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# Checklist of the Liverworts and Hornworts of Ecuador

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**Abstract:** Gradstein, S.R. (2020): Checklist of the Liverworts and Hornworts of Ecuador. *Frahmia* 17:1-40.

706 species of liverworts and 16 of hornworts are reported from Ecuador; a further twenty species are listed as doubtful. Endemism in the country is about 6%. For each accepted species, distribution within the country (by province) and elevational range is given. The disproportionate numbers of provincial records indicate that the exploration of the country is still incomplete, with exception perhaps of the Galápagos Islands.

## 1. Introduction

This checklist is an updated version of the catalogue of liverworts and hornworts of Ecuador by León-Yáñez et al. (2006). Since the publication of the 2006 catalogue, numerous additions and corrections to the liverwort and hornwort flora of Ecuador have been published (see Bibliography) and a manual with keys, descriptions and illustrations, *The Liverworts and Hornworts of Colombia and Ecuador*, has been prepared (Gradstein 2020). As a result of these recent studies, more than a hundred species names accepted in the 2006 catalogue have been reduced to synonymy, about 70 species have been transferred to other genera, and 120 species and 13 genera have been recorded new to Ecuador, including 23 species and one genus (*Reinerantha*) new to science (Tables 1, 2).

The current checklist is based on *The Liverworts and Hornworts of Colombia and Ecuador* and lists 706 accepted species of liverworts (in 131 genera and 42 families) and 16 of hornworts (in 7 genera and 4 families). A further twenty species are listed as doubtful. The total number of species in Ecuador is about the same as in Colombia, which has 705 species of liverworts and 15 of hornworts (Gradstein 2020), even though Colombia is about four times larger than Ecuador. This supports the notion that species richness is largely driven by habitat diversity

— which is rather similar in Colombia and Ecuador — and not by surface area (e.g., Lack 1973; Riclefs & Lovette 1999; Patiño et al. 2013). The intensive exploration of Ecuador in recent years by specialists (e.g., Schäfer-Verwimp et al. 2006, 2013; Benitez & Gradstein 2011; Benitez et al. 2012; Gradstein & Benitez 2017; Gradstein & León-Yáñez 2018, 2020; Burghardt 2019, 2020) may also have played a role here. In spite of the similar species richness of the liverwort and hornwort floras of Ecuador and Colombia, many species are still recorded from only one of the two countries (Gradstein, 2020), indicating that exploration of the two countries is incomplete.

The incomplete exploration of the liverwort and hornwort flora of Ecuador – with exception perhaps of the Galápagos Islands – is also evident from the disproportionate numbers of provincial records (Table 3). Highest species numbers are recorded from Zamora Chinchipe (427 spp.) and Pichincha (325), lowest numbers from Bolívar (11), Cañar (6), Guayas (12) and Manabí (7). The high number of species recorded from Zamora Chinchipe, which has almost sixty percent of the species recorded from the country, may be due to the intensive recent explorations carried out in this province (e.g., Gradstein et al. 2007; Benitez & Gradstein 2011; Schäfer-Verwimp et al. 2013), while that of Pichincha is undoubtedly due to its approximation to the capital of Quito. A comparison of the species numbers in the 2006 catalogue and the present one (2020) shows a marked increase in the number of species recorded from El Oro (2 vs. 82 spp.) and Loja (38 vs. 202 spp.), furthermore from Napo, Azuay, Cotopaxi, Carchi and Pichincha. A decrease, on the other hand, is observed for Cañar, Chimborazo, Los Ríos, Pastaza and Sucumbíos, which may be explained by misidentification and new synonymy. The unchanged number recorded from Galápagos since 2006 (126 spp.) suggests that the flora of the islands has become rather well known (Gradstein 2009; Gradstein & Ziemmeck 2016).

Forty species of liverworts and 3 species of hornworts are only known from Ecuador (Table 4); percent endemism is about 6% and is almost twice higher than in Colombia (3.5%). The higher endemism in Ecuador may be due to the contribution of the Galápagos Islands to endemism (10 spp.) and, perhaps, the intensive hepaticological explorations in the country in recent years.

**Table 1. Genera of liverworts recorded new to Ecuador since 2006.**

*Acrolejeunea* (Spruce) Steph. (Gradstein 2020)  
*Alobiella* (Spruce) Schiffn. (Schäfer-Verwimp et al. 2013)  
*Anthelia* (Dumort.) Dumort. (Benitez et al. 2012)  
*Blepharostoma* Dumort. (Benitez et al. 2012)  
*Isopaches* H.Buch (Benitez et al. 2012)  
*Lobatiriccardia* (Mizut. & S.Hatt.) Furuki (Preußing et al. 2010)  
*Neolepidozia* Fulford & J.Taylor (Schäfer-Verwimp et al. 2013)  
*Pictolejeunea* Grolle (Mota de Oliveira & ter Steege 2013)

*Platycaulis* R.M.Schust. (Benitez et al. 2012)  
*Reinerantha* Gradst. & R.L.Zhu (Gradstein et al. 2018)  
*Schiffneriolejeunea* Verd. (Burghardt 2019)  
*Verdoornianthus* Gradst. (Mota de Oliveira & ter Steege 2013)  
*Zoopsidella* R.M.Schust. (Benitez & Gradstein 2011)

**Table 2. Species described as new to science from Ecuador since 2006.**

*Archilejeunea nebeliana* Gradst. & Schäf.-Verw.  
*Cololejeunea kuciana* Pócs & Schäf.-Verw.  
*Cololejeunea stotlerana* Gradst., Ilkiu-Borges & Vanderp.  
*Diplasiolejeunea mayaykuensis* Schäf.-Verw. & Heinrichs  
*Fossombronia jostii* Crand.-Stotl. & Gradst.  
*Lejeunea mojandae* Gradst.  
*Lejeunea topoensis* Gradst. & M.E.Reiner  
*Lejeunea yasuniensis* Gradst. & C.J.Bastos  
*Lepidolejeunea auriculata* Schäf.-Verw. & Heinrichs  
*Leptoscyphus leoniae* Gradst.  
*Leptoscyphus revolutus* Burghardt  
*Leptoscyphus sotiauxii* Vanderp. et al.  
*Lobatiriccardia oberwinkleri* Nebel et al.  
*Lobatiriccardia verdoornioides* Nebel et al.  
*Metzgeria holzii* Gradst. & A.R.Benitez  
*Odontoschisma engelii* Gradst. & Burghardt  
*Plagiochila pautaphila* Gradst. & León-Yáñez  
*Plagiochila priceana* Gradst. & A.R.Benitez  
*Reinerantha foliicola* Gradst. & R.L.Zhu  
*Riccardia verticillata* Gradst. & Reeb  
*Syzygiella burghardtii* Gradst. & A.R.Benitez  
*Syzygiella ciliata* Gradst. & A.R.Benitez  
*Zoopsidella grahamii* Pócs

**Table 3. Number of species of liverworts and hornworts recorded from the provinces of Ecuador in 2006 and 2020.**

Province (region)	2006	2020
Azuay (Sierra)	60	150
Bolivar (Sierra)	5	11
Carchi (Sierra)	66	101

Cañar (Sierra)	12	6
Chimborazo (Sierra)	91	87
Cotopaxi (Sierra)	30	77
El Oro (Costa)	2	82
Esmeraldas (Costa)	52	68
Galápagos Islands (Galápagos)	126	126
Guayas (Costa)	9	12
Imbabura (Sierra)	13	32
Loja (Sierra)	38	202
Los Ríos (Costa)	62	56
Manabí (Costa)	5	7
Morona Santiago (Oriente)	93	202
Napo (Oriente)	103	225
Orellana (Oriente)	2	115
Pastaza (Oriente)	153	130
Pichincha (Sierra)	171	312
Sucumbíos (Oriente)	44	41
Tungurahua (Sierra)	147	195
Zamora Chinchipe (Oriente)	337	427

**Table 4. Endemic species of liverworts and hornworts of Ecuador.**

LIVERWORTS

- Cololejeunea kuciana* (Zamora Chinchipe)  
*Cololejeunea pterocolea* (Morona Santiago)  
*Cololejeunea stotlerana* (Zamora Chinchipe)  
*Colura andoi* (Galápagos)  
*Colura irrorata* (Tungurahua, Zamora Chinchipe)  
*Diplasiolejeunea erostrata* (Loja, Zamora Chinchipe)  
*Diplasiolejeunea grandirostrata* (Zamora Chinchipe)  
*Diplasiolejeunea lanceolata* (Esmeraldas, El Oro)  
*Diplasiolejeunea mayaykuensis* (Zamora Chinchipe)  
*Fossombronia jostii* (Pastaza)  
*Frullania blepharozia* (Chimborazo, Pichincha, Zamora Chinchipe)  
*Frullania darwinii* (Galápagos)  
*Frullania gradsteinii* (Galápagos)  
*Fuscocephalozia subintegra* (Zamora Chinchipe)  
*Lejeunea flagellaris* (Chimborazo, Galápagos, Morona Santiago)  
*Lejeunea mojandae* (Pichincha)  
*Lejeunea suffruticola* (Chimborazo)  
*Lejeunea xiphophylla* (Los Ríos)

*Lejeunea yasuniensis* (Orellana)  
*Leptoscyphus autoicus* (Azuay, Loja, Napo, Zamora Chinchipe)  
*Leptoscyphus leoniae* (Loja, Pichincha)  
*Leptoscyphus revolutus* (Pichincha)  
*Leptoscyphus sotiauxii* (Napo)  
*Lobatiriccardia oberwinkleri* (Loja, Zamora Chinchipe)  
*Lobatiriccardia verdoornioides* (Azuay, Pichincha)  
*Metzgeria grandiflora* (Galápagos)  
*Plagiochila macrifolia* (Chimborazo)  
*Plagiochila pautaphila* (Pichincha, Napo)  
*Plagiochila priceana* (Azuay, Cotopaxi, Pichincha)  
*Radula eggersi* (Loja, Zamora Chinchipe)  
*Radula galapagona* (Galápagos)  
*Radula sinskeana* (Pichincha)  
*Riccardia verticillata* (Morona Santiago)  
*Riccia howellii* (Galápagos)  
*Riccia ianthina* (Galápagos)  
*Riccia limicola* (Galápagos)  
*Spruceanthus theobromae* (Guayas, Los Ríos)  
*Syzygiella burghardtii* (Loja/Zamora Chinchipe)  
*Syzygiella ciliata* (Pichincha, Zamora Chinchipe)  
*Triandrophyllum eophyllum* (Napo/Pichincha)

#### HORNWORTS

*Anthoceros simulans* (Galápagos)  
*Notothylas galapagensis* (Galápagos)  
*Phaeoceros pichinchensis* (Pichincha)

## 2. Alphabetical list of genera and species of liverworts and hornworts recorded from Ecuador

For each species, distribution in Ecuador is given based on the provinces where the species have been recorded. In addition, elevational range is cited. The data are based on *The Liverworts and Hornworts of Colombia and Ecuador* (<https://www.springer.com/gp/book/9783030494490>) and the latter work may be consulted for further detail. Elevation usually refers to the northern Andean region. Synonyms (cited in brackets) include names listed in the 2006 catalogue that are no longer accepted. Taxon authors are abbreviated according to IPNI. In author citations "ex" is omitted and only the second, validating author is cited as the use of "ex" is not obligatory by the Code. Three or more authors are shortened as "et al."

The provinces of Ecuador are abbreviated as follows: Az = Azuay; Bo = Bolívar; Ca = Carchi; Cañ = Cañar; Ch = Chimborazo; Co = Cotopaxi; EO = El

Oro; Es = Esmeraldas; Ga = Galápagos Islands; Gu = Guayas; Im = Imbabura; Lo = Loja; LR = Los Ríos; Ma = Manabí; MS = Morona Santiago; Na = Napo; Or = Orellana; Pa = Pastaza; Pi = Pichincha; Su = Sucumbíos; Tu = Tungurahua; ZC = Zamora Chinchipe.

Taxa recorded new to Ecuador since 2006 are marked by an asterisk.

## LIVERWORTS (Marchantiophyta)

**ACANTHOCOLEUS** R.M.Schust. (Lejeuneaceae)

**Acanthocoleus aberrans** (Lindenb. & Gottsche) Kruijt var. **laevis** Gradst. – Ga, Lo; 700–2600 m.

**ACROBOLBUS** Nees (Acrobolbaceae)

\***Acrobolbus cuneifolius** (Steph.) Briscoe – ZC; ca. 2000–2750 m.

**Acrobolbus laxus** (Lehm. & Lindenb.) Briscoe – Az, Ca, Co, Ga, Lo, Na, Pi, ZC; 500–4000 m.

\***Acrobolbus setaceus** (Steph.) Gradst. – Co; ca. 3000–4000 m.

**Acrobolbus wilsonii** Nees (= *A. mittenii* Steph., *A. wilsonii* var. *andinus* Spruce) – Az, Co, Na, Pi, Tu; ca. 3000–4500 m.

\***ACROLEJEUNEA** (Spruce) Steph. (Lejeuneaceae)

\***Acrolejeunea emergens** (Mitt.) Steph. – Or; 150–220 m.

\***Acrolejeunea torulosa** (Lehm. & Lindenb.) Schiffn. – Or; 230 m.

**ADELANTHUS** Mitt. (Adelanthaceae)

\***Adelanthus carabayensis** (Mont.) Grolle – ZC; 1000–3000 m.

**Adelanthus lindenbergianus** (Lehm.) Mitt. – Lo, Pi, Tu, ZC; 1800–4200 m.

**Adelanthus pittieri** (Steph.) Grolle – Lo, Na; 2500–3700 m.

\***ALOBIELLA** (Spruce) Schiffn. (Cephaloziaceae)

\***Alobiella husnotii** (Spruce) Schiffn. – ZC; 2750–2900 m (elsewhere at lower elevation).

**ALOBIELLOPSIS** R.M.Schust. (Cephaloziaceae)

**Alobiellopsis dominicensis** (Spruce) Fulford – Ga, ZC; 250–2000 m.

**ANASTROPHYLLUM** (Spruce) Steph. (Scapaniaceae)

**Anastrophyllum auritum** (Lehm.) Steph. (= *A. calocystum* (Spruce) Steph.) – Az, Ca, Co, Lo, Na, Pi, ZC; 1800–4500 m.

**Anastrophyllum nigrescens** (Mitt.) Steph. (= *A. paramicola* R.M.Schust.) – Az, Ca, Co, Lo, Na, Pi, ZC; 3000–4300 m.

**Anastrophyllum piligerum** (Nees) Steph. (= *A. hians* Steph.) – Az, Co, Lo, Na, ZC; 1500–4000 m.

**Anastrophyllum stellatum** R.M.Schust. – Ca, Lo, Pi, ZC; 3100–4200 m.

**Anastrophyllum tubulosum** (Nees) Grolle – Az, Ca, Na, Pi, ZC; 2000–4500 m.

**ANEURA** Dumort. (Aneuraceae)

**Aneura latissima** Spruce (= *A. pseudopinguis* Herzog) – Na, Or, Pi (?); alt. ?

**Aneura pinguis** (L.) Dumort. – Na, Tu, ZC; 500–4300 m.

**ANOPOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)

**Anopolejeunea conferta** (Spreng.) A.Evans – Az, Lo, MS, Na, Pi, ZC; 0–3700 m.

\***ANTHELIA** (Dumort.) Dumort. (Antheliaceae)

\***Anthelia juratzkana** (Limpr.) Trevis. – Lo, Na; 3100–4300 m.

**ARCHILEJEUNEA** (Spruce) Steph. (Lejeuneaceae)

**Archilejeunea juliformis** (Nees) Gradst. (= *A. fuscescens* (Lehm.) Fulford) – Na, Or; 100–500 m.

**Archilejeunea ludoviciana** (De Not.) P.Geissler & Gradst.

subsp. **ludoviciana** – MS, Na, ZC; 100–1100 m.

subsp. **porelloides** (Spruce) Gradst. (= *A. porelloides* (Spruce) Steph.) – MS; 100–450 m.

\***Archilejeunea nebeliana** Gradst. & Schäf.-Verw. – ZC; ca. 1000 m.

**ASTERELLA** P.Beauv. (Aytoniaceae)

**Asterella lateralis** M.Howe. – Tu; 1500–1800 m.

**Asterella macropoda** (Spruce) A.Evans – Az, Co, Lo, Pi, Tu, ZC.; 1000–4000 m.

**BAZZANIA** Gray (Lepidoziaceae)

\***Bazzania acanthostipa** Spruce – Pi, ZC; 900–1900 m.

**Bazzania affinis** (Lindenb. & Gottsche) Trevis. (= *B. taleana* (Gottsche) Fulford) – Lo, ZC; 800–2900 m.

**Bazzania aurescens** Spruce – Bo, Ch, MS, Or, ZC; 100–2000 m.

**Bazzania bidens** (Gottsche & Lindenb.) Trevis. – Bo, Ch, ZC; 200–3400 m.

**Bazzania canelensis** (Steph.) Fulford – Lo, Pa (Canelos), Tu, ZC; ca. 1000–3750 m.

**Bazzania chilensis** (Steph.) Fulford – unknown locality.

**Bazzania cuneistipula** (Gottsche & Lindenb.) Trevis. – Lo, Or, Pa, ZC; 200–2000 m.

**Bazzania denticulata** (Lindenb. & Gottsche) Trevis. – ZC; 1000–3100 m.

**Bazzania falcata** (Lindenb.) Trevis. (= *B. macrostipula* Fulford, *B. schlimiana* sensu Fulford non typus) – Lo, Pa, Tu, ZC; 1000–3600 m.

- Bazzania gracilis** (Hampe & Gottsche) Steph. – Az, ZC; 100–3300 m.  
**Bazzania hookeri** (Lindenb.) Trevis.  
 var. **hookeri** (= *B. arcuata* (Lindenb. & Gottsche) Trevis., *B. schlimiana* (Gottsche) Fulford) – Az, Ch, Ga, Im, MS, Na, Or, Pa, Pi, Tu, ZC; 100–4000 m.  
 var. **mamillosa** (Gradst. & A.R.Benitez) Gradst. & A.R.Benitez (= *B. arcuata* var. *mamillosa* Gradst. & A.R.Benitez) – ZC; 2300 m.  
**Bazzania jamaicensis** (Lehm. & Lindenb.) Trevis. – Na, ZC; 1500–3500 m.  
**Bazzania longistipula** (Lindenb.) Trevis. – Lo, Na, Pa, Pi, Su, Tu, ZC; 750–3500 m.  
**Bazzania pallidevirens** (Steph.) Fulford – Ch, Lo; 0–2800(?) m.  
**Bazzania peruviana** (Nees) Trevis. – unknown locality.  
**Bazzania phyllobola** Spruce – MS, Pi, ZC; 0–3000 m.  
**Bazzania placophylla** (Taylor) Grolle – Az, Pi; 3500–4000 m.  
**Bazzania spruceana** Steph. – ZC; 2650–2950 m.  
**Bazzania stolonifera** (Sw.) Trevis. – Ch, MS, Or, Pa, Tu; 500–3000 m.
- BLEPHAROLEJEUNEA** S.W.Arnell (Lejeuneaceae)  
**Blepharolejeunea incongrua** (Lindenb. & Gottsche) van Slageren & Kruijt – Ca, Co, Pi, ZC; 1800–4100 m.  
**Blepharolejeunea saccata** (Steph.) van Slageren & Kruijt subsp. **harlingii** (S.W.Arnell) Gradst. (= *B. harlingii* S.W.Arnell) – Na, Pa, Tu; 1200–1850 m.  
**Blepharolejeunea securifolia** (Steph.) R.M.Schust. – Ca, Ch, Im, MS, Na, Pi; 2450–4100 m.
- \***BLEPHAROSTOMA** Dumort. (Pseudolepicoleaceae)  
 \***Blepharostoma trichophyllum** (L.) Dumort. – Co, Lo, Na; 3000–4300 m.
- BRACHIOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)  
**Brachiolejeunea laxifolia** (Taylor) Schiffn. – Az, Ca, Ch, Na, Pi, Tu, ZC; 1500–3800 m.  
**Brachiolejeunea leiboldiana** (Gottsche & Lindenb.) Schiffn. – Tu; 1500–1700 m.  
**Brachiolejeunea phyllorhiza** (Nees) Kruijt & Gradst. – Pi Tu, ZC; 300–2500 m.
- BRYOPTERIS** (Nees) Lindenb. (Lejeuneaceae)  
**Bryopteris diffusa** (Sw.) Nees – MS, ZC; 600–1250 m.  
**Bryopteris filicina** (Sw.) Nees (= *Thysananthus olivaceus* S.W.Arnell) – Bo, Ch, EO, Es, Ga, Gu, Lo, LR, MS, Na, Pa, Tu, ZC; 250–2150 m.
- CALYPOGEIA** Raddi (Calypogeiaceae)  
**Calypogeia andicola** Bischl. – Az, Pi; 1000–4100 m.  
**Calypogeia grandistipula** (Steph.) Steph. – ZC; 1800–2000 m.

- \***Calypogeia laxa** Gottsche & Lindenb. – ZC; up to 3000 m.  
**Calypogeia lechleri** (Steph.) Steph. – Na, Pi, ZC; up to 2600 m.  
**Calypogeia oblata** Herzog – Tu, ZC; 2150–3500 m.  
**Calypogeia peruviana** Nees & Mont. – Ga, Lo, Na, ZC; 450–4000 m.  
**Calypogeia rhombifolia** (Spruce) Steph. – Pi, Tu, ZC; up to 1700 m.  
\***Calypogeia subintegra** (Gottsche et al.) Bischl. – ZC; 2800–3300 m.  
\***Calypogeia uncinulatula** Herzog – EO; ca. 350 m.

**CAUDALEJEUNEA** Schiffn. (Lejeuneaceae)

- Caudalejeunea lehmanniana** (Gottsche) A.Evans – Or, Pa; 100–500 m.

**CEPHALOZIA** (Dumort.) Dumort. (Cephaloziaceae)

- Cephalozia crossii** Spruce – MS, ZC; 1700–4100 m.

**CEPHALOZIELLA** (Spruce) Schiffn. (Cephaloziellaceae)

- Cephaloziella divaricata** (Sm.) Schiffn. – Ca, Ga; 400–3500 m.

- \***Cephaloziella fragillima** (Spruce) Fulford (= *C. granatensis* Steph.) – Az, Ga, Pi;  
600–4000 m.

**CEPHALOZIOPSIS** (Spruce) Schiffn. (Cephaloziellaceae)

- Cephaloziopsis intertexta** (Gottsche) R.M.Schust. – Ga, MS, ZC; 450–2100 m.

**CERATOLEJEUNEA** (Spruce) J.B.Jack & Steph. (Lejeuneaceae)

- Ceratolejeunea brevinervis** (Spruce) A.Evans – ZC; 1800–2150 m.

- Ceratolejeunea coarina** (Gottsche) Schiffn. (= *C. diversicornua* (Prantl) Sydow)  
– Es, Na, Or, Pa, Pi; 100–1000 m.

- Ceratolejeunea cornuta** (Lindenb.) Steph. – Az, Ch, Es, Ga, LR, MS, Na, Or, Pa,  
Pi, ZC; 0–2550 m.

- Ceratolejeunea cubensis** (Mont.) Schiffn. (= *C. commixta* (Spruce) Steph.) – Es,  
EO, MS, Or, Pa; 0–1500 m.

- Ceratolejeunea desciscens** (Sande Lac.) Schiffn. (= *C. ecuadorensis* S.W.Arnell)  
– Pa; 100–1100 m.

- Ceratolejeunea fallax** (Lehm. & Lindenb.) Bonner – ES, MS, Pa; 100–2000 m.

- Ceratolejeunea filaria** (Taylor) Steph. – Ch, EO, Es, Ga, LR, MS, Pi, ZC; 250–  
2400 m.

- Ceratolejeunea grandiloba** J.B.Jack & Steph. (= *C. szyszyłowiczii* (Loitl.)  
Steph.) – Az, ZC; 1400–3000 m.

- Ceratolejeunea laetefusca** (Austin) R.M.Schust. – Es, LR, Or, ZC; ca. 0–2000  
m.

- Ceratolejeunea patentissima** (Hampe & Gottsche) A.Evans – Lo, Ma, Tu, ZC;  
450–3050 m.

- Ceratolejeunea pungens** Steph. – Ch, Es, LR, MS, Pa, Pi; 200–900 m.

- Ceratolejeunea spinosa** (Gottsche) Steph. – Ch, EO, Es, Pa, Pi; 0–1600 m.

**CHAETOCOLEA** Spruce (Pseudolepicoleaceae)**Chaetocolea palmata** Spruce – Na, Tu; 2400–3300 m.**CHEILOLEJEUNEA** (Spruce) Steph. (Lejeuneaceae)**Cheilolejeunea acutangula** (Nees) Grolle – EO, ZC; 900–2100 m.**Cheilolejeunea adnata** (Lehm.) Grolle – Ch, Ga (?), MS, Or, Pa; 100–1800 m.**Cheilolejeunea aneogyna** (Spruce) A.Evans (= *C. assurgens* (Spruce) Steph.) – Az, Or; 100–250 m.**Cheilolejeunea beyrichii** (Lindenb.) M.E.Reiner – Az, Pi, ZC; 1000–2500 m.**Cheilolejeunea choachina** (Gottsche) Gradst. – Lo, Pi, ZC; 2150–4500 m.**Cheilolejeunea comans** (Spruce) R.M.Schust. – Ch, Tu, ZC; 0–2000 m.**Cheilolejeunea filiformis** (Sw.) W.Ye et al.var. **filiformis** (= *Omphalanthus filiformis* (Sw.) Nees) – Ca, EO, Ga, Lo, LR, MS, Na, Pa, Pi, Tu, ZC; 100–3900 m.var. **platycoleus** (Herzog) W.Ye et al. (= *Omphalanthus platycoleus* Herzog) – ZC; ca. 1500–3000 m.var. **wallisii** (J.B.Jack & Steph.) W.Ye et al. (= *Omphalanthus wallisii* J.B.Jack & Steph.) – Pi, ZC; 900–3000 m.**Cheilolejeunea holostipa** (Spruce) Grolle & R.L.Zhu – Az, Lo, LR, MS, Na, Or, Su, ZC; 0–3400 m.**Cheilolejeunea inflexa** (Hampe) Grolle – Pi, ZC; 1300–2550 m.**Cheilolejeunea jackii** (Prantl) W.Ye et al. (= *Omphalanthus jackii* (Prantl) Gradst.) – Bo, Cañ, EO, Ga, LR, Ma, Pi; 200–1200 m.**Cheilolejeunea laevicalyx** (J.B.Jack & Steph.) Grolle – Lo; 2500–3600 m.**Cheilolejeunea lineata** (Lehm. & Lindenb.) Schiffn. – Pi, ZC; up to 950 m.**Cheilolejeunea lobulata** (Lindenb.) Gradst. & C.J.Bastos (= *C. oncophylla* (Ångstr.) Grolle & M.E.Reiner) – Lo, Na, Tu, ZC; 200–4500 m.**Cheilolejeunea ornata** C.J.Bastos – ZC; 1890 m.**Cheilolejeunea ovalis** (Lindenb. & Gottsche) W.Ye et al. (= *Omphalanthus ovalis* (Lindenb. & Gottsche) Gradst.) – Az, Ch, EO, Ga, Lo, LR, Na, Pi, Tu, ZC; 100–3000 m.**Cheilolejeunea paramicola** (Herzog) W.Ye et al. (= *Aureolejeunea paramicola* (Herzog) R.M.Schust.) – Az, Ca, Pi, ZC; 2600–4000 m.**\*Cheilolejeunea quinquecarinata** (R.M.Schust.) W.Ye et al. (= *Aureolejeunea quinquecarinata* R.M.Schust.) – Lo, ZC; 3000–4100 m.**Cheilolejeunea revoluta** (Herzog) Gradst. & Grolle – ZC; 700–2650 m.**Cheilolejeunea rigidula** (Mont.) R.M.Schust. – EO, Es, Ga, Lo, MS, Na, Or, Pi; 0–2800 m.**Cheilolejeunea tonduzana** (Steph.) W.Ye et al. (= *Aureolejeunea tonduzana* (Steph.) Gradst., *A. fulva* R.M.Schust.) – Lo, ZC; 1800–3100 m.**Cheilolejeunea trifaria** (Reinw. et al.) Mizut.

var. **trifaria** (= *C. azureomontana* C.J.Bastos & Schäf.-Verw.) – Az, EO, Ga, MS, Or, Pi, ZC; 0–2200 m.

var. **clausa** (Nees & Mont.) C.J.Bastos & Gradst. (= *C. clausa* (Nees & Mont.) R.M.Schust.) – Ga (?), Es, MS, Or, ZC; 70–2500 m.

**Cheilolejeunea uncioloba** (Lindenb.) Malombe (= *Leucolejeunea uncioloba* (Lindenb.) A.Evans) – Lo, ZC; up to 3100 m.

**Cheilolejeunea xanthocarpa** (Lehm. & Lindenb.) Malombe (= *Leucolejeunea xanthocarpa* (Lehm. & Lindenb.) A.Evans) – EO, Ga, Lo, ZC; 450–3500 m.

#### CLASMATOCOLEA Spruce (Lophocoleaceae)

**Clasmatocolea vermicularis** (Lehm.) Grolle – Ca, Lo, Na, Pi, Tu, ZC; 1800–4500 m.

#### CLEVEA Lindb. (Cleveaceae)

**Clevea spathysii** (Lindenb.) Müll.Frib. (= *Athalamia andina* (Spruce) S.Hatt.) – Pa, Tu; 2000–2800 m.

#### COLOLEJEUNEA (Spruce) Steph. (Lejeuneaceae)

\***Cololejeunea antillana** Pócs – Na; 100–1700 m.

**Cololejeunea azorica** V.Allorge & Jovet-Ast (= *Aphanolejeunea azorica* (V.Allorge & Jovet-Ast) Pócs & Bernecker) – Lo, ZC; 2180–2880 m.

\***Cololejeunea bekkeriae** Tixier – Or; 230 m.

**Cololejeunea bischlerana** Tixier – ZC; 1900–2500 m.

**Cololejeunea camillii** (Lehm.) A.Evans (= *Aphanolejeunea camillii* (Lehm.) R.M.Schust., *C. ensifolia* (Spruce) Steph.) – EO, Es, MS, Or, ZC; 0–2400 m.

**Cololejeunea cardiocarpa** (Mont.) A.Evans – Az, ES, Ga, Or, ZC; 0–1825 m.

**Cololejeunea cingens** (Herzog) Bernecker & Pócs (= *Aphanolejeunea cingens* Herzog) – Ga (?), Ma, MS, ZC; 250–2000 m.

\***Cololejeunea crenata** (A.Evans) Pócs – Lo; ca. 2800 m.

**Cololejeunea diaphana** A.Evans (= *Aphanolejeunea truncatifolia* Horik., *C. ensifolia* (Spruce) Herzog var. *pygmaea* Herzog) – Lo, MS, ZC; 180–3100 m.

**Cololejeunea ecuadoriensis** Pócs – Es, Pi; 500–1950 m.

**Cololejeunea gracilis** (Jovet-Ast) Pócs (= *Aphanolejeunea gracilis* Jovet-Ast) – Es, Ga, MS, Or, ZC; 200–2050 m.

\***Cololejeunea kuciana** Pócs & Schäf.-Verw. – ZC; ca. 1900 m.

**Cololejeunea latilobula** (Herzog) Tixier – Na; 450 m.

\***Cololejeunea linopteroides** H.Rob. – Na; ca. 450 m.

**Cololejeunea microscopica** (Taylor) Schiffn. (= *A. microscopica* (Taylor) A.Evans, inclus. vars.) – Im, Ba, Or, Pa, Pi, Su, ZC; 0–3800 m.

\***Cololejeunea minuscula** Pócs – EO, ZC; 950–1500 m.

**Cololejeunea obliqua** (Nees & Mont.) Schiffn. – Es, MS, Na, Or, ZC; 0–2000 m.

**Cololejeunea papilliloba** (Steph.) Steph. (= *Aphanolejeunea papilliloba* (Steph.) Pócs & Bernecker) – ZC; 1900 m.

- Cololejeunea papillosa** (K.I.Goebel) Mizut. (= *Aphanolejeunea angustissima* Steph., *A. cyathiphylla* Herzog) – Es, EO, LR, Lo, Or, Pi, Su, ZC; 200–2850 m.  
 \***Cololejeunea planissima** (Mitt.) Abeyw. (= *C. lanciloba* Steph.) – Es, ZC; 0–2000 m.  
 \***Cololejeunea platyneura** (Spruce) A.Evans – Or; 100–250 m.  
**Cololejeunea pterocolea** Herzog (= *Aphanolejeunea pterocolea* (Herzog) R.M.Schust.) – MS; 700 m.  
**Cololejeunea sicifolia** (A.Evans) Pócs & Bernecker (= *Aphanolejeunea sicifolia* A.Evans) – Ga, ZC; 200–2700 m.  
 \***Cololejeunea stotlerana** Gradst., Ilk-Borg. & Vanderp. – ZC; 900–1000 m.  
**Cololejeunea subcardiocalpa** Tixier – ZC; up to 2000 m.  
 \***Cololejeunea subsphaeroidea** (R.M.Schust.) Pócs – Lo; 2890 m.  
**Cololejeunea verwimpai** Tixier – MS, ZC; 650–2000 m.  
**Cololejeunea vitaliana** Tixier – ZC; 2020 m.  
 \***Cololejeunea winkleri** (M.I.Morales & A.Lücking) Pócs – MS, Na, Or; 200–650 m.

**COLURA** (Dumort.) Dumort. (Lejeuneaceae)

- Colura andoi** Gradst. & Jovet-Ast – Ga; 600–650 m.  
**Colura calyptrifolia** (Hook.) Dumort. – Ca, Lo, Na, Pi; 2300–3750 m.  
**Colura cylindrica** Herzog – Ga, MS; 100–650(–1800?) m.  
**Colura greig-smithii** Jovet-Ast – MS, Na, Or; 100–650 m.  
**Colura irrorata** (Spruce) Heinrichs et al. (= *Myriocolea irrorata* Spruce) – Tu, ZC; 1200–1700 m.  
**Colura naumannii** (Schiffn.) Steph. – Ca, Co, Lo, Pi, ZC; 2550–3850 m.  
**Colura ornithocephala** Herzog – Az, Ca, Co, Na, Pi; 2950–4020 m.  
**Colura sagittistipula** (Spruce) Steph. – Na, Or, ZC; 100–1800 m.  
**Colura tenuicornis** (A.Evans) Steph. – Az, Ca, EO, Ga, Lo, LR, Pi, ZC; 0–2900 m.  
**Colura tortifolia** (Nees & Mont.) Trevis. – EO, Es, MS, Pa, ZC; 0–1060 m.

**CRYPTOLOPHOCOLEA** L.Söderstr. et al. (Lophocoleaceae)

- Cryptolophocolea connata** (Sw.) L.Söderstr. & Vána (= *Lophocolea connata* (Sw.) Nees, *L. granatensis* Gottsche) – Na, Pa, Tu, ZC; 800–4000 m.  
**Cryptolophocolea guadalupensis** (Steph.) L.Söderstr. & Vána (= *Lophocolea guadalupensis* Steph.) – Pa, ZC; 600–3300 m.  
**Cryptolophocolea martiana** (Sw.) L.Söderstr., Crand-Stotl. & Stotler (= *Lophocolea martiana* Nees) – Pi, ZC; 100–2000(–3000?) m.

**CYATHODIUM** Kunze (Cyathodiaceae)

- Cyathodium foetidissimum** Schiffn. – Bo, Gu, LR; 50–2100 m.

**CYCLOLEJEUNEA** A.Evans (Lejeuneaceae)

- Cyclolejeunea accedens** (Gottsche) A.Evans (= *C. papillata* Steph.) – Ch, LR, Pa, ZC; 0–1500 m.
- Cyclolejeunea chitonia** (Taylor) A.Evans (? = *C. ecuadorensis* Steph.) – EO, Ma, Pa; 0–300 m.
- Cyclolejeunea convexistipa** (Lehm. & Lindenb.) A.Evans (= *C. subintegerrima* Herzog) –EO, Es, LR, MS, Na, Pa, Pi; 70–1800 m.
- \***Cyclolejeunea foliorum** (Nees) Grolle – Na, Or, ZC; 100–1000 m.
- Cyclolejeunea luteola** (Spruce) Grolle – Pi, ZC; up to 2000 m. .
- Cyclolejeunea peruviana** (Lehm. & Lindenb.) A.Evans – EO, LR, MS, Or, Na, Pa, Pi, Tu, ZC; 30–2700 m.
- CYLINDROCOLEA** R.M.Schust. (Cephaloziellaceae)
- Cylindrocolea rhizantha** (Mont.) R.M.Schust. – Ga; 200–1300 m.
- DIBRACHIELLA** (Spruce) X.Q.Shi et al. (Lejeuneaceae)
- Dibrachiella auberana** (Mont.) X.Q.Shi et al. (= *Archilejeunea auberana* (Mont.) A.Evans) – Es, Gu, LR; 0–300 m.
- Dibrachiella parviflora** (Nees) X.Q.Shi et al. (= *Archilejeunea parviflora* (Nees) Steph.) – LR, Or; 100–1500 m.
- DICRANOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)
- Dicranolejeunea axillaris** (Nees & Mont.) Schiffn. – EO, Es, Ca, Ch, Ga, MS, Na, Pa, Tu, ZC; 100–3200 m.
- DIPLASIOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)
- Diplasiolejeunea alata** Jovet-Ast – Lo, Na, Pi, ZC; 1700–3050 m.
- Diplasiolejeunea brunnea** Steph. (= *D. bidentiloba* Steph.) – Az, Es, EO, LR, MS, Na, Or, Pa, Pi, Su, ZC; 0–2500 m.
- Diplasiolejeunea cavifolia** Steph. – Es, MS, Na, Pi, Tu, ZC; 0–2800 m.
- Diplasiolejeunea erostrata** Schäf.-Verw. – 2600–3050 m.
- Diplasiolejeunea grandirostrata** Schäf.-Verw. – ZC; 3000 m.
- Diplasiolejeunea involuta** S.Winkl. subsp. **andicola** Pócs – Lo, Pi, ZC; 2150–3200 m.
- Diplasiolejeunea johnsonii** A.Evans – ZC; 1900 m.
- Diplasiolejeunea lanceolata** Grolle – Es, EO; 500–960 m.
- \***Diplasiolejeunea mayaykuensis** Schäf.-Verw. & Heinrichs – ZC; 850 m.
- Diplasiolejeunea papillionacea** R.M.Schust. – ZC; 1850–3500 m.
- Diplasiolejeunea pauckertii** (Nees) Steph. – Az, Ca, Lo, Na, Tu, ZC; 1500–4100 m.
- Diplasiolejeunea pellucida** (Spreng.) Schiffn. (= *D. caribea* Tixier) – Az, Es, MS, Na, Pa, Pi, ZC; 70–2500 m.
- Diplasiolejeunea pluridentata** Schäf.-Verw. – ZC; 2150–3150 m.
- Diplasiolejeunea pocsii** Reyes Montoya – ZC; 2000–2800 m.

- Diplasiolejeunea replicata** (Spruce) Steph. – Az, Ca, Cañ, Lo, Na, Pa, Pi, Tu, ZC; 1200–4150 m.
- Diplasiolejeunea unidentata** (Lehm. & Lindenb.) Schiffn. (= *D. rudolphiana* Steph.) – Az, EO, Ga, Or, ZC; 0–2800 m.
- DIPLOPHYLLUM** (Dumort.) Dumort. (Scapaniaceae)
- Diplophyllum obtusatum** (R.M.Schust.) R.M.Schust. – Ca; 2650–3400 m.
- DREPANOLEJEUNEA** (Spruce) Steph. (Lejeuneaceae)
- Drepanolejeunea andina** Herzog – Az, Ca, Na, Pi; 2950–4400 m.
- Drepanolejeunea anoplantha** (Spruce) Steph. – Lo, ZC; 700–3100 m.
- Drepanolejeunea araucariae** Steph. – Na, Pi, ZC; 100–3000 m.
- Drepanolejeunea bidens** (Prantl) A.Evans – Az, Ga, ZC; 100–2650 m. .
- Drepanolejeunea biocellata** A.Evans – MS, Pa, Tu, ZC; 100–2100 m.
- Drepanolejeunea campanulata** (Spruce) Steph. – Ch, Lo, Na, Pa, Pi, Su, Tu, ZC; 0–3550 m.
- Drepanolejeunea crassiretis** A.Evans (= *D. integribracteata*) – Na, ZC; (100–)1000–3500 m.
- Drepanolejeunea crucianella** (Taylor) A.Evans – Lo, LR, MS, Or, Pa, Pi, Su, ZC; 80–1600(–3000?) m.
- \***Drepanolejeunea cutervoensis** (Loitl.) Grolle – Az, Co, Lo, ZC; (1600–)2500–4560 m.
- \***Drepanolejeunea fragilis** L.Söderstr. et al. – Or; 120–210 m.
- Drepanolejeunea granatensis** (Prantl) Bischl. – Az, Ca, Co, Im, Lo, Pi, ZC; 1900–4000 m.
- Drepanolejeunea inchoata** (C.F.W.Meissn.) Steph. (= *D. inchoata* var. *roraimae* (Steph.) Bischl.) – EO, Es, Ga, Lo, LR, MS, Na, Pa, Pi, Su, Tu, ZC; 80–3400 m.
- Drepanolejeunea infundibulata** (Spruce) A.Evans – Ch, LR, MS, Pa, Pi, Su; 100–2400 m.
- Drepanolejeunea lichenicola** (Spruce) Steph. – Lo, LR, Na, MS, Or, Pi, Tu, ZC; 450–3000 m.
- Drepanolejeunea mosenii** (Steph.) Bischl. – ZC; up to 2000 m.
- Drepanolejeunea orthophylla** (Nees & Mont.) Bischl. subsp. **orthophylla** – Az, Es, Ga, Or, Pa, Pi, ZC; 450–2700 m.
- Drepanolejeunea palmifolia** (Nees) Schiffn. – Tu; up to 500(–1000?) m.
- \***Drepanolejeunea spinosa** Herzog – Pi; 900–3400 m.
- Drepanolejeunea subvittata** (Herzog) Grolle – Az, Tu; 3000–3700 m.
- Drepanolejeunea urceolata** R.M.Schust. – ZC; 2000–2100 m.
- DUMORTIERA** Nees (Dumortieraceae)
- Dumortiera hirsuta** (Sw.) Nees – Co, EO, ES, Ga, MS, Na, Pa, Pi, Tu, ZC; 200–3300 m.

**FOSSOMBRONIA** Raddi (Fossombroniaceae)**Fossombronia crassifolia** Spruce – MS, Tu, ZC; 500–2100 m.**Fossombronia fernandezensis** Steph. – Ch, Pi; 2350–3560 m.**\*Fossombronia jostii** Crand.-Stotl. & Gradst. –Pa/Tu; 1100 m.**Fossombronia peruviana** Gottsche & Hampe (= *Austrofossombronia peruviana* (Gottsche & Hampe) R.M.Schust.) – Ca, Ch, Co, Lo, MS, Na, Pi; 3300–4100 m.**Fossombronia porphyrorhiza** (Nees) Prosk. – EO, Ga, MS, Or, ZC; 0–2000 m.**Fossombronia pusilla** (L.) Nees – Ch, Ga, 1100–3450 m.(the Ecuadorian record of *F. lophoclada* Spruce in León-Yáñez et al. (2006) is erroneous)**FRULLANIA** Raddi (Frullaniaceae)**Frullania aculeata** Taylor – Az, Ch, Co, EO, Ga, Lo, LR, Pi, 300–3000 m.**Frullania atrata** (Sw.) Mont. (= *F. subaculeata* Spruce) – Az, Co, EO, Lo, MS, Tu, ZC; 600–3200(–4000) m.**Frullania beyrichiana** (Lehm. & Lindenb.) Lehm. & Lindenb. – Bo; 1800–2400 m.**Frullania bicornistipula** Spruce – Ch, Pa, Pi, Tu, ZC; 1250–2300 m.**Frullania blepharozia** Spruce – Ch, Pi, ZC; 1800–3300 m.**Frullania brasiliensis** Raddi – Az, Co, EO, Ga, Lo, LR, MS, Na, Pa, Pi, Tu, ZC; 100–3900 m.**Frullania clandestina** (Nees & Mont.) Nees – Pa (?), Tu; 1500–4500 m.**Frullania confertiloba** Steph. – MS; 700–1700 m.**Frullania convoluta** Lindenb. & Hampe – Ca, Co, Ga, Na; 1100–3600 m.**Frullania cuencensis** Taylor – Az, Ch, Na, Pi, ZC; 1800–4100 m.**Frullania darwinii** Gradst. & Uribe – Ga; 250–650 m.**Frullania decidua** Spruce (= *F. flammea* Spruce) – Az, Ch; 2350–3800 m.**Frullania dusenii** Steph. – Az, Ch, Co, Na, Pi, ZC; 1700–3500 m.**Frullania ecklonii** (Spreng.) Gottsche et al. – 500–3500 m.**Frullania ericoides** (Nees) Mont. (= *F. allionii* Steph.) – Ga, Lo, MS, Pa, Pi, Tu, ZC; 100–2200 m.**Frullania formosa** Spruce – MS, Na, Pa, Tu; 500–1400 m.**Frullania gibbosa** Nees – Ga; 150–300 m.**Frullania glomerata** (Lehm. & Lindenb.) Nees & Mont. (= *F. hirtiflora* Spruce, *F. squamulifera* Spruce) – Tu; ca. 1500–1800 m.**Frullania gradsteinii** Yuzawa et al. – Ga; 50–200 m.**Frullania grandifolia** Steph. – Co; 3400 m.**Frullania haematocysta** Spruce – Ch; ca. 1800 m.**Frullania intumescens** (Lehm. & Lindenb.) Lehm. & Lindenb.  
var. **intumescens** – MS; 950 m.

- var. **sabanetica** (Gottsche) Gradst. (= *F. closterantha* Spruce) – Az, Ga (?), Pi, Tu, ZC; 1000–4000 m.
- Frullania kunzei** (Lehm. & Lindenb.) Lehm. & Lindenb. (= *F. ecuadorensis* Steph.) – Ga, Gu, ZC; 100–3000 m.
- Frullania laxiflora** Spruce – Ch, Ga, Tu; 650–3500 m.
- Frullania lindenbergii** Lehm. (= *F. serrata* auct. not typus) – ZC; ca. 1900 m.
- Frullania lobatohastata** Steph. (= *F. villosa* Steph.) – Az, Pi; 1800–4000 m.
- Frullania macrocephala** (Lehm. & Lindenb.) Lehm. & Lindenb. – Pa, MS, ZC; 1000–2900 m.
- \***Frullania meridana** Steph. – Pi; 1500–4000 m.
- Frullania mirabilis** J.B.Jack & Steph. (= *F. pendulostyla* Steph.) – MS, Pi, ZC; 900–2550 m.
- Frullania montagnei** Gottsche (= *F. gualaquizana* Steph.) – MS, Na, ZC; 200–2250 m.
- Frullania nodulosa** (Reinw. et al.) Nees – Na, Or; 100–250 m.
- Frullania obcordata** (Lehm. & Lindenb.) Lehm. & Lindenb. (= *F. caulisequa* sensu Yuzawa non typus) – Ga, Pa; 100–1000 m.
- Frullania obscura** (Sw.) Mont.
- var. **obscura** (= *F. arecae* (Spreng.) Gottsche) – Az, Ch, Co, Ga, MS, Lo, Su, Tu, ZC; 500–3400 m.
- var. **spiniloba** (Steph.) Hentschel & von Konrat (= *F. arecae* (Spreng.) Gottsche var. *spiniloba* (Steph.) Yuzawa) – Ga, Ma; ca. 650–700 m.
- Frullania paradoxa** Lehm. & Lindenb. (= *F. flexicaulis* Spruce) – Az, Ca, Ch, Ga (?), Lo, Na, Pi, Tu, ZC; 1500–4000 m.
- Frullania peruviana** Gottsche – Az, Ca, Co, EO, Ga, Im, Lo, MS, Na, Pi, Tu, ZC; 450–4000 m.
- Frullania phalangiflora** Steph. (= *F. bakeri* Steph.) – EO, Ga; 300–600 m.
- Frullania pittieri** Steph. – Pi, ZC; 100–3000 m.
- Frullania planifolia** Steph. – Pi; 3000–3500 m.
- Frullania pluricarinata** Gottsche – Az, Pi; 1700–3350 m.
- Frullania ringens** Spruce – Ch; 3400 m.
- Frullania rio-janeirensis** (Raddi) Ångstr. var. **riojaneirensis** – Co, EO, Ga, Lo, MS, Or, Pa, Pi, Tu, ZC; 0–3800 m.
- var. **megalostipa** (Spruce) Gradst. (= *F. megalostipa* Spruce) – MS, Pa; 700–2000 m.
- Frullania setigera** Steph. – Az, Lo, Na, Pi, ZC; 1000–3600 m.
- Frullania sphaerocephala** Spruce – Az, Lo; ca. 2000–3900 m.
- Frullania standaertii** Steph. (= *F. albertii* Steph.) – Pi; 2750–4000 m.
- Frullania stenostipa** Spruce – Pi; 3000 m.
- Frullania subtilissima** (Nees ex Mont.) Lindenb. (= *F. apiculata* auct. non typus, *F. exilis* Taylor, *F. crenulifolia* J.B.Jack & Steph.) – MS, ZC; 100–3300 m.
- Frullania tetraptera** Nees & Mont. – Az, Pi; 2000–4000 m.
- Frullania tunguraguana** L.Clark & Frye – MS, Pi, Tu; 500–4000 m.

**Frullania uleana** Steph. (= *Frullania involuta* Steph.) – Ga; 450–650 m.  
**Frullania winteri** Steph. var. **vanderhammenii** (Haarbrink) Yuzawa – ZC; 1700–2550 m.

**FRULLANOIDES** Raddi (Lejeuneaceae)

**Frullanoides densifolia** Raddi

subsp. **densifolia** – Az, Ca, Ch, Ga, Na, Pi, Tu, ZC; 100–4000 m.

subsp. **grandidentata** (L.Clark) van Slageren – Ga; 450–750 m.

**Frullanoides laciniatiflora** (Loitl.) van Slageren – ZC; 1800–2150 m.

**Frullanoides tristis** (Steph.) van Slageren – Ga; 300–750 m.

**FULFORDIANTHUS** Gradst. (Lejeuneaceae)

**Fulfordianthus pterobryoides** (Spruce) Gradst. – Es, Ma, Na, Or, Pa, Pi; 0–1500 m.

**FUSCOCEPHALOZIOPSIS** Fulford (Cephaloziaceae)

**Fuscocephaloziopsis crassifolia** (Lindenb. & Gottsche) Vána & L.Söderstr. (= *Cephalozia crassifolia* (Lindenb. & Gottsche) Fulford) – Pi, ZC; 400–3300 m.

**Fuscocephaloziopsis subintegra** Gradst. & Vána – ZC; 2400–2600 m.

**GONGYLANTHUS** Nees (Arnelliaceae)

**Gongylanthus granatensis** (Gottsche) Steph. (? = *G. oniscoides* (Spruce) Steph.) – Az, Ca, Lo, Na, Pi, ZC; 1800–4300 m.

**Gongylanthus liebmannianus** (Lindenb. & Gottsche) Steph. – Az, Ch, Lo, Na, Pi, ZC; 2700–4300 m.

**Gongylanthus limbatus** (Herzog) Grolle & Vána – Co, Pi; 3100–4450 m.

**Gongylanthus muelleri** (Gottsche) Steph. – Pi; ca. 2000–4000 m.

**GYMNOCOLEOPSIS** R.M.Schust. (Cephaloziellaceae)

**Gymnocoleopsis cylindriformis** (Mitt.) R.M.Schust. – Ch, Co, Pi; 3300–4460 m.

**GYMNOMITRION** Corda (Gymnomitriaceae)

**Gymnomitrium atrofilum** Vána – MS, Tu; 3400–4400 m.

**Gymnomitrium bolivianum** (Steph.) Vána (= *Marsupella lacerata* (Steph.) Vána) – Az, MS, Na; 3000–4800 m.

**Gymnomitrium truncatoapiculatum** Herzog (= *Marsupella truncatoapiculatum* (Herzog) Vána) – Ch; 3500–4300 m.

**HAPLOMITRIUM** Nees (Haplomitriaceae)

**Haplomitrium blumei** (Nees) R.M.Schust. – Ca, Tu; 1200–4000 m.

**HARPALEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)

**Harpalejeunea cinchonae** (Nees) Schiffn. – Az, Ca, Lo, Na, Pi, Su, Tu, ZC;

500–4300 m.

**Harpalejeunea oxyphylla** (Nees & Mont.) Steph. – MS, Na, Or, Pa, Tu, ZC;  
100–2500 m.

**Harpalejeunea stricta** (Lindenb. & Gottsche) Steph. – MS, Or, Pa, Pi, Tu, ZC;  
100–2150 m.

**Harpalejeunea subacuta** A.Evans – Pi; 900 m.

**Harpalejeunea tridens** (Besch. & Spruce) Steph. – EO, Lo, Na, Or, Pa, Pi, ZC;  
100–2400 m.

**Harpalejeunea uncinata** Steph. – Na, Tu;

**HERBERTUS** Gray (Herbertaceae)

**Herbertus acanthelius** Spruce – Az, Ca, Ch, Co, Lo, MS, Pi, Tu, Lo, ZC; 2400–  
4300 m.

**Herbertus bivittatus** Spruce (= *H. divergens* (Steph.) Herzog) – Ga, Lo, ZC; 100–  
3000 m.

**Herbertus juniperoideus** (Sw.) Grolle – At, Pa, Pi, Tu, ZC; 1000–3750 m.

**Herbertus pensilis** (Taylor) Spruce – Ch, Ga, Lo, Na, Pi, ZC; 750–4000 m.

**Herbertus sendtneri** (Nees) Lindb. – Ca, Co, Lo, Pi, ZC; 2150–4350 m.

**HETEROSCYPHUS** Schiffn. (Lophocoleaceae)

**Heteroscyphus contortuplicatus** (Nees & Mont.) Grolle – Pa, Tu, ZC; 900–2700  
m.

**Heteroscyphus marginatus** (Steph.) Fulford – MS, Pa, Tu, ZC; 1000–3300 m.

**Heteroscyphus polyblepharis** (Spruce) Schiffn. – Lo, Pa, Pi, Tu; 1500–3700 m.

**Heteroscyphus polychaetus** (Spruce) Hentschel & Heinrichs (= *Lophocolea*  
*polychaeta* Spruce) – Pa, Tu, ZC; 1000–2500 m.

**Heteroscyphus thraustus** (Spruce) Fulford – Tu; 1800–2100 m.

\***ISOPACHES** H.Buch (Scapaniaceae)

\***Isopaches bicrenatus** (Hoffm.) H.Buch – Na; 4300–4500 m.

**ISOTACHIS** Mitt. (Balantiopsidaceae)

**Isotachis lopezii** (R.M.Schust.) Gradst. – Az, Ca, Co, Na, ZC; 2800–4300 m.

**Isotachis multiceps** (Lindenb. & Gottsche) Gottsche (= *Cephalozia hians* Steph.) –  
Pi, ZC; 500–4350 m.

**Isotachis obtusa** Steph. (= *I. lacustris* Herzog) – Az/MS, Ca, Co, Lo, Na/Pi, ZC;  
3200–4150 m.

**Isotachis serrulata** (Sw.) Gottsche (= *I. lindigiana* Gottsche) – Az, Es, Lo, MS,  
Na, Pi, ZC; 800–4500 m.

**JENSENIA** Lindb. (Pallaviciniaceae)

**Jensenia difformis** (Nees) Grolle – MS, ZC; 500–3600 m.

**Jensenia florschuetzii** Gronde – Ca, Pi; 3700–4150 m.

**Jensenia spinosa** (Lindenb. & Gottsche) Grolle – Ca, Co, Lo, Na, Pi, ZC; 1500–4000 m.

**JUBULA** Dumort. (Jubulaceae)

**Jubula bogotensis** Steph. – MS, Pa, Tu; 600–3000 m.

**JUNGERMANNIA** L. (Jungermanniaceae)

**Jungermannia ovatotrigona** (Steph.) Grolle – Na, Pi, Su; 2700–4000 m.

**KURZIA** G.Martens (Lepidoziaceae)

**Kurzia capillaris** (Sw.) Grolle – Lo, ZC; 1500–3800 m.

\***Kurzia flagellifera** (Steph.) Grolle – Az, Lo, Pi, ZC; 800–3750 m.

**KYMATOCALYX** Herzog (Cephaloziellaceae)

**Kymatocalyx dominicensis** (Spruce) Vána – ZC; 900–2000 m.

\***Kymatocalyx rhizomaticus** (Herzog) Gradst. & Vána – Pi; 100–1100 m.

**LEIOMITRA** Spruce (Trichocoleaceae)

**Leiomitra flaccida** Spruce (= *Trichocolea flaccida* (Spruce) J.B.Jack & Steph.) – Co, Na, Pi, Su, Tu, ZC; 600–4000 m.

**Leiomitra paraphyllina** Spruce (= *Trichocolea paraphyllina* (Spruce) Steph.) – Ca, Co, Na, Tu; 2100–4200 m.

**Leiomitra sprucei** (Steph.) T.Katagiri (= *Trichocolea sprucei* Steph.) – Az, Lo, Pi, ZC; 1000–4000 m.

**Leiomitra tomentosa** (Sw.) Lindb. (= *Trichocolea tomentosa* (Sw.) Gottsche) – Lo, MS, Na, Pa, Pi, Tu, ZC; 600–4000 m.

**LEJEUNEA** Lib. (Lejeuneaceae)

**Lejeunea acanthogona** Spruce (= *L. blepharogona* Spruce, *L. cristulata* (Steph.) M.E.Reiner & Goda, *C. cristuliflora* (Steph.) M.E.Reiner & Goda, *L. grossitexta* sensu Parolly *et al.* non typus) – Az, Ca, Ch, Lo, Tu ZC; 2000–3500 m.

**Lejeunea adpressa** Nees (= *L. anisophylla* Mont., *L. caespitosa* auct. non typus, *L. carolensis* Spruce, *L. drymophila* Spruce, *L. longifissa* Spruce, *L. magnoliae* Lindenb. & Gottsche) – Es, MS, Or, Pa, Pi, Su, Tu, ZC; 0–2100 m.

**Lejeunea angusta** (Lehm. & Lindenb.) Mont. – Pi, Tu, ZC; 1400–2900 m.

**Lejeunea anomala** Lindenb. & Gottsche – Pa; 100–1000 m.

**Lejeunea aphanes** Spruce (= *L. filipes* Spruce) – Ch, Co, EO, Ga (?), MS, Or, Pi, Tu, ZC; 0–3800 m.

**Lejeunea asperrima** Spruce – MS, Na, Or, ZC; 100–1500 m.

**Lejeunea asthenica** Spruce (= *Taxilejeunea asthenica* (Spruce) Steph.) – Ga, MS, Or, Su, ZC; 100–1800 m.

- Lejeunea bombonasensis** Spruce (= *Taxilejeunea bombonasensis* (Spruce) Steph., *T. lusoria* auct. non typus) – Es, MS, Na, Or, Pa, Pi, Su, Tu; 100–2000 m.
- \***Lejeunea boryana** Mont. – MS, Or; 100–650 m.
- Lejeunea cancellata** Nees & Mont. – Az, EO, MS, Pi, ZC; 100–2800 m.
- Lejeunea capensis** Gottsche – Co, Lo, Pi, ZC; 1800–3900 m.
- \***Lejeunea caripensis** Lindenb. & Gottsche (= *Taxilejeunea caripensis* (Lindenb. & Gottsche) Steph.) – Ca, Na, MS, Pa, Tu; 700–2600 m.
- Lejeunea catinulifera** Spruce – Az, Lo, Na, Pi, Tu, ZC; 1800–4350 m.
- Lejeunea cerina** (Lehm. & Lindenb.) Lehm. & Lindenb. – EO, Lo, MS, Pi, Tu, ZC; 100–2500 m.
- Lejeunea chimborazensis** Spruce (= *Taxilejeunea chimborazensis* (Spruce) Steph.) – Ch; 80–1500 m.
- Lejeunea cochleata** Spruce – Ch, Tu; ca. 1800 m.
- Lejeunea controversa** Gottsche – EO, Es, LR, Na, Or, Pa, Pi, ZC; 0–2200 m.
- \***Lejeunea corynantha** Spruce – Az; 3000–3700 m.
- Lejeunea cyathophora** Mitt. – Pi, Tu, ZC; 1800–3000 m.
- Lejeunea debilis** (Lehm. & Lindenb.) Nees & Mont. (= *Taxilejeunea debilis* (Lehm. & Lindenb.) Steph., *T. heterocheila* (Taylor) Steph.) – EO, Ga, Lo, Pi, ZC; ca. 400–3500 m.
- Lejeunea deplanata** Nees (= *Cheilolejeunea boliviensis* Steph., *L. hebetata* Spruce, *L. maxonii* (A.Evans) X.L.He, *L. megalostipa* Spruce, *Rectolejeunea longiloba* Steph.) – Az, Ga, Im, MS, Or, Pa, Pi, Su, Tu, ZC; 200–3800 m.
- \***Lejeunea drehwaldii** Heinrichs & Schäfer-Verw. – ZC; 1000–1800 m.
- Lejeunea elongella** Gottsche (= *Lejeunea fulva* Spruce) – Tu; 2100–3450 m.
- Lejeunea flaccida** Lindenb. & Gottsche (= *Taxilejeunea florida* (Spruce) Steph., *T. lusoria* (Lindenb. & Gottsche) Steph., *T. foliicola* Steph., *T. multiflora* Steph. *T. obtusangula* (Spruce) A.Evans) – Ch, Ga, MS, Pa, Pi, Or, Su, Tu; 100–2800 m.
- Lejeunea flagellaris** Spruce (= *L. leptalea* Spruce, *Taxilejeunea galapagensis* Onr.) – Ch, Ga, MS; ca. 350–3350 m.
- Lejeunea flava** (Sw.) Nees (= *Lejeunea leucophaea* Spruce, *L. pallida* Lindenb. & Gottsche, *Taxilejeunea tenuiplica* Steph.) – EO, Ga, MS, Na, Or, Pa, Tu, ZC; 0–3000 m.
- Lejeunea fulfordiae** (Jovet-Ast) R.L.Zhu (= *Amblyolejeunea fulfordiae* Jovet-Ast) – Na; 2220 m.
- Lejeunea galeata** Spruce – Ch, ZC; 200–1820 m.
- \***Lejeunea glaucescens** Gottsche (= *L. caulicalyx* (Steph.) M.E.Reiner & Goda, *L. tarapotensis* Spruce) – MS, Na (Schäfer-Verwimp et al., 2013a), Or; 0–650 m.
- Lejeunea herminieri** (Steph.) R.L.Zhu (= *Oryzolejeunea saccatiloba* (Steph.) Gradst.) – Lo, Na, Tu, ZC; 1500–2650 m.
- Lejeunea inflexiloba** Prantl – ZC; ca. 3000 m.

- Lejeunea intricata** Prantl – MS; 650–3000 m.
- Lejeunea laeta** (Lehm. & Lindenb.) Lehm. & Lindenb. (= *L. geophila* Spruce) – EO, Es, T; 0–2000 m.
- Lejeunea laetevirens** Nees & Mont. (= *L. lepida* Lindenb. & Gottsche, *L. subbrufula* Spruce) – Az, Ch, EO, Es, Ga, Lo, LR, MS, Na, Or, Pa, Pi, Su, Tu, ZC; 0–2650 m.
- \***Lejeunea meridensis** Ilk.-Borg. – Lo, ZC; 2550–2850 m.
- \***Lejeunea mojandae** Gradst. – Pi; ca. 3800 m.
- Lejeunea osculatiana** De Not. (= *L. flavicans* Gottsche) – Lo, Na, Pa, Su, Tu, ZC; 1250–2700 m.
- Lejeunea pallescens** Mitt. (= *Taxilejeunea peruviana* Steph.) – Az, Ca, Ch, Pi, Tu; 2000–3800 m.
- Lejeunea parviloba** Ångstr. (= *L. tapajosensis* Spruce) – Es, Or, ZC; 0–2150 m.
- Lejeunea phyllobola** Nees & Mont. – LR, MS, Pi, Su, ZC; 0–2150 m.
- Lejeunea prionoides** Spruce – Pi, Tu, ZC; 1000–1825 m.
- Lejeunea pterigonia** (Lehm. & Lindenb.) Mont. (= *Taxilejeunea pterigonia* (Lehm. & Lindenb.) Schiffn. – Es, Ga, MS, Na, Pa, Pi, Tu, ZC; 300–3400 m.
- \***Lejeunea puiggariana** Steph. – ECUADOR: MS; ca. 600 m.
- Lejeunea pulverulenta** (Steph.) M.E.Reiner – Pa, Pi, ZC; 700–1900 m.
- Lejeunea quinqueumbonata** Spruce – MS; 600 m.
- \***Lejeunea raddiana** Lindenb. – Es, ZC; 0–2000 m.
- Lejeunea ramulosa** Spruce – Ch, Lo, LR, MS, Na, Pi, Su, Tu, ZC; 600–3300 m.
- Lejeunea reflexistipula** (Lehm. & Lindenb.) Lehm. & Lindenb. – Ca, Lo, MS, Na, Or, Pa, Pi, Tu, ZC; 150–2000(–3000) m.
- \***Lejeunea rionegrensis** Spruce – MS, Or; 200–800 m.
- Lejeunea rotundifolia** Mitt. (= *Dictadolejeunea rotundifolia* (Mitt.) León-Yáñez et al. nom. inval., *Taxilejeunea auriculata* Steph.) – Lo, MS, Na, Pa, Pi, Tu, ZC; 600–2900 m.
- Lejeunea serpillifolioides** (Raddi) Gradst. (= *Taxilejeunea isocalycina* (Nees) Steph.) – EO, Pa, Tu, ZC; 100–2000 m.
- Lejeunea setiloba** Spruce – Ga, ZC; 100–1500 m.
- Lejeunea sessilis** Spruce (= *Lejeunea monimiae* (Steph.) Steph.) – Ga, Pa, ZC; 250–1880 m.
- Lejeunea subspathulata** Spruce – Na, Pa, Pi; 400–1000(–3000?) m.
- Lejeunea suffruticola** Spruce – Ch; 2200 m.
- Lejeunea sulphurea** (Lehm. & Lindenb.) Spruce (= *Taxilejeunea sulphurea* (Lehm. & Lindenb.) Schiffn., ? *T. renistipula* (Lindenb.) Steph.) – MS, Pi, Tu; 400–3200 m.
- \***Lejeunea topoensis** Gradst. & M.E.Reiner – Tu, ZC; 1000–1600 m.
- Lejeunea trinitensis** Lindenb. – Es, Ga; 0–800 m.
- Lejeunea xiphophylla** (Herzog) M.E.Reiner (= *Taxilejeunea xiphophylla* Herzog) – LR, Su; ca. 750 m.
- \***Lejeunea yasuniensis** Gradst. & C.Bastos – Or; 200–230 m.

**LEPICOLEA** Dumort. (Lepicoleaceae)**Lepicolea pruinosa** (Taylor) Spruce – Az, Lo, Na, Pa, Pi, Tu, ZC; 1800–4000 m.**LEPIDOLEJEUNEA** R.M.Schust. (Lejeuneaceae)**\*Lepidolejeunea auriculata** Schäf.-Verw. & Heinrichs – Lo; 2770–2870 m.**Lepidolejeunea cordifissa** (Taylor) M.E.Reiner (= *L. cordifissa* Taylor, *L. ornata* (H.Rob.) R.M.Schust., *Lejeunea pentotantha* Spruce) – Bo, Ch, Es, LR, MS, Na, Or, Pi, ZC; 0–1600 m.**Lepidolejeunea cuspidata** (Gottsche) Heinrichs & Schäf.-Verw. (= *L. punctata* (Herzog) R.M.Schust.) – Or, Tu, ZC; 200–2000 m.**Lepidolejeunea eluta** (Nees) R.M.Schust. (= *Lejeunea pastasensis* Spruce) – MS; 100–1800 m.**Lepidolejeunea involuta** (Gottsche) Grolle – Ga, MS, Or, Pa, Tu, ZC; 100–3000 m.**Lepidolejeunea sullivantii** (Gottsche) M.E.Reiner (= *L. spongia* (Spruce) B.Thiers) – Tu, ZC; 2450–3500 m.**LEPIDOZIA** (Dumort.) Dumort. (Lepidoziaceae)**Lepidozia alstonii** Fulford – Pi; 2100–3500 m.**Lepidozia andicola** Beauverd – Az; 2650–3600 m.**Lepidozia auriculata** Steph. – Az, Co, Lo, Na, Pi, ZC; 2100–4050 m.**Lepidozia cupressina** (Sw.) Lindenb. (= *L. brasiliensis* Steph., *L. caespitosa* Spruce, *L. wallisiana* Steph.) – Az, Lo, MS, Na, Pa, Pi, Tu, ZC; 1000–4500 m.**Lepidozia dendritica** Spruce (= *L. peruviana* Steph.) – Lo, MS, Pa, Tu, ZC; 750–3700 m.**Lepidozia inaequalis** (Lehm. & Lindenb.) Lehm. & Lindenb. – Az, MS; 750–2000 m.**Lepidozia incurvata** Lindenb. – Ca, ZC; 1800–3600 m.**Lepidozia macrocolea** Spruce – Ca, Lo, Na, Pi, Tu, ZC; 1500–4000 m.**Lepidozia patens** Lindenb. – Lo, Pi; 700–3100 m.**Lepidozia pinnaticruris** Steph. – Ch, Na, Pi; 80–2400 m.**Lepidozia pseudocupressina** Schiffn. (= *L. allionii* Steph.) – Az, MS.**\*Lepidozia squarrosa** Steph. – Lo (Schäfer-Verwimp *et al.*, 2013a), ZC; 1800–3600 m.**Lepidozia subdichotoma** Spruce – Az, Pa, Lo, Tu, ZC; 1200–3150 m.**LEPTOLEJEUNEA** (Spruce) Steph. (Lejeuneaceae)**Leptolejeunea elliptica** (Lehm. & Lindenb.) Besch. – Az, Es, Ga, Gu, MS, Na, Or, Pi, Su; 0–2750 m.**Leptolejeunea exocellata** (Spruce) A.Evans – Es; 185–500 m.**\*Leptolejeunea jamaicensis** R.M.Schust. (= *Leptolejeunea maculata* auct. non typus, ? *L. convexistipa* Bischl.) – Pi, ZC; ca. 100–2000 m.

\***Leptolejeunea obfuscata** (Spruce) Steph. – Or; 100–200 m.

**LEPTOSCYPHUS** Mitt. (Lophocoleaceae)

**Leptoscyphus amphibolius** (Nees) Grolle – Im, Lo, MS, Tu, ZC; ca. 800–4000 m.

**Leptoscyphus autoicus** (J.J.Engel & Gradst.) Vanderp. & Gradst. (= *Physotheca autoica* J.J.Engel & Gradst.) – Az, Lo, Na, ZC; 2300–4000 m.

\***Leptoscyphus cleefii** Fulford – Pi; 3200–4100 m.

**Leptoscyphus cuneifolius** (Hook.) Mitt. – Az, Pi, ZC; 2500–4400 m.

**Leptoscyphus gibbosus** (Taylor) Mitt. – Im, ZC (?); 700–3900 m.

**Leptoscyphus hexagonus** (Nees) Grolle – Az, Ca, MS, Pi, ZC; 2500–4000 m.

**Leptoscyphus intermedius** Grolle – Na, Pi, ZC; 1800–4200 m.

**Leptoscyphus jackii** (Steph.) Grolle – Ca, Na, Pi; 2750–4400 m.

\***Leptoscyphus leoniae** Gradst. – Lo, Na, Pi; 2880–4000 m.

**Leptoscyphus obcordatus** (Spruce) Grolle – Ca, Pi; 3300–3500 m.

**Leptoscyphus physocalyx** (Hampe & Gottsche) Gottsche – Pi, ZC; 3000–4000 m.

**Leptoscyphus porphyrius** (Nees) Grolle – Az, Co, Ga, Im, Lo, MS, Na, Or, Pi, Su, Tu, ZC; 0–4300 m.

\***Leptoscyphus revolutus** Burghardt – Pi; 3600–3800 m.

\***Leptoscyphus sotiauxii** Vanderp. et al. – Na; 4030 m.

\***Leptoscyphus spectabilis** (Steph.) Grolle – Lo; 2850–2900 m.

**Leptoscyphus trapezoides** (Mont.) L.Söderstr. (= *Lophocolea trapezoides* Mont., *L. orbigniana* Nees & Mont.) – Az, Cañ, Ch, Co, Ga, Pi, Tu, ZC; 1000–4000 m.

**LETHOCOLEA** Mitt. (Acrobolbaceae)

**Lethocolea glossophylla** (Spruce) Grolle – Ca, Co, Pi, Tu, ZC; (1800–)3000–4000 m.

**LINDIGIANTHUS** Kruijt & Gradst. (Lejeuneaceae)

**Lindigianthus cipaconeus** (Gottsche) Kruijt & Gradst. – Lo, Pi, Tu, ZC; 2000–3500 m.

\***LOBATIRICCARDIA** (Mizut. & S.Hatt.) Furuki (Aneuraceae)

\***Lobatiriccardia oberwinkleri** Nebel et al. – Lo, MS, ZC; 1850–3500 m.

\***Lobatiriccardia verdoornioides** Nebel et al. – Az, Pi ; 3700–4100 m.

**LOPHOCOLEA** (Dumort.) Dumort. (Lophocoleaceae)

**Lophocolea aberrans** Lindenb. & Gottsche (= *Lophocolea canelensis* Spruce, *L. granatensis* Gottsche) – Pa; 500–4000 m.

**Lophocolea bidentata** (L.) Dumort. (= *L. coadunata* (Sw.) Nees) – Az, Cañar, Ch, Co, Lo, MS, Na, Or, Pi, Tu, ZC; 100–4450 m.

**Lophocolea fragmentissima** R.M.Schust. (= *Campanocolea fragmentissima* (R.M.Schust.) R.M.Schust.) – Az, Ca, Lo, Na, Pi, ZC; 3000–4100 m.

**Lophocolea liebmanniana** Gottsche – Or, ZC; 200–2000 m.

**Lophocolea muricata** (Lehm.) Nees – Az, Lo, Pi, ZC; 1000–3800 m.

**Lophocolea tenerrima** Spruce (= *Lophocolea erosa* Gradst. nom. inval.) – Ca, Co, Pi; 2400–3700 m.

**LOPHOLEJEUNEA** (Spruce) Steph. (Lejeuneaceae)

\***Lopholejeunea eulopha** (Taylor) Schiffn. – Or; 100–200 m.

**Lopholejeunea nigricans** (Lindenb.) Schiffn. – Ga, MS, Na, Or, Pa, Pi, Tu; 0–1800 m.

**Lopholejeunea subfusca** (Nees) Schiffn. – Az, Es, MS, Na, Or, ZC; 0–1500 m.

**LOPHONARDIA** R.M.Schust. (Scapaniaceae)

**Lophonardia jamesonii** (Mont.) L.Söderstr. & Váňa (= *Andrewsianthus jamesonii* (Mont.) Váňa) – Pi, Tu; 3000–4550 m.

**Lophonardia laxifolia** (Mont.) L.Söderstr. & Váňa (= *Lophozia laxifolia* Mont.) – Az, Pi, Tu, ZC; 2500–4500 m.

**LUNULARIA** Adans. (Lunulariaceae)

**Lunularia cruciata** (L.) Dumort. – Lo, Pi; ca. 2000–3000 m.

**MARCHANTIA** L. (Marchantiaceae)

**Marchantia berteriana** Lehm. & Lindenb. – Az, Ga, ZC; 650–4200 m.

**Marchantia breviloba** A.Evans – Pi; 1000–3900 m.

**Marchantia chenopoda** L. – EO, Es, Ga, Gu, Lo, MS, Na, Pa, Tu, ZC; 150–3000 m.

\***Marchantia papillata** Raddi – without locality.

**Marchantia plicata** Nees & Mont. – Az, Bo, Ch, Co, Im, Lo, MS, Na, Pa, Pi, Tu; 1800–4150 m.

**Marchantia polymorpha** L. – Ga, Tu; 1000–4000 m.

**MARCHESINIA** Gray (Lejeuneaceae)

**Marchesinia bongardiana** (Lehm. & Lindenb.) Trevis. (= *M. galapagona* (Ångstr.) Steph., *M. nigrescens* (Ångstr.) Steph.) – Az, EO, Ga, LR, MS; 200–1500 m.

**Marchesinia brachiata** (Sw.) Schiffn.

var. **brachiata** – Ch, Ga, Gu, Lo, MS, Or, Pa, Pi, Tu, ZC; 250–3300 m.

var. **robusta** (Mitt.) Gradst. & Uribe (= *Marchesinia robusta* (Mitt.) Schiffn.) – Es, Pi, Tu, ZC; 650–2500 m.

**Marchesinia languida** (Nees & Mont.) Steph. (= *Lejeunea palaeiflora* Spruce) – Ch, Na, Pi, Tu; 1200–2100 m.

**MARSUPELLA** Dumort. (Gymnomitriaceae)

**Marsupella miniata** (Lindenb. & Gottsche) Grolle – Co, Pi; 2700–4350 m.

**METZGERIA** Raddi (Metzgeriaceae)**Metzgeria agnewiae** Kuwah. – Az, Ca, Na, Pi, ZC; 1800–4430 m.**Metzgeria allionii** Steph. – MS, NA.**Metzgeria albinea** Spruce (= *M. australis* sensu Kuwahara non typus)var. **albinea** – EO, Na, Pa, Pi, Tu, ZC; 700–4000 m.var. **angusta** (Steph.) Costa & Gradst. – Su; 2700 m.**Metzgeria bischlerae** Kuwah. – ZC; 1800–3650 m.**Metzgeria chilensis** Steph. – Na, Pi, ZC; 3050–4000 m.**Metzgeria ciliata** Raddi (= *M. decipiens* (Massal.) Schiffn., ? *M. tonsa* Steph.) –

Ga, Lo, LR, Na, Or, Pi, ZC; 200–3000 m.

**Metzgeria claviflora** Spruce – Ca, Ch, Co, Na, Pi, ZC; 900–4350 m.**Metzgeria consanguinea** Schiffn. (= *M. neotropica* Kuwah.) – Ca, Co, Im, Na,

Pi, ZC; 1500–4000 m.

**Metzgeria crassipilis** (Lindb.) A.Evans – EO, MS; 800–2500 m.**Metzgeria dorsipara** – (Herzog) Kuwah. – Az, Ca, Lo, Pi, Tu; 2700–4300 m.**Metzgeria filicina** Mitt. Az, Lo, Na, Pi, Tu; 1700–3700 m.**Metzgeria fruticosa** Spruce – Co, Pi, Tu, SZ; 700–4000 m.**Metzgeria furcata** (L.) Corda – ZC; 1800–3300 m.**Metzgeria grandiflora** A.Evans – Ga; 450–800 m.\***Metzgeria holzii** Gradst. & A.R.Benitez (= *M. saccata* sensu Benitez &

Gradstein non typus) – Az, Lo, ZC; 2900–3600 m.

**Metzgeria inflata** Steph. – ZC; 1000–3100 m.**Metzgeria jamesonii** Kuwah. – Pi.**Metzgeria lechleri** Steph. – Ch, Lo, Tu, ZC; 1800–4000 m.**Metzgeria leptoneura** Spruce (= *M. ecuadoriensis* Steph.) – Az, Ca, Ch, Co, Lo,

LR, MS, Na, Pa, Su, Tu, ZC; 500–4200 m.

**Metzgeria liebmanniana** Lindenb. & Gottsche – Ca, Na, Pi; 1900–4000 m.**Metzgeria myriopoda** Lindb. – Ga, MS, Pi, Su, Tu, ZC; 450–1800 m.\***Metzgeria parvi-involucrata** Kuwah. – Ca; 3250–3500 m.**Metzgeria polytricha** Spruce – Ca, Im, Lo, MS, Na, Pa, Pi, Tu, ZC; 1000–4200

m.

**Metzgeria procera** Mitt. – Im, LR, Na, Pa, Pi; 1300–4000 m.\***Metzgeria pulvinata** Steph. – Im, Pi; ca. 3500 m.**Metzgeria rufula** Spruce (? = *M. bracteata* Spruce, *M. herminieri* Steph.) – Im,

Pi, Tu, ZC; 500–4000 m.

**Metzgeria scyphigera** A.Evans – Az, Co, Lo, Na, Pi, ZC; 1800–4200 m.**Metzgeria violacea** (Ach.) Dumort. – Ca; 2400–3600 m.**MICROLEJEUNEA** (Spruce) Steph. (Lejeuneaceae)**Microlejeunea acutifolia** Steph. – Az, Es, Lo, Na, Or, Pi; 0–2800 m.**Microlejeunea bullata** (Taylor) Steph. – Az, Ch, Es, Ga, Lo, MS, Na, Or, Pi, Tu,

ZC; 100–3000 m.

**Microlejeunea capillaris** (Gottsche) Steph. (= *M. colombiana* Bischl.) – Ca, Co, EO, Im, Lo, Na, Pi, ZC; 700–4780 m.

**Microlejeunea diversiloba** (Spruce) Müll.Frib. (= *Microlejeunea stricta* Steph.) – Lo, Na, ZC; 700–3100 m.

**Microlejeunea epiphylla** Bischl. – MS, Or, ZC; 0–2500 m.

**Microlejeunea globosa** (Spruce) Steph. (= *Lejeunea cardotii* Steph.) – Or (?), Pi; 2300 m.

**MICROPTERYGIUM** Gottsche (Lepidoziaceae)

**Micropterygium campanense** Reimers – ZC; ca. 1000–2200 m.

\***Micropterygium duidae** Reimers – ZC; ca. 2300 m.

**Micropterygium lechleri** Reimers – ZC; up to to 1700 m.

**Micropterygium reimersianum** Herzog – MS, ZC; ca. 1500–2000 m.

**Micropterygium trachyphyllum** Reimers – ZC; 0–1900 m.

**MNILOMA** Herzog (Calypogeiaceae)

**Mnioloma caespitosum** (Spruce) R.M.Schust. – MS, Pa, Pi, ZC; 400–1900 m.

**Mnioloma cellulolum** (Spreng.) R.M.Schust. (= *M. crenulatum* (Bischl.) R.M.Schust.) – Pi, Tu, ZC; 800–2550 m.

**Mnioloma cyclostipum** (Spruce) R.M.Schust. – Lo, Tu, ZC; 1700–3600 m.

**MONOCLEA** Hook. (Monocleaceae)

**Monoclea gottschei** Lindb. subsp. **gottschei** (= *M. gottschei* Lindb. subsp. *elongata* Gradst. & Mues) – EO, Lo, LR, MS, Na, Pa, Pi, Tu, ZC; 150–4000 m.

**MYRIOCOLEOPSIS** Schiffn. (Lejeuneaceae)

**Myriocoleopsis gymnocolea** (Spruce) M.E.Reiner & Gradst. – MS, Tu, ZC; 500–1300 m.

**Myriocoleopsis minutissima** (Sm.) R.L.Zhu et al.

subsp. **minutissima** (= *Cololejeunea minutissima* (Sm.) Schiffn., *C. turbinifera* (Spruce) León-Yáñez et al.) – Gu, Lo, Pi, Tu; 1500–2800 m.

subsp. **myriocarpa** (Nees & Mont.) R.L.Zhu et al. (= *Cololejeunea minutissima* subsp. *myriocarpa* (Nees & Mont.) R.M.Schust.) – Az, EO, Ga, Im, Pi, ZC; 100–3000 m.

**MYTILOPSIS** Spruce (Lepidoziaceae)

**Mytilopsis albifrons** Spruce – ZC; 1200–2650 m.

**NANOMARSUPELLA** A.Hagborg et al. (Gymnomitriaceae)

**Nanomarsupella xenophylla** A.Hagborg et al. – Ch, Na; 4200–4300 m.

**NARDIA** Gray (Solenostomataceae)

**Nardia succulenta** (Lehm.) Spruce – Az, Ca, MS, Na, Pi, Tu; 1500–3500 m.

**NEESIOSCYPHUS** Grolle (Balantiopsidaceae)

**Neesioscyphus allionii** (Steph.) Grolle – MS, Pi, ZC; 1300–2000 m.

**Neesioscyphus argillaceus** (Nees) Grolle – EO, Ga, Pa, ZC; 200–1600 m.

**Neesioscyphus carneus** (Nees) Grolle – Ca, MS, Pi; 950–3700 m.

\***NEOLEPIDOZIA** Fulford & J.Taylor (Lepidoziaceae)

\***Neolepidozia rectangularis** (R.M.Schust.) E.D.Cooper – ZC; 2550 m.

**NEUROLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)

**Neurolejeunea breutelii** (Gottsche) A.Evans – Ga, LR, MS, Or, ZC; 100–3000 m.

\***Neurolejeunea sastreana** Gradst. – Pi; 900 m.

**NOTEROCLADA** Hook.f. & Wilson (Noterocladaceae)

**Noteroclada confluens** Taylor – Az, Ca, Ch, Co, Lo, MS, Pi, ZC; 1800–4300 m.

**NOWELLIA** Mitt. (Cephaloziaceae)

**Nowellia curvifolia** (Dicks.) Mitt. – Ca, Lo, MS, ZC; 900–3200 m.

**ODONTOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)

**Odontolejeunea decemdentata** (Spruce) Steph. – Az, Ch, EO, LR, MS, Na, Pa, Pi, Tu, ZC; 0–1500 m.

**Odontolejeunea lunulata** (F.Weber) Schiffn. – Ch, EO, Es, LR, MS, Na, Or, Pa, Pi, Su, Tu, ZC; 0–3200 m.

**Odontolejeunea rhomalea** (Spruce) Steph. – Es, LR, MS, Na, Or, Pa, ZC; 0–1500 m.

**ODONTOSCHISMA** (Dumort.) Dumort. (Cephaloziaceae)

**Odontoschisma denudatum** (Nees) Dumort. – Ca, Lo, ZC; ca. 3500–4000 m.

\***Odontoschisma engelii** Gradst. & Burghardt (= *O. alpinum* R.M.Schust. nom. inval.) – Lo, ZC; ca. 3000–3150 m.

**Odontoschisma longiflorum** (Taylor) Trevis. – Ga, ZC; 500–2700 m.

**Odontoschisma variabile** (Lindenb. & Gottsche) Trevis. (= *O. atropurpureum* Steph., *O. falcifolium* Steph.) – Ca, Ga, Lo, MS, Na, ZC; 100–4100 m.

**OTIGONIOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)

**Otigoniolejeunea huctumalcensis** (Lindenb. & Gottsche) Y.M.Wei et al. (= *Ceratolejeunea dussiana* (Steph.) Dauphin) – Ga, MS, Tu, ZC; 100–2000 m.

**PALLAVICINIA** Gray (Pallaviciniaceae)

**Pallavicinia lyellii** (Hook.) Gray – Lo, MS, Na, Pa, Pi, Su, Tu, ZC; 100–2800 m.

**PARACROMASTIGUM** Fulford & J.Taylor (Lepidoziaceae)\***Paracromastigum granatense** (Gottsche) R.M.Schust. – EO, ZC; 300–3300 m.**Paracromastigum pachyrhizum** (Nees) Fulford – Az, Lo, ZC; 1100–3300 m.\***PICTOLEJEUNEA** Grolle (Lejeuneaceae)\***Pictolejeunea picta** (Steph.) Grolle – Or; 100–200 m.**PLAGIOCHASMA** Lehm. & Lindenb. (Aytoniaceae)**Plagiochasma rupestre** (J.R.Forst. & G.Forst.) Steph. – Co, Ga, Lo, Tu; 50–3200 m**PLAGIOCHILA** (Dumort.) Dumort. (Plagiochilaceae)**Plagiochila adianthoides** (Sw.) Lindenb. – Az, Ch, LR, MS, Na, Pa, Pi, Su, Tu, ZC; 300–3400 m.**Plagiochila aerea** Taylor – Ch, EO, Es, Ga, Lo, LR, MS, Na, Pa, Pi, Su, Tu, ZC; 100–3500 m.**Plagiochila alternans** Lindenb. & Gottsche – Ca, Lo, MS, Na, Pi, Tu, ZC; 1500–3300 m.**Plagiochila amicta** Steph. – Tu, ZC; 1400–3100 m.**Plagiochila bicuspidata** Gottsche (= *P. inouei* Grolle, *P. nudiuscula* Inoue nom. illeg.) – Az, Ca, Ga, Na, Pi; 750–4560 m.**Plagiochila bifaria** (Sw.) Lindenb. (= *P. atrovirens* Taylor, ? *P. echinella* Gottsche, *P. fragilis* Taylor, *P. spinifera* Ångstr. – Az, Ca, Ch, Co, Ga, Lo, Na, Pa, Pi, Tu, ZC; 500–4200 m.**Plagiochila breuteliana** Lindenb. – ZC; 200–2700 m.**Plagiochila buchtiniana** Steph. – Az, Co, Im, Pi, ZC; 3100–4000 m.**Plagiochila canelensis** Steph. – Lo, Na, Pa, Pi, Tu; 2500–4000 m.**Plagiochila cleefii** Inoue – Az, Co, Lo, Na, Pi; 3150–4300 m.**Plagiochila cristata** (Sw.) Lindenb. – Pa, Tu, ZC; 1500–2300 m.\***Plagiochila cuatrecasii** H.Rob. – Az, Pi; 3600–4200 m.**Plagiochila cucullifolia** J.B.Jack & Steph.var. **cucullifolia** – Na, ZC; 1300–3000 m.var. **anomala** Heinrichs & Gradst. – ZC; 2900–3000 m.\***Plagiochila cuneata** Lindenb. & Gottsche – Ga, 500–800 m.**Plagiochila deflexa** Mont. & Gottsche (= *P. chimborazensis* Spruce, *P. ecuadorensis* Steph.) – Ca, Ch, MS, Pi, ZC, ca. 1500–2000 m.**Plagiochila deflexirama** Taylor (= *P. andicola* Mont. & Gottsche, *P. bicaudata* Steph., *P. bryopteroides* Spruce) – Az, EO, Lo, MS, Na, Pi, ZC, 300–2800 m.**Plagiochila dependula** Taylor – Az, Ca, Co, Lo, Na, Pi, ZC; 3150–4300 m.**Plagiochila disticha** (Lehm. & Lindenb.) Lehm. & Lindenb. (= *P. falcatoserrata* Carl, *P. pensilis* Spruce) – Es, MS, Na, Or, Pa, Pi, ZC; 100–1800 m.

- Plagiochila distinctifolia** Lindenb. (= *P. diffusa* Steph., *P. hypantra* Spruce) – EO, MS, Pi, ZC; 100–2700 m.
- Plagiochila diversifolia** Lindenb. & Gottsche – Ch, Es, Ga, Lo, LR, Na, Or, Pa, Su, ZC; 500–3000 m.
- Plagiochila dominicensis** Taylor – LR, Pa, Pi; 100–2500 m.
- Plagiochila ecuadorica** (Inoue) L.Söderstr. (= *Plagiochila dimorpha* Lindenb. var. *ecuadorica* (Inoue) Heinrichs) – Ca, Na, Pi; 1500–2900 m.
- \***Plagiochila eggersii** Inoue – Pi; 30–900 m.
- Plagiochila ensiformis** Taylor – Az, Ca, Im, Lo, Na, Pi, Tu, ZC; (1250–)2000–4100 m.
- Plagiochila exigua** (Taylor) Taylor – Az, Im, Pi, ZC; 2000–4000 m.
- Plagiochila fuscolutea** Taylor – Az, Ca, Co, Lo, MS, Na, Pi, Tu, ZC; 2500–4100 m.
- Plagiochila guevarii** H.Rob. – Ca, Co, Na; 3300–3800 m.
- \***Plagiochila gymnocalycina** (Lehm. & Lindenb.) Mont. & Nees (= *P. gymnocalycina* var. *surinamensis* (Molk.) Heinrichs & D.S.Rycroft, *P. rutilans* Lindenb. var. *angustifolia* Herzog) – Az, EO, MS, Or, Pa, Pi; 200–1500 m.
- Plagiochila heteromalla** (Lehm. & Lindenb.) Lindenb. (= *P. oresitropha* Spruce, *P. paludosa* Steph.) – Lo, MS, Tu, ZC; 1200–3900 m.
- Plagiochila laetevirens** Lindenb. (= *P. flabellifrons* Spruce, *P. impluviata* Spruce, *P. pachoensis* Steph., *P. pastasensis* Steph., *P. pseudopatula* Herzog) – EO, MS, Pa, Pi, Tu, ZC; 300–3000 m.
- Plagiochila longispina** Lindenb. & Gottsche (= *P. matanga* Steph.) – Az/MS, Ca, Ch, Co, Na, Pi, Tu; 2700–4050 m.
- Plagiochila macra** Taylor (= *P. heterophylla* Lehm.) – Az, Ca, Lo, Na, Pa, Pi, Su, Tu, ZC; 400–3400 m.
- Plagiochila macrifolia** Taylor – Az, Ch, Pi.
- Plagiochila macrostachya** Lindenb. – Ca, Ch, MS, Na, Pa, Tu, ZC; 100–4000 m.
- Plagiochila montagnei** Nees (= *P. nova* Steph.) – Gu, EO, Es, LR, Na, Or, Pa, Su, ZC (?); 0–1000(–2000?) m.
- Plagiochila ovata** Lindenb. & Gottsche – Az, Co, Im, MS, Na, Pi, ZC; ca. 3000–4200 m.
- Plagiochila pachyloma** Taylor (= *P. homochroma* Spruce) – Az, Ca, Co, Im, Lo, Na, Pi, Su, Tu, ZC; (1000–)2000–4100 m.
- Plagiochila papillifolia** Steph. – Az, Na, Tu, ZC; 2150–3600 m.
- Plagiochila paraphyllina** Herzog – Ca; 2300–3700 m.
- Plagiochila patula** (Sw.) Lindenb. (= *P. dichotoma* sensu Spruce non typus, *P. martiana* (Nees) Lindenb., *P. xanthochroma* Spruce) – Lo, MS, Or, ZC; 200–2800 m.
- \***Plagiochila pautaphila** Gradst. & León-Yáñez – Na, Pi; 3600–4000 m.
- \***Plagiochila priceana** Gradst. & A.R.Benitez – Az, Co, Na, Pi; 3700–4200 m.
- Plagiochila punctata** (Taylor) Taylor (= *P. paramicola* Herzog, *P. subrara* Herzog) – Az, Ch, Co, Im, Na, Tu, ZC; 1600–4300 m.

- Plagiochila raddiana** Lindenb. – Az, EO, Ga, Im, MS, Pa, Su, Tu, ZC; 0–3800 m.
- Plagiochila revolvens** Mitt. – Na, Pi; 4000–4300 m.
- \***Plagiochila rudischusteri** H.Rob. – Pi; 900–1600 m.
- Plagiochila rutilans** Lindenb.  
 var. **rutilans** (= *P. cobana* Steph.) – EO, Es, MS, Na, Pa, Pi, Su, Tu, ZC; 200–3200 m.  
 var. **moritziana** (Hampe) Heinrichs – ZC; ca. 2000 m.  
 var. **standleyi** (Carl) Heinrichs & D.S.Rycroft – ZC; ca. 2000 m.
- Plagiochila simplex** (Sw.) Lindenb. – Az, Na, MS, Or, Pa, Pi, ZC; 100–3700 m.
- Plagiochila stricta** Lindenb. – Az, Ca, Co, Ch, Im, Pi, ZC; 100–4000 m.
- Plagiochila subplana** Lindenb. (= *P. harlingii* S.W.Arnell) – Es, Ga, LR, MS, Na, Or, Pa, Pi, Su; 100–1200 m.
- Plagiochila superba** (Spreng.) Mont. & Nees – Ch, Co, EO, Lo, LR, MS, Na, Pi, Tu, ZC; ca. 1000–3200 m.
- Plagiochila tabinensis** Steph. – Lo, Pi, Su, ZC; 900–3100 m.
- Plagiochila tamariscina** Steph. – Lo, MS, Na, ZC; 180–2200 m.
- Plagiochila tenuis** Lindenb. (= *P. bidens* Gottsche) – Ga, Pi, ZC; 750–4000 m.
- Plagiochila trichostoma** Gottsche – Co, Im, Na, Lo, Pi, Tu, ZC; 1050–4000 m.
- Plagiochila turgida** Herzog – Pi, ZC; 1800–3500 m.
- Plagiochila vincentina** Lindenb. – LR, Ma, Pi; 100–2200 m.
- \***PLATYCAULIS** R.M.Schust. (Lophocoleaceae)
- \***Platycaulis renifolia** R.M.Schust. – Ca; 3200–3600 m.
- PLEUROZIA** Dumort. (Pleuroziaceae)
- Pleurozia heterophylla** Fulford – ZC; 2300–2650 m.
- Pleurozia paradoxa** (J.B.Jack) Schiffn. – Az, Lo, Na, Tu, ZC; 2150–4000 m.
- PORELLA** L. Porellaceae)
- Porella brachiata** (Taylor) Spruce – Lo, Pi; 2200–3200 m.
- Porella crispata** (Hook.) Trevis. – Az, Ca, Cañ, Ch, Lo, Pi, Tu, ZC; 1000–3200 m.
- \***Porella leiboldii** (Lehm.) Trevis. – EO, Im, Lo, Na; 650–3000 m.
- Porella squamulifera** (Taylor) Trevis. – Az, Ca, Es, Im, Na, Pi; 1200–4000 m.
- Porella swartziana** (F.Weber) Trevis. – Ch, EO, Lo, Tu, ZC; 800–3000 m.
- PRIONOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)
- \***Prionolejeunea aemula** (Gottsche) A.Evans – Ch, EO, Ga, MS, Or, Pi, ZC; 100–1800 m.
- \***Prionolejeunea ampliretis** Herzog – Or; 200–300 m.
- Prionolejeunea arguta** (Nees) Steph. – MS, Na, Pa, Pi, ZC; 100–1800 m.
- Prionolejeunea decora** (Taylor) Steph. – EO, MS, Or, Pi; 200–1800 m.

**Prionolejeunea denticulata** (F. Weber) Schiffn. – Ch, Es, Ga (?), MS, Na, Or, Pa, Pi, Tu, ZC; 0–2300 m.

\***Prionolejeunea magnistipula** Herzog – Pi; 200–1000 m.

\***Prionolejeunea mucronata** (Sande Lac.) Steph. – Pa; 100–1500 m.

\***Prionolejeunea muricatoserrulata** (Spruce) Steph. – Es, Or, Pi; 0–1800 m.

\***Prionolejeunea scaberula** (Spruce) Steph. – EO, Na, Or, ZC; 100–1500 m.

**Prionolejeunea schlimiana** (Gottsche) Steph. – Bo, Ch, Es, LR, MS, Pi; 500–1500 m.

\***Prionolejeunea trachyodes** (Spruce) Steph. – 200–1500 m.

**PSEUDOCEPHALOZIA** R.M.Schust. (Lepidoziaceae)

**Pseudocephalozia quadriloba** (Steph.) R.M.Schust. – Az, Ca, Pi, ZC; 3200–4100 m.

**PSEUDOMARSUPIDIUM** Herzog (Adelanthaceae)

\***Pseudomarsupidium aureocinctum** (R.M.Schust.) J.J.Engel – Ca, Lo, Pi, ZC; 2200–4050 m.

**Pseudomarsupidium decipiens** (Hook.) Grolle (= *Adelanthus decipiens* (Hook.) Mitt.) – Az, Ca, Ga, Lo, Na, Pa, Tu, ZC; 500–4300 m.

**PYCNOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)

\***Pycnolejeunea contigua** (Nees) Grolle – Or, ZC; 650–2000 m.

**Pycnolejeunea decurviloba** Steph. (= *Cheilolejeunea decurviloba* (Steph.) X.L.He, *Trachylejeunea decurviloba* (Steph.) X.L.He & Grolle) – unknown locality.

**Pycnolejeunea densistipula** (Lehm. & Lindenb.) Steph. – MS, ZC; 300–2280 m.

\***Pycnolejeunea macroloba** (Nees & Mont.) Schiffn. – Or; 100–350 m.

**RADULA** Dumort. (Radulaceae)

**Radula cubensis** K.Yamada – ZC; 1800 m.

**Radula decora** Steph. – Es, Su.

**Radula eggertii** K.Yamada – Lo, ZC; 2800–3050 m.

**Radula episcia** Spruce (= *R. antilleana* Castle) – Bo, Ch, Co, Ga, Pa, Pi, Tu, ZC; 450–3400 m.

**Radula fendleri** Steph. – ZC; up to to 2000 m.

**Radula flaccida** Lindenb. & Gottsche – Es, Na, Or, Pa; 30–500 m.

**Radula galapagona** Steph. – Ga; 450–1200 m.

**Radula gottscheana** Taylor – Ch, Ga, Lo, MS, Pa, Tu, ZC; 100–2100 m.

**Radula involvens** Spruce – Tu, ZC; 1000–3000 m.

**Radula jamesonii** Taylor – Ch, Na, Pi, ZC; 2200–3900 m.

**Radula javanica** Gottsche – Az, EO, Lo, MS, Na, Or, ZC; 150–2800 m.

**Radula mammosa** Spruce – Lo, Or, ZC; 0–2900 m.

**Radula mexicana** Lindenb. & Gottsche – ZC; 1800–2150 m.

- Radula nudicaulis** Steph. – Az, Lo, ZC; 1000–4000 m.  
**Radula pallens** (Sw.) Mont. (= *R. kegelii* Steph.) – EO, Gu, LR, MS, Or, Pa, Su, Tu, ZC; 200–2000 m.  
**Radula pusilla** Spruce (= *R. mazarunensis* K.Yamada) – Pa; 500–1700 m.  
**Radula quadrata** Gottsche – Ga, MS, Tu, ZC; 400–4000 m..  
**Radula saccatiloba** Steph. – Es, ZC; 500–2000 m.  
**Radula santacruziana** K.Yamada & Gradst. – Ga; 600–650 m.  
\***Radula schaefer-verwimpai** K.Yamada – Lo, ZC; 700–4000 m.  
**Radula sinskeana** K.Yamada – Pi; 830 m.  
\***Radula sinuata** Steph. – EO; 900–2000 m.  
**Radula stenocalyx** Mont. – Es; 50–2300 m.  
**Radula subinflata** Lindenb. & Gottsche – EO, Ga, Na, Pi, ZC; 200–3800 m.  
**Radula tectiloba** Steph. – ZC; 1000–1900 m.  
**Radula tenera** Mitt. – Az, Ca, Im, Lo, Na, Pi, ZC; 1900–3500 m.  
**Radula voluta** Taylor – Az, Ca, Co, Ch, Ga, Lo, MS, Na, Pa, Pi, Su, Tu, ZC; 450–4000 m.  
**Radula xalapensis** Nees & Mont. (= *R. frondescens* Steph.) – Lo, ZC; 1500–3800 m.  
**Radula yanoella** R.M.Schust. – Na, ZC; 300–2100 m.

**RECTOLEJEUNEA** A.Evans (Lejeuneaceae)

- \***Rectolejeunea emarginuliflora** (Schiffn.) A.Evans – Es, Or, ZC; 80–1000 m.  
\***Rectolejeunea flagelliformis** A.Evans – MS; ca. 600 m.  
**Rectolejeunea versifolia** (Schiffn.) L.Söderstr. & A.Hagborg (= *R. berteriana* (Steph.) A.Evans) – Es, MS, Na, Or, ZC; 100–2700 m.

\***REINERANTHA** Gradst. & R.L.Zhu (Lejeuneaceae)

- \***Reinerantha foliicola** Gradst. & R.L.Zhu – Pi; ca. 1800 m.

**RICCARDIA** Gray (Aneuraceae)

- Riccardia aberrans** (Steph.) Gradst. – Na, ZC; ca. 2700–3700 m.  
\***Riccardia cataractarum** (Spruce) Schiffn. – Na; 3400–4000 m.  
\***Riccardia chamedryfolia** (With.) Grolle – Ca, Lo, Na, Pi, 2800–4000 m.  
**Riccardia ciliolata** (Spruce) Horik. – Lo, Tu; 2650–3750 m.  
**Riccardia digitiloba** (Spruce) Pagán – EO, Lo, Na, Pa, Pi, ZC; ca. 100–3200 m.  
**Riccardia fucoidea** (Sw.) C.Massal. (= *R. andina* (Spruce) Herzog, *R. lepidomitra* (Spruce) Gradst., *R. plumiformis* (Spruce) Meenks) – Ca, Lo, LR, MS, Na, Pa, Pi, Tu, ZC; (300–)1000–3700 m.  
**Riccardia hans-meyeri** (Steph.) Meenks & C.De Jong – Az, Ca, Ch, Co, Lo, MS, Na, Pi, ZC; 2700–4500 m.  
**Riccardia hymenophytoides** (Spruce) Meenks (= *R. sprucei* Steph.) – EO, Pi, Tu; ca. 200–3000 m.

- Riccardia latifrons** (Lindb.) Lindb. subsp. **parasitans** (Steph.) Gradst. & Reeb  
(= *R. parasitans* Steph.) – Ca, Co, Lo, Na, Pi; 2600–4500 m.
- Riccardia leptophylla** (Spruce) Herzog – Co, LR, MS, Or, ZC; 100–3350 m.
- Riccardia pallida** (Spruce) Meenks & C.De Jong (= *R. capillacea* (Steph.)  
Meenks & C.De Jong, *R. foliacea* Meenks & C.De Jong, *R. trichomanoides*  
(Spruce) Meenks) – Az, Ca, Ch, Co, Na, Pi, Tu, ZC; 1000–4000 m.
- Riccardia poeppigiana** (Lehm. & Lindenb.) Meenks & C.De Jong (= *R. algooides*  
(Taylor) Meenks, *R. cervicornis* (Spruce) Gradst. & Hekking) – Az, Co, Lo,  
MS, Na, Pi, Tu; (1200–)2500–4200 m.
- Riccardia regnellii** (Ángstr.) K.G.Hell (= *R. amazonica* (Spruce) Gradst. &  
Hekking) – Co, Es, Im, Lo, MS, Na, Pa, Pi, Tu, ZC; 0–3500 m.
- \***Riccardia verticillata** Gradst. & Reeb – MS; 1900–2200 m.
- \***Riccardia wallisii** (Steph.) Gradst. (= *R. smaragdina* Meenks & C.De Jong) –  
Co, Lo, Pi, ZC; 2300–4100 m.

**RICCIA** L. (Ricciaceae)

- Riccia albopunctata** Jovet-Ast – Ga; 1100 m.
- Riccia australis** Steph. – Pi; up to 1800 m.
- \***Riccia crassifrons** Spruce – MS, ZC; ca. 100–1000 m.
- Riccia fluitans** L. (= *R. stenophylla* Spruce) – MS, Tu, ZC; 400–2000 m.
- Riccia howellii** M.Howe – Ga; 50–250 m.
- Riccia huebenerana** Lindenb. – Na; 3650 m.
- Riccia ianthina** Jovet-Ast – Ga; 650 m.
- Riccia iodocheila** M.Howe – Ga; ca. 100 m.
- Riccia limicola** Jovet-Ast – Ga; ca. 400–700 m.
- Riccia membranacea** Gottsche & Lindenb. – Bo, Pi, ZC; 200–1800 m.
- Riccia planobiconvexa** Steph. – Ga; 0–1000 m.
- \***Riccia subplana** Steph. – MS, Or, Su; 0–850 m.
- \***Riccia vitalii** Jovet-Ast – MS; 850 m.

**SAUTERIA** Nees (Cleveaceae)

- Sauteria chilensis** (Mont.) Grolle. – Ga; ca. 1200 m.

**SCAPANIA** (Dumort.) Dumort. (Scapaniaceae)

- Scapania portoricensis** Hampe & Gottsche – Az, Ca, Lo, MS, Na, Tu, Pi, ZC;  
800–4100 m.

\***SCHIFFNERIOLEJEUNEA** Verd. (Lejeuneaceae)

- \***Schiffneriolejeunea polycarpa** (Nees) Gradst. – Es; 100–1000 m.

**SCHISTOCHILOPSIS** (N.Kitag.) Konstant. (Scapaniaceae)

- Schistochilopsis incisa** (Schrad.) Konstant. (= *Lophozia incisa* (Schrad.)  
Dumort.) – Az, Ca, Lo/ZC, Pi; 2500–4500 m.

**SOLENOTOMA** Mitt. (Solenostomataceae)

**Solenostoma amoenum** (Lindenb. & Gottsche) Váňa, Hentschel & Heinrichs (= *Jungermannia amoena* Lindenb. & Gottsche) – Ch, MS ZC; 1400–2500 m.

**Solenostoma amplexifolium** (Lehm.) Váňa & Schäf.-Verw. (= *Jungermannia linguifolia* Gottsche) – Ca, Pi, Tu; 1900–3700 m.

**Solenostoma callithrix** (Lindenb. & Gottsche) Steph. (= *Jungermannia callithrix* Lindenb. & Gottsche) – Ca, Lo, Pi, Tu, ZC; 1200–3300 m.

**Solenostoma decolor** (Schiffn.) Váňa, Hentschel & Heinrichs (= *Jungermannia decolor* Schiffn.) – Pi; 475–3000 m.

**Solenostoma hyalinum** (Lyell) Mitt. (= *Jungermannia hyalina* Lyell) – Az, Co, Lo, MS, Pi, ZC; 1000–4000 m.

**Solenostoma sphaerocarpum** (Hook.) Steph. (= *Jungermannia sphaerocarpa* Hook.) – Az (*S. León-Yáñez*, QCA), Ca, Na, ZC; 1800–4100 m.

**SPRUCEANTHUS** Verd. (Lejeuneaceae)

**Spruceanthus theobromae** (Spruce) Gradst. – Gu, LR; 300–600 m.

**STEPHANIELLA** J.B.Jack (Stephaniellaceae)

**Stephaniella paraphyllina** J.B.Jack – CA, Co, Lo, Na, Pi; 2700–4500 m.

\***Stephaniella rostrata** U.Schmitt – Lo; 3100–3200 m.

**STICTOLEJEUNEA** (Spruce) Schiffn. (Lejeuneaceae)

**Stictolejeunea squamata** (F.Weber) Schiffn. – Az, Chi, EO, LR, Na, Or, Pa, Pi, ZC; 100–2400 m.

**SYMBIEZIDIUM** Trevis. (Lejeuneaceae)

**Symbiezidium barbiflorum** (Lindenb. & Gottsche) A.Evans – Az, EO, Es, LR, MS, Na, Or.; 0–2800 m.

**Symbiezidium dentatum** Herzog – Es, Pi; 0–900 m.

**Symbiezidium transversale** (Sw.) Trevis. – Az, Bo, Es, Ch, Gu, Na, Or, Pa, ZC; 0–2600 m.

var. **hookeranum** (Gottsche) Gradst. & van Beek – Gu, Or.

**SYMPHYOGYNA** Nees & Mont. (Pallaviciniaceae)

\***Symphyogyna apiculispina** Steph. – Lo; 500–3350 m.

**Symphyogyna aspera** F.A.McCormick – EO, MS, Na, Pi, ZC; 450–3700 m.

**Symphyogyna brasiliensis** Nees & Mont. – Ca, Co, Ga, MS, Lo, Na, Tu, ZC; 100–4300 m.

**Symphyogyna brongniartii** Mont. – Ch, EO, LR, Lo, MS, Na, Tu, ZC; 200–3700 m.

**Symphyogyna leptothelia** Taylor – Tu; 3450–3750 m.

**Symphyogyna marginata** Steph. – Na, Pi, ZC; 1050–3700 m.

**Symphogyna podophylla** (Thunb.) Nees & Mont. (= *S. bogotensis* (Gottsche) Steph.) – ZC; 500–3900 m.

\***Symphogyna trivittata** Spruce – Pa; 600–3200 m.

**SYZYGIELLA** Spruce (Jamesoniellaceae)

**Syzygiella anomala** (Lindenb. & Gottsche) Steph. – Az, Lo, MS, Pi, ZC; 1500–3600 m.

\***Syzygiella bilobata** Inoue – ZC; 1780 m.

\***Syzygiella burghardtii** Gradst. & A.R.Benitez – Lo, ZC; ca. 2900–3500 m.

\***Syzygiella campanulata** Herzog – Lo; 2700–3700 m.

\***Syzygiella ciliata** Gradst. & A.R.Benitez – Pi, ZC; 1000–2600 m.

\***Syzygiella concreta** (Gottsche) Spruce – Lo, ZC; 1500–3200 m.

\***Syzygiella contigua** Steph. – Lo, ZC; 2900–3600 m.

**Syzygiella manca** (Mont.) Steph. – Az, Im, Pi, Tu, ZC; 1500–4000 m.

**Syzygiella pectiniformis** Spruce – MS, Na, Pi, Tu, ZC; 500–2300 m.

**Syzygiella perfoliata** (Sw.) Spruce – ZC; 1500–2750 m.

**Syzygiella rubricaulis** (Nees) Steph. (= *Jamesoniella rubricaulis* (Nees) Grolle) – ECUADOR: Az, Ca, Cañ, Co, Ga, Lo, Na, Tu, ZC; 650–4500 m.

**Syzygiella setulosa** Steph. – Az, Lo, ZC; 2900–3700 m.

**Syzygiella sonderi** (Gottsche) K.Feldberg et al. (= *Cryptochila grandiflora* (Lindenb. & Gottsche) Grolle) – Az, MS, Pi, Tu, ZC; 2000–4300 m.

**Syzygiella tonduzana** Steph. – Lo, Na, ZC; 1780–3200 m.

\***Syzygiella trigonifolia** (Steph.) Herzog – Az, Im, Na, Lo, ZC; 1900–3900 m.

\***Syzygiella uleana** Steph. – ZC; 1780 m.

**Syzygiella undata** (Mont.) K.Feldberg et al. (= *Jamesoniella undata* (Mont.) Steph.) – Az; 3400–4300 m.

**TARGIONIA** L. (Targioniaceae)

**Targionia hypophylla** L. – Ch, Ga; 630–3800 m.

**TELARANEA** (Spruce) Schiffn. (Lepidoziaceae)

**Telaranea diacantha** (Mont.) J.J.Engel & G.L.Merr. (= *Arachniopsis diacantha* (Mont.) Howe) – Or, Pi, ZC; 100–2000 m

**Telaranea nematodes** (Austin) M.A.Howe – Ch, EO, Ga, MS, Pi, Tu, ZC; 150–4250 m.

\***Telaranea sejuncta** (Ångstr.) S.W.Arnell (= *T. coactilis* (Spruce) J.J.Engel & G.L.Merr.) – ZC; ca. 1900 m.

**THYSANANTHUS** Lindenb. (Lejeuneaceae)

\***Thysananthus amazonicus** (Spruce) Schiffn. – Or; 100–350 m.

**Thysananthus auriculatus** (Wilson & Hook.) Sukkharak & Gradst. (= *Mastigolejeunea auriculata* (Wilson & Hook.) Schiffn.) – EO, LR, MS, Or, Pa; 0–1500 m.

**Thysananthus innovans** (Spruce) Sukkharak & Gradst. (= *Mastigolejeunea innovans* (Spruce) Steph.) – MS; up to 700 m.

**TRIANDROPHYLLUM** Fulford & Hatcher (Herbertaceae)

**Triandrophyllum eophyllum** (R.M.Schust.) Gradst. – Na, Pi; 4250–4300 m.

**Triandrophyllum subtrifidum** (Hook.f. & Taylor) Fulford & Hatcher – Ca, Co, Lo, Pi, ZC; 1800–4500 m.

**TRICHOCOLEA** Dumort. (Trichocoleaceae)

\***Trichocolea filicaulis** Steph. – Pi; 800–3000 m.

\***VERDOORNIANTHUS** Gradst. (Lejeuneaceae)

\***Verdoornianthus griffinii** Gradst. – Or; 100–220 m.

**XYLOLEJEUNEA** X.L.He & Grolle (Lejeuneaceae)

**Xylolejeunea crenata** (Nees & Mont.) X.L.He & Grolle – Na, Or, ZC; 100–1075 m.

\***Xylolejeunea pellucidissima** (Spruce) Gradst. (= *Lejeunea pellucidissima* Spruce) – Or; ca. 100–300 m.

\***ZOOPSIDELLA** R.M.Schust. (Lepidoziaceae)

\***Zoopsidella grahamii** Pócs (= *Z. caledonica* sensu Benitez & Gradstein non typus) – Lo, ZC; 2500–2650 m.

\***Zoopsidella integrifolia** (Spruce) R.M.Schust. – Pi; 800 m.

## **HORNWORTS** (Anthocerotophyta)

**ANTHOCEROS** L. (Anthocerotaceae)

**Anthoceros punctatus** L. – Ga, Lo, Tu, ZC; 650–2700 m.

**Anthoceros simulans** M.Howe – Ga; 650–1600 m.

**Anthoceros tuberculatus** Lehm. & Lindenb. (= *A. vegetans* M.Howe) – Ga, Tu; 100–1200 m.

**DENDROCEROS** Nees (Dendrocerotaceae)

\***Dendroceros crispatus** (Hook.) Nees – Ch, Na, ZC; 500–1200 m.

**Dendroceros crispus** (Sw.) Nees (= *D. foliatus* Spruce) – Ga, Pi, Or, Tu; 200–2900 m.

**LEIOSPOROCEROS** Hässel (Leiosporocerotaceae)

**Leiosporoceros dussii** (Steph.) Hässel – Pi, ZC; 1800–3000 m.

**NOTHOCEROS** (R.M.Schust.) J.Haseg. (Dendrocerotaceae)

**Nothoceros vincentianus** (Lehm. & Lindenb.) J.C.Villarreal (= *M. vincentianus* (Lehm. & Lindenb.) Campb.) – EO, Lo, MS, Na, Pi, ZC; 250–3725 m.

**NOTOTHYLAS** A.Gray (Notothyladaceae)

**Notothylas galapagensis** M.Howie – Ga; ca. 100–250 m.

\***Notothylas orbicularis** (Schwein.) Sull. – EO, Lo; 0–750 m.

\***Notothylas vitalii** Udar & D.K.Singh – MS; 850 m.

**PHAEOCEROS** Prosk. (Notothyladaceae)

**Phaeoceros carolinianus** (Michx.) Prosk. (= *Megaceros callistictus* (Spruce) Steph., *Phaeoceros gualaquizanus* (Steph.) Gradst.) – MS, Na, Pa; 500–3500 m.

**Phaeoceros laevis** (L.) Prosk. – Ga, MS; 650–2900 m.

**Phaeoceros pichinchensis** (Spruce) Hässel – Pi.

**Phaeoceros tenuis** (Spruce) Hässel – MS, ZC; 800–1800 m.

**PHAEOMEGACEROS** R.J.Duff et al. (Dendrocerotaceae)

**Phaeomegaceros fimbriatus** (Gottsche) R.J.Duff et al. (*Phaeoceros laevis* (Gottsche) Gradst.) – Pi; 2000–4000 m.

**Phaeomegaceros squamuligerus** (Spruce) J.C.Villarreal (= *Phaeoceros squamuligerus* (Spruce) Hässel) – Pi.

### 3. Further records

*Bazzania diversicuspis* Spruce – ZC.; identification needs verification.

*Cololejeunea sintenisii* (Steph.) Pócs (= *Aphanolejeunea ephemeroides* R.M.Schust.) – ZC; species very close to *C. microscopica*, the Ecuadorian material needs study.

*Dendroceros allionii* – MS; the status of this species needs study.

*Dendroceros breutelii* Nees (= *D. ecuadorensis* Steph.) – MS; the Ecuadorian material needs study.

*Dendroceros jamesonii* Taylor – Pi; the status of this species is needs study.

*Drepanolejeunea lancifolia* (Gottsche) J.B.Jack & Steph. – Co; possibly a synonym of *D. bidens* or *D. araucariae*; the type material is lost.

*Drepanolejeunea longirostris* (Spruce) Steph. – Az, Tu; possibly a synonym of *D. bidens* or *D. araucariae*, the type material has not been studied.

*Drepanolejeunea subdissitifolia* Herzog – ZC; the identity of the Ecuadorian material needs study.

*Lejeunea apiculata* (Gottsche) Steph. nom. illeg. (= *Taxilejeunea apiculata* (Gottsche) Steph.) – Su; the identity of the species needs study, the type has not been located.

- Lejeunea diaphana* Spruce – Tu; the identity of the species needs study, the type has not been located.
- Lejeunea dictyocalyx* Spruce (= *Taxilejeunea dictyocalyx* (Spruce) Steph.) – Ga, Tu; the identity of the species needs study, the type has not been located.
- Lejeunea smaragdina* Besch. & Spruce – ZC; dubious Caribbean species, the identity of the Ecuadorian material needs study.
- Lepidozia serpens* Spruce – Tu; the identity of this species needs study.
- Leptolejeunea trigonostipa* (Spruce) Steph. – Ch; the identity of the species needs study, the type has not been located.
- Metzgeria aurantiaca* Steph. – Su; Brazilian species, the record from Ecuador needs verification.
- Metzgeria convoluta* Steph. (= *M. jackii* Steph.) – Na, Pa, ZC; species from SE Brazil and Paraguay, the record from Ecuador needs verification.
- Metzgeria heteroramea* Steph. – Co; the identity of the Ecuadorian material needs study (species lacking in Costa 2008).
- Microlejeunea perpusilla* (Spruce) Steph. – Ca, Ch; the identity of the species needs study.
- Plagiochila sprucei* Steph. – Ch; the status of this species needs study, the type has not been located.
- Plagiochila thyoides* Spruce – Tu; the status of this species needs study, the type has not been located.

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