brit. Bryol. Soc.* 4: 443. 1963.

Bas.: *Jungermannia decipiens* Hook., in Smith, *Engl. Bot.* 36, no. 2567. 1813. (Grolle 1972: 358).

Syn.: *Marsupidium brevifolium* Steph., *Spec. Hep.* 3: 388. 1908.

*Adelanthus decipiens* (Hook.) Mitt., *J. Proc. Linn. Soc. Bot.* 7: 244. 1864.

Stephani 1908, 388, as *Marsupidium brevifolium*; Pagán 1942: 88, as *M. brevifolium*; Schuster 1967, see fig. 1, as *Adelanthus decipiens*; Grolle 1972: 358, 359, as *A. decipiens*; Fulford 1987: 265, as *A. decipiens*; Schuster 2002: 175, 179-180, as *A. decipiens*.

**Fig.:** Stephani 1916, fig. 151, as *Tylimanthus bifidus*; Schuster 1967, figs 1-2; 1984, fig. 71; 2002, figs 276-278, 280:1-3 + 13-14, all as *Adelanthus decipiens*; Stephani 1985, fig. 40, as *Acrobolbus campyodontus*, fig. 57-59, as *Adelanthus brevicaulis*, fig. 60, as *A. cubanus*, fig. 61, as *A. decipiens*, fig. 6789, as *Marsupidium brevifolium*; fig. 10388, as *Tylimanthus pusillus*; Smith 1990, fig. 17:1-3, as *A. decipiens*; Kis & Pócs 1997, pl. X: 49 (oil bodies, as *A. decipiens*); Paton 1999, fig. 29, as *A. decipiens*; Gradstein *et al.* 2001, fig. 15J-M, as *A. decipiens*; Gradstein & Costa 2003, fig. 10A-D, as *Adelanthus decipiens*; Wigginton 2004, fig. 71A-P, as *A. decipiens*.

**Note:** Recent molecular work (Feldberg *et al.*, 2010) supported *Pseudomarsupidium* as an independent genus.

#### PYCNOLEJEUNEA (Spruce) Schiffn. 1893

#### LEJEUNEACEAE

***Pycnolejeunea contigua*** (Nees) Grolle, *J. Hattori Bot. Lab.* 45: 179. 1979.

Bas.: *Jungermannia contigua* Nees in Mart., *Fl. Brasil.* 1: 360. 1833.

Schäfer-Verwimp 1999: 325; He 1999: 51.



**Fig.:** Kachroo & Schuster 1961, fig. 1:1-8, as *P. spruceana*, fig. 2:1-4, as *P. papulosa*; Jones 1979, fig. 6a-i; Stephani 1985, fig. 2784, as *Euosmolejeunea contigua*, figs 8403-8404, as *P. densiuscula*, figs 8387-8390, as *P. papulosa*, fig. 8420, as *P. ocellulata*; He 1999, figs 1a,e, 2a-b, 13a-l, 14a-k, 15a-n; map (fig. 21); Ilkiu-Borges 2000, fig. 41; Gradstein *et al.* 2001, fig. 52E-G; Gradstein & Costa 2003, fig. 64A-C; Wigginton 2004, fig. 243A-J; Zartman & Ilkiu-Borges 2007, pl. 20A-B; Gradstein & Ilkiu-Borges 2009, fig. 76A-C.

## RADULA Dumort. 1822

## RADULACEAE

*Radula amazonica* Spruce 1885 = *Radula javanica* Gottsche, in Gottsche, Lindenb. & Nees 1845 (Yamada, 2000).

***Radula angulata*** Steph., *Hedwigia* 23: 114. 1884.

Spruce 1895: 349; Fulford 1987: 269 (based on Spruce 1895).

**Fig.:** Castle 1964, fig. 4A-D; Yamada 1980, fig. 6a-j, as *R. korthalsii*; Stephani 1985, fig. 8574, figs 8590-8594, as *R. korthalsii*; Yamada 1991, fig. 38a-j; Yamada 2003, fig. 84C.

**Note:** *Fide* Castle (1964: 195, and 1969: 19), known only from Venezuela; Yamada (1991: 87) gives the following distribution: Venezuela, Brazil, Colombia, Cuba, Guadeloupe, Haiti, Puerto Rico.

***Radula antilleana*** Castle, *J. Hattori Bot. Lab.* 21: 48. 1959.

Castle 1959: 51; Castle 1969: 13; Fulford 1987: 269; Yamada 1988: 386.

**Fig.:** Castle 1959, figs 22A-E.

***Radula campanulata*** Lindenb. *et* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.* 256. 1844.

Castle 1959: 43; Castle 1969: 13; Fulford 1987: 270.

**Fig.:** Castle 1959, figs 19A-D; Stephani 1985, fig. 8798; Yamada 1993, fig. 47a-k;

*Radula dominicensis* Steph. 1924 = *Radula saccatiloba* Steph. 1884 (Castle, 1963: 17, *syn. nov.*) = *Radula fendleri* Gottsche 1884 (Gradstein & Hekking, 1989).

***Radula elliottii*** Castle, *J. Hattori Bot. Lab.* 21: 12. 1959. [**Type: Dominica**]

Castle 1959: 13, the type; Castle 1969: 11; Fulford 1987: 270; Yamada 1988: 387.

**Fig.:** Castle 1959, figs 5A-F.

***Radula evansii*** Castle, *Ann. Bryol.* 11: 39. 1938. [**Type: Dominica**]

Castle 1938: 37-38 (incl. type); Castle 1939: 23; Pagán 1939: 42; Castle 1969: 8; Fulford 1987: 270.

**Fig.:** Castle 1938, figs A-E; Castle 1939, fig. 1A-E.

*Radula falcifolia* Steph. 1910 = *Radula javanica* Gottsche, in Gottsche, Lindenb. & Nees 1845 (Yamada, 2000).

***Radula fendleri*** Gottsche, in Steph., *Hedwigia* 23: 146. 1884.

*Syn.:* *Radula dominicensis* Steph., *Spec. Hep.* 6: 507. 1924. [**Type: Dominica**]

*Radula saccatiloba* Steph., *Hedwigia* 23: 129. 1884.

Spruce 1895: 349, as *R. fendleri*, 350, as *R. saccatiloba*; Stephani 1910, as *R. fendleri* and *R. saccatiloba*; 1924: 507, type of *R. dominicensis*; Pagán 1942: 95,

as *R. dominicensis*; Castle 1963, 1969, as *R. saccatiloba*; Fulford *et al.* 1970, as *R. saccatiloba*; Fulford 1987: 270, as *R. fendleri* and *R. saccatiloba*; Yamada 1987, 1988, as *R. saccatiloba*.

**Fig.:** Castle 1963: 5, fig. 1A-F, fig. 7A-F, as *R. saccatiloba*; Yamada 1980: 245, fig. 2a-i; Stephani 1985, fig. 8689, as *R. dominicensis* (from Dominica, leg. Elliott 1924 p.p., fig. 8693, as *R. fendleri*, fig. 8705, as *R. saccatiloba*; Yamada 1987: 296, fig. 36[“46”]a-e, as *R. saccatiloba*; 2003, fig. 83H.

***Radula flaccida*** Lindenb. *et* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.* 726. 1847.

Castle 1939: 30; Schuster 1980a: 649; Lücking 1995: 36.

**Fig.:** Castle 1925, fig. 11A-F; 1939, fig. 4A-D; Frye & Clark 1946: 709, figs 1-10; Vanden Berghen 1972, fig. 20; Griffin 1979, pl. VIII, figs 396-398; Schuster 1980a, figs 616:13-15, 635; Stephani 1985, figs 8803-8804; Jones 1990: 37, fig. 1f-g; Lücking 1995, fig. 12; Kis & Pócs 1997, pl. XVIII:106-107 (oil bodies); Gradstein *et al.* 2001, fig. 64L-N; Yamada 2003, fig. 82C-D; Wigginton 2004, fig. 126G, 130A-F; Zartman & Ilkiu-Borges 2007, pl. 21D-F; Gradstein & Ilkiu-Borges 2009, fig. 22D-G; further references to additional illustrations in Wigginton & Grolle 1996.

***Radula husnotii*** Castle, *J. Hattori Bot. Lab.* 21: 45. 1959.

Castle 1959: 48; Castle 1969: 13; Fulford 1987: 270; Yamada 1988: 387.

**Fig.:** Castle 1959, figs 21A-E.

***Radula inflexa*** Gottsche, in Steph., *Hedwigia* 23: 148. 1884.

Spruce 1895: 350; Stephani 1910; Pagán 1942: 95; Castle 1963: 24; Castle 1969: 17; Fulford 1987: 270; Yamada 1980: 247; 1987: 297.

**Fig.:** Castle 1963, fig. 9A-E; Yamada 1980, fig. 3a-f; Stephani 1985, fig. 8696-8697.

***Radula javanica*** Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 257. 1845.

*Syn.:* *Radula amazonica* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 321. 1885.

*Radula longifolia* Steph., *Spec. Hep.* 4: 181. 1910.

*Radula surinamensis* Steph., *Hedwigia* 23: 136. 1884.

*Radula falcifolia* Steph., *Spec. Hep.* 4: 174. 1910.

*Radula macrostachya* Lindenb. *et* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 726. 1847.

Castle 1964: 190, as *R. falcifolia*; 1967: 25; 1969: 25, as *R. longifolia*; Yamada 1982: 458, as *R. macrostachya*; Fulford 1987: 270, as *R. longifolia* and *R. macrostachya*; Yamada 1988: 384, as *R. amazonica*, 385.

**Fig.:** Castle 1966, fig. 6, as *R. caldana*; Castle 1967, fig. 6A-E, as *R. falcifolia*, 24, fig. 10A-H, as *R. macrostachya*; Oliveira 1973, fig. 8, as *R. caldana*; Schuster 1980a, figs 631-632, as *R. floridana*; Yamada 1982, fig. 27a-i, as *Radula macrostachya*; 1991, figs 42-45, as *R. surinamensis*; 2003, fig. 83C; Stephani 1985, figs 8627-2630, as *R. javanica*, fig. 8581, as *R. falcifolia*, fig. 8598, as *R. longifolia*, fig. 8806, as *R. macrostachya*, fig. 8683, as *R. amazonica*, fig. 8813, as *R. surinamensis*; Reiner-Drehwald 1994, fig. 1C, as *R. macrostachya*; Zhu & So 2001, fig. 30; Gradstein & Ilkiu-Borges 2009, fig. 23A-C; for further references to illustrations see Piippo 1990.

***Radula kegelii*** Gottsche in Steph., *Hedwigia* 23: 152. 1884.

Castle 1959: 40; Castle 1969: 13; Fulford 1987: 270; Yamada 1988: 387.

**Fig.:** Castle 1959, fig. 18A-E; Oliveira 1973, fig. 1; Yamada 1980, fig. 5 a-g; 2003, fig. 83G; Stephani 1985, fig. 8588-8589, as *R. kegelii*, fig. 8578, as *R. didrichsenii*; Reiner-Drehwald 1994, fig. 2 B; Gradstein & Ilkiu-Borges 2009, fig. 22I-K.

*Radula longifolia* Steph. 1910 = *Radula javanica* Gottsche, in Gottsche, Lindenb. & Nees 1845 (Yamada, 2000).

*Radula macrostachya* Lindenb. et Gottsche, in Gottsche, Lindenb. & Nees 1847 = *Radula javanica* Gottsche, in Gottsche, Lindenb. & Nees 1845 (Yamada, 2000: 260, syn. nov.).

***Radula mazarunensis*** Yamada, *Trop. Bryol.* 1: 38, fig. 6. 1989.

Schäfer-Verwimp 1999: 325.

**Fig.:** Yamada 1989, fig. 6a-j.

***Radula neotropica*** Castle, *J. Hattori Bot. Lab.* 21: 31. 1959. [**Type: Dominica**]

Castle 1959: 32, sp. nov.; Castle 1969: 12; Fulford 1987: 270.

**Fig.:** Castle 1959, figs 14A-E.

***Radula obovata*** Castle, *J. Hattori Bot. Lab.* 21: 16. 1959. [**Type: Dominica**]

Castle 1959: 17, sp. nov.; Castle 1969: 11; Fulford 1987: 270; Yamada 1988: 388.

**Fig.:** Castle 1959, figs 7A-E.

***Radula paganii*** Castle, *J. Hattori Bot. Lab.* 21: 33. 1959. “*paganii*”.

Castle 1959: 35; Fulford 1987: 270.

**Fig.:** Castle 1959, figs 15A-E.

*Radula pallens* (Sw.) Dumort., *Recueil d’Observ. Jungerm.* 14. 1835, *nom. inval.*

*Radula pallens* (Sw.) Nees et Mont., in d’Orbigny, *Voy. Amér. Mérid.*, *Bot.* 7 (2): 71. 1839.

*Jungermannia pallens* Sw., *Nova Gen. Spec. Pl. Prodr.*: 143. 1788.

Spruce, 1895: 349; Pearson, 1922: 224; Fulford, 1987: 270.

**Fig.:** Castle 1960: 23, figs A-F; Castle 1967: 31, fig. 12A-F.

**Note:** Castle 1960: 22: “only the Jamaican collections agree with the type and ... this species does not occur outside the island of Jamaica”, 1967: 32, “the Swartz plant grows only at high elevations and is restricted to the island of Jamaica”, and 1969: 30, cites only Jamaica, mentioning that other records may be based on erroneous identifications; therefore *Radula pallens* should be excluded from the hepatic flora of Dominica though Fulford (1987: 270) did remove all but one citations of *R. pallens* by Spruce 1895 to other taxa.

*Radula saccatiloba* Steph. 1884 = *Radula fendleri* Gottsche ex Steph. 1884 (Gradstein & Hekking 1989: 223; see also Uribe & Gradstein 1998: 87).

***Radula stenocalyx*** Mont., *Ann. Sci. Nat. Bot.*, sér. 4, 3: 315. 1855.

Syn.: *Radula tenella* Gottsche, *Mex. Leverm.* 149. 1863.

Spruce 1895: 349, as *R. tenella*; Stephani 1910, as *R. tenella* and *R. stenocalyx*; Castle 1939: 37; Pagán 1942: 96; Castle 1969: 9; Fulford 1987: 271.

**Fig.:** Castle 1939: 37, fig. 6A-F; Stephani 1985, figs 8707-8708, figs 8712-8714, as *R. tenella*; Yamada 1993: 135, fig. 53a-i; Yamada in Gradstein & Costa 2003, fig. 82G; Wigginton 2004, fig. 126H, 133A-H.

***Radula subinflata*** Lindenb. et Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 724. 1847.

Schäfer-Verwimp 1999: 325.

**Fig.:** Gottsche 1863, pl. 20; Castle 1963, fig. 5A-E; Stephani 1985, fig. 8709.

***Radula subsimplex*** Steph., *Hedwigia* 23: 130. 1884.

Spruce 1895: 350; Pagán 1939: 43; Fulford 1987: 271.

**Fig.:** Spruce 1895, pl. 25, figs 1-3; Castle 1959, figs 9A-C; Yamada 1980, fig. 9a-g; Stephani 1985, figs 8710-8711.

**Note:** *Fide* Yamada (1980: 255) known only from the type collection from Guadeloupe.

*Radula surinamensis* Steph. 1884 = *Radula javanica* Gottsche, in Gottsche, Lindenb. & Nees 1845 (Yamada, 2000).

***Radula tectiloba*** Steph., *Hedwigia* 27: 298. 1888.

Spruce 1895: 350, with “?”; Pagán 1939: 43; Fulford 1987: 271.

**Fig.:** Stephani 1888, Tafel XIII, fig. 39; 1985, fig. 88, as *R. tectiloba*, fig. 137, as *R. Arsenii*; Castle 1964: 189, fig. 1A-F; Yamada 1981, figs 20-22.

**Note:** Castle (1964: 190) points out that the record from Dominica by Spruce (1895: 350) “is a non-gemmparous species with caducous lobes and should be referred to *Radula falcifolia* St.”. As Fulford’s record of this species is referring to the same collection of Elliott (no. 216) from Morne Couronne cited in Spruce (1895: 350), this species should be excluded from the hepatic flora of Dominica.

*Radula tenella* Gottsche 1863 = *Radula stenocalyx* Mont. 1855 (Castle, 1939: 36, in syn.).

***Radula tenuis*** Yamada, *J. Hattori Bot. Lab.* 54: 247, fig. 4. 1983.

Schäfer-Verwimp 1999: 325.

**Fig.:** Yamada 1983, fig. 4; Schäfer-Verwimp 1999, fig. 1.

***Radula varilobula*** Castle, *J. Hattori Bot. Lab.* 21: 19. 1959. [**Type: Dominica**]

Castle 1959: 20, sp. nov.; Castle 1969: 11 (“*verilobula*”); Yamada 1983: 249; Fulford 1987: 271.

**Fig.:** Castle 1959, figs 8A-E.

RECTOLEJEUNEA A. Evans 1906

LEJEUNEACEAE

***Rectolejeunea berteriana*** (Gottsche) A. Evans, *Bull. Torrey Bot. Club* 33: 12. 1906.

Bas.: *Lejeunea* (“*Odontolejeunea*”) *berteriana* Gottsche ex Steph., *Hedwigia* 27: 282, pl. 11, fig. 6. 1888, *nom. inval.*

Fulford 1987: 276; Schuster 2000a: 136, 137.

**Fig.:** Stephani 1888, pl. 11, fig. 6, as *Lejeunea* (“*Odontolejeunea*”) *berteriana*; 1985, figs 8873-8875; Frye & Clark 1947: 840, figs 1-7; Schuster & Hattori 1954, pl. VIII, figs 1-2 (oil bodies); Schiffner & Arnell 1964, pl. XIV, fig. 156a-i, as *Pycnolejeunea flagellifera*; Schuster 1980: 1159, fig. 742: 1-10; Lücking 1995: 130, fig. 74; He 1997, fig. 3; Bastos & Vilas Bôas-Bastos 2000, figs 17-22; Ilkiu-Borges 2000, fig. 43; Gradstein *et al.* 2001, fig. 52H-K; Gradstein & Costa 2003, fig. 64F-I; Ilkiu-Borges & Lisboa 2004a, fig. 6; Zartman & Ilkiu-Borges 2007, pl. 22A-B; Gradstein & Ilkiu-Borges 2009, fig. 77A-E.

*Rectolejeunea dominicensis* Steph., *Spec. Hep.* 5: 684. 1914.

Stephani 1985, in legend of fig. 8879.

**Fig.:** Stephani 1985, fig. 8879, from Dominica, Elliott 1329 p.p.

**Note:** A little known species, erroneously cited from Brazil by Stephani (1914: 684) and subsequently by Gradstein & Costa (2003) who did not treat this species but mentioned it under “further records” without any comment.

***Rectolejeunea flagelliformis*** A. Evans, *Bull. Torrey Bot. Club* 33: 9, pl. 1:10-25. 1906. [subsp. ***flagelliformis***]

Schuster 1992: 269, admixt to *Lejeunea ruthii* subsp. *jamaicensis*; 2000a: 136, 137.

**Fig.:** Evans 1906, pl. 1:10-25; Stephani 1985, fig. 8885; Bastos & Yano 2003, figs 23-26; Gradstein & Ilkiu-Borges 2009, fig. 77F-I.

**Note:** Fide Gradstein & Costa (2003: 186), *R. flagelliformis* may be a synonym of *R. berteroaana*. However, He (1997) gives distinguishing characters in a key, and Gradstein & Ilkiu-Borges (2009) kept it as a separate species.

*Rectolejeunea phyllobola* (Nees et Mont.) A. Evans 1906 = *Lejeunea phyllobola* Nees et Mont. ex Mont. 1842 (Grolle, 1995: 16).

*Rectolejeunea pililoba* (Spruce) R.M. Schust. 1980 = *Lejeunea trinitensis* Lindenb., in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 381: 1845. (Grolle, 1981: 90).

#### RICCARDIA S.F. Gray 1821

#### ANEURACEAE

***Riccardia cataractarum*** (Spruce) Schiffn., *Österr. Avkad. Wiss., Math.-Naturwiss. Kl., Denkschr.* 111: 10, 18. 1964.

Bas.: *Aneura cataractarum* Spruce, *Bull. Soc. Bot. France* 36 (Suppl.): CXCXV. 1890 “1889”.

Stephani 1899: 252, as *Aneura*; (Hell 1969, Meenks & De Jong 1985, Meenks 1987, and Schäfer-Verwimp & Pócs 2009 erroneously as Dominican Republic).

**Fig.:** Stephani 1916, fig. 85a-b, as *Aneura uleana*; 1985, fig. 439, as *Aneura cataractarum*; Hell 1969, pls. 19-23, figs 138, 139, 157, 166, 178, 190; Meenks & De Jong 1985, fig. 1a (oil bodies); Gradstein & Costa 2003, fig. 89F-G.

***Riccardia diabolina*** (Spruce) Pagán, *Bryologisvt* 45: 80. 1942. [**Type: Dominica**]

Bas.: *Aneura diabolina* Spruce, *J. Linn. Soc., Bot.* 30: 366. 1895

Spruce 1895: 366, type of *Aneura diabolina*; Stephani 1899: 227, as *A. diabolina*; Pagán 1942: 80; Schiffner & Arnell 1964: 12, as *A. diabolina*.

**Fig.:** Stephani 1985, fig. 273, as *Aneura diabolina*.

***Riccardia digitiloba*** (Spruce) Pagán, *Bryologist* 42: 6. 1939.

Bas.: *Aneura digitiloba* Spruce, *Hedwigia* 27: 276. 1888.

Stephani 1899: 258, as *Aneura digitiloba*; Pagán 1939: 6; 1942: 80.

**Fig.:** Hell 1969, pls. 19-21, figs 141, 154, 156, 168, 185; Stephani 1985, figs 478-480, as *Aneura digitiloba*; Gradstein & Costa 2003, fig. 86G-I.

***Riccardia dilatata*** (Spruce) Schäf.-Verw. et Pócs, **comb. nov.**

Bas.: *Aneura dilatata* Spruce, *J. Linn. Soc., Bot.* 30: 368. 1895. [**Type: Dominica**]

Spruce 1895: 368, the type of *Aneura dilatata*; Stephani 1899: 254, as *A. dilatata*; 1985, in legend of fig. 450, as *A. dilatata*.

**Fig.:** Stephani 1985, fig. 450, as *Aneura dilatata* (from Dominica, leg. Elliott s.n.).

**Note:** Based on the descriptions and illustrations by Stephani 1985, both *Aneura dilatata* and *Aneura ligulata* belong to the genus *Riccardia*, hence new combinations are made.

***Riccardia distans*** (Spruce) Pagán, *Bryologist* 45: 80. 1942.

Bas.: *Aneura distans* Spruce, *J. Linn. Soc., Bot.* 30: 367. 1895. [**Type: Dominica**]

Spruce 1895: 367, type of *Aneura distans*; Stephani 1899: 221, as *Aneura*; Pagán 1942: 80.

**Fig.:** Stephani 1985, fig. 242, from Dominica, Elliott 1140, as *Aneura distans*.

***Riccardia fucoidea*** (Sw.) Schiffn., *Consp. Hep. Arch. Ind.:* 54. 1898 “*fucooides*”.

Bas.: *Jungermannia fucoidea* Sw., *Nova Gen. Spec. Pl. Prodr.:* 145. 1788.

*Aneura fucooides* (Sw.) Spruce, *J. Linn. Soc. Bot.* 30: 366. 1895 [*vide* Meenks, 1987].  
Spruce 1895: 366, as *Aneura fucooides*; Stephani 1899: 221, as *A. fucooides*;  
Pagán 1939: 6; Meenks 1987: 172.

**Fig.:** Hell 1969, pls. 19-23, figs 142, 149, 150, 153, 164, 170, 175, 191; Meenks & De Jong 1985, photo 1a, b (“*R. cf. fucooides*”); Stephani 1985, fig. 246, as *Aneura fucooides*; Gradstein 1989: 332, fig. 6; Gradstein *et al.* 2001, fig. 67E-F; Gradstein & Costa 2003, fig. 88A-D.

***Riccardia grossidens*** (Steph.) Pagán, *Bryologist* 45: 80. 1942.

Bas.: *Aneura grossidens* Steph., *Hedwigia* 32: 23. 1893.

Stephani 1899: 222, as *Aneura*; Pagán 1942: 80.

**Fig.:** Stephani 1985, fig. 248, as *Aneura grossidens*.

***Riccardia laticostata*** (Spruce) Schiffn., in Schiffn. & Arnell, *Österr. Akad. Wiss., Math.-Naturwiss. Kl., Denkschr.* 111: 12. 1964.

Bas.: *Aneura laticostata* Spruce, *J. Linn. Soc., Bot.* 30: 367. 1895. [**Type: Dominica**]

Spruce 1895: 367, as *Aneura laticostata* (type); Stephani 1899: 217, as *A. laticostata*; Schiffner & Arnell 1964: 12.

**Fig.:** Stephani 1985, fig. 252, from Dominica, Elliott 1026, as *Aneura laticostata*.

***Riccardia ligulata*** (Steph.) Pócs *et* Schäf.-Verw., **comb. nov.**

Bas.: *Aneura ligulata* Steph., *Spec. Hep.* 6: 32. 1917. [**Type: Dominica**]

Stephani 1917: 33, the type of *Aneura ligulata*.

**Fig.:** Stephani 1985, fig. 350, from Dominica, Elliott 1148, as *Aneura ligulata*.

See note under *Riccardia dilatata*.

***Riccardia planifrons*** (Spruce) Pagán, *Bryologist* 45: 80. 1942.

Bas.: *Aneura planifrons* Spruce, *J. Linn. Soc., Bot.* 30: 368. 1895.

Stephani 1899: 241, as *Aneura planifrons*; Pagán 1942: 80.

**Fig.:** Stephani 1985, fig. 393, from Dominica and St. Vincent, as *Aneura planifrons*.

***Riccardia schwaneckeii*** (Steph.) Pagán, *Bryologist* 42: 7. 1939.

Bas.: *Aneura schwaneckeii* Steph., *Hedwigia* 27: 278. 1888.

Spruce 1895: 367, as *Aneura*; Pagán 1939: 7.

**Fig.:** Hässel de Menéndez 1964, figs 1-2; Stephani 1985, fig. 559, as *Aneura schwaneckeii*.

***Riccardia stipatiflora*** (Steph.) Pagán, *Bryologist* 45: 81. 1942.

Bas.: *Aneura stipatiflora* Steph., *Hedwigia* 32: 27. 1893.

Spruce 1895: 368, as *Aneura*; Stephani 1899: 259, as *Aneura*; Pagán 1942: 81.

**Fig.:** Stephani 1985, fig. 502, as *Aneura stipatiflora*.

RICCIA L. 1753

RICCIACEAE

***Riccia elliottii*** Steph., *Bull. Herb. Boissier* 6: 324. 1898. [*Spec. Hep.* 1: 16. 1898.]  
[**Type: Dominica**]

Stephani 1898: 16; Pagán 1939: 2; Jovet-Ast 1991: 273, 274.

**Fig.:** Stephani 1985, fig. 8966 (from Dominica, Elliott 984); Jovet-Ast 1991, pl. 54, 72, map: 14.

*Riccia glauca* L. var. ?

Spruce 1895: 369.

**Note:** Jovet-Ast (1991) does not treat *Riccia glauca* for Latin America. Thus it is here excluded from the hepatic flora of Dominica. Spruce (1895: 369) referred “the only specimens of this genus collected” to “*Riccia glauca* L. var. ?”. Probably these specimens belong to *Riccia elliottii*, the only known *Riccia* species from Dominica.

SCALIA S.F. Gray 1821 (*SCALIUS*) mut. Lindb. 1874 =

HAPLOMITRIUM Nees 1833

HAPLOMITRIACEAE

*Scalia andina* Spruce 1885 = *Haplomitrium blumii* (Nees) R.M.Schust. 1963

SCAPANIA (Dumort.) Dumort. 1835

SCAPANIACEAE

***Scapania geppii*** Steph., *Hedwigia* 44: 14. 1904. [**Type: Dominica**]

Stephani 1904: 14; Müller 1905: 154; Fulford 1987: 271.

**Fig.:** Müller 1905, pl. 48:1-7; Stephani 1985, fig. 9303, from Dominica, Elliott 2321.

SCHIFFNERIOLEJEUNEA Verd. 1933

LEJEUNEACEAE

***Schiffneriolejeunea polycarpa*** (Nees) Gradst., *J. Hattori Bot. Lab.* 38: 335. 1974.

Bas.: *Jungermannia polycarpa* Nees, in Martius, *Fl. Brasil.* 1(1): 350. 1833.

Gradstein 1994: 74.

**Fig.:** Evans 1908a, pl. 7, figs 1-11, as *Ptychocoleus polycarpus*; Gradstein 1974, pl. II, fig. 2; Udar & Awasthi 1982: 56, fig. 1:1-22; Stephani 1985, figs 8293-8294, as *Ptychocoleus multiflorus*, figs 8295-8296, as *P. polycarpus*; Kis & Pócs 1997, pl. XVI:88 (oil bodies); Jones 1990: 39, fig. 4a-d.; Schuster 1992, fig. 7:1-2 (oil bodies); Reiner-Drehwald 1993: 42, figs 10E-K; Gradstein 1994: 73, fig. 19 + map; Gradstein *et al.* 2001, fig. 36A-C; Gradstein & Costa 2003, fig. 64J-L; Wigginton 2004, fig. 185A-N; references to additional illustrations in Wigginton & Grolle 1996.

SCHISMA Dumort. 1822 = HERBERTUS S.F. Gray 1821

HERBERTACEAE

*Schisma elliottii* (Spruce) Steph. 1909 = *Herbertus juniperoides* (Sw.) Grolle subsp. *bivittatus* (Spruce) Feldberg *et* Heinrichs 2006 (Feldberg & Heinrichs, 2006: 328).

SENDTNERA Endlicher 1840 = HERBERTUS S.F. Gray 1821

HERBERTACEAE

*Sendtnera elliottii* Spruce 1895 = *Herbertus juniperoideus* subsp. *bivittatus* (Spruce) Feldberg et Heinrichs 2006.

*Sendtnera juniperina* Nees 1845 = *Herbertus juniperoideus* (Sw.) Grolle 1961.

SOLENOSTOMA Mitt.1865

SOLENOSTOMATACEAE

***Solenostoma amplexifolium*** (Hampe ex Lehm.) Vána et Schäfer-Verwimp, in Schäfer-Verwimp & Pócs, *Acta Bot. Hung.* 51: 408. 2009 [*“amplexifolia”*].

Bas.: *Plagiochila amplexifolia* Hampe ex Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 7: 6. 1838.

Syn.: *Lethocolea amplexifolia* (Hampe ex Lehm.) Grolle, *Österr. Bot. Z.* 117: 3. 1969.

*Tylimanthus amplexifolius* (Hampe ex Lehm.) Spruce, *J. Linn. Soc., Bot.* 30: 364. 1895.

Spruce 1895: 364, as *Tylimanthus amplexifolius*; Pagán 1942: 87, as *T. amplexifolius*; Fulford 1987: 267, as *Lethocolea amplexifolia*; Schäfer-Verwimp & Pócs 2009.

**Fig.:** Gottsche 1863, pl. 19, as *Jungermannia linguifolia*; Grolle 1969, fig. 1d, as *Lethocolea amplexifolia*; Stephani 1985, fig. 4764, as *Jungermannia linguifolia*, fig. 10332, as *Tylimanthus amplexifolius*.

***Solenostoma callithrix*** (Lindenb. et Gottsche) Steph., *Spec. Hep.* 2: 48. 1901.

Syn.: *Jungermannia callithrix* Lindenb. et Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hepat.*: 673. 1847.

Vána 1974: 187, as *Jungermannia*; Fulford 1987: 267, as *Jungermannia*; Gradstein 1993: 81, 83, as *Jungermannia*.

**Fig.:** Gottsche 1863, pl. 17, as *Jungermannia*; Vána 1974, figs 4-5, as *Jungermannia*; Schumacker & Vána 1999, fig. 2, as *Jungermannia*; Gradstein et al. 2001, fig. 31A-D, as *Jungermannia*.

STICTOLEJEUNEA (Spruce) Schiffn. 1893

LEJEUNEACEAE

***Stictolejeunea balfourii*** (Mitt.) Jones, *J. Bryol.* 9: 50. 1976. [var. *balfourii*]

Bas.: *Lejeunea balfourii* Mitt., *Phil. Trans. Roy. Soc. London* 168 (extra vol.): 398. 1879 *“balfouri”*.

Eggers 1997: 182.

**Fig.:** Vanden Berghen 1950, fig. 5, as *Stictolejeunea africana*; Herzog 1950: 319, fig. 33a-g, as *Stictolejeunea richardsii*; Stephani 1985, fig. 9813, as *Symbiezidium balfourii*; Wigginton 2004, fig. 190A-J; Gradstein & Ilkiu-Borges 2009, fig. 78A, B.

***Stictolejeunea squamata*** (Willd. ex Web.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 131. 1893.

Bas.: *Jungermannia squamata* Willd. ex Web., *Hist. Musc. Hepat. Prodr.*: 33. 1815.

Syn.: *Lejeunea squamata* (Willd. ex Web.) Nees, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 322. 1845.

*Phragmicoma ocellulata* Nees et Mont., in Mont., *Ann. Sci. Nat., Bot.*, sér. 2, 19: 259. 1843. [**Type: Dominica**]

*Lejeunea squamata* (Willd. ex Web.) Nees var. *squamata* (*“willdenowia* Gott.”) f. *ocellulata* (Nees et Mont.) Gottsche, Lindenb. et Nees, *Syn. Hep.*: 322. 1845.

Montagne 1843: 259, as *Phragmicoma ocellulata*; Spruce 1895: 334, as *Lejeunea squamata*; Evans 1907: 6; Pagán 1939: 78; Pagán 1942: 106; Gradstein



1985: 204, 207, 209; Fulford 1987: 276; Schuster 1992: 219; Gradstein 1994: 147; Lücking 1995: 133.

**Fig.:** Spruce 1885, pl. III, as *S. kunzeana*; Schiffner 1893, fig. 69L, as *S. kunzeana*; Evans 1907, pl. 1, figs 1-16; 1935, fig. 3A, as *S. kunzeana*, fig. 3B, as *S. squamata*; Lorscheitter Baptista 1977, pl. XIV, pl. XXXVII:6 (ocellus), all as *S. kunzeana*; Griffin 1979, pl. IX, figs 435-437; Geissler & Gradstein 1981, pls. 4-6; Gradstein 1975, pl. XXIII, fig. 19 (trigones and ocellus); 1985: 205, fig. 1; 1994: 145, fig. 37A-F; Cole 1983, fig. 31c (leaf cells with ocelli); Stephani 1985, figs 9738-9739, as *S. kunzeana*, fig. 9743; Schuster 1992, figs 5: 11, 31: 1 (oil bodies); Lücking 1995: 134, fig. 76; Ilkiu-Borges 2000, fig. 13; Gradstein *et al.* 2001, fig. 39G-I; Gradstein & Costa 2003, fig. 65D-F; Gradstein & Ilkiu-Borges 2009, fig. 78E-G.

**STREPSILEJEUNEA** (Spruce) Schiffn. 1893 = **CHEILOLEJEUNEA** (Spruce) Schiffn. 1893 **LEJEUNEACEAE**

*Strepsilejeunea inflexa* (Hampe ex Lehm.) Steph. 1897 = *Cheilolejeunea inflexa* (Hampe ex Lehm. et Lindenb.) Grolle 1979 (Grolle, 1979: 174).

*Strepsilejeunea involuta* (Gottsche) Steph. 1913 = *Lepidolejeunea involuta* (Gottsche) Grolle 1984

*Strepsilejeunea kunthiana* (Lindenb.) Schiffn. 1893 = *Cheilolejeunea acutangula* (Nees) Grolle 1979 (Grolle, 1979: 173, syn. nov.).

**STYLOLEJEUNEA** Sim 1926 = **LEJEUNEA** Libert 1820 **LEJEUNEACEAE**

*Stylolejeunea pililoba* (Spruce) A. Evans 1940 = *Lejeunea trinitensis* Lindenb. 1845 (Grolle 1981: 90).

*Stylolejeunea trinitensis* (Lindenb.) Fulf. 1987 = *Lejeunea trinitensis* Lindenb. 1845.

**SYMBIEZIDIUM** Trevis. 1877 **LEJEUNEACEAE**

***Symbiezidium barbiflorum*** (Lindenb. et Gottsche) A. Evans, *Bull. Torrey Bot. Club* 34: 540, pl. 31: 11-14. 1908.

Bas. *Lejeunea barbiflora* Lindenb. et Gottsche, *Linnaea* 24: 630. 1851.

Gradstein & Van Beek 1985: 242, however, without citing a specimen.

**Fig.:** Evans 1908, pl. 31, figs 11-14; Fulford 1942, figs 6-7; Gradstein *et al.* 1981, fig. 1:5, oil bodies; Stephani 1985, figs 9815-9816, fig. 9824, as *S. kroneanum*, fig. 9826, as *S. pogonopterum*, figs 9829-9830, as *S. setosum*; Gradstein & van Beek 1985: 232, fig. 2: 3-4, 233, fig. 3: 3-4, 7, 240, fig. 4: 1-4; Gradstein & Costa 2003, fig. 65J-K; Gradstein & Ilkiu-Borges 2009, fig. 79D-H.

*Symbiezidium laceratum* A. Evans 1908 = *Symbiezidium transversale* (Sw.) Trevis. var. *hookerianum* (Gottsche) Gradst. et van Beek 1985 (Gradstein, 1994: 165, in syn.).

*Symbiezidium subrotundum* (Kunth) Trevis. 1877 = *Symbiezidium transversale* (Sw.) Trevis. 1877 (Gradstein, 1994: 162, in syn.).

***Symbiezidium transversale*** (Sw.) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4: 403. 1877. [var. ***transversale***]

Bas.: *Jungermannia transversalis* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 144. 1788.

*Platylejeunea transversalis* (Sw.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 131. 1893.

*Symbiezidium subrotundum* (Kunth) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4: 403. 1877.

Stephani 1888: 301, as *Platylejeunea transversalis*; Evans 1907a: 538; Pagán 1939: 78; Fulford 1987: 277.

**Fig.:** Evans 1907a, pl. 31, figs 1-10; Fulford 1942: 296, figs 1-5; Stephani 1985, fig. 9818, as *S. grandifolium*, figs 9819-9820, as *S. granulatatum*, figs 9821-9823, as *S. hobsonianum*, figs 9833-9835; Gradstein 1994: 163, fig. 42A-F; Schuster 1992, fig. 4:3 (oil bodies); Lücking 1995: 138, fig. 80; Kürschner & Parolly 1998: 35, fig. 6:7; Ilkiu-Borges 2000, fig. 14A-N, P; Gradstein *et al.* 2001, fig. 40E-G; Gradstein & Costa 2003, fig. 65G-I; Zartman & Ilkiu-Borges 2007, pl. 23B-D.

**Symbiezidium transversale** (Sw.) Trevis. 1877 var. **hookerianum** (Gottsche) Gradst. *et van Beek*, *Beih. Nova Hedwigia* 80: 237, fig. 2-3. 1985.

Bas.: *Lejeunea transversalis* (Sw.) Nees var. *hookeriana* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 311. 1845.

*Symbiezidium vincentinum* (Gottsche) Trevis., *Mem. Reale Ist. Lombardo*, ser. 3, (*Cl. Sci. Mat. Nat.*) 4: 403. 1877.

*Lejeunea vincentina* Gottsche, in Gottsche, Lindenb. & Nees, *Syn. Hep.*: 313. 1845.

*Platylejeunea vincentina* (Gottsche) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 131. 1893.

*Symbiezidium laceratum* A. Evans, *Bull. Torrey Bot. Club* 35: 386. pl. 28, fig. 15-20. 1908.

Spruce 1895: 335, as *Lejeunea (Platylejeunea) vincentina*; Evans 1907a: 542, as *S. vincentinum*; Fulford 1942: 304, as *S. laceratum*; Gradstein & van Beek 1985: 238, 244; Schuster 1992: 221, as *S. vincentinum*; Gradstein 1994: 165.

**Fig.:** Evans 1908, pl. 28, fig. 15-20, as *S. laceratum*; Fulford 1942, fig. 11, as *S. taeniops*, figs 12-14, as *S. laceratum* Evans; Stephani 1985, fig. 9825, as *S. laceratum*, figs 9827-9828, as *S. vincentinum*; Gradstein & van Beek 1985, figs 2-3; Schuster 1992, fig. 4:4 (oil bodies, as *S. vincentinum*); Ilkiu-Borges 2000, fig. 14O.

*Symbiezidium vincentinum* (Gottsche) Trevis. 1877 = *Symbiezidium transversale* (Sw.) Trev. var. *hookeriana* (Gottsche) Gradst. *et van Beek* 1985 (Gradstein & van Beek, 1985: 238, in syn.).

SYMPHYOGYNA Nees & Mont. 1836

PALLAVICINIACEAE

**Symphygyna brongniartii** Mont., *Ann. Sci. Nat. Bot.*, sér. 2, 19: 265. pl. 9, fig. 1. 1843.

Evans 1925: 27; Pagán 1939: 5.

**Fig.:** Montagne 1843, pl. 9, fig. 1a-m; Evans 1925, figs 5A-F, 6A-G, 7A-L; Hell 1969, pls. 10-13, figs 65, 72-74, 79, 82, 83, 91, 96; Stephani 1985, figs 9898-9899; Schuster 1992a, fig. 824; Uribe & Aguirre 1995, fig. 5; Gradstein *et al.* 2001, fig. 71G-I; Gradstein & Ilkiu-Borges 2009, fig. 7A-C.

**Symphygyna marginata** Steph., *Spec. Hep.* 1: 334. 1900. [**Type: Dominica**]

Stephani 1900: 334, the type; Evans 1925: 332; Pagán 1942: 79; Uribe & Aguirre 1995: 453.

**Fig.:** Evans 1925: 333, fig. 7A-D; Stephani 1985, fig. 9877, from Dominica, Elliott 2263; Uribe & Aguirre 1995, fig. 8.

*Symphygyna sinuata* (Sw.) Nees *et* Mont. *ex* D'Orbigny, *Voy. Amér. Mérid.*, *Bot.* 7 (2): 61. 1839.

Bas.: *Jungermannia sinuata* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 143. 1788.

Spruce 1895: 365; Stephani 1900: 345.

**Fig.:** Evans 1925, figs 1A-D, 2A-H, 3A-H;

**Note:** *Fide* Evans (1925: 13) "apparently confined to the higher mountains of Jamaica, although a very extensive range has been assigned to it by Stephani and other writers." The record from Dominica therefore needs verification.

***Symphygyna trivittata*** Spruce, *J. Linn. Soc. Bot.* 30: 365. pl. 30, figs 7-11. 1895 "1894". [Type: Dominica]

Spruce 1895: 365, the type; Stephani 1900: 334; Pagán 1942: 79; Uribe & Aguirre 1995: 455.

**Fig.:** Spruce 1895, pl. 30, figs 7-11; Evans 1927: 336, fig. 8A-E; Stephani 1985, figs 9889-9890 (fig. 9889 from Dominica, Elliott s.n.); Uribe & Aguirre 1995, fig. 10.

SYZYGIELLA Spruce 1876

ADELANTHACEAE

***Syzygiella integerrima*** Steph., *Spec. Hep.* 6: 117. 1917.

Schäfer-Verwimp 1999: 326.

**Fig.:** Inoue 1966: 200, fig. XIIIH-Q; Gradstein *et al.* 1977, pl. 5, fig. 30 (oil bodies); Stephani 1985, fig. 9945.

*Syzygiella laevigata* (Spruce) Steph. 1895 = *Syzygiella perfoliata* var. *laevigata* Spruce 1895 = *Syzygiella perfoliata* (Sw.) Spruce 1876 (Inoue, 1966: 201, syn. nov.).

*Syzygiella longicaulis* Spruce 1895, *nom. inval.* = *Syzygiella perfoliata* (Sw.) Spruce (Fulford 1987: 271).

***Syzygiella perfoliata*** (Sw.) Spruce, *J. Bot.* 5: 234. 1876.

Bas.: *Jungermannia perfoliata* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 143. 1788.

*Syzygiella laevigata* (Spruce) Steph., *Hedwigia* 34: 239. 1895.

*Syzygiella perfoliata* var. *laevigata* Spruce, *J. Linn. Soc., Bot.* 30: 362. 1895.

*Syzygiella longicaulis* Spruce, *J. Linn. Soc., Bot.* 30: 362. 1895, *nom. inval.*

Spruce 1895: 362, as *S. perfoliata* var. *laevigata*; Stephani 1900: 185, as *S. laevigata*; Fulford 1987: 271.

**Fig.:** Spruce 1895, pl. 28, figs 6-9, as *S. perfoliata* var. *laevigata*; Stephani 1916, fig. 105a, as *Syzygiella herzogiana*; fig. 133a, as *Plagiochila ligulato-opposita*; 1985, fig. 9943, as *S. herzogiana*, fig. 9944, as *S. jelskii*, figs 9946-9948, as *S. laevigata* (9946-9947 from Dominica, leg. Elliott s.n.), fig. 9950, as *S. longifolia*, fig. 9960, as *S. perfoliata*; Schiffner & Arnell 1964, pl. V, fig. 44, as *S. parvula*, fig. 46, as *S. linguifolia*; Inoue 1966, fig. IIA-B, XIVA-K, XVA-D.

*Syzygiella perfoliata* var. *laevigata* Spruce 1895 = *Syzygiella perfoliata* (Sw.) Spruce (Inoue, 1966: 201, syn. nov.).

***Syzygiella rubricaulis*** (Nees) Steph., *Spec. Hep.* 2: 187. 1902.

Bas.: *Jungermannia rubricaulis* Nees, in Martius, *Fl. Brasil.* 1: 344. 1833.

Syn.: *Jamesoniella rubricaulis* (Nees) Grolle, *Bryologist* 71: 355. 1968.

Fulford 1987: 267, as *Jamesoniella*.

**Fig.:** Grolle 1971, fig. 21a-n + map 6 (as *Jamesoniella*); Schuster 1983, fig. 72 (map, as *Jamesoniella rubricaulis*); Stephani 1985, figs 9956-9957, as *Syzygiella oppositifolia*, fig. 9963, as *S. rubricaulis*; Frahm & Kürschner 1992: 65, fig. 7a (photo, as *Jamesoniella*); Gradstein & Costa 2003, fig. 30A-C, as *Jamesoniella*; León-Yáñez *et al.* 2006: 98, col. photo, as *Jamesoniella*;

**Note:** Recent molecular studies on Adelanthaceae including Jamesoniellaceae by Feldberg *et al.* (2010) resulted in the synonymization of *Jamesoniella* under *Syzygiella*.

TAXILEJEUNEA (Spruce) Schiffn. 1893

LEJEUNEACEAE

**Note:** *Taxilejeunea* is provisionally kept as a genus because for several taxa no combination in *Lejeunea* is available. Wilson *et al.* (2007) demonstrated that *Taxilejeunea* is nested in *Lejeunea*; Crandall-Stotler *et al.* (2009) included *Taxilejeunea* in *Lejeunea*.

***Taxilejeunea biapiculata*** Steph., *Spec. Hep.* 5: 460. 1914 “1913”. [Type: **Dominica**]  
Stephani 1914: 461, the type; Pagán 1942: 107; Fulford 1987: 277.

**Fig.:** Stephani 1985, fig. 10000-10001 (from Dominica, Elliott 2156).

*Taxilejeunea* “*crenuliformis* phenotype” R.M. Schust., *J. Hattori Bot. Lab.* 72: 281. 1992, *nom. inval.*

***Taxilejeunea debilis*** (Lehm. et Lindenb.) Steph., *Spec. Hep.* 5: 463. 1914 “1913”.

Bas.: *Jungermannia debilis* Lehm. et Lindenb., in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 4: 51. 1832.

*Lejeunea debilis* (Lehm. et Lindenb.) Nees et Mont., *Ann. Sci. Nat., Bot.*, sér. 2, 5: 60. 1836.

*Taxilejeunea martinicensis* Steph., *Hedwigia* 35: 135. 1896.

Pearson 1922: 223, as *T. martinicensis*; Fulford 1987: 277; Schuster 1992: 281, as “*debilis*-phenotype”.

**Fig.:** Herzog 1951: 155, fig. 20a-h; Stephani 1985, fig. 10009, as *T. debilis*, figs 10035-10036, as *T. martinicensis*; Lücking 1995: 141, fig. 82; Gradstein & Ilkiu-Borges 2009, fig. 79D-H.

*Taxilejeunea* “*debilis* phenotype” R.M. Schust., *J. Hattori Bot. Lab.* 72: 281. 1992, *nom. inval.*

*Taxilejeunea decora* Taylor, *London J. Bot.* 5: 393. 1846. [Type: **Dominica**]

**Note:** This entry in Index Hepaticorum is an error. The correct citation is: “*Lejeunea decora* Taylor, *London J. Bot.* 5: 393. 1846” = *Prionolejeunea decora* (Taylor) Steph. 1913 (Grolle, 1991: 192).

***Taxilejeunea decurrens*** Steph., *Spec. Hep.* 5: 487. 1914. [Type: **Dominica**]

Stephani 1913: 487, the type; Fulford 1987: 277.

**Fig.:** Stephani 1985, fig. 10093 (from Dominica, leg. Elliott 1881/82).

*Taxilejeunea* (*X.*) “*erostrata* phenotype” R.M. Schust., *J. Hattori Bot. Lab.* 72: 284. 1992, *nom. inval.*

***Taxilejeunea leiantha*** (Spruce) Steph., *Spec. Hep.* 5: 470. 1914 “1913”.

Bas.: *Lejeunea (Hygrolejeunea) leiantha* Spruce, in Gepp, *J. Linn. Soc., Bot.* 30: 345. 1895 “1894”. [Type: **Dominica**]

Spruce 1895: 345, as *Lejeunea (Hygrolejeunea) leiantha*, sp. nov.; Stephani “1913” 1914: 471; Fulford 1987: 277.

**Fig.:** none.

*Taxilejeunea martinicensis* Steph. 1896 = *Taxilejeunea debilis* (Lehm. et Lindenb.) Steph. 1913 (Herzog, 1951: 155, in syn.).

*Taxilejeunea pulverulenta* Gottsche ex Steph. 1914 “1913” = *Lejeunea pulverulenta* (Gottsche ex Steph.) E. Reiner 2005.

*Taxilejeunea* “*subcordata* phenotype” R.M. Schust., *J. Hattori Bot. Lab.* 72: 281. 1992, *nom. inval.*

***Taxilejeunea sulphurea*** (Lehm. et Lindenb.) Schiffn., in Engler & Prantl, *Nat. Pflanzenfam.* 1(3): 125. 1893.

Bas. *Jungermannia sulphurea* Lehm. et Lindenb. in Lehm., *Nov. Min. Cogn. Stirp. Pugillus* 5: 14. 1833.

*Lejeunea (Taxilejeunea) sulphurea* (Lehm. et Lindenb.) Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 217. 1885.

Spruce 1895: 342, as *Lejeunea (Taxilejeunea) sulphurea*; Pearson 1922: 223; Fulford 1987: 277.

**Fig.:** Stephani 1985, figs 10065-10066; Gradstein *et al.* 2001, fig. 54A-D.

## TELARANEA Spruce ex Schiffn. 1885

## LEPIDOZIACEAE

**Note:** All descriptions and figures of *Telaranea* species (except the types) especially those of “*Telaranea sejuncta*” antedating the monograph of Engel & Smith Merrill (2004) should be considered doubtful, as these may include some or all of the taxa formerly included in “*T. nematodes*”. Illustrations of the following two species are therefore cited only following Engel & Smith Merrill 2004 (and from papers that were published later than 2004).

***Telaranea diacantha*** (Mont.) J.J. Engel *et* Smith Merrill, *Fieldiana Bot.*, new ser., 44: 145. 2004.

Bas.: *Jungermannia diacantha* Mont., *Ann. Sci. Nat. Bot.*, sér. 4, 5: 349. 1856.

Syn.: *Arachniopsis diacantha* (Mont.) Howe, *Bull. Torrey Bot. Club* 29: 288. 1902.

Schuster 1966c: 440 (as *Arachniopsis diacantha*, admixed to the type of *Phycolepidozia exigua*); 2000: 449, as *Arachniopsis caduciloba*; Schäfer-Verwimp 1999: 319, as *Arachniopsis diacantha*.

**Fig.:** Fulford 1968: 363, pl. 96, fig. 1a-d, as *Arachniopsis diacantha*; Stephani 1985, fig. 755, as *Arachniopsis capillacea*; Schuster 2000, fig. 190A, as *Arachniopsis caduciloba*; Engel & Smith Merrill 2004, fig. 46; Gradstein & Ilkiu-Borges 2009, fig. 13C-E.

**Note:** The plant illustrated by Schuster (2000, fig. 191) as *Arachniopsis diacantha* is the type of *A. coactilis* (Engel & Smith Merrill, 2004).

***Telaranea nematodes*** (Gottsche ex Aust.) Howe, *Bull. Torrey Bot. Club* 29: 284. 1902.

Bas.: *Cephalozia nematodes* Gottsche ex Aust., *Bull. Torrey Bot. Club* 6: 302. 1879.

Syn.: *Telaranea sejuncta* auct. non (Ångstr.) S. Arn., *Bot. Not.* 110: 17. 1957.

Fulford 1963a: 70, as *Telaranea sejuncta*; 1966: 237, as *T. sejuncta*; Fulford *et al.* 1970: 65, as *T. sejuncta*; Fulford 1987: 271; Schuster 2000: 233; Ilkiu-Borges & Schäfer-Verwimp 2005: 34.

**Fig.:** Stephani 1985, fig. 4983, as *Lepidozia nematodes*, fig. 4987, as *Lepidozia quintasii*; Engel & Smith Merrill 2004, fig. 38:9-11; Ilkiu-Borges 2009, fig. 15A-C.

**Note:** *Fide* Engel & Smith Merrill (2004: 171), “the range of *T. nematodes* must be reevaluated in view of the confusion between this species and *T. bicruris*, *T. chaetophylla*, *T. europaea*, *T. longifolia*, and *T. sejuncta*.” However, *Telaranea bicruris* seems to be confined to SE Brazil, *T. chaetophylla* occurs in Colombia, Venezuela and Peru, *T. europaea* is an oceanic European species, *T. longifolia* is confirmed only for continental United States, and *T. sejuncta* is confirmed for Brazil and Cuba, and reported also from Guadeloupe, but “is probably widely distributed in the Neotropics” (Engel & Smith Merrill, 2004: 187). Therefore, it is not quite clear, if *T. nematodes* or *T. sejuncta* or even both species occur on Dominica.

*Telaranea sejuncta* auct. non (Ångstr.) S. Arn. 1957 = *Telaranea nematodes* (Gottsche ex Aust.) Howe 1902.

TRACHYLEJEUNEA (Spruce) Schiffn. 1893 = CHEILOLEJEUNEA (Spruce)  
Schiffn. 1893

## LEJEUNEACEAE

*Trachylejeunea conifera* Steph., *Spec. Hep.* 5: 302. 1913. [**Type: Dominica**]

Stephani 1913: 302; Fulford 1987: 277 [“conifer”].

**Fig.:** Stephani 1985, fig. 10237, from Dominica, Elliott 2154.

**Note:** The taxonomic status of this name needs clarification. A combination under *Cheilolejeunea* should wait until the type has been studied. The genus *Trachylejeunea* has recently been synonymized with *Cheilolejeunea* by Gradstein & Ilkiu-Borges 2009.

*Trachylejeunea dilatata* A. Evans 1908 = *Echinocolea dilatata* (A. Evans) R.M. Schust. 1980 = *Lejeunea subspathulata* Spruce 1884 (Ilkiu-Borges, 2005: 63, syn. nov.).  
*Trachylejeunea dominicensis* Steph. 1913 = *Cheilolejeunea oncophylla* (Ångstr.) Grolle & Reiner 1997 (Grolle & Reiner-Drehwald, 1997: 781, syn. nov.).  
*Trachylejeunea "exocellata-phenotype"* R.M. Schust., *J. Hattori Bot. Lab.* 72: 253, 1992, *nom. inval.*

## TRICHOCOLEA Dumort. 1822

## TRICHOCOLEACEAE

**Note:** Crandall-Stotler *et al.* (2009) considered *Leiomitra* as distinct at generic level.

***Trichocolea brevifissa*** Steph., *Spec. Hep.* 4: 54. 1909.

Fulford 1963: 49; Fulford 1987: 271; Schäfer-Verwimp 1999: 318 (mix).

**Fig.:** Hatcher 1957, figs 47-59; Fulford 1963, fig. 7a-d; Stephani 1985, fig. 10269, as *T. brevifissa*, fig. 10271, as *T. cubensis*, fig. 287, as *T. subquadrata*; Gradstein & Costa 2003, fig. 85F-G.

*Trichocolea eggertiana* Steph. 1909 = *Trichocolea flaccida* (Spruce) Spruce 1888 (Fulford, 1963: 47, 1987: 271).

***Trichocolea elliotii*** Steph., *Spec. Hep.* 4: 55. 1909. [**Type: Dominica**]

Stephani 1909: 55, the type; Hatcher 1957: 160; Fulford 1963: 45; Fulford 1987: 271.

**Fig.:** Hatcher 1957, figs 60-80; Fulford 1963, fig. 3a-e; Stephani 1985, fig. 10274, from Dominica, Elliott 1213.

***Trichocolea filicaulis*** Steph., *Spec. Hep.* 4: 59. 1909. [var. *filicaulis*]

Stephani 1909: 59; Pagán 1942: 94; Fulford 1963: 53; Fulford 1987: 271; Schuster 2000: 156.

**Fig.:** Hatcher 1957, figs 1-4; Fulford 1963, fig. 12a-c; Stephani 1985, fig. 10275, as *T. filicaulis*, fig. 10283, as *T. paupercula*.

***Trichocolea filicaulis*** Steph. var. *bifida* R.M. Schust., *Nova Hedwigia Beiheft* 118: 156. 2000. [**Type: Dominica**]

Schuster 2000: 154, 156, the type.

**Fig.:** none.

***Trichocolea flaccida*** (Spruce) Spruce, *Rev. Bryol.* 15: 34. 1888.

Bas.: *Leiomitra flaccida* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 349. 1885.

*Trichocolea patula* Steph., *Spec. Hep.* 4: 57. 1909. [**Type: Dominica**]

*Trichocolea eggertiana* Steph., *Spec. Hep.* 4: 59. 1909. [**Type: Dominica**]

Stephani 1888: 301, as *Leiomitra flaccida*; Spruce 1895: 353; Pagán 1939: 41; 1942: 94; Hatcher 1957: 154; Fulford 1963: 50; Fulford 1987: 271.

**Fig.:** Hatcher 1957, figs 11-40; Fulford 1963, fig. 8a-d; Cole 1983, fig. 10a-c; Stephani 1985, fig. 10273, as *T. eggertiana*, fig. 10276, as *T. flaccida*, fig. 10278, as *T. herzogiana*, fig. 10279, as *T. inaequalis*, fig. 10282, as *T. patula*; Kürschner & Parolly 1998: 51, fig. 7: 14-15.

*Trichocolea gracillima* Spruce 1895 ["1894"], *nom. illeg.* = *Trichocolea sprucei* Steph. 1909 (Fulford, 1963: 52, 1987: 271).

***Trichocolea paraphyllina*** (Spruce) Steph., *Spec. Hep.* 4: 58. 1909.

Bas.: *Leiomitra paraphyllina* Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 350. 1885.

Fulford 1963: 48; Fulford 1987: 271.

**Fig.:** Stephani 1916, fig. 173, as *T. difficilis*; 1985, fig. 10272, as *T. difficilis*, fig. 10281, as *T. paraphyllina*; Hatcher 1957, figs 81-97; Fulford 1963, fig. 5a-f; Gradstein *et al.* 2001, fig. 66K-M.

*Trichocolea patula* Steph. 1909 = *Trichocolea flaccida* (Spruce) Spruce 1888 (Fulford, 1963: 49, 1987: 271).

***Trichocolea sprucei*** Steph., *Spec. Hep.* 4: 59. 1909.

*Trichocolea gracillima* Spruce, in Gepp, *J. Linn. Soc., Bot.* 30: 353. 1895 "1894", *nom. illeg.* [**Type: Dominica**]

Spruce 1895: 353, type of *T. gracillima*; Stephani 1909: 60; Hatcher 1957: 152; Fulford 1963: 53; Fulford 1987: 271.

**Fig.:** Hatcher 1957, figs 8-10; Fulford 1963, fig. 11a-c.

***Trichocolea tomentosa*** (Sw.) Gottsche, *Mexik. Leverm.*: 119. 1863.

Bas.: *Jungermannia tomentosa* Sw., *Nov. Gen. Spec. Pl. Prodr.*: 145. 1788.

Spruce 1895: 353; Pearson 1922: 225; Pagán 1939: 42; 1942: 94; Hatcher 1957: 176; Fulford 1987: 271.

**Fig.:** Hatcher 1957, figs 139-168; Fulford 1963, fig. 1a-g; Stephani 1985, fig. 10268, as *T. allionii*, fig. 10270, as *T. crista-castrensis*, fig. 10277, as *T. grandifolia*, fig. 10280, as *T. mexicana*, fig. 10286, as *T. sphagnoides*, fig. 10288, as *T. tomentosa*; Gradstein & Costa 2003, fig. 85H-I; León-Yáñez *et al.* 2006: 100, col. photo; Gradstein & Ilkiu-Borges 2009, fig. 13A-B.

*Trichocolea tomentosa* (Sw.) Gottsche var. *platyclada* Spruce, in Gepp, *J. Linn. Soc., Bot.* 30: 353. 1895 "1894", *nom. inval.*

[Spruce, 1895: 353; Fulford, 1987: 271.]

## TROCHOLEJEUNEA Schiffn. 1932

## LEJEUNEACEAE

*Trocholejeunea (Plicolejeunea)* sp. (Schuster, 1992: 201).

## TYLIMANTHUS Mitten 1867

## ACROBOLBACEAE

*Tylimanthus amplexifolius* (Hampe ex Lehm.) Spruce 1895 = *Lethocolea amplexifolia* (Hampe ex Lehm.) Grolle (Grolle, 1969: 3) = *Solenostoma amplexifolium* (Hampe ex Lehm.) Vána *et* Schäfer-Verwimp 2009 (in Schäfer-Verwimp & Pócs, 2009).

*Tylimanthus approximatus* (Lindenb.) Besch. 1893 = *Tylimanthus laxus* (Lindenb.) Spruce 1885 (Burghardt & Gradstein, 2008, *syn. nov.*).

*Tylimanthus jamaicensis* Steph. 1905 = *Tylimanthus laxus* (Lindenb.) Spruce 1885 (Fulford, 1987: 272).

***Tylimanthus laxus*** (Lehm. *et* Lindenb.) Spruce, *Trans. & Proc. Bot. Soc. Edinburgh* 15: 502. 1885.

Bas.: *Plagiochila laxa* Lehm. *et* Lindenb., in Lindenberg, *Sp. Hepat.*: 68. 1840.

Syn.: *Gymnanthe laxa* (Lindenb.) Gottsche, *Ann. Sci. Nat. Bot.*, sér. 5, 1: 137. 1864.

*Tylimanthus approximatus* (Lindenb.) Besch., *J. Bot. (Morot)* 7: 191. 1893.

*Tylimanthus jamaicensis* Steph., *Spec. Hep.* 3: 9. 1905.

Spruce 1895: 364, as *T. approximatus* and *T. laxus*; Pagán 1942: 87-88, as *T. approximatus* and *T. laxus*; Bonner 1966: 516, as *Gymnanthe laxa*; Fulford 1987: 271-272, as *T. approximatus* and *T. laxus*; Burghardt & Gradstein 2008: 206.

**Fig.:** Stephani 1916, fig. 152, as *T. herzogii*; 1985, figs 10340, 10341, as *T. approximatus*, fig. 10349, as *T. herzogii*, fig. 10354-10355, as *T. laxus*, fig. 10364,

as *T. setaceo-ciliatus* (“setaceus”) fig. 10372-10373, as *T. jamaicensis*, fig. 10376, as *T. striolatus*, fig. 10377-10378, as *T. subtilis*, figs 10395-10396, as *T. fendleri*; Grolle & Persson 1966, fig. 2, as *T. madeirensis*, fig. 3, as *T. azoricus*; Kis & Pócs 1997, pl. XXXII, fig. 196 (oil bodies, as *T. ruwenzorensis*); Gradstein *et al.* 2001, fig. 14F-I, as *T. approximatus*; Gradstein & Costa 2003, fig. 9I-L; Wigginton 2004, fig. 123A-U, as *T. ruwenzorensis*; Burghardt & Gradstein 2008, figs 1-4, with reference to further illustrations.

*Tylimanthus marginatus* Steph. 1905 = *Plagiochila bicornis* Hampe *et* Gottsche 1853 (syn. nov. *fide* H. Inoue *in* Grolle, 1991: 191).

ZOOPSIDELLA R.M. Schust. 1965

LEPIDOZIACEAE

*Zoopsisidella antillana* (Steph.) Robinson, *Bol. Soc. Venez. Ci. Nat.* 32: 254. 1976.

Bas.: *Zoopsis antillana* Steph., *Spec. Hep.* 3: 282. 1908. [**Type: Dominica**]

Stephani 1908: 282, the type of *Zoopsis antillana*; Pagán 1939: 38; Fulford 1968: 372; 1987: 272; Schäfer-Verwimp 1999: 319, all as *Zoopsis antillana*; Schuster 2000: 425.

**Fig.:** Stephani 1985, figs 10412-3, as *Zoopsis antillana* (from Dominica, Elliott s.n.); Fulford 1968, pl. 100, fig. 3a-e, as *Zoopsis antillana*; Schuster 1983, fig. 55 (map, as *Zoopsis antillana*); 2000, figs 177-179.

ZOOPSIS J.D. Hook. *ex* Gottsche, Lindenb. *et* Nees

LEPIDOZIACEAE

*Zoopsis antillana* Steph. 1908 = *Zoopsisidella antillana* (Steph.) Robinson 1976.

## BRYOGEOGRAPHICAL SURVEY

According to the present overview, Dominica has a very diverse liverwort flora. In fact, no other island or geographical unit of comparable size seems to harbour a higher number of liverworts than Dominica. Guadeloupe has a similarly rich liverwort flora but has twice the size of Dominica (see also Schäfer-Verwimp & Reiner-Drehwald, 2009).

The main part of the Dominican liverworts and hornworts (247 taxa or 82.1%) belongs to the **Neotropical element**, more than 100 taxa (34.7%) are widespread or common tropical American species, 19.3% are scattered or rare, e.g., *Blepharolejeunea saccatiloba*, *Bromeliophila helenae*, *Leiosporoceros dussii*, *Oryzolejeunea saccatiloba*, and *Lejeunea asprella*, the latter species known only from two collections. About 85 species (28.2%) have a more limited range in the Neotropics, of these 6.0% are **widely distributed in the Caribbean**, namely *Acrobolbus antillanus*, *Cololejeunea costaricensis*, *Drepanolejeunea submuricata*, *Heteroscyphus elliotii*, *Lejeunea corynantha*, *Lepidozia patens*, *Radula campanulata*, *Symphyogyna marginata*, *S. trivittata*, and *Zoopsisidella antillana*. Only four species or 1.3% may be considered to belong to the **Caribbean-Andean** element (*Calypogeia rhombifolia*, *Jubula hutchinsiae* subsp. *bogotensis*, *Plagiochila tamariscina*, and *Prionolejeunea decora*), and 2.3% are **disjunctly** distributed between the **Caribbean** region and **SE Brazil**. To this interesting group belong *Drepanolejeunea crassiretis*, *Mnioloma cellulosum*, *M. crenulatum*, *Neesioscyphus bicuspidatus*, *Radula varilobula*, *Riccardia schwaneckeii* (known also from Guayana) and *Trichocolea brevifissa*. **Confined to the Antilles** are 31 species or 10.3%, and 12 species (4.0%) are restricted to the **Lesser Antilles**. The latter species may be considered as subendemics, for example *Diplasiolejeunea*



Table 1. Distribution patterns of the liverworts and hornworts from Dominica (for comparison with Cuba and the Dominican Republic see Pócs, 1988 and Schäfer-Verwimp & Pócs, 2009)

|                                 | <i>number of species</i> | <i>percentage</i> |
|---------------------------------|--------------------------|-------------------|
| Neotropical                     |                          |                   |
| common or widespread            | 104                      | 34.7%             |
| rare or scattered               | 58                       | 19.3%             |
| widely Carribbean               | 18                       | 6.0%              |
| Carribbean-Andean               | 4                        | 1.3%              |
| Carribbean-SE Brazil            | 7                        | 2.3%              |
| Antillean                       |                          |                   |
| Antilles                        | 31                       | 10.3%             |
| Lesser Antilles (“subendemics”) | 12                       | 4.0%              |
| endemic                         | 12                       | 4.0%              |
| “proven endemics”               | [7]                      | [2.3%]            |
| Wide tropical to pantropical    | 19                       | 6.3%              |
| Afro-American                   | 16                       | 5.3%              |
| Subcosmopolitan to cosmopolitan | 9                        | 3.0%              |
| Amphi-Atlantic-temperate        | 6                        | 2.0%              |
| New World                       | 1                        | 0.3%              |
| Holarctic element               | 1                        | 0.3%              |
| Irregular in range              | 2                        | 0.7%              |
| Total                           | 300                      | 99.8%             |

*leiocarpa*, *Drepanolejeunea valiae*, *Harpalejeunea emarginata*, *Lejeunea pulverulenta*, *Plagiochila herminieri*, *Prionolejeunea grollei* and *Radula subsimplex*. Twelve taxa (4.0%) are **known only from Dominica**, at least 7 of these (2.3%) may be considered as “proven endemics” and five (1.7%) as “potential endemics” (Pócs, 1988). To the first group belong *Bazzania longa* var. *papillata*, *Calypogeia falcata*, *Drepanolejeunea perissodonta*, *Fuscocephaloziopsis pulvinata*, *Plagiochila eggersii*, *Scapania geppii*, and *Phycolepidozia exigua*, the latter one representing an endemic genus and family. To the second group belong *Riccardia laticostata*, *Taxilejeunea biapiculata*, *T. decurrens*, *T. leiantha*, and *Trichocolea filicaulis* var. *bifida*.

The remaining 17.9% are distributed as follows: 6.3% have a **wide tropical to pantropical** range (*Cololejeunea cardiocarpa*, *Colura tenuicornis*, *Diplasiolejeunea cavifolia*, *D. rudolphiana*, *Frullania nodulosa*, *Haplomitrium blumii*, *Lopholejeunea nigricans*, *L. subfusca*, *Pycnolejeunea contigua*, *Radula javanica* and *Stictolejeunea*

*balfourii*). *Cololejeunea papillosa*, also filed here, is known only from tropical Asia and America and could alternatively be separated as a single **Asian-American** element, 5.3% of Dominicas liverworts belong to the **Afro-American** element, among these are *Cheilejeunea rigidula*, *Cololejeunea microscopica* var. *africana* and var. *exigua*, *Colura cylindrica*, *Isotachis aubertii*, *Lejeunea trinitensis*, *Marchesinia brachiata*, *Radula flaccida*, *R. stenocalyx*, *Symbiezidium barbiflorum*, and *Tylimanthus laxis*; 3.0% have a **subcosmopolitan to cosmopolitan** distribution (*Aneura pinguis*, *Dumortiera hirsuta*, *Marchantia paleacea*, *Metzgeria ciliata*, *M. furcata*, *M. leptoneura*, *Pallavicinia lyellii*, *Phaeoceros carolinianus*, and *Pseudomarsupidium decipiens*), 2.0% are **amphi-atlantic-temperate** (*Cephalozia crassifolia*, *Cololejeunea sintenisii*, *Harpalejeunea molleri*, *Jungermannia callithrix*, *Odontoschisma prostratum* [reaching only the Azores], and *Syzygiella rubricaulis*), *Marchantia inflexa* is the only **New World** species (0.3%), *Lepidozia reptans* belong to the **holarctic** element (0.3%), and two species (0.7%) are irregular in range (*Odontoschisma denudatum*, *Cheilejeunea papillata*).

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