

CHECKLIST OF LIVERWORTS (MARCHANTIOPHYTA) OF RUSSIA
СПИСОК ПЕЧЕНОЧНИКОВ (MARCHANTIOPHYTA) РОССИИ

N.A. KONSTANTINOVA¹ & V.A. BAKALIN²

With contributions on regional floras from

E.N. ANDREJEVA³, A.G. BEZGODOV⁴, E.A. BOROVICHEV¹,
M.V. DULIN⁵, YU.S. MAMONTOV⁶

Н.А. КОНСТАНТИНОВА¹, В.А. БАКАЛИН²

С дополнениями по флорам отдельных регионов следующих авторов:

Е.Н. АНДРЕЕВА³, А.Г. БЕЗГОДОВ⁴, Е.А. БОРОВИЧЕВ¹,
М.В. ДУЛИН⁵, Ю.С. МАМОНТОВ⁶

Abstract

Checklist of Russia includes data on 448 species, 3 subspecies and 16 varieties. Territory of Russia is subdivided into 24 regions. Each record for region has a reference to herbaria possessing voucher specimens and to relevant publications.

Резюме

Список печеночников России включает 448 видов, 3 подвида и 16 разновидностей. Территория России подразделена на 24 района. Все указания на нахождение таксонов в каждом из районов сопровождаются ссылками на гербарии, где хранятся образцы, и на соответствующие публикации.

KEYWORDS: liverworts, Russia, distribution, systematical arrangement, checklist

INTRODUCTION

In 1992 the first checklist of liverworts and hornworts of the former USSR including Russia was published (Konstantinova et al., 1992). Since then a considerable number of species and genera new to Russia have been recorded and the distribution of most taxa has been greatly expanded. Molecular phylogenetic studies improved considerably our ideas on phylogeny and taxonomy of the groups, resulting in numerous systemati-

ВВЕДЕНИЕ

В 1992 году был опубликован чеклист печеночников и антоцеротовых бывшего СССР (Konstantinova et al., 1992), включавший и территорию России. После этого выявлен ряд новых для России видов и родов, уточнено распространение большинства таксонов. Использование методов геносистематики привело к уточнению филогении печеночников, в результате чего была пересмотрена их система

¹ – Polar-Alpine Botanical Garden, Kola Sci. Centre, Russ. Acad. Sci., Kirovsk-6, Murmansk Province 184256 Russia – Россия 184256, Кировск-6 Мурманской области, Полярно-альпийский ботанический сад-институт КНЦ РАН; e-mails: nadya50@list.ru; borovichev@yandex.ru.

² – Institute of Biology and Soil Science, 100-Letia Vladivostoka Street, 159, Vladivostok 690022 Russia – Россия 690022, Владивосток, просп. 100-летия Владивостока, 159, Биолого-почвенный институт ДВО РАН. v-bak@list.ru

³ – Lenina Str., 27/59, app. 10, St. Petersburg, 197376 Russia – Россия, 197376, Санкт-Петербург, ул. Ленина д. 27/59, кв. 10; e-mail: SPb.Elena@list.ru

⁴ – Marshala Rybalko str. 97, kv. 16, Perm, 614032 Russia – Россия 614032, Пермь, Маршала Рыбалко 97, кв. 16; e-mail: bezgodovs@mail.ru

⁵ – Institute of Biology, Komi Sci. Centre, Russ. Acad. Sci., Kommunisticheskaya 28, Syktyvkar 167610 Russia – Институт биологии Коми НЦ УрО РАН, Коммунистическая 28, Сыктывкар 167610 Россия; e-mail: dulin@ib.komisc.ru

⁶ – Surgut State University, Energetikov str. 22, Surgut, Tyumen Province 628408 Russia – Россия 628408 г. Сургут Тюменской области, ул. Энергетиков, д. 22. Сургутский гос. университет; e-mail: yur-mamontov@yandex.ru

cal and nomenclatural changes (Crandall-Stotler et al., 2008; Hentschel et al., 2007; He-Nyngren et al., 2006; De Roo et al., 2007; Yatsentyuk et al., 2004). In many cases, the narrow generic concept was supported.

In this checklist we use the same format as in the checklist of mosses (Ignatov et al., 2006), although regional subdivision of Russia is somewhat different (Fig. 1; Table 1). Each record for a particular region has a reference to herbaria, where specimens were studied by us and to the relevant literature source. They are given in square brackets. Locations of specimens in herbaria are indicated by Roman numerals as follow: I – КРАБГ, II – VLA, III – LE, IV – СYKO, V – МНА, VI – MW, VII – H, and for other herbaria we use their acronyms. Although the number of specimens were revised during the check-list preparation, we were not able to revise everything, and in a number of cases the presence of the species in the herbarium means just the presence of so-identified collection, without checking its identity. After slash (/) the literature references are given in Arabic numerals. For rare and poorly known species we try to cite publications which include descriptions of localities and/or some comments on morphology and distribution. For species more or less common in a region, more recently published comprehensive reports are cited. Number in figure brackets refer to a relevant annotation. Author names are given according <http://www.ipni.org>.

A question mark “?” before a reference number in brackets means that the author(s) of that reference express(es) certain doubts on the occurrence of the taxon in the region; a “?” before a region name indicates that we doubt the occurrence of a taxon in that region; a “?” before a species name means that we doubt that this is a good species, but retain it due to unknown identity; a “?” after herbarium means that specimen was not seen, but the specimen presence in relevant herbarium is indicated in literature.

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и изменены названия таксонов (Crandall-Stotler et al., 2008; Hentschel et al., 2007; He-Nyngren et al., 2006; De Roo et al., 2007; Yatsentyuk et al., 2004). Во многих случаях подтверждена правильность узкого понимания объема родов.

В целом формат настоящего чеклиста сходен с чеклистом мхов (Ignatov et al., 2006), хотя деление на районы немного отличается (Рис. 1, Табл. 1). Указание для каждого из районов сопровождается ссылкой на гербарий, где имеются образцы вида и на литературу; они даны в квадратных скобках – гербарии римскими цифрами и после / литературы источники арабскими цифрами. Гербарии сокращаются так: I – КРАБГ, II – VLA, III – LE, IV – СYKO, V – МНА, VI – MW, VII – H, для прочих даны акронимы. Хотя многие образцы были проверены при подготовке чеклиста, некоторую часть образцов изучить не было возможности, так что указание на наличие в гербарии означает не более чем наличие таким образом определенного образца. Литературные источники для редких видов выбраны, как правило, из тех, в которых содержатся описания видов и более подробная характеристика местообитаний. Для более частых видов указаны преимущественно работы последних лет. В фигурных скобках указаны номера соответствующих комментариев. Цитирование авторов дается согласно <http://www.ipni.org>.

Вопросительный знак (“?”) перед номером ссылки означает, что в цитируемом источнике таксон приводится со знаком вопроса или под «cf.»; “?” перед названием региона отражает сомнения авторов чеклиста относительно наличия таксона в регионе; “?” перед названием вида свидетельствует о сомнении в его самостоятельности; “?” после аббревиатуры гербария указывает на то, что наличие образца в данном месте не проверялось и указание основано на литературе.

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SYSTEMATIC ARRANGEMENT

Systematic arrangement follows Crandal-Stotler et al. [65] with some modifications according to Vilnet et al. [271, 272, 273] and Konstantinova & Vilnet [155a].

MARCHANTIOPHYTA Stotler & Crand.-Stotl.

CLASS: HAPLOMITRIOPSISIDA Stotler & Crand.-Stotl.

Subclass: TREUBIIDAE Stotler & Crand.-Stotl.

Order: **Treubiales** Schljakov

Treubiaceae Verd.

Apotreubia S.Hatt. & Mizut.

Subclass: HAPLOMITRIIDAE Stotler & Crand.-Stotl.

Order: **Calobryales** Hamlin

Haplomitriaceae Dedecek

Haplomitrium Nees

CLASS: MARCHANTIOPSISIDA Cronquist, Takht. & W.Zimm.

Subclass: BLASIIDAE Xiao L.He, Juslén, Ahonen, Glenny & Piippo

Order: **Blasiales** Stotler & Crand.-Stotl.

Blasiaceae H.Klinggr.

Blasia L.

Subclass: MARCHANTIIDAE Engl.

Order: **Lunulariales** D.G.Long.

Lunulariaceae H.Klinggr.

Lunularia Adans.

Order: **Marchantiales** Limpr.

Marchantiaceae Lindl.

Bucegia Radian

Marchantia L.

Preissia Corda

Aytoniaceae Cavers

Asterella P.Beauv.

Mannia Opiz

Plagiochasma Lehm. & Lindenb.

Reboulia Raddi

Cleveaceae Cavers

Athalamia Falconer

Peltolepis Lindb.

Sauteria Nees

Conocephalaceae Müll.Frib. ex Grolle

Conocephalum Hill

Ricciaceae Rchb.

Riccia L.

Ricciocarpos Corda

Targioniaceae Dumort.

Targionia L.

CLASS: JUNGERMANNIOPSISIDA Stotler & Crand.-Stotl.

Subclass: PELLIIDAE Xiao L.He, Juslén, Ahonen, Glenny & Piippo

Order: **Pelliales** Xiao L.He, Juslén, Ahonen, Glenny & Piippo

Pelliaceae H.Klinggr.

Pellia Raddi

Order: **Fossombroniales** Schljakov

Suborder: **Calyculariineae** Xiao L.He, Juslén, Ahonen, Glenny & Piippo

Calyculariaceae Xiao L.He, Juslén, Ahonen, Glenny & Piippo

Calycularia Mitt.

Suborder: **Fossombroniineae** R.M.Schust. ex Stotler & Crand.-Stotl.

Fossombroniaceae Hazsl.

Fossombronia Raddi

Order: **Pallaviciniales** W.Frey & M.Stech

Suborder: **Pallaviciniineae** R.M.Schust.

Moerckiaceae Stotler & Crand.-Stotl.

Hattorianthus R.M.Schust.

Moerckia Gottsche

Pallaviciniaceae Mig.

Pallavicinia Gray

Subclass: METZGERIIDAE Barthol.-Began

Order: **Metzgeriales** Chalaud

Metzgeriaceae H.Klinggr.

Apometzgeria Kuwah.

Metzgeria Raddi

Aneuraceae H.Klinggr.

Aneura Dumort. (incl. *Cryptothallus* Malmb.)

Riccardia Gray

Subclass: JUNGERMANNIIDAE Engl.

Order: **Porellales** Schljakov

Suborder: **Porellineae** R.M.Schust.

Porellaceae Cavers

Porella L. (incl. *Macvicaria* W.E.Nicholson)

Suborder: **Radulineae** R.M.Schust.

Radulaceae Müll.Frib.

Radula Dumort.

Suborder: **Jubulineae** Müll.Frib.

Frullaniaceae Lorch

Frullania Raddi

Neohattoria Kamim.

Jubulaceae H.Klinggr.

Jubula Dumort.

Nipponolejeunea S.Hatt.

Lejeuneaceae Cavers

Cololejeunea (Spruce) Schiffn.

Tabl. 1. Regions of the check-list (cf. Fig. 1) – Табл. 1. Регионы списка печеночников (см. Рис. 1)

	ARC (Arctic floristic region as it is delimited by Yurtsev et al. (1978))
EURO	European Arctic, including Polar Urals, Novaya Zemlya and Franz-Josef Land Archipelagos, Waigach and Kolguev Islands
WS	From the foot of eastern slope of Polar Urals eastward to the border between Yamalo-Nenetsky Autonomous District and Krasnoyarsk Territory
ES	Krasnoyarsk Territory within Arctic, including Severnaya Zemlya Archipelago
ARCYAK	Republic of Sakha (Yakutia) within Arctic, including Novosibirskie Islands Archipelago
BE	Chukotsky Autonomous District within Arctic, including Wrangel Island
	EUR
NW	Murmansk and Leningrad Provinces, Republic of Karelia
NE	Arkhangelsk Province and Republic of Komi excluding its northern (Arctic) parts and Urals
KLN	Kaliningrad Province
C	Belgorod, Bryansk, Ivanovo, Kaluga, Kirov, Kostroma, Kursk, Lipetsk, Moskva, Novgorod, Nizhny Novgorod, Orel, Penza, Pskov, Ryazan, Smolensk, Tambov, Tula, Tver, Vladimir, Vologda, Voronezh, Yaroslavl Provinces, Republics of Chuvashia, Marij-El, Mordovia, Tatarstan and Udmurtia
N-UR	Ural Mountains north of 59°N, excluding arctic part (east of Republic of Komi, north of Perm Territory, west of Tyumen and Sverdlovsk Provinces)
S-UR	Ural Mountains south of 59°N (south of Perm Territory, west of Sverdlovsk Province and Republic of Bashkortostan, Chelyabinsk and Orenburg Provinces)
SE	Rostov-na-Donu, Samara, Saratov, Ulyanovsk, Volgograd, Astrakhan Provinces, Republic of Kalmykia
	CAUC
	Krasnodar and Stavropol Territories, Republics of Adygeya, Kabardino-Balkaria, Alania (North Osetia), Dagestan, Ingushetia, Chechnya and Karachaevo-Cherkessia
	SIB
W	Tyumen and Sverdlovsk Provinces excluding Urals, Kurgan, Omsk, Tomsk, Novosibirsk Provinces
E	Krasnoyarsk Territory excluding southern and arctic parts, Irkutsk Province excluding southern part, Republic of Buryatia excluding southern part
YAK	Republic of Sakha (Yakutia) excluding arctic part
S	South of Krasnoyarsk Territory, Irkutsk Province and Republic of Buryatia, Altaisky and Zabaikalsky Territories, Republics of Altai, Tyva and Khakassia, and Kemerovo Province
	FAR EAST
CHUK	North of Magadan Province, South of Chukotsky Autonomous District and continental part of Kamchatsky Territory
KAM	Kamchatsky Territory within peninsular part and Commander Islands, Sakhalinskaya Province (North Kuril Islands)
MAG	South of Magadan Province and North of Khabarovsk Territory
AMU	Amurskaya Province, South of Khabarovsk Territory, North of Primorsky Territory (southward to 45°N)
SAKH	Sakhalinskaya Province (Sakhalin and nearby island, e.g. Moneron Island, but not Kurils)
S-KUR	Sakhalinskaya Province (South Kuril Islands)
PRIM	South of Primorsky Territory (northward to 45°N)



Fig. 1. Regional subdivision of Russia (see also Table 1) – Рис. 1. Подразделение территории России на районы, принятые в списке печеночников (см. также Табл. 1)

- Lejeunea* Lib.
Cheilolejeunea (Spruce) Schiffn.
Trocholejeunea Schiffn.
- Order: **Ptilidiales** Schljakov
 Ptilidiaceae H.Klinggr.
Ptilidium Nees
 Neotrichocoleaceae Inoue
Trichocoleopsis S.Okamura
- Order: **Jungermanniales** H.Klinggr.
 Suborder: **Lophocoleineae** Schljakov
 Pseudolepicoleaceae Fulford & J.Taylor
Blepharostoma (Dumort.) Dumort.
Pseudolepicolea Fulford & J.Taylor
 Trichocoleaceae Nakai
Trichocolea Dumort.
 Herbertaceae Müll.Frib. ex Fulford & Hatcher
Herbertus Gray
 Lepidoziaceae R.M.Schust.
Bazzania Gray
Kurzia G.Martens
Lepidozia (Dumort.) Dumort.
 Lophocoleaceae Vanden Berghen
Chiloscyphus Corda
Heteroscyphus Schiffn.
Lophocolea (Dumort.) Dumort.
 Chonecoleaceae R.M.Schust. ex Grolle
Chonecolea Grolle
 Plagiocilicaceae Müll.Frib. & Herzog
Plagiocila (Dumort.) Dumort.
- Suborder: Cephaloziineae** Schljakov
 Jamesoniellaceae Xiao L.He, Juslén, Ahonen, Glenny & Piippo
Crossogyna (R.M.Schust.) Schljakov
Pedinophyllum (Lindb.) Lindb.
- Cephaloziaceae Mig.
Cephalozia (Dumort.) Dumort.
Nowellia Mitt.
Pleurocladula Grolle
Schofieldia J.D.Godfrey
- Odontoschismataceae (Grolle) Schljakov
Alobiellopsis R.M.Schust.
Cladopodiella H.Buch
Iwatsukia N.Kitag.
Odontoschisma (Dumort.) Dumort.
- Hygrobiellaceae (Jørg.) Konstant. & Vilnet
Hygrobiella Spruce
- Cephaloziellaceae Douin
Cephaloziella (Spruce) Schiffn.
Dichiton Mont.
- Scapaniaceae Mig. (incl. Lophoziaceae; the genera marked by asterisk (*) belong to another family, segregated from Scapaniaceae s.l., which is at moment in press in *Taxon* journal)
 **Anastrepta* (Lindb.) Schiffn.
 **Anastrophyllum* (Spruce) Steph.
 **Barbilophozia* Loeske
 **Biantheridion* (Grolle) Konstant. & Vilnet
 **Crossocalyx* Meyl.
Diplophyllum (Dumort.) Dumort.
 **Gymnocolea* (Dumort.) Dumort.
Heterogemma (Lindb.) Konstant. & Vilnet
 **Isopaches* H.Buch
Lophozia (Dumort.) Dumort.
Lophoziopsis Konstant. & Vilnet
Macrodiplophyllum (H.Buch) Perss.
Obtusifolium S.W.Arnell
 **Orthocaulis* H.Buch
 **Plicanthus* R.M.Schust.
Protolophozia (R.M.Schust.) Schljakov
 **Pseudolophozia* Konstant. & Vilnet
Pseudotritomaria Konstant. & Vilnet
Saccobasis H.Buch
Scapania (Dumort.) Dumort.
Schistochilopsis (N.Kitag.) Konstant.
 **Schljakovia* Konstant. & Vilnet
 **Schljakovianthus* Konstant. & Vilnet
 **Sphenobolus* (Lindb.) Berggr.
 **Tetralophozia* (R.M.Schust.) Schljakov
Tritomaria Schiffn. ex Loeske
- Suborder: Jungermanniiineae** R.M.Schust. ex Stotler & Crand.-Stotl.
 Myliaceae Schljakov
Mylia Gray
 Arnelliaceae Nakai
Arnellia Lindb.
Southbya Spruce
 Calypogeiaceae Arnell
Calypogeia Raddi
Eocalypogeia (R.M.Schust.) R.M.Schust.
Metacalypogeia (S.Hatt.) Inoue
 Delavayellaceae R.M.Schust.
Liochlaena Nees
 Jungermanniaceae Reichenbach
Eremonotus Lindb. & Kaal. ex Pearson
Hattoriella (Inoue) Inoue
Jungermannia L.
Leiocolea (Müll.Frib.) H.Buch
Mesoptychia (Lindb.) A.Evans

Solenostomataceae Stotler & Crand.-Stotl.	<i>Harpanthus</i> Nees
<i>Cryptocolea</i> R.M.Schust.	Antheliaceae R.M.Schust.
<i>Cryptocoleopsis</i> Amakawa	<i>Anthelia</i> (Dumort.) Dumort.
<i>Nardia</i> Gray	Gymnomitriaceae H.Klinggr.
<i>Solenostoma</i> Mitt.	<i>Apomarsupella</i> R.M.Schust.
<i>Plectocolea</i> (Mitt.) Mitt.	<i>Gymnomitrium</i> Corda
Geocalycaceae H.Klinggr.	<i>Marsupella</i> Dumort.
<i>Geocalyx</i> Nees	<i>Prasanthus</i> Lindb.

LIST OF TAXA

- Alobiellopsis* R.M.Schust. [Odontoschismataceae]
 — *parvifolia* (Steph.) R.M.Schust. – **FAR EAST:** S-KUR [II / 32, 39]
- Anastrepta* (Lindb.) Schiffn. [Scapaniaceae s.l.]
 — *orcadensis* (Hook.) Schiffn. – **SIB:** S [I / 129]
- Anastrophyllum* (Spruce) Steph. [Scapaniaceae s.l.]
 — *assimile* (Mitt.) Steph. – **SIB:** S [V / 267], **FAR EAST:** AMU [I, II, V / 135]
 — *michauxii* (F. Weber) H.Buch – **EUR:** NW [III / 221], NE [I, IV / 78, 79, 80, 86], N-UR [I, IV / 41, 78, 80, 299], S-UR [I / 138], **CAUC:** [I / 107, 131], **SIB:** E [277], YAK [I / 27, 246, 247], S [I, V / 112, 146, 155, 267], **FAR EAST:** KAM [I / 36], AMU [I, II, V, VI, VII / 6, 66, 67, 91, 135, 156], SAKH [I, II / 38], S-KUR [II / 32, 39], PRIM [II / 89]
 — *sphenoloboides* R.M.Schust. – **ARC:** WS [III / 195], ES [III / 295], ARCYAK [246], BE [III / 10, 151], **EUR:** NW [I / 24, 119, 234], NE [IV / 83, 284, 285], **SIB:** YAK [I / 27, 246], **FAR EAST:** KAM [I / 36]
- Aneura* Dumort. [Aneuraceae]
 — *maxima* (Schiffn.) Steph. – ?**EUR:** NW [III / 219], **FAR EAST** S-KUR [II / 32, 39]– {1}
 — *mirabilis* (Malmb.) Wickett & Goffinet – **EUR:** NW [I, III / 24, 124, 194, 214] – {2}
 — *pinguis* (L.) Dumort. – **ARC:** EURO [I, IV / 18, 113, 147, 151, 282], WS [III / 195], ES [III / 171, 222], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 24, 214, 234], NE [I, IV / 266, 284], KLN [115], C [I, IV / 12, 14, 85, 103, 105, 125, 173, 193, 274], N-UR [I / 136], S-UR [I / 21, 138], **CAUC:** [I / 75, 107, 131], **SIB:** W [169], E [171], YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I, II / 36], AMU [I, II, V / 91, 92, 135], SAKH [II / 114], S-KUR [II / 39], PRIM [II / 89]
- Anthelia* (Dumort.) Dumort. [Antheliaceae]
 — *julacea* (L.) Dumort. – **ARC:** EURO [19, 151, 299], ES [III / 295], ARCYAK [246], BE [III / 10], **EUR:** NW [I / 24, 234], **SIB:** S [112], **FAR EAST:** CHUK [III / 10], KAM [I, II / 36] – {3}
 — *juratzkana* (Limpr.) Trevis. – **ARC:** EURO [I, III, IV / 19, 141, 147, 151, 283, 288], WS [III / 195, 296], ES [I, III / 171, 222], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 24, 234], N-UR [I, IV / 41, 136, 191, 252, 299], S-UR [I / 138], **CAUC:** [I / 107, 131], **SIB:** E [292], YAK [I / 246], S [I, V / 112, 146, 267], **FAR EAST:** CHUK [I / 10, 51, 145], MAG [II / 51], KAM [I, II, IV / 36], AMU [I, V / 135], SAKH [II], S-KUR [II / 39]
- Apomarsupella* R.M.Schust. [Gymnomitriaceae]
 — *revoluta* (Nees) R.M.Schust. – **SIB:** S [264] – {4}
- Apometzgeria* Kuwah. [Metzgeriaceae]
 — *pubescens* (Schrank) Kuwah. – **ARC:** BE [III / 10], **EUR:** C [2, 11, 84], **CAUC:** [I / 107, 131], **SIB:** W [169], YAK [I / 246], S [I, V / 42, 112, 267, 269], **FAR EAST:** CHUK [III / 10], MAG [II / 51], KAM [I / 36], AMU [I, II, III, V / 27, 66, 67, 91, 92, 135, 297], SAKH [II / 114, 183, 30], S-KUR [II / 32, 39], PRIM [I, II / 89]
- Apotreubia* S.Hatt. & Mizut. [Treubiaceae]
 — *hortonae* R.M.Schust. & Konstant. – **SIB:** E [III / 238, 291], YAK [247] – {5}

Arnellia Lindb. [Arnelliaceae]

— *fennica* (Gottsche) Lindb. – **ARC:** EURO [I, IV / 83, 147, 151, 191, 283], WS [III / 195], ES [III / 171, 222], ARCYAK [I / 142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 83, 266, 284, 298], N-UR [I, IV / 47, 83, 136, 252, 299], **SIB:** W [I / 69, 169, 257], E [I / 171], YAK [I / 246], S [I / 42, 112, 146], **FAR EAST:** CHUK [III / 10], MAG [III? / 51], AMU [I / 27], SAKH [II / 40]

Asterella P.Beauv. [Aytoniaceae]

— *gracilis* (F.Weber) Underw. – **ARC:** EURO [151, 299], ES [III / 172, 277, 295], ARCYAK [142, 246], BE [I, III / 10, 172], **EUR:** NW [I / 20, 24, 55, 172], S-UR [21], **CAUC:** [263], **SIB:** E [172, 277, 292], YAK [246], S [I / 146, 172], **FAR EAST:** CHUK [III / 10], KAM [I / 36], SAKH [II / 34]

— *leptophylla* (Mont.) Grolle – **FAR EAST:** PRIM [II, V / 89, 172]

— *lindenbergiana* (Corda ex Nees) Arnell – **CAUC:** [I / 131, 281a], **SIB:** YAK [13]

— *saccata* (Wahlenb.) A.Evans – **ARC:** BE [I, III / 10], **EUR:** N-UR [I / 136], S-UR [171, 172, 277], **SIB:** E [171], S [I, V / 155, 172, 267, 277], YAK [246, 248], **FAR EAST:** CHUK [III / 10], KAM [36], AMU [13, 172, 277]

Athalamia Falconer [Cleveaceae]

— *hyalina* (Sommerf.) S.Hatt. – **ARC:** EURO [I, IV / 287], ES [I, III / 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I / 24, 234], NE [IV / 80], N-UR [I, III, IV / 41, 80], S-UR [21], **CAUC:** [I / 59, 131, 277], **SIB:** E [13], YAK [I / 246, 248], S [13, 112], **FAR EAST:** KAM [I / 36], AMU [I / 27]

— *nana* (Shimizu & S.Hatt.) S.Hatt. – **FAR EAST:** PRIM [II / 89]

— *spathysii* (Lindenb.) S.Hatt. – **EUR:** ?CAUC [240]

Barbilophozia Loeske [*Scapaniaceae s.l.]

— *barbata* (Schmidel ex Schreb.) Loeske – **ARC:** EURO [IV / 141, 147, 283], WS [III / 195, 296], ES [I, III / 222, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266], KLN [72a, 73], C [I, IV / 14, 85, 103, 105, 125, 173, 193, 202], N-UR [I, IV / 41, 80, 136, 252, 299], S-UR [I / 21, 22, 46, 138], SE [177], **CAUC:** [I / 1a, 107, 131], **SIB:** WS [69, 70, 169], ES [171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II / 51], KAM [I, III, IV / 36, 184], AMU [I, II, V / 6, 66, 91, 135, 156, 170], SAKH [II / 34], S-KUR [II / 39], PRIM [II / 89]

— *hatcheri* (A.Evans) Loeske – **ARC:** EURO [I, IV / 19, 141, 147, 151, 283], WS [I, III / 195], ES [I, III / 295], ARCYAK [142, 246], BE [III / 7, 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 111], C [16], N-UR [I, IV / 41, 136, 299], S-UR [I / 21, 22, 138], **CAUC:** [I / 107, 131], **SIB:** W [I / 70], E [292], YAK [I / 27, 246], S [I, V / 112, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 145], MAG [II / 51], KAM [I, IV / 36], SAKH [I, II / 38], S-KUR [II / 39], PRIM [II / 33]

— *lycopodioides* (Wallr.) Loeske – **ARC:** EURO [I, III, IV / 141, 151, 283], WS [III / 195], ES [III / 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 266], KLN [72a, 73], C [11, 14, 84], N-UR [I, IV / 41, 136], S-UR [I / 21, 22, 138], **CAUC:** [I / 107, 131], **SIB:** W [169], E [171, 294], YAK [246], S [I, V / 112, 146, 267], E [171], **FAR EAST:** CHUK [I, III / 10, 145], MAG [III? / 51], KAM [I / 36], AMU [II / 66, 67, 91, 170], SAKH [II]

— *rubescens* (R.M.Schust. & Damsh.) Kartt. & L.Söderstr. – **ARC:** EURO [I / 19, 151], WS [III / 195], **EUR:** NW [I / 24, 45, 119], **FAR EAST:** CHUK [I / 145], KAM [I / 36]

Bazzania Gray [Lepidoziaceae]

— *bidentula* (Steph.) Steph. – **SIB:** S [I, V / 112, 155, 267, 268], **FAR EAST:** KAM [I / 36] AMU [I, II / 66, 67, 91], SAKH [II / 34], S-KUR [II / 32, 39], PRIM [I, II / 89]

— *flaccida* (Dumort.) Grolle – **CAUC:** [III / 59, 215]

— *japonica* (Sande Lac.) Lindb. – **FAR EAST:** S-KUR [II / 32, 39], PRIM [II / 89]

— *ovifolia* (Steph.) S.Hatt. – **FAR EAST:** KAM [I / 36], AMU [II / 67, 91], SAKH [II / 114], S-KUR [II, III / 1, 39, 157, 179], PRIM [II / 89]

- *tricrenata* (Wahlenb.) Lindb. – **EUR:** NW [24], C [105], S-UR [I / 21, 138], **CAUC:** [I / 107, 131], **SIB:** YAK [246, 247], S [I, V / 132, 146, 267, 269], **FAR EAST:** KAM [I / 36], AMU [I, II, V / 66, 91, 135], SAKH [II / 34], S-KUR [II / 32, 39], PRIM [II / 89]
 - *trilobata* (L.) Gray – **EUR:** NW [I, III / 20, 53, 214, 221], KLN [72a], C [14, 17, 105], **CAUC:** [I / 104, 131], **FAR EAST:** MAG [II / 51], AMU [II, VII / 66, 67, 91, 156, 170], SAKH [I, II / 38, 100, 114, 170], S-KUR [I, II, III / 39, 183], PRIM [I, II, III / 50, 89]
- Biantheridion** (Grolle) Konstant. & Vilnet [*Scapaniaceae s.l.] – {6}
- *undulifolium* (Nees) Konstant. & Vilnet (*Crossogyna undulifolia* (Nees) Schljakov) – **ARC:** EURO [I / 141], BE [III / 7, 10, 151, 228, 231], **SIB:** YAK [I / 244, 246], S [I / 27, 112, 146, 153], **FAR EAST:** CHUK [I / 228, 231] – {7}
- Blasia** L. [Blasiaceae]
- *pusilla* L. – **ARC:** EURO [I, IV / 141, 147, 282, 283], WS [III / 195], ES [III / 171, 295], ARCYAK [246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 266], KLN [72a, 73], C [I, IV / 11, 12, 15, 85, 103, 105, 106, 125, 173, 193, 202, 274], N-UR [I, IV / 41, 136, 252], S-UR [46, 138, 241], SE [177], **CAUC:** [I / 107, 131], **SIB:** W [I / 70, 169, 171], E [171, 292], YAK [I / 27, 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51], MAG [II / 51], KAM [I / 36], AMU [I, II, V / 66, 67, 91, 135], SAKH [I, II / 38, 114], S-KUR [II / 39], PRIM [II / 89]
- Blepharostoma** (Dumort.) Dumort. [Pseudolepicoleaceae]
- *arachnoideum* M.Howe – ?**FAR EAST:** ?S-KUR [III / 157] – {8}
 - *minus* Horik. – **FAR EAST:** SAKH [II / 29a, 114], S-KUR [II / 32, 39], PRIM [II / 35]
 - *trichophyllum* (L.) Dumort. – **ARC:** EURO [I, IV / 19, 141, 147, 151, 283], WS [III / 18, 195], ES [I, III / 171, 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 191, 266, 284, 299], KLN [72a], C [I, IV / 12, 14, 15, 85, 103, 105, 106, 125, 173, 193, 202, 274], N-UR [I, IV / 41, 47, 136, 252], S-UR [I / 21, 23, 46, 138], SE [177], **CAUC:** [I / 75, 107, 131], **SIB:** W [70, 169, 171], E [I / 171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III? / 51], KAM [I, II, IV / 36], AMU [I, II, V / 6, 66, 67, 91, 135, 156, 170], SAKH [I, II, VII / 38, 114, 170], SAKH [II / 34], S-KUR [II, III / 1, 39], PRIM [II / 89]
 - var. *brevirete* Bryhn & Kaal. – **ARC:** EURO [III / 151, 288], WS [III / 195, 296], ES [III / 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I / 234], NE [IV / 284], N-UR [IV / 136], **SIB:** YAK [246], S [I / 155], **FAR EAST:** CHUK [III / 10], KAM [I / 36], SAKH [II] – {9}
- Bucegia** Radian [Marchantiaceae]
- *romanica* Radian – **ARC:** ARCYAK [142, 246], BE [I, III / 7, 10], **SIB:** YAK [246]
- Calycularia** Mitt. [Calyculariaceae]
- *crispula* Mitt. – **FAR EAST:** AMU [I, II, V / 135], S-KUR [II / 32, 39], PRIM [II / 33] – {10}
 - *laxa* Lindb. & Arnell – **ARC:** EURO [I / 147], WS [III / 195, 239], ES [I / 144, 171], ARCYAK [III / 142, 246], BE [I, III / 10, 239], **SIB:** YAK [I / 246, 247], S [I, III / 112], **FAR EAST:** CHUK [I, III / 10, 145], MAG [II / 51], KAM [I, II / 36, 239] – {10}
- Calypogeia** Raddi [Calypogeiaceae]
- *arguta* Nees & Mont. – **FAR EAST:** S-KUR [II, III / 32, 39, 182]
 - *azurea* Stotler & Crotz – **EUR:** NW [I, III / 24, 214], NE [IV / 80], N-UR [252], S-UR [I / 137], ?C [I / 85, 173, ?180], **CAUC:** [I / 107, 131], **SIB:** S [I / 146], **FAR EAST:** ?CHUK [III / 10, 51], KAM [I / 36], AMU [VII? / 156, 170], SAKH [II / 170], S-KUR [II, III / 39, 50, 157], PRIM [II / 35] – {11}
 - *fissa* (L.) Raddi – **EUR:** NW [III? / 20, 110, 221] ?C [227], **CAUC:** [I / 75, 104, 107, 131] – {12}
 - *integristipula* Steph. – **ARC:** BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 266, 284], KLN [73], C [I, IV / 12, 14, 15, 17, 85, 103, 105, 106, 125, 202, 274], N-UR [I, IV / 41, 136], S-UR [I / 21, 23, 138], **CAUC:** [I / 107], **SIB:** W [I / 69, 70, 168, 257], YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [III / 10, 51], MAG [II / 51], KAM [I / 36],

- AMU [I, V, VI, VII / 6, 135, 156], SAKH [I, II, III / 38, 183], S-KUR [II, III / 39, 50], PRIM [II / 33]
- *muelleriana* (Schiffn.) Müll.Frib. – **ARC**: EURO [IV / 141, 151], WS [III / 195], ES [III / 295], ARCYAK [142, 246], BE [I, III / 10], **EUR**: NW [I, III / 24, 214, 234], NE [I, IV / 80, 266, 284], KLN [72a, 73], C [I, IV / 12, 14, 15, 17, 85, 103, 105, 106, 125, 274], N-UR [I, IV / 41, 136, 252, 286], S-UR [I / 21, 22, 138], **CAUC**: [I / 131], **SIB**: W [I / 69, 70, 168, 169], E [171], YAK [I / 246], S [I / 42, 112, 146, 155], **FAR EAST**: CHUK [I, III / 10, 51, 145], MAG [II / 51], KAM [I, IV / 36], AMU [II, VI / 6, 67, 91], SAKH [I, II, III / 38, 183], S-KUR [II / 39] PRIM [II / 89] – {11}
- *neesiana* (C.Massal. & Carestia) Müll.Frib. – **ARC**: EURO [IV / 147, 151], ES [III / 295], BE [III / 10], **EUR**: NW [I, III / 24, 204, 214, 234], NE [IV / 80, 266, 284], C [IV / 12, 15, 85, 173, 193, 275], N-UR [252, 299] S-UR [241], **SIB**: W [168, 169], E [292], YAK [I / 246], S [I, V / 42, 155, 267], **FAR EAST**: CHUK [I, III / 10, 145], MAG [III? / 51], KAM [I, IV / 36], AMU [II, VII / 66, 67, 91, 156], SAKH [I, II / 38, 114] S-KUR [II, III / 1, 39, 157], PRIM [II / 89]
- *neogaea* (R.M.Schust.) Bakalin¹ – **FAR EAST**: KAM [I / 36], S-KUR [II / 39], PRIM [II / 35]
- *sphagnicola* (Arnell & J.Perss.) Warnst. & Loeske – **ARC**: EURO [151], WS [III / 195], ARCYAK [142, 246], BE [I, III / 10], **EUR**: NW [I, III / 24, 214, 234], NE [IV / 113, 80], KLN [72a, 73], C [I, IV / 14, 15, 85, 125, 139, 180, 223, 274], N-UR [I, IV / 136, 286, 299], S-UR [I / 138], **CAUC**: [I / 131], **SIB**: W [I / 70, 168, 169], E [292], YAK [I / 246], S [I / 42, 112, 146], **FAR EAST**: CHUK [I, III / 10, 51, 145], KAM [I, III, IV / 1, 36], MAG [II / 37], AMU [III / 297], SAKH [I, II / 38, 114], S-KUR [II / 39]
- *suecica* (Arnell & J.Perss.) Müll.Frib. – **EUR**: NW [I, III / 24, 140, 204, 214], NE [IV / 80, 86], C [I, IV / 85, 105, 125, 202, 223, 274], S-UR [I / 138], **CAUC**: [I / 107, 131], **SIB**: S [I, V / 132, 155, 267, 268], **FAR EAST**: SAKH [I, II / 38], S-KUR [II, III / 32, 39, 184], PRIM [II / 35]
- Cephalozia* (Dumort.) Dumort. [Cephaloziaceae]
- *ambigua* C.Massal. – **ARC**: EURO [IV / 18, 19, 113, 151], WS [III / 195], ES [III / 295], ARCYAK [246], BE [I, III / 10], **EUR**: NW [I / 234], NE [113], N-UR [I / 136], S-UR [I / 138], **CAUC**: [I / 131], **SIB**: S [I, V / 146, 267], **FAR EAST**: CHUK [I / 145], KAM [I / 36], AMU [I, V / 135] – {13}
- *bicuspidata* (L.) Dumort. – **ARC**: EURO [I, IV / 18, 19, 117, 141, 147, 151, 191, 283], WS [III / 195, 296], ES [I, III / 18, 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR**: NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284, 298], KLN [73], KLN [115], C [I, IV / 12, 14, 15, 85, 103, 105, 106, 125, 193, 202, 274, 275], N-UR [I, IV / 41, 136, 252, 299], S-UR [I / 21, 23, 138], SE [177], **CAUC**: [I / 75, 107, 131], **SIB**: W [169], E [171, 292], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST**: CHUK [I, III / 10, 51, 145], MAG [II / 51], KAM [I, IV / 36], AMU [I, II, III, V, VI, VII / 6, 27, 67, 135, 170, 297], SAKH [I, II, VII, 38, 170], S-KUR [II / 39], PRIM [II / 89]
- *catenulata* (Huebener) Lindb. – **EUR**: KLN [72a], ?C [174], **CAUC**: [I / 75, 104, 107, 131, 263], **FAR EAST**: AMU [VII? / 170], PRIM [II / 33]
- *connivens* (Dicks.) Lindb. – **ARC**: WS [III / 195], ES [III / 295], ARCYAK [246], **EUR**: NW [I, III / 24, 118, 214], NE [I, IV / 41, 191, 284, 299], KLN [72a, 73, 115], C [I, IV / 12, 14, 85, 103, 105, 106, 125, 173, 274, 275], N-UR [252, 299], S-UR [217], **SIB**: W [169], E [292, 294], YAK [246], S [I / 42, 146, 155, 169], **FAR EAST**: CHUK [III? / 51], KAM [36], AMU [III, VI / 6, 170, 297], SAKH [II, VII / 38, 170], S-KUR [II / 32, 39], PRIM [II / 89]
- *lacunculata* J.B.Jack ex Spruce – **EUR**: NW [III? / 214], **SIB**: S [112] – {14}
- *leucantha* Spruce – **ARC**: EURO [I / 117, 147, 151, 299], WS [III / 195], ES [III / 295], BE [I, III / 10], **EUR**: NW [I, III / 24, 214, 234], NE [IV / 80, 284], ?C [173], **SIB**: W [169], YAK [246], S [155], **FAR EAST**: CHUK [I / 145], KAM [I, IV / 36], AMU [II, VI, VII 6, 66, 67, 91, 156], SAKH [I, II / 38, 114], S-KUR [II, III / 39, 50], PRIM [II / 89]

1 – The combination *Calypogeia neogaea* (R.M.Schust.) Bakalin (basionym *Calypogeia fissa* subsp. *neogaea* R.M. Schust., Hepat. Anthocerotae N. Amer. 2: 169. 1969) was published in [33a].

- *loitlesbergeri* Schiffn. – **ARC:** EURO [151, 299], ES [III / 295], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 78, 80, 266, 284], KLN [73], C [IV / 12, 14, 85, 105, 274], ?N-UR [252], **SIB:** E [292, 294] W [168, 169], **FAR EAST:** KAM [I, IV / 36], AMU [II], SAKH [I, II / 38] – {15}
 - *lunulifolia* (Dumort.) Dumort. – **ARC:** EURO [I, IV / 19, 117, 141, 147, 151, 191, 283, 299], WS [III / 195], ES [III / 171, 295], ARCYAK [246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284, 298], KLN [72a, 73], C [I, IV / 12, 14, 85, 103, 105, 106, 125, 173, 202, 274], N-UR [I, IV / 41, 80, 136, 286, 299], S-UR [I / 21, 46, 138], SE [177], **CAUC:** [I / 75, 104, 107, 131], **SIB:** W [I / 70, 169, 171], E [171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [I / 145], MAG [II / 51], KAM [I, IV / 36], AMU [I, II, V, VI, VII / 6, 66, 67, 91, 135, 156], SAKH [I, II / 38, 114], S-KUR [II, III / 39, 157, 183], PRIM [II / 89]
 - *macounii* (Austin) Austin – **EUR:** NW [I, III / 24, 204, 214], NE [IV / 80, 83, 86, 284], N-UR [I / 136], **SIB:** E [171, ?292], S [I / 146, 153] – {16}
 - *macrostachya* Kaal. – **EUR:** NW [I, III / 214], KLN [72a], C [I / 12, 14, 15]
 - *otaruensis* Steph. – **ARC:** BE [III / 10], **FAR EAST:** KAM [I / 36], AMU [II / 68], SAKH [KYO? / 114], S-KUR [II / 32, 39], PRIM [II / 89]
 - *pachycaulis* R.M.Schust. – **SIB:** S [I / 134], **FAR EAST:** KAM [I / 36], S-KUR [II / 39]
 - *pleniceps* (Austin) Lindb. – **ARC:** EURO [I, III, IV / 117, 141, 147, 151, 283, 288], WS [III / 195], ES [I, III / 171, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 266, 284], KLN [72a], C [I, IV / 12, 14, 85, 103, 105, 106, 125, 173, 223, 275, 276], N-UR [I, IV / 41, 136, 286, 299], S-UR [21, 138], **CAUC:** [I / 107, 131, 263], **SIB:** W [70, 169, 171], E [I / 171, 294] YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III? / 51], KAM [I, IV / 36], AMU [VI / 6], SAKH [I, II / 38], S-KUR [II / 39]
- Cephaloziella* (Spruce) Schiffn. [Cephaloziellaceae]
- *arctogena* (R.M.Schust.) Konstant. – **ARC:** EURO [I, III / 141, 151], WS [III / 195], ES [I, III / 127, 222, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 24, 118], S-UR [I/138], **SIB:** W [70], YAK [246], S [I / 42, 146, 155], **FAR EAST:** KAM [I / 36], S-KUR [II / 39]
 - *aspericaulis* Jørg. – **ARC:** WS [III / 195], BE [III / 151], **CAUC:** [I / 131], **SIB:** YAK [III / 249, 251], S [I / 130, 155, 268]
 - *divaricata* (Sm.) Schiffn. – **ARC:** EURO [I, IV / 18, 141, 147, 151, 191, 283], WS [III / 171, 195], ES [III / 18, 222, 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 79, 80, 284], KLN [73], C [I / 12, 14, 17, 85, 103, 125], N-UR [I / 41, 136], S-UR [21, 138], **CAUC:** [I / 107, 131, 263], **SIB:** W [I / 169, 171, 257], E [171], YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I / 36], AMU [I, II, V / 67, 135], SAKH [I, II / 38, 114], S-KUR [II / 39], PRIM [II / 89]
 - *elachista* (J.B.Jack ex Gottsche & Rabenh.) Schiffn. – **EUR:** NW [I, III / 24, 118, 128, 214], NE [IV / 83, 284], N-UR [252], KLN [72a, 73], C [I / 12, 14, 15, 85, 106, 139], **SIB:** W [I / 70, 168, 169, 256], E [13], YAK [I / 27, 246], S [I / 42, 112], **FAR EAST:** KAM [I / 36], S-KUR [II / 32, 39] – {17}
 - *elegans* (Heeg) Schiffn. – **ARC:** WS [III / 195], ES [I, III / 295], BE [III / 10], **EUR:** S-UR [I / 138], **SIB:** E [I], S [112], **FAR EAST:** MAG [III / 51], KAM [I / 36] – {18}
 - *grimsulana* (J.B.Jack ex Gottsche & Rabenh.) Lacout. – **ARC:** EURO [19, 117, 151], WS [III / 195], ES [I, III / 222, 295], ARCYAK [142, 246], BE [III / 7, 10, 151], **EUR:** NW [I / 234], NE [284], **CAUC:** [I / 107, 263], **SIB:** E [292], YAK [I / 27, 246], S [I], **FAR EAST:** CHUK [I / 145], KAM [I / 36]
 - *hampeana* (Nees) Schiffn. – **ARC:** EURO [?19, 151], WS [III / 195], ES [III / 18, 295], ARCYAK [142, 246], BE [I, III / 7, 151], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 284], KLN [72a, 73], C [I / 85, 125, 173, 193, 202, 274], N-UR [252, 299], S-UR [21, 22], **SIB:** W [168, 169, 256], S [I, V / 112, 146, 267], **FAR EAST:** KAM [I / 36], MAG [II / 37], AMU [II / 68] – {19}

- *polystratosa* (R.M.Schust. & Damsh.) Konstant. – **ARC:** EURO [151], WS [III / 195], ES [151], **EUR:** NW [I, III / 120, 214], C [274], **SIB:** YAK [246]
- *rubella* (Nees) Warnst. – **ARC:** EURO [151], WS [III / 195], ES [III / 18, 295], ARCYAK [246], ?BE [231], **EUR:** NW [I, III / 24, 204, 214, 234], NE [I, IV / 80, 266], KLN [73], C [I / 14, 74, 85, 103, 105, 106, 125, 173, 193, 202, 274, 275], N-UR [I, IV / 41, 80, 136], S-UR [I / 21, 22, 138], **CAUC:** [I / 131], **SIB:** W [I / 70, 169], E [171], YAK [I / 27, 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** KAM [I, IV / 36], MAG [II / 37]
- *spinicaulis* Douin – **FAR EAST:** PRIM [II / 89]
- *spinigera* (Lindb.) Warnst. (*Cephaloziella subdentata* Warnst.) – **ARC:** EURO [I, III / 18, 19, 117, 147, 283, 288, 299], WS [III / 195], ES [I, III / 18, 295], ARCYAK [246], BE [III / 7, 10], **EUR:** NW [I / 24, 234], NE [IV / 80, 284], KLN [73], C [I, IV / 12, 15, 85, 125], N-UR [252, 299], **SIB:** W [70, 168, 169], E [292], YAK [I / 246], S [I / 42, 146, 155], **FAR EAST:** CHUK [I / 145], KAM [I, IV / 36], AMU [II / 68]
- *stellulifera* (Taylor ex Spruce) Schiffn. – **EUR:** NW [III? / 214], ?**SIB:** W [159] – {20}
- *turneri* (Hook.) Müll.Frib. – **CAUC:** [I / 104, 131]
- *uncinata* R.M.Schust. – **ARC:** EURO [I / 117, 147, 151], WS [III / 195], ES [I, III / 222, 295], ARCYAK [142, 246], BE [I], **EUR:** NW [I / 24, 234], **SIB:** E [292], **FAR EAST:** CHUK [I / 145], KAM [I, II / 36] MAG [II / 37], S-KUR [II / 39]
- *varians* (Gottsche) Steph. – **ARC:** EURO [III / 151, 288], WS [III / 195, 296], ES [I, III / 222, 295], ARCYAK [142, 246], BE [I, III / 10, 151], **EUR:** NW [I / 24, 204, 234], **CAUC:** [I / 131], **SIB:** YAK [246], S [I, V / 132, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], KAM [I, II / 36], MAG [II / 37]
- *violacea* Schljakov – **SIB:** W [I / 169, 230]
- Cheilolejeunea* (Spruce) Schiffn. [Lejeuneaceae]
- *obtusifolia* (Steph.) S.Hatt. – **FAR EAST:** S-KUR [II, III / 39, 185], PRIM [I, II / 33]
- Chiloscyphus* Corda [Lophocoleaceae] – {21}
- *palescens* (Ehrh. ex Hoffm.) Dumort. var. *palescens* – **ARC:** EURO [IV / 283], ES [III / 295], BE [III / 10], ARCYAK [142, 246], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284], KLN [72a, 73], C [I / 12, 14, 15, 17, 85, 103, 125, 193, 274], N-UR [IV / 41, 80, 136, 299], S-UR [I / 21], SE [177, 253], **CAUC:** [I / 107, 131, 263], **SIB:** W [168, 169], E [171], YAK [246], S [I / 42], **FAR EAST:** CHUK [III / 10], KAM [I / 36], AMU [II, VI, VII / 6, 67, 91], SAKH [170], S-KUR [III / 50], PRIM [II / 89]
- var. *fragilis* (A.Roth) Müll.Frib. – **ARC:** EURO [18], WS [III / 18, 195], ES [III / 295], BE [I, III / 10], **EUR:** NW [I, III / 24, 110, 214, 234], NE [IV / 80, 284], N-UR [I], C [173], S-UR [21], **SIB:** YAK [246], S [I / 42, 112], **FAR EAST:** KAM [I / 36], SAKH [I, II / 38], S-KUR [II / 39], PRIM [II / 33]
- *polyanthos* (L.) Corda var. *polyanthos* – **ARC:** EURO [I, IV / 19, 113, 141, 151, 283], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 113, 284], C [I / 12, 14, 74, 85, 103, 105, 106, 125, 193, 202, 274, 275], N-UR [I, IV / 80, 136, 299], S-UR [I / 21, 22, 46, 138], SE [177, 253], **CAUC:** [I / 107, 131, 263], **SIB:** W [69, 168, 169, 256, 257], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [III / 10], KAM [I / 36], AMU [I, II, V, VII / 66, 67, 91, 135, 156], SAKH [I, II / 38, 114], S-KUR [III / 183], PRIM [II / 89]
- var. *rivularis* (Schrad.) Hazsl. – **ARC:** ES [171], **EUR:** NW [III / 214], C [85], NE [IV / 284], N-UR [I, IV / 113], **SIB:** E [171], S [I, V / 42, 112, 267], **FAR EAST:** KAM [I / 36], AMU [II / 66, 91], S-KUR [II / 39], PRIM [II / 89]
- Chonecolea* Grolle [Chonecoleaceae]
- *verae* Potemkin – **SIB:** S [III / 205] – {22}
- Cladopodiella* H.Buch [Odontoschismataceae]
- *fluitans* (Nees) H.Buch – **ARC:** EURO [117, 151, 283], WS [III / 195], ES [III / 171, 295], BE

- [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284], KLN [72a], C [I, IV / 12, 14, 15, 85, 103, 105, 106, 139, 223, 274], N-UR [I, IV / 41, 136, 252], S-UR [21, 138, 241], **CAUC:** [I / 107], **SIB:** W [168, 169], E [171], YAK [I / 27], S [I / 27, 146], **FAR EAST:** KAM [I, IV / 36], AMU [II, VI / 6, 68], SAKH [II / 34], S-KUR [II, III / 39, 50], PRIM [II / 89]
- *francisci* (Hook.) Jørg. – **ARC:** EURO [299], WS [III / 195], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 113, 284, 285], C [15], **SIB:** W [III / 211], S [I / 132], **FAR EAST:** KAM [I, III / 36, 184], S-KUR [II, III / 39, 182]
- Cololejeunea** (Spruce) Schiffn. [Lejeuneaceae]
- *calcareae* (Lib.) Schiffn. – **CAUC:** [I / 104, 131, 154]
- *japonica* (Schiffn.) S.Hatt. – **FAR EAST:** PRIM [III / 201]
- *macounii* (Spruce) A.Evans – **FAR EAST:** S-KUR [II / 32, 39]
- *nakajimae* S.Hatt. – **SIB:** S [III / 213]
- *ornata* A.Evans – **FAR EAST:** AMU [II / 67, 91, 92], PRIM [II / 89] – {23}
- *rossettiana* (C.Massal.) Schiffn. – **CAUC:** [I / 75, 104, 131, 154]
- *subkodamae* Mizut. – **SIB:** S [I / 31, 132], **FAR EAST:** SAKH [III / 182], ?S-KUR [99] – {24}
- Conocephalum** Hill [Conocephalaceae]
- *conicum* aggr. (*Conocephalum conicum* (L.) Dumort. s. str. and *C. salebrosum* Szweyk., Buczk. & Odrzyk.) – **ARC:** EURO [191, 299], ARCYAK [142, 246], **EUR:** NE [266], KLN [73], C [14, 15, 103, 105, 173, 193], N-UR [252, 299], S-UR [21, 23], SE [177], **SIB:** W [168], YAK [246], S [112, 146], E [171], **FAR EAST:** KAM [36], AMU [170], SAKH [100, 114, 226], S-KUR [39, 100, 157, 179], PRIM [89] – {25}
- *conicum* (L.) Dumort. s. str. – **EUR:** NW [I, V, VII / 56, 58], NE [I / 56], C [I, V / 56], N-UR [I / 56], **CAUC:** [I / 56, 131], **SIB:** S [I, V / 56]
- *japonicum* (Thunb.) Grolle – **FAR EAST:** KAM [I / 36], AMU [II / 91, 92], SAKH [I, II / 38, 114, 29a], S-KUR [II, III / 39, 50], PRIM [II / 89]
- *salebrosum* Szweyk., Buczk. & Odrzyk. – **ARC:** EURO [I, IV / 56], **EUR:** NW [I, III, VII / 56, 58, 220], NE [I, IV, V / 56], KLN [254], C [I / 13, 56], N-UR [I, IV / 56, 81], S-UR [III, V / 56], SE [III / 56], **CAUC:** [I / 56, 131], **SIB:** S [I, V / 56], **FAR EAST:** KAM [I / 56], AMU [V, VII / 56], SAKH [I / 56], PRIM [I, V / 56, 254], S-KUR [V / 56]
- Crossocalyx** Meyl. [*Scapaniaceae s.l.]
- *hellerianus* (Nees ex Lindenb.) Meyl. – **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 266, 284], C [I / 12, 85, 105, 106, 125, 173, 202], N-UR [I, IV / 136, 252, 299], S-UR [I / 138], SE [177], **CAUC:** [I / 107, 131], **SIB:** W [70, 168, 169, 171, 257], E [171], YAK [I / 27, 246], S [I, V / 42, 146, 155, 267], **FAR EAST:** MAG [II / 51], AMU [II, VI / 6], SAKH [I, II / 38], S-KUR [II / 32, 39]
- Crossogyna** (R.M.Schust.) Schljakov [Jamesoniellaceae]
- *autumnalis* (DC.) Schljakov – **EUR:** NW [III / 24, 214], NE [I, IV / 80, 284], KLN [72a, 73], C [I / 12, 14, 85, 105, 106, 125, 173], N-UR [I / 136], S-UR [I / 21, 23, 138], SE [177], **CAUC:** [I / 75, 107, 131, 263], **SIB:** W [69, 70, 169, 258], E [171], YAK [246], S [I, V / 42, 112, 146, 267], **FAR EAST:** KAM [36], AMU [II / 6, 67, 91], SAKH [III / 183], S-KUR [II / 32, 39], PRIM [II / 89] – {26}
- Cryptocolea** R.M.Schust. [Solenostomataceae]
- *imbricata* R.M.Schust. – **ARC:** WS [III / 195], ES [III / 295], ARCYAK [I / 142, 246], BE [III / 7, 10], **SIB:** YAK [246, 247], **FAR EAST:** KAM [36]
- Cryptocoleopsis** [Solenostomataceae]
- *imbricata* Amakawa – **FAR EAST:** KAM [I, II, III / 29, 36, 184], S-KUR [I, II, III / 39, 182]
- Dichiton** Mont. [Cephaloziellaceae]
- *integerrimum* (Lindb.) H.Buch – **EUR:** NW [I / 24, 116, 128], NE [IV / 83, 284, 285], N-UR [252, 299], **FAR EAST:** MAG [II / 37]

Diplophyllum (Dumort.) Dumort. [Scapaniaceae]

- *albicans* (L.) Dumort. – **ARC:** ARCYAK [246], BE [III / 10], **EUR:** NW [I, III / 110, 148, 221, 234], KLN [72a], N-UR [299], **CAUC:** [I / 107, 131], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III? / 51], KAM [I, IV / 36], AMU [I, V / 135], SAKH [II / 34], S-KUR [II, III / 1, 39, 183]
- *andrewsii* A.Evans – **FAR EAST:** S-KUR [II / 32, 39]
- *obtusatum* (R.M.Schust.) R.M.Schust. – **SIB:** YAK [I / 27, 246, 249], S [I / 132, 155], **FAR EAST:** KAM [I / 36], AMU [I, V / 135]
- *obtusifolium* (Hook.) Dumort. – **ARC:** EURO [I / 113, 141, 151], **EUR:** NW [I, III / 24, 214, 234], KLN [72a], C [15], N-UR [I / 136], **SIB:** YAK [246], S [I, V / 112, 146, 155, 267], **FAR EAST:** CHUK [III / 10], KAM [I / 36], MAG [II / 37], AMU [III / 297], PRIM [II / 89]
- *taxifolium* (Wahlenb.) Dumort. – **ARC:** EURO [I, IV / 18, 19, 117, 141, 151, 283], WS [III / 195], ES [I, III / 18, 295], ARCYAK [246], BE [I, III / 10], **EUR:** NW [I, III / 24, 204, 221, 234], NE [I, IV / 284], C [105], N-UR [I, IV / 136, 191, 286], **CAUC:** [I / 107, 131], **SIB:** E [292], YAK [I / 246], S [I / 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II / 51], KAM [I, IV / 36], AMU [I, II, V, VII / 66, 67, 91, 135, 156], SAKH [I, II, VII / 38, 114, 170], S-KUR [II, III / 39, 50, 157, 183], PRIM [II / 89]

Eocalypogeia (R.M.Schust.) R.M.Schust. [Calypogeiaceae]

- *schusterana* (S.Hatt. & Mizut.) R.M.Schust. – **ARC:** BE [III / 7, 239, 289], **SIB:** YAK [246, 247], **FAR EAST:** AMU [I / 27], SAKH [II / 40]

Eremonotus Lindb. & Kaal. ex Pearson [Jungermanniaceae]

- *myriocarpus* (Carrington) Pearson – **EUR:** NW [I / 121], **CAUC:** [I / 107], **SIB:** S [I / 146], **FAR EAST:** CHUK [I / 145], KAM [I / 36], SAKH [II / 34], S-KUR [II, III / 39, 184]

Fossombronina Raddi [Fossombroniaceae]

- *alaskana* Steere & Inoue – **ARC:** WS [III / 195], **SIB:** E [13], **FAR EAST:** CHUK [III / 10, 161], KAM [13], S-KUR [II / 32, 39], PRIM [II / 35]
- *angulosa* (Dicks.) Raddi – **CAUC:** [III / 164a, 215]
- *foveolata* Lindb. – **EUR:** NW [I, III / 24, 120, 204, 214], SE [253], C [14, 276], **CAUC:** [240]
- *incurva* Lindb. – **EUR:** NW [13], C [15]
- *wondraczekii* (Corda) Lindb. – **EUR:** NW [I, III / 24, 214], C [I / 12, 14, 16, 105, 125, 193, 202, 275] – {27}

Frullania Raddi [Frullaniaceae] – {28}

- *appendiculata* Steph. – **FAR EAST:** AMU [II / 91], SAKH [II / 114, 29a], S-KUR [II / 39, 100], PRIM [I, II / 89]
- *bolanderi* Austin – **EUR:** NW [III / 218], C [I, TVBG / 14, 17, 85, 125, 180,], N-UR [I / 136, 252, 299], S-UR [I / 21, 22, 23, 138], **CAUC:** [I / 131, 187], **SIB:** YAK [I / 27, 246], S [I / 112, 146, 167a, 268], **FAR EAST:** KAM [I, IV / 36], AMU [I, II, V, VII / 67, 91, 92, 135, 156], SAKH [I, II, III / 38, 183], PRIM [II / 89]
- *crispiplacata* Yuzawa & S.Hatt. – **SIB:** YAK [I / 27], **FAR EAST:** PRIM [II, V / 89]
- *davurica* Hampe – **SIB:** W [168, 169], S [I, V / 112, 264, 267], **FAR EAST:** KAM [I / 36], AMU [I, II, V / 27, 66, 67, 91, 135], S-KUR [II, III / 39, 184], PRIM [I, II / 89]
- *dilatata* (L.) Dumort. – **EUR:** NW [III / 24, 214, 221], KLN [73, 115], C [I, V / 103, 105, 173, 180], S-UR [21], **CAUC:** [I / 75, 104, 107, 131], **SIB:** W [168], E [171], YAK [I / 246], S [I / 42, 112, 264], **FAR EAST:** KAM [I / 36], AMU [II, VI / 6, 66, 67, 91], ?SAKH [KYO? / 114], ?S-KUR [III / 157], PRIM [I, II / 89] – {29}
- *diversitexta* Steph. – **FAR EAST:** AMU [II / 88], PRIM [I, II / 89]
- *fauriana* Steph. – ?**FAR EAST:** AMU [G? / 60] – {30}
- *fragilifolia* (Taylor) Gottsche – **EUR:** NW [III / 221]
- *fuscovirens* Steph. – **FAR EAST:** ?PRIM [II / 33] – {31}
- *inflata* Gottsche – **SIB:** YAK [246], S [I, II / 42, 112, 268], **FAR EAST:** AMU [I, II / 27, 66, 67,

- 91], SAKH [I, II, III / 38, 114, 183], S-KUR [II / 32, 39], PRIM [I, II / 89]
- *jackii* Gottsche – **EUR:** N-UR [299], **CAUC:** [I, III / 143, 215]
- *koponenii* S.Hatt. – **SIB:** YAK [251], S [268], **FAR EAST:** AMU [II, VII / 67, 156], SAKH [I, II / 38], S-KUR [II / 32, 39], PRIM [I, II / 89]
- *musciola* Steph. – **SIB:** S [V / 267, 268], **FAR EAST:** AMU [I, II, VII / 66, 67, 91, 92, 156], SAKH [I, II / 38, 114], S-KUR [II / 32, 39], PRIM [I, II / 89]
- *nisquallensis* Sull. – **ARC:** ES [I, III / 127, 295], ARCYAK [142, 246], BE [III / 10], **SIB:** YAK [246], S [I / 132], **FAR EAST:** CHUK [III / 10], SAKH [II / 40]
- *oakesiana* Austin – **EUR:** NW [III / 220], C [17], **FAR EAST:** SAKH [KYO? / 114], S-KUR [III / 184]
- *parvistipula* Steph. – **CAUC:** [I / 131, 187], **SIB:** YAK [246], S [I, V / 267, 268], **FAR EAST:** AMU [VII / 156], PRIM [II / 91]
- *polyptera* Taylor – **FAR EAST:** PRIM [II / 35]
- *schensiana* C.Massal. – ?**FAR EAST:** AMU [G? / 60] – {32}
- *tamarisci* (L.) Dumort. – **ARC:** EURO [299], BE [III / 10], **EUR:** NW [III / 24, 52, 214, 221], KLN [72a], **CAUC:** [I / 1a, 75, 104, 107, 131], **SIB:** S [V / 112, 267], **FAR EAST:** CHUK [III / 10]
- *taradakensis* Steph. – **FAR EAST:** AMU [II / 66, 91], PRIM [I, II / 89]
- Geocalyx** Nees [Geocalycaceae]
- *graveolens* (Schrad.) Nees – **EUR:** NW [I, III / 24, 118, 214, 234], NE [IV / 80,86], KLN [72a], C [I, TVBG / 15, 125, 180, 193, 202, 223], N-UR [252, 299], S-UR [I / 138], **CAUC:** [I / 131], **SIB:** W [69, 168, 169], E [171, 277], YAK [I / 27, 246], S [I, V / 42, 267], **FAR EAST:** KAM [36], AMU [II / 67, 91], SAKH [II / 38], S-KUR [II, III / 32, 39, 184], PRIM [II / 89] – {33}
- *lancistipulus* (Steph.) S.Hatt. – ?**FAR EAST:** S-KUR [II / 32, 39] PRIM [II / 35] – {34}
- Gymnocolea** (Dumort.) Dumort. [*Scapaniaceae s.l.]
- *fascinifera* Potemkin – **ARC:** EURO [III / 207], WS [III / 195]
- *inflata* (Huds.) Dumort. – **ARC:** EURO [I, IV / 141, 147, 151, 283], WS [III / 18, 195, 296], ES [III, I / 171, 295], ARCYAK [246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80,86, 111, 284, 299], KLN [72a, 73], C [I, IV / 15, 85, 125, 173, 274, 276], N-UR [I, IV / 41, 136, 286], S-UR [I / 138, 217], **CAUC:** [I / 107, 131], **SIB:** W [70, 168, 169], YAK [I / 27, 246], S [I, V / 112, 146, 155, 267], E [171], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II / 51], KAM [I, IV / 36], AMU [I, II, VI / 6, 68], SAKH [I, II / 38], S-KUR [II / 39], PRIM [II / 89]
- subsp. *acutiloba* (Schiffn.) R.M.Schust. & Damsh. ex L.Söderstr. & Váňa – **ARC:** WS [III / 195], ES [III / 295] – {35}
- *marginata* (Steph.) S.Hatt. – **FAR EAST:** S-KUR [II / 32, 39]
- Gymnomitrium** Corda [Gymnomitriaceae] – {36}
- *adustum* Nees emend. Limpr. – **FAR EAST:** KAM [III / 36], S-KUR [II / 32, 39] – {36}
- *alpinum* (Gottsche ex Husn.) Schiffn. – **SIB:** YAK [I / 246], S [I / 112, 146], **FAR EAST:** KAM [I, II / 36], S-KUR [II / 39] – {36}
- *brevissimum* (Schleich. ex Dumort.) Warnst. – **EUR:** NW [I / 148, 234], N-UR [I, IV / 41], **CAUC:** [I / 107], **SIB:** S [I / 127, 132, 146], **FAR EAST:** CHUK [III? / 51], KAM [I / 36] – {36}
- *commutatum* (Limpr.) Schiffn. – **ARC:** BE [I, III / 10], **SIB:** S [I / 132], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I / 36], AMU [I, II, V / 91, 135], SAKH [II / 34], S-KUR [II / 32, 39] – {36}
- *concinatum* (Lightf.) Corda – **ARC:** EURO [I, III, IV / 18, 19, 141, 147, 283, 288], WS [III / 195], ES [I, III / 18, 222, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 24, 234], N-UR [I, IV / 41, 136, 191, 299], **CAUC:** [I / 107, 131], **SIB:** E [292], YAK [I / 27, 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II / 51], KAM [I, IV / 36], AMU [I, V / 135], SAKH [II / 34], S-KUR [II, III / 39, 50]
- *corallioides* Nees – **ARC:** EURO [I, III, IV / 18, 141, 151, 288, 299], WS [I, III / 195, 296], ES

- [I, III / 18, 171, 222, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 234], N-UR [IV / 299], **CAUC:** [I / 107], **SIB:** YAK [I / 246], S [I, V / 112, 127, 267], **FAR EAST:** CHUK [III / 10, 51], KAM [I, IV / 36], MAG [II / 37], SAKH [III / 184], S-KUR [II / 39]
- *laceratum* (Steph.) Horik. – **SIB:** S [265, 267] – {37}
- *obtusum* Lindb. – **ARC:** ?EURO [III / 299], **EUR:** NW [III / 24, 110, 221], ?**CAUC:** [59] – {38}
- *pacificum* Grolle – **ARC:** BE [III / 10], **FAR EAST:** KAM [I / 36], S-KUR [II / 39]
- Haplomitrium* Nees [Haplomitriaceae]
- *hookeri* (Sm.) Nees – **EUR:** NW [I / 118, 150, 214], NE [IV / 83, 284], **SIB:** E [239], YAK [I / 246, 247, 249], S [I / 146], **FAR EAST:** S-KUR [III / 39, 182]
- Harpanthus* Nees [Geocalycaceae]
- *drummondii* (J.Taylor) Grolle – **SIB:** W [III / 43]
- *flotivianus* (Nees) Nees – **ARC:** EURO [I, IV / 82, 117, 141, 151], ES [I / 277], BE [I, III / 10], **EUR:** NW [I, III / 24, 204, 214, 234], NE [I, IV / 80, 266, 284], N-UR [I, IV / 41, 136, 252, 299], S-UR [I / 21, 22, 138], **SIB:** E [171], S [I, V / 112, 146, 267], **FAR EAST:** CHUK [III / 10], MAG [II / 51], KAM [I / 36], AMU [II / 67, 91], SAKH [I, II / 38, 114], S-KUR [II / 39], PRIM [II / 89]
- *scutatus* (F.Weber & D.Mohr) Spruce – **EUR:** NW [III, VII / 24, 214], NE [I, IV / 80, 83, 86], ?N-UR [I / 252, 299], **CAUC:** [I / 131], **SIB:** W [70, 168], S [I / 42, 112], **FAR EAST:** AMU [II / 92], SAKH [II / 34], PRIM [II / 35] – {39}
- Hattorianthus* R.M.Schust. & Inoue [Moerckiaceae]
- *erimonus* (Steph.) R.M.Schust. & Inoue – **FAR EAST:** S-KUR [II / 39], PRIM [I, II / 89]
- Hattoriella* (Inoue) Inoue [Jungermanniaceae]
- *morrisoncola* (Horik.) Bakalin – **SIB:** S [I / 25] – {40}
- Herbertus* Gray [Herbertaceae] – {41}
- *aduncus* (Dicks.) Gray – **SIB:** E [293] YAK [I / 246], S [112, 127, 268], **FAR EAST:** CHUK [III / 10], KAM [I / 36], S-KUR [II / 39], PRIM [II / 89]
- ?*buchii* Juslén – **FAR EAST:** AMU [H, 108], S-KUR [II / 39] – {41}
- *dicranus* (Taylor ex Gottsche, Lindenb. & Nees) Trevis. – **ARC:** ES [III / 295], ARCYAK [142, 246], BE [III / 10], **FAR EAST:** AMU [I, V / 135], PRIM [II / 33]
- Heterogemma* (Lindb.) Konstant. & Vilnet [Scapaniaceae] – {6}
- *capitata* (Hook.) Konstant. & Vilnet (*Schistochilopsis capitata* (Hook.) Konstant.) – **EUR:** NW [III / 214], KLN [72a], C [I / 17, 125], **SIB:** W [I / 149]
- *laxa* (Jørg.) Konstant. & Vilnet (*Schistochilopsis laxa* (Lindb.) Konstant.) – **ARC:** ARCYAK [246], **EUR:** NW [I / 118, 128, 206, 228, 234], NE [IV / 80, 83, 284], C [180], **SIB:** W [168], YAK [I / 246], **FAR EAST:** KAM [I / 36]
- Heteroscyphus* Schifffn. [Lophocoleaceae]
- *planus* (Mitt.) Schifffn. – ?**FAR EAST:** PRIM [III / 203] – {42}
- Hygrobella* Spruce [Hygrobellaceae]
- *laxifolia* (Hook.) Spruce – **EUR:** NW [I / 24, 148, 234], **FAR EAST:** KAM [I / 36], S-KUR [II / 39]
- Isopaches* H.Buch [*Scapaniaceae s.l.]
- *albovidis* (R.M.Schust.) Schljakov – **ARC:** WS [III / 195], BE [III / 10], **EUR:** NW [52], **FAR EAST:** CHUK [III / 10], AMU [I / 27]
- *bicrenatus* (Schmidel ex Hoffm.) H.Buch – **ARC:** EURO [141, 147, 151], WS [III / 195], ES [171], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284], N-UR [IV], S-UR [138], C [I / 14, 15, 17, 85, 103, 105, 106, 125, 193, 202, 274], **CAUC:** [I / 107], **SIB:** W [171], E [171, 292], YAK [I / 246], S [I, V / 112, 267], **FAR EAST:** MAG [II / 51], KAM [I, IV / 36], AMU [I / 27], SAKH [I, II / 38], S-KUR [II / 39], PRIM [II / 33]
- *decolorans* (Limpr.) H.Buch – **ARC:** WS [III / 195], **EUR:** NW [I / 234], **CAUC:** [I / 107], **SIB:** YAK [246], **FAR EAST:** KAM [I / 36]

Iwatsukia N.Kitag. [Odontoschismataceae]

— *jishibae* (Steph.) N.Kitag. – **SIB:** S [I, V / 126, 155, 267], **FAR EAST:** AMUR [I / 27], S-KUR [II / 32, 39]

Jubula Dumort. [Jubulaceae]

— *hutchinsiae* (Hook.) Dumort. subsp. *javanica* (Steph.) Verd. – **CAUC:** [I / 75, 104, 131, 133]

— *japonica* Steph. – **FAR EAST:** PRIM [I, II / 89]

Jungermannia L. [Jungermanniaceae]

— *atrovirens* Dumort. – **ARC:** ARCYAK [246], **EUR:** NW [I / 20, 24], C [I / 174, 179a], **CAUC:** [I / 59, 75, 104, 107, 131], **SIB:** E [294], YAK [246], S [I, V / 127, 146, 267], **FAR EAST:** KAM [I / 36], SAKH [KYO? / 114], PRIM [II / 33]

— *borealis* Damsh. & Váňa – **ARC:** BE [I, III / 10], ARCYAK [142, 246], **EUR:** NW [I / 24, 234], S-UR [21, 22], **CAUC:** [I / 107, 263], **SIB:** YAK [246], S [I, V / 127, 267], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I / 36], AMU [I, V / 135], S-KUR [II / 32]

— *eucordifolia* Schljakov – **ARC:** ARCYAK [142], ?BE [I, III / 10], **EUR:** NW [I / 24, 234], NE [IV / 79, 80], N-UR [I, IV / 41, 136, 191], **CAUC:** [I / 107, 131, 259], **SIB:** S [I, V / 267], **FAR EAST:** MAG [II, III / 51], KAM [I / 36], SAKH [II / 34], S-KUR [II / 39]

— *exsertifolia* Steph. – **ARC:** ?BE [I, III / 10], ?ARCYAK [246], **SIB:** S [I, ?146], **FAR EAST:** CHUK [I, III / 10, 145], MAG [II, III / 51], KAM [I / 36], SAKH [II / 34], S-KUR [II / 39], PRIM [II, III / 201] – {43}

— *konstantinovae* Bakalín & Vilnet – **FAR EAST:** PRIM [I, II / 44a]

— *polaris* Lindb. – **ARC:** EURO [I, III, S-PA, 147, 151, 259, 288], WS [III / 195, 296], ES [III, S-PA, UPS, 18, 222, 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I / 234], NE [V / 266], **SIB:** W: [S-PA, 259], YAK [246], E [UPS, 259], S [I], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I / 36], SAKH [II / 34]

— *pumila* With. – **ARC:** EURO [I, III, IV / 141, 151, 288], WS [I, III / 195], ES [III / 171, 295], ARCYAK [142, 246], BE [I, III / 7, 10], **EUR:** NW [I, III / 24, 204, 234], NE [IV / 80, 86, 284], N-UR [IV / 136, 299], S-UR [21, 22, 138], **CAUC:** [I / 131], **SIB:** E [171, 259, 292], YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], E [171], **FAR EAST:** CHUK [I, III / 10, 145], MAG [II, III / 51], KAM [I / 36], SAKH [II / 34], S-KUR [II / 39]

Kurzia G.Martens [Lepidoziaceae]

— *makinoana* (Steph.) Grolle – **FAR EAST:** KAM [I, IV / 36], SAKH [I, II / 38], S-KUR [II, III / 39, 184]

— *pauciflora* (Dicks.) Grolle – **EUR:** NW [I, III / 24, 110, 140, 214, 234], NE [IV / 80, 83], KLN [73], C [16, 105, 174]

Leiocolea (Müll.Frib.) H.Buch [Jungermanniaceae]

— *badensis* (Gottsche) Jørg. – **ARC:** EURO [I, IV / 19, 147, 151], WS [III / 195], ES [I, III / 171, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 24, 214, 234], NE [IV / 80, 266, 284, 298], C [I / 12, 14, 103, 174, 193, 276, 298], N-UR [I, IV / 41, 191, 299], S-UR [21, 46, 171], **CAUC:** [I / 131], **SIB:** W: [178], E [171], YAK [I / 246], S [I, V / 146, 267], **FAR EAST:** CHUK [III / 10], AMU [I / 27], SAKH [II / 40]

— *bantriensis* (Hook.) Jørg. – **ARC:** EURO [IV / 113, 151], ES [I, III / 295], **EUR:** NW [I / 24, 234], NE [IV / 113, 266, 284], N-UR [I, IV / 41], **CAUC:** [I / 107, 131, 263], **SIB:** E [292, 294], W [I / 168], S [V / 155, 267], **FAR EAST:** KAM [I / 36], SAKH [II / 40]

— *collaris* (Nees) Schljakov – **ARC:** EURO [I, III, IV / 147, 151, 283, 288], WS [III / 195], ES [III / 295], ARCYAK [142, 246], **EUR:** NW [I / 24, 234], NE [IV / 80, 266, 284], ?C [?173], N-UR [IV / 47, 286], S-UR [I / 137], **CAUC:** [I / 107, 263], **SIB:** E [292], YAK [246], S [I / 155], **FAR EAST:** CHUK [I, III / 10, 145], MAG [III / 51], AMU [I, V / 135], SAKH [II / 40] – {44}

— *gillmanii* (Austin) A.Evans – **ARC:** EURO [III, IV / 19, 141, 151, 288], WS [III / 195], ES [III / 171, 295], BE [III / 10], ARCYAK [142, 246], **EUR:** NW [I / 20, 24, 119, 234], NE [IV / 80,

- 284], N-UR [I, IV / 47, 136, 191, 252, 299], **SIB:** W [169], E [171], YAK [246], S [I / 42, 112, 146, 155], **FAR EAST:** CHUK [III / 10], KAM [I, II / 36], SAKH [II / 40]
- *heterocolpos* (Thed. ex C.Hartm.) H.Buch – **ARC:** EURO [I, III, IV / 18, 19, 117, 141, 147, 288], WS [18, 195, 296], ES [I / 171, 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I / 24, 214, 234], NE [IV / 80, 266, 284], C [I / 11, 85, 106], N-UR [I, IV / 41, 47, 80, 136, 191, 252, 299], S-UR [138], **CAUC:** [I / 107, 131], **SIB:** W [I / 168, 169], E [171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], KAM [I / 36], AMU [I, V / 27, 135], SAKH [II / 114], S-KUR [II / 39], PRIM [II / 33]
- var. *arctica* (S.W.Arnell) Mertensson – **ARC:** WS [III / 195], ARCYAK [142], BE [I, III / 10], **EUR:** NW [I / 234], **SIB:** S [42],
- var. *harpanthoides* (Bryhn & Kaal.) S.W.Arnell – **ARC:** EURO [151], WS [III / 195], ES [222], BE [I, III / 10], **FAR EAST:** CHUK [III / 10], KAM [I / 36]
- *rutheana* (Limpr.) Müll.Frib. – **ARC:** EURO [IV / 287], WS [III / 195], ES [III / 171, 295], BE [III / 10], ARCYAK [142, 246], **EUR:** NW [I / 24, 234], NE [266], C [IV / 85], N-UR [IV / 136, 286], **SIB:** W [168, 169], YAK [246], **FAR EAST:** CHUK [III / 10], KAM [36]
- *turbinata* (Raddi) H.Buch – **CAUC:** [I / 76, 104, 131]
- *ussuriensis* Bakalin – **FAR EAST:** PRIM [II / 34a]
- Lejeunea* Lib. [Lejeuneaceae]
- *cavifolia* (Ehrh.) Lindb. – **ARC:** ARCYAK [142, 246], **EUR:** NW [I, III / 24, 140, 214], KLN [72a, 115], C [5, 174], S-UR [21, 22], **CAUC:** [I / 75, 104, 131], **SIB:** YAK [246], S [I, V / 112, 267], **FAR EAST:** AMU [II / 66, 67, 91], S-KUR [II / 32, 39], PRIM [I, II / 89]
- *japonica* Mitt. – **FAR EAST:** AMU [II / 91], S-KUR [II / 39], PRIM [I, II / 89]
- *otiana* S.Hatt. – **FAR EAST:** S-KUR [II / 39]
- *patens* Lindb. – **CAUC:** [75, 77]
- *ulicina* (Taylor) Gottsche, Lindenb. & Nees – **FAR EAST:** S-KUR [II / 39] – {45}
- Lepidozia* (Dumort.) Dumort. [Lepidoziaceae]
- *reptans* (L.) Dumort. – **ARC:** EURO [151], ARCYAK [246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 78, 80, 266, 284], KLN [73, 115], C [I, IV / 12, 14, 15, 85, 103, 105, 106, 125, 173, 193, 202, 275], N-UR [I, IV / 136, 252, 286, 299], S-UR [22, 23, 138, 241], SE [177], **CAUC:** [I / 104, 107, 131], **SIB:** W [I / 69, 70, 168, 169, 171, 257, 258], E [171], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [III / 10], MAG [III / 51], KAM [I / 36], AMU [I, II, V, VI, VII / 6, 27, 66, 67, 91, 135, 156, 170], SAKH [I, II, III, VII / 38, 114, 170, 226], S-KUR [II, III / 1, 39, 157, 179], PRIM [II / 89]
- Liochlaena* Nees [Delavayellaceae] – {46}
- *lanceolata* Nees – **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 113], C [I, IV / 57, 85, 105, 106, 125, 202, 223], N-UR [252, 299], S-UR [I / 138], **CAUC:** [I / 107, 131], **SIB:** S [I / 146]
- *subulata* (A.Evans) Schljakov – **EUR:** NW [III / 110, 206, 214, 218], N-UR [I / 136], C [14, 192], **CAUC:** [I / 75, 131], **SIB:** W [168], S [I / 42, 112, 267], **FAR EAST:** AMU [II, VI, VII / 6, 67, 91, 156], SAKH [I, II / 38, 114], S-KUR [II / 32, 39], PRIM [II / 89]
- Lophocolea* (Dumort.) Dumort. [Lophocoleaceae] – {47}
- *bidentata* (L.) Dumort. – ?**ARC:** ?EURO [299], **EUR:** NW [III / 214], NE [299], KLN [72a, 73], N-UR [252], C [12, 14, 15, 85, 173, 174, 193], **CAUC:** [I / 107], **SIB:** S [112], **FAR EAST:** AMU [II / 66], SAKH [I, II / 38], PRIM [II / 89] – {48}
- *cuspidata* (Nees) Limpr. – **EUR:** C [11, 85], **CAUC:** [I / 131], **FAR EAST:** S-KUR [II / 32, 39], PRIM [II / 33] – {49}
- *heterophylla* (Schrad.) Dumort. – **ARC:** ?EURO [151, 299], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 113, 266, 284], KLN [73, 115], C [I, IV / 12, 14, 15, 74, 85, 103, 105, 106, 125, 173, 193, 202, 274], N-UR [I, IV / 41, 136, 252, 286, 299], S-UR [21, 22, 23, 46, 138], SE [177], **CAUC:** [I / 75, 104, 107, 131], **SIB:** W [I / 70, 169, 171], E [171], YAK [246], S [I, V / 42, 112, 146, 267], **FAR EAST:** MAG [II, III / 51], KAM [I, IV / 36], AMU [I, II, V, VI, VII / 6, 66, 67,

- 91, 135, 156], SAKH [I, II / 38, 114,], S-KUR [II, III / 1, 39, 157], PRIM [II / 89] – {50}
- *itoana* Inoue – **FAR EAST:** KAM [I / 36], SAKH [II / 40], S-KUR [II / 32, 39]
- *minor* Nees – **ARC:** EURO [I, IV / 82, 141, 283, 299], WS [III / 195], ES [III / 171, 295], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284], C [I, IV / 5, 74, 85, 103, 105, 106, 125, 173, 193, 274, 275], N-UR [I, IV / 136, 252, 286, 299], S-UR [21, 22, 46, 138], SE [177, 253], **CAUC:** [I / 1a, 107], **SIB:** W [70, 169, 171], E [171, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [III / 10], MAG [III / 51], KAM [I, IV / 36], AMU [II, III, VI / 6, 66, 67, 91, 297], SAKH [I, II / 38, 114], S-KUR [II / 39], PRIM [II / 89]
- Lophozia** (Dumort.) Dumort. [Scapaniaceae]
- *ascendens* (Warnst.) R.M.Schust. – **ARC:** ?ARCYAK [246], **EUR:** NW [I, III / 24, 28, 214, 234], NE [IV / 28, 80, 83, 284], C [I / 28, 105, 125, 173], N-UR [I, IV / 136], **CAUC:** [I / 107, 263], **SIB:** E [292], YAK [I / 246], S [I, V / 28, 42, 112, 267], **FAR EAST:** KAM [I, IV / 36], AMU [I / 28], SAKH [KYO? / 114] – {51}
- *austro-sibirica* Bakalin – **SIB:** W [I / 28], S [I / 28] – {52}
- *ciliata* Damsh., L.Söderstr. & H.Weibull – **CAUC:** [I / 107] – {53}
- *guttulata* (Lindb. & Arnell) A.Evans – **ARC:** EURO [147], BE [I], **EUR:** NW [I, III / 28, 204], NE [I], N-UR [136], C [106, 173], S-UR [138], **CAUC:** [107], **SIB:** W [171], E [171], YAK [246], S [III, V / 28], **FAR EAST:** CHUK [III / 28], MAG [II], AMU [I, III, V, VI / 28], SAKH [II / 40], S-KUR [II / 39]
- *heteromorpha* R.M.Schust. & Damsh. – **ARC:** ES [III? / 295], BE [28], **EUR:** NW [I / 28], **FAR EAST:** CHUK [III / 28], KAM [I / 36] – {54}
- *lacerata* N.Kitag. – **ARC:** YAK [III / 28], **FAR EAST:** CHUK [I / 145], KAM [I, III / 36, 184], SAKH [KYO, 28], S-KUR [II / 39, 179]
- *lantratoviae* Bakalin – **CAUC:** [I / 107], **SIB:** YAK [I / 28], S [I / 28], **FAR EAST:** KAM [I / 36], PRIM [II / 33]
- *savicziae* Schljakov – **ARC:** EURO [I, IV / 86, 141, 151], WS [I, III / 195], ES [I, III / 295], ARCYAK [I / 28], BE [I / 28], **EUR:** NW [I, III / 221, 234], NE [IV / 86], N-UR [136], **SIB:** YAK [I / 246], **FAR EAST:** MAG [II / 37], KAM [I / 36], SAKH [II / 34], S-KUR [II / 39]
- *schusteriana* Schljakov – **ARC:** WS [I / 28], **EUR:** NW [I / 28], **FAR EAST:** CHUK [I, III / 51, 145], KAM [I / 36]
- *silvicola* H.Buch – **ARC:** ES [I / 28], **EUR:** NW [I, III / 28, 204], NE [I, IV / 28, 80], KLN [72a], C [I, IV / 28, 85, 125, 173], N-UR [I, IV / 41, 136], S-UR [I / 28, 138], **CAUC:** [I / 28, 107], **SIB:** W [I / 28], E [I / 28], YAK [I / 28, 246], S [I / 28, 146], **FAR EAST:** KAM [I / 36], AMU [I / 27], SAKH [I, II / 38], S-KUR [II, III / 39, 50] – {55}
- *silvicoloides* N.Kitag. – **EUR:** NW [I / 28], **SIB:** YAK [246, 249], **FAR EAST:** CHUK [III / 51], KAM [I / 36], AMU [II, V / 68], SAKH [II / 34], S-KUR [II / 39]
- *ventricosa* (Dicks.) Dumort. – **ARC:** EURO [I / 19, 147, 151], WS [I, III / 195], ES [I, III / 222, 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 266, 284], KLN [73], C [I, IV / 11, 14, 85, 103, 105, 106, 173], N-UR [I, IV / 41, 136, 252, 299], S-UR [I / 21, 22, 23, 46, 138], **CAUC:** [I / 107], **SIB:** W [I / 28, 169], E [I / 28, 294], YAK [I / 246], S [I, V / 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III / 51], KAM [I, IV / 36], AMU [I, V / 135], SAKH [I, II, III, VII / 38, 114, 170, 183], S-KUR [II, III / 39, 157, 183] – {56}
- var. *longiflora* (Nees) Macoun – **ARC:** EURO [I / 28, 147], WS [III / 195], ES [I, III / 222, 295], ARCYAK [I / 142, 246], BE [I / 28], **EUR:** NW [I, III / 24, 214, 234], NE [266, 284], KLN [72a], C [I / 11, 15, 85, 202, 274], N-UR [I / 28, 136, 252], S-UR [I / 22, 138], **CAUC:** [I / 107, 131], **SIB:** W [169], E [III / 28], YAK [I / 28, 246], S [I, V / 42, 112, 267], **FAR EAST:** CHUK [I / 145], KAM [I / 36], AMU [I, II, V, VI / 6, 68, 91, 135], SAKH [I, II / 38], PRIM [II / 89]
- *wenzelii* (Nees) Steph. – **ARC:** EURO [I, IV / 151, 287], WS [III / 195, 296], ES [I, III / 171, 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 111, 284],

- N-UR [I, IV / 41, 136, 252], **CAUC:** [I / 107], **SIB:** YAK [I / 246], S [I, V / 112, 146, 267], E [28, 171, 292], **FAR EAST:** CHUK [III / 10, 51], MAG [III / 51], KAM [I / 36, 179], SAKH [III / 114, 183], S-KUR [II / 39]
- var. *groenlandica* (Nees) Bakalin – **ARC:** EURO [117, 141, 151], ARCYAK [I / 142, 246], ES [I / 28, 127], **EUR:** NW [I / 24, 234], NE [28, 284], C [84, 274], N-UR [28, 136], S-UR [I / 28, 138], **CAUC:** [28, 107], **SIB:** E [V / 28, 292], YAK [I / 246], **FAR EAST:** CHUK [I / 145], KAM [I / 36], AMU [II, VI / 6, 68]
- var. *lapponica* H.Buch & S.W.Arnell – **EUR:** NW [I / 28], **SIB:** YAK [I / 28], **FAR EAST:** KAM [I / 36], SAKH [II / 34] – {57}
- var. *litoralis* (Arnell) Bakalin – **ARC:** EURO [IV / 28], ES [III / 28], **EUR:** NW [I / 28], NE [IV / 28], **SIB:** S [28]
- var. *massularioides* Bakalin – **CAUC:** [I / 28, 107, 131]
- Lophozia* Konstant. & Vilnet [Scapaniaceae] – {6}
- *excisa* (Dicks.) Konstant. & Vilnet (*Lophozia excisa* (Dicks.) Dumort.) – **ARC:** EURO [I, III, IV / 19, 147, 151, 283, 288], WS [I, III / 28, 195, 296], ES [I, III / 171, 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284], KLN [73], C [I / 12, 85, 103, 106, 125, 173, 174, 193, 274, 275, 298], N-UR [I, IV / 136, 252], S-UR [I / 21, 137, 138], **CAUC:** [I / 107, 131], **SIB:** W [I / 70, 169, 171], E [171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], KAM [I, IV / 36], AMU [I, V / 135], PRIM [II / 89] – {58}
- var. *elegans* (R.M.Schust.) Konstant. & Vilnet – **ARC:** EURO [IV], WS [III / 296], YAK [28] – {58}
- *longidens* (Lindb.) Konstant. & Vilnet (*Lophozia longidens* (Lindb.) Macoun) – **ARC:** EURO [I, IV / 113, 141, 151, 283], WS [III / 195], ES [I, III / 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 204, 214, 234], NE [IV / 86, 266], C [I / 11, 17, 85, 105, 106, 173], N-UR [I, IV / 41, 136, 252, 299], S-UR [I / 21, 22, 23, 46, 138], **CAUC:** [I / 107, 131], **SIB:** W [I / 70, 169, 171], E [28, 171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [III / 10, 51], MAG [II, III / 51], KAM [I, IV / 36], AMU [I, II, V, VI / 6, 90, 135] – {59}
- *pellucida* (R.M.Schust.) Konstant. & Vilnet (*Lophozia pellucida* R.M.Schust.) – **ARC:** EURO [I, IV / 28, 86, 147], WS [III / 195], ES [III / 222, 295], ARCYAK [I / 28], BE [I / 151], **EUR:** NW [I / 140], NE [IV / 80, 83, 86], N-UR [I, IV / 47, 136], **FAR EAST:** KAM [I, II / 36] – {60}
- *perssonii* (H.Buch & S.W.Arnell) Konstant. & Vilnet (*Lophozia perssonii* H.Buch & S.W.Arnell) – **ARC:** EURO [I / 147], ARCYAK [142, 246], **EUR:** NW [24, 95], NE [I, IV / 80, 83, 86, 266, 285], C [I / 28], **SIB:** YAK [245, 246, 247], S [I, V / 267] – {61}
- *polaris* (R.M.Schust.) Konstant. & Vilnet (*Lophozia polaris* (R.M.Schust.) R.M.Schust. & Damsh.) – **ARC:** EURO [I, III, IV / 151, 287, 288], WS [I, III / 28, 195, 296], ES [I, III / 222, 295], ARCYAK [I / 28, 142, 246], BE [I, III / 10], **EUR:** NW [I / 234], **SIB:** E [28, 292], YAK [I / 246], S [I / 132, 155], **FAR EAST:** CHUK [I, III / 10, 28, 145], KAM [I / 36]
- *propagulifera* (Gottsche) Konstant. & Vilnet (*Lophozia propagulifera* (Gottsche) Steph.) – **ARC:** EURO [IV / 151, 287], WS [III / 195], ES [I, III / 222, 295], ARCYAK [I / 28], **EUR:** NW [I / 24, 234], NE [IV / 28, 80, 284], S-UR [I / 138], **CAUC:** [107, 131], **SIB:** W [?70], YAK [246], S [I / 42, 112], **FAR EAST:** KAM [I, III / 36, 184], PRIM [II / 89], SAKH [II / 34]
- *rubrigemma* (R.M.Schust.) Konstant. & Vilnet (*Lophozia rubrigemma* R.M.Schust.) – **ARC:** EURO [I, IV / 28, 86, 141, 151], WS [III / 195], **EUR:** NW [I / 118], **SIB:** S [I / 28], **FAR EAST:** KAM [I / 36]
- Lunularia* Adans. [Lunulariaceae]
- *cruciata* (L.) Lindb. – **EUR:** C [103, 298], **CAUC:** [I, II / 131, 154] – {62}
- Macrodiplophyllum* (H.Buch) Perss. [Scapaniaceae]
- *imbricatum* (M.Howe) Perss. – **FAR EAST:** KAM [I / 26, 36]

- *microdontum* (Mitt.) Perss. – **ARC:** BE [I, III / 10], ARCYAK [246], **SIB:** E [3], YAK [I / 246], S [I / 112, 146, 155, 268], **FAR EAST:** CHUK [III / 10, 51], MAG [II, III / 51], KAM [I, II / 36], AMU [I, II, V / 91, 135], SAKH [II / 34], PRIM [II / 89]
- *plicatum* (Lindb.) Perss. – **SIB:** YAK [246, 247], **FAR EAST:** MAG [III / 51], KAM [I, II / 36], AMU [II, VII / 68, 91, 156, 170], SAKH [I, II, III / 38, 114, 170, 226], S-KUR [II, III / 39, 50], PRIM [II, III / 50, 89]
- Mannia* Opiz [Aytoniaceae] – {63}
 - *androgyna* (L.) A.Evans – **EUR:** CAUC [I / 59, 131, 277] – {64}
 - *fragrans* (Balb.) Frye & L.Clark – **ARC:** ?BE [I, III / 10], **EUR:** NW [20, 24], NE [266], C [I, III / 106, 193], SE [I, III / 13, 127, 176a], **CAUC:** [59], **SIB:** E [I / 171], YAK [I / 13, 246], S [I, III, V / 13, 112, 155, 267], **FAR EAST:** CHUK [III / 10], AMU [II, III, VII / 60, 67, 90, 170, 297], PRIM [II / 13, 89] – {65}
 - *pilosa* (Hornem.) Frye & L.Clark – **ARC:** EURO [I, IV], ES [171], ARCYAK [I, III / 142, 246], BE [I, III / 10], **EUR:** NW [24, 234], NE [IV / 80,86, 284], C [276], N-UR [IV / 299], S-UR [171], **SIB:** E [III / 13, 171], S [V / 155, 267], YAK [I, III / 246, 248], **FAR EAST:** CHUK [III / 10], KAM [36], AMU [I, II / 27, 66, 67, 170], PRIM [II / 89]
 - *sibirica* (Müll.Frib.) Frye & L.Clark – **ARC:** ?BE [III / 7, 10], **SIB:** YAK [VI / 13, 246, 248], S [13, 155], **FAR EAST:** AMU [II / 67] – {66}
 - *triandra* (Scop.) Grolle – **ARC:** BE [I, III / 7, 10], **EUR:** NW [I / 55], NE [13], **SIB:** YAK [III / 8, 246], **FAR EAST:** CHUK [III / 10, 13] – {67}
- Marchantia* L. [Marchantiaceae] – {68}
 - *polymorpha* L. subsp. *polymorpha* (*M. aquatica* (Nees) Burgeff) – **ARC:** WS [III / 195], ES [I, III / 295], **EUR:** NW [I, III / 24, 214, 234], NE [III, IV / 80], KLN [73], C [I / 12, 14, 15, 85, 125, 173], N-UR [I, III / 41, 80, 252], S-UR [138], **SIB:** W [169], E [292, 294], YAK [246], S [I / 42, 112, 146], **FAR EAST:** KAM [I / 36], AMU [II, III / 67, 91, 297], S-KUR [II / 39]
 - subsp. *montivagans* Bischl. & Boissel.-Dub. (*M. alpestris* (Nees) Burgeff). – **ARC:** EURO [I, III, IV / 19, 117, 141, 147, 288], WS [I, III / 195], ES [I, III / 295], ARCYAK [142, 246], BE [III, IV / 10], **EUR:** NW [I, III / 24, 220, 234], NE [IV / 79, 80, 266, 284], KLN [115], N-UR [I, IV / 41, 136], S-UR [I / 138], **CAUC:** [I / 107, 131], **SIB:** W [I / 169], YAK [I / 246], S [I / 146, 155, 267], **FAR EAST:** CHUK [III / 10], KAM [I, IV / 36], AMU [I, V / 135], SAKH [II / 34], PRIM [II / 89]
 - subsp. *ruderalis* Bischl. & Boissel.-Dub. (*M. latifolia* Gray, *M. polymorpha* auct. non L.) – **ARC:** EURO [I, IV / 18, 151, 283, 299], WS [III / 195, 296], ES [I, III / 171, 295], ARCYAK [142], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 41, 80, 111, 191, 266, 284, 298], KLN [73], C [I, IV / 14, 74, 85, 103, 105, 106, 125, 193, 202, 274, 275], N-UR [I, IV / 41, 80,86, 136, 191, 286, 299], S-UR [23, 46, 136], SE [177, 253], **CAUC:** [I / 1a, 75, 104, 107, 131], **SIB:** W [I / 169, 171], YAK [I / 248], S [I / 112], E [171, 292], S [42], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III / 51], KAM [I, II, IV / 36, 179], AMU [II, III, VI, VII / 6, 66, 67, 91, 92, 170, 297], SAKH [I, II, III, KYO, 38, 114, 226?, 29a], S-KUR [II, III / 39, 50], PRIM [II / 89]
 - *paleacea* Bertol. – **CAUC:** [I / 154], **SIB:** [I, V / 267], **FAR EAST:** S-KUR [II / 32, 39]
- Marsupella* Dumort. [Gymnomitriaceae] – {69}
 - *alata* S.Hatt. – **FAR EAST:** S-KUR [II / 39]
 - *apiculata* Schiffn. – **ARC:** EURO [I, IV / 19, 113, 147, 151, 283, 299], WS [III / 195], ES [III / 18, 222], BE [III / 10, 151], **EUR:** NW [I / 148, 234], **SIB:** YAK [I / 246, 247], S [I, V / 112, 146, 267], **FAR EAST:** CHUK [III / 51], KAM [I / 36], MAG [II / 37], S-KUR [II / 39]
 - *aquatica* (Lindenb.) Schiffn. – **ARC:** BE [I], **EUR:** NW [I, III / 24, 204, 234], C [84], **CAUC:** [I / 107], **SIB:** YAK [246], S [I / 127] – {70}
 - *arctica* (Berggr.) Bryhn & Kaal. – **ARC:** ES [III / 222, 290], ARCYAK [246], BE [I, III / 7, 10], **FAR EAST:** CHUK [III / 10]

- *boeckii* (Austin) Kaal. – **ARC:** BE [I, III / 7, 10], **EUR:** NW [I / 24, 234], N-UR [I / 136, 252, 299], **SIB:** YAK [I / 246], S [I, V / 112, 146, 155, 267], **FAR EAST:** CHUK [I], MAG [III / 51], KAM [I / 36], AMU [I, V, VI / 6, 135], S-KUR [II, III / 39, 184] – {71}
 - *condensata* (Engstr. ex C.Hartm.) Kaal. – **ARC:** EURO [IV / 151, 283, 299], BE [III / 7, 10], **EUR:** NW [I / 24, 234], ?N-UR [299], **FAR EAST:** KAM [I / 36]
 - *emarginata* (Ehrh.) Dumort. – **ARC:** EURO [141], ES [III / 295], **EUR:** NW [I, III / 24, 110, 214, 234], N-UR [I / 41, 136, 252, 299], **CAUC:** [I / 131], **SIB:** YAK [I / 246], S [I, V / 112, 127, 146, 267], **FAR EAST:** CHUK [III / 51], MAG [III / 51], KAM [I / 36], AMU [II, VI / 6, 91], S-KUR [III / 50]
 - *funckii* (F.Weber & D.Mohr) Dumort. – **EUR:** KLN [72a, 115], **CAUC:** [I / 107, 131, 263], **SIB:** S [I / 112], **FAR EAST:** KAM [I / 36], SAKH [II / 34], S-KUR [II / 32, 39]
 - *pseudofunckii* S.Hatt. – **FAR EAST:** S-KUR [II / 39]
 - *sparsifolia* (Lindb.) Dumort. – **EUR:** NW [I / 20, 24, 214, 234], **CAUC:** [I / 131], **FAR EAST:** KAM [I, II / 36]
 - *sphacelata* (Giesecke ex Lindenb.) Dumort. – **ARC:** EURO [151], **EUR:** NW [I, III / 24, 214, 234], NE [111], N-UR [136], S-UR [I / 138], **CAUC:** [I / 107], **SIB:** S [I / 112, 146, 155], **FAR EAST:** KAM [I / 36], MAG [II / 37], SAKH [II / 34], S-KUR [II / 39]
 - *spiniloba* R.M.Schust. & Damsh. – **EUR:** NW [122]
 - *sprucei* (Limpr.) Bernet – **ARC:** EURO [I, IV / 141, 147, 283], WS [I, III / 195], ES [III / 222, 295], BE [I, III / 10] **EUR:** NW [I / 148, 234], N-UR [136], S-UR [I / 138], **SIB:** S [I, V / 27, 146, 267], **FAR EAST:** CHUK [I / 145], KAM [I, II, IV / 36], SAKH [II / 34], S-KUR [II / 39]
 - *tubulosa* Steph. – **FAR EAST:** CHUK [III / 51], KAM [I / 36], AMU [I, II, V, VI / 6, 66, 91, 135], SAKH [KYO? / 114], S-KUR [II / 32], PRIM [II / 89] – {72}
- Mesoptychia* (Lindb.) A.Evans [Jungermanniaceae]
- *sahlbergii* (Lindb.) A.Evans – **ARC:** WS [III / 195], ES [I, III / 239, 295], ARCYAK [I / 142, 246], BE [III / 10], **SIB:** W [164], E [I / 164, 171, 239], YAK [3, 246], S [I, V / 112, 267, 268], **FAR EAST:** CHUK [III / 10, 51]
- Metacalypogeia* (S.Hatt.) Inoue [Calypogeiaceae]
- *cordifolia* (Steph.) Inoue – **FAR EAST:** AMU [I, II / 66, 67, 91], S-KUR [II, III / 39, 184], PRIM [I, II / 89]
- Metzgeria* Raddi [Metzgeriaceae]
- *conjugata* Lindb. – **EUR:** KLN [72a], **CAUC:** [I / 75, 104, 107, 131, 263], **SIB:** S [V / 267] – {73}
 - *furcata* (L.) Dumort. – **EUR:** NW [I, III / 24, 148, 214, 234], KLN [73, 115], C [I / 16, 103, 105, 193], N-UR [IV / 136, 286], S-UR [21], **CAUC:** [I / 75, 104, 107, 131, 263], **SIB:** S [I, V / 42, 127, 155, 267], **FAR EAST:** KAM [I, IV / 36], AMU [II / 91], SAKH [I, II / 38], PRIM [II / 89]
 - *lindbergii* Schiffn. – **FAR EAST:** AMU [II / 66, 91], SAKH [I, II, III / 38, 114, 226], S-KUR [II / 32, 39], PRIM [I, II / 89] – {73}
 - *temperata* Kuwah. – **FAR EAST:** S-KUR [II / 32, 39]
 - *violacea* (Ach. ex F.Weber & D.Mohr) Dumort. – **EUR:** KLN [72a], **CAUC:** [186]
- Moerckia* Gottsche [Moerckiaceae]
- *blyttii* (Morch ex Hornem.) Brockm. – **ARC:** EURO [18, 151, 299], WS [III / 195], ES [III / 295], **EUR:** NW [I / 24, 127, 234], **FAR EAST:** KAM [I / 36], S-KUR [II / 39]
 - *flotoviana* (Nees) Schiffn. – **ARC:** WS [13], **EUR:** NW [I / 118, 234 (as *M. hibernica*)], **SIB:** E [13], S [I / 146 (as *M. hibernica*)] – {74}
 - *hibernica* (Hook.) Gottsche – **ARC:** ?ES [III? / 295], ?ARCYAK [246], **EUR:** NW [III? / 24, 214], ?NE [IV / 80, 266, 284], ?N-UR [41], **FAR EAST:** ?CHUK [III / 10], ?MAG [III / 51] – {75}
- Mylia* Gray [Myliaceae]
- *anomala* (Hook.) Gray – **ARC:** EURO [I, IV / 117, 151, 282, 283], WS [III / 195], ES [I, III /

- 171, 295], ARCYAK [246], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284, 299], KLN [73], C [I, IV / 12, 14, 15, 85, 103, 105, 174, 223, 274, 298], N-UR [I, IV / 136, 252, 286, 299], S-UR [I / 138, 217, 241], **SIB:** W [I / 70, 169], E [171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III / 51], KAM [I, III, IV / 1, 36], AMU [I, V, VI, VII / 6, 27, 135, 156], SAKH [I, II VII / 38, 170], S-KUR [II, III / 1, 39] – {76}
- *nuda* Inoue & B.Y.Yang – **FAR EAST:** SAKH [I, II / 38], PRIM [II / 35]
- *taylorii* (Hook.) Gray – **EUR:** NW [I, III / 24, 214, 234], C [14], **SIB:** S [I, V / 112, 155, 267], **FAR EAST:** CHUK [III / 10], KAM [III / 185], AMU [I, II, III, V, VI / 6, 67, 68, 91, 135, 297], SAKH [II / 34], S-KUR [II / 32, 39], PRIM [II / 89]
- *verrucosa* Lindb. – **FAR EAST:** AMU [II, III, VI, VII / 6, 66, 67, 91, 156, 170, 297], SAKH [I, II, III / 38, 114, 170, 226], S-KUR [II, III / 39, 157], PRIM [II, III / 50, 89]
- Nardia* Gray [Solenostomataceae]
- *assamica* (Mitt.) Amakawa – **FAR EAST:** KAM [I, III / 36, 185], MAG [II / 37], SAKH [I, II / 38], S-KUR [II / 32, 39], PRIM [II]
- *breidlerii* (Limpr.) Lindb. – **ARC:** EURO [I / 147, 151, 191], ES [I / 171], **EUR:** NW [I / 234], N-UR [I, IV / 41], **SIB:** S [I, V / 127, 132, 267], **FAR EAST:** KAM [I / 36], S-KUR [II / 39]
- *compressa* (Hook.) Gray – **FAR EAST:** KAM [I, III / 36], S-KUR [III / 50, 184]
- *geoscyphus* (De Not.) Lindb. – **ARC:** EURO [I, IV / 19, 141, 147, 151, 283], WS [I, III / 195, 296], ES [III / 295], ARCYAK [142, 246], BE [I, III / 7, 10], **EUR:** NW [I, III / 24, 214, 234, 262], NE [IV / 80, 284], C [84, 174, 274], N-UR [I, IV / 41, 136], S-UR [I / 138], **CAUC:** [I / 107, 131], **SIB:** E [27], YAK [I / 27, 246], S [I, V / 127, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III / 51], KAM [I, IV / 36], AMU [VI / 6], SAKH [II / 34], S-KUR [II, III / 39, 50]
- var. *dioica* Bakalin – **FAR EAST:** S-KUR [II / 39]
- *hiroshii* Amakawa – **FAR EAST:** S-KUR [II / 39] – {77}
- *insecta* Lindb. – **ARC:** EURO [151, 283], WS [III / 195], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 262, 284], C [I / 15, 103, 180], N-UR [136], **SIB:** E [27], YAK [I / 27, 246], S [I / 112], **FAR EAST:** CHUK [III / 10], KAM [I, III / 184], SAKH [II / 34]
- *japonica* Steph. – **ARC:** EURO [141, 151], WS [I, III / 195], BE [III / 10], **EUR:** NW [I, III / 116, 128, 204], NE [I, IV / 83, 284], **SIB:** YAK [I / 27, 246, 247], S [I / 146], **FAR EAST:** CHUK [III / 10], KAM [I, III / 36, 184], MAG [II / 37], SAKH [II / 34], S-KUR [II / 39]
- *scalaris* Gray – **ARC:** EURO [IV / 113, 299], ES [III / 151, 295], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 113, 284], KLN [72a], **CAUC:** [I / 154], **SIB:** E: [I / 27], YAK [246], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III / 51], KAM [I / 36], S-KUR [II / 39]
- *subclavata* (Steph.) Amakawa – **FAR EAST:** KAM [II / 36], S-KUR [II / 32, 39]
- *unispiralis* Amakawa – **FAR EAST:** ?KAM [I, III / 36, 184], ?S-KUR [II / 39] – {78}
- Neohattoria* Kamim. [Frullaniaceae]
- *herzogii* (S.Hatt.) Kamim. – **FAR EAST:** AMU [II], S-KUR [II, III / 39, 166, 183, 184]
- Nipponolejeunea* S.Hatt. [Jubulaceae]
- *subalpina* (Horik.) S.Hatt. – **FAR EAST:** SAKH [I, II / 38, 114], S-KUR [II, III / 4, 39]
- Nowellia* Mitt. [Cephaloziaceae]
- *curvifolia* (Dicks.) Mitt. – **EUR:** NW [I, III / 54, 206, 218], KLN [72a, 115], C [I, III / 12, 14, 57, 105, 180, 202, 223], **CAUC:** [I / 75, 131], **FAR EAST:** AMU [I, II, III V / 67, 91, 135, 297], SAKH [KYO? / 114], S-KUR [II, III / 32, 39, 184], PRIM-S [I, II / 35, 89]
- Obtusifolium* S.W.Arnell [Scapaniaceae]
- *obtusum* (Lindb.) S.W.Arnell – **ARC:** EURO [IV, III / 141, 283, 288], ES [I, III / 295], ARCYAK [142, 246], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284], C [11, 85], N-UR [I, IV / 41, 113, 136, 252, 299], S-UR [I / 21, 138], **CAUC:** [I / 107, 131], **SIB:** S [I / 112, 146], **FAR EAST:** KAM [I / 36], S-KUR [II, III / 32, 39, 184]

Odontoschisma (Dumort.) Dumort. [Odontoschismataceae]

- *denudatum* (Mart.) Dumort. – **EUR:** NW [III / 24, 110, 214], NE [I, IV / 78, 80, 83], KLN [73], C [I, III / 85, 125, 139, 180, 202, 274], **CAUC:** [I / 75, 104, 131], **SIB:** S [I, V / 132, 264, 267], **FAR EAST:** AMU [II / 67, 91], S-KUR [II, III / 32, 39, 184], PRIM-S [I, II / 89] – {79}
- *elongatum* (Lindb.) A.Evans – **ARC:** WS [III / 195, 296], ES [I, III / 295], ARCYAK [142], BE [I, III / 10], **EUR:** NW [I, III / 24, 204, 234], NE [I, IV / 80], C [14, 160], N-UR [I, IV / 41, 136], **SIB:** E [155, 171], YAK [I / 27], S [I, V / 27, 267], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I / 36], AMU [II / 91] – {80}
- *macounii* (Austin) Underw. – **ARC:** EURO [I, III, IV / 18, 19, 113, 151, 282, 288, 299], WS [III / 195, 296], ES [I, III / 222, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 24, 234], NE [I, IV / 80], N-UR [299], **SIB:** ?E [292, 294], YAK [246], **FAR EAST:** CHUK [III / 10], KAM [I / 36], SAKH [II / 34], S-KUR [II / 39]
- *sphagni* (Dicks.) Dumort. – **EUR:** KLN [III / 72a, 73, 111, 197]

Orthocaulis H.Buch [*Scapaniaceae s.l.]

- *atlanticus* (Kaal.) H.Buch – **ARC:** EURO [IV / 283], WS [III / 195], ES [III / 295], ARCYAK [142, 246], **EUR:** NW [I / 24, 234], N-UR [IV / 252], **SIB:** E [292], YAK [246]
- *attenuatus* (Mart.) A.Evans – **ARC:** EURO [18, 19,], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284, 298], C [I / 105, 139, 180], N-UR [I, IV / 136, 252, 286], S-UR [I / 22, 138], **CAUC:** [107], **SIB:** W [168, 169, 256], E [171, 292], YAK [I / 27, 246], S [I, V / 112, 146, 267], **FAR EAST:** KAM [I, III / 36, 185], AMU [II / 91], MAG [II / 37], SAKH [I, II / 38], S-KUR [II / 32, 39]
- *binsteadii* (Kaal.) H.Buch – **ARC:** EURO [I / 18, 19, 117, 141, 147, 151, 191, 283], WS [I, III / 18, 195], ES [I, III / 18, 222, 295], ARCYAK [246], BE [I, III / 10], **EUR:** NW [I / 24, 234], NE [IV / 111, 284, 299], N-UR [I, IV / 286, 299], **SIB:** E [292], YAK [I / 246], S [I, V / 112, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], KAM [I, III, IV / 1, 36], AMU [I, II, VI / 6, 27, 68], SAKH [I, II / 38]
- *floerkei* (F.Weber & D.Mohr) H.Buch – **ARC:** EURO [I, IV / 117, 141, 147, 151, 283], ES [III / 295], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 284, 298], C [85], N-UR [I, IV / 41, 136, 252, 286, 299], S-UR [138], **SIB:** W [168, 169], E [171], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [III / 10], KAM [I / 36]
- *hyperboreus* (R.M.Schust.) Konstant. – **ARC:** EURO [IV / 141, 151, 287], WS [III / 195], ES [I, III / 222, 295], ARCYAK [142, 246], BE [III / 10], **SIB:** YAK [I / 246], **FAR EAST:** CHUK [III / 10], KAM [I / 36]

Pallavicinia Gray [Pallaviciniaceae]

- *lyellii* (Hook.) Carruth. – **EUR:** KLN [73], **CAUC** [I / 131], **FAR EAST:** S-KUR [II / 32, 39]

Pedinophyllum (Lindb.) Lindb [Jamesoniellaceae]

- *interruptum* (Nees) Kaal. – **EUR:** N-UR [252, 299], S-UR [I], **CAUC:** [I / 75, 104, 131], **SIB:** W [169], **FAR EAST:** AMU [I, II / 66, 67, 92], SAKH [III / 183], S-KUR [II, III / 39, 157], PRIM [I, II / 89]
- *truncatum* (Steph.) Inoue – **FAR EAST:** AMU [II / 91, 92], SAKH [KYO? / 114], S-KUR [II / 32, 39], PRIM [I, II / 89]

Pellia Raddi [Pelliaceae]

- *endiviifolia* (Dicks.) Dumort. – **ARC:** EURO [IV / 113], BE [I, III / 10], ARCYAK [246], **EUR:** NW [I, III / 24, 118, 214], NE [IV / 80, 86, 266, 284, 299], KLN [72a], C [I, III, IV / 5, 11, 12, 14, 85, 103, 105, 106, 173, 193, 202], N-UR [I, IV / 41, 80, 252, 299], S-UR [I / 21, 22, 46, 180a], **CAUC:** [I / 75, 104, 107, 131, 263], **SIB:** W [168, 178], YAK [246], S [I, V / 42, 146, 267], **FAR EAST:** CHUK [III / 10], KAM [I / 36], SAKH [I, II / 38, 29a], S-KUR [II / 39], PRIM [II / 89]
- *epiphylla* (L.) Corda – **ARC:** EURO [151], ES [III / 295], BE [III / 10], **EUR:** NW [I, III / 24, 204, 214, 234], NE [IV / 80, 266, 284], KLN [115], C [I / 12, 14, 85, 103, 105, 106, 125, 193, 274, 275], N-UR [IV / 191, 252, 286], S-UR [21, 22, 241], SE [177], **SIB:** W [169], E [171, 292,

- 294], S [I, V / 112, 199, 267], **FAR EAST:** CHUK [III / 10], KAM [I / 36], SAKH [II, III / 226], S-KUR [II / 39]
- *neesiana* (Gottsche) Limpr. – **ARC:** EURO [I, IV / 82, 117, 141, 147, 151, 191, 283], WS [III / 195], ES [I, III / 171, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284], KLN [72a, 73], C [I / 15, 85, 103, 105, 106, 125, 274], N-UR [I, IV / 41, 80, 136, 286, 299], S-UR [I / 21, 22, 138, 241], SE [177], **CAUC:** [I / 75, 104, 107, 131, 263], **SIB:** W [I / 70, 168, 169, 171], E [171, 292], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 145], MAG [II, III / 51], KAM [I, IV / 36], AMU [I, II, V / 66, 67, 91, 135], SAKH [I, II, III, KYO, 38, 114, 226?, 29a], S-KUR [II, III / 39, 183], PRIM [II / 89]
- Peltolepis* Lindb. [Cleveaceae]
- *japonica* (Shimizu & S.Hatt.) S.Hatt. – **FAR EAST:** PRIM [II / 89]
- *quadrata* (Saut.) Müll.Frib. – **ARC:** EURO [19, 151], ES [I, III / 171, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I / 24, 57, 128, 234], NE [13], **CAUC:** [I / 131, 154], **SIB:** E [13, 171], S [V / 267], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I / 36], SAKH [II]
- Plagiochasma* Lehm. & Lindenb. [Aytoniaceae]
- *japonicum* (Steph.) C.Massal. – **SIB:** S [112], **FAR EAST:** PRIM [II / 89]
- *pterospermum* C.Massal. – **SIB:** E [13], S [13], **FAR EAST:** SAKH [HIRO? / 29a]
- Plagiochila* (Dumort.) Dumort. [Plagiochilaceae]
- *arctica* Bryhn & Kaal. – **ARC:** EURO [III / 151, 288], ES [I], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [234], **SIB:** E [294], YAK [I / 246], **FAR EAST:** CHUK [III / 10], KAM [I, II, IV / 36, 216] – {81}
- *asplenioides* (L.) Dumort. (*Plagiochila major* (Nees) S.W.Arnell) – **EUR:** NW [I, III / 24, 214], NE [IV / 80, 284], KLN [73, 115], C [5, 11, 12, 85, 105, 173, 192, 193], N-UR [I, IV / 252], S-UR [I / 138], **CAUC:** [I / 1a] **FAR EAST:** PRIM [I] – {82}
- *hakkodensis* Steph. – **FAR EAST:** PRIM [II / 89]
- *ovalifolia* Mitt. – **FAR EAST:** AMUR [II], SAKH [II / 34], S-KUR [II / 39], PRIM [II / 33] – {83}
- *porelloides* (Torr. ex Nees) Lindenb. – **ARC:** EURO [I, IV / 117, 141, 151, 283, 299, 1973], WS [III / 195], ES [I, III / 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284], KLN [73], C [I, IV / 12, 15, 85, 103, 106, 125, 193, 274], N-UR [I, IV / 80, 136, 286], S-UR [I / 21, 23, 46, 138], SE [177], **CAUC:** [I / 75, 104, 107, 131, 263], **SIB:** W [70, 168, 169, 257], E [171], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 145], MAG [III / 51], KAM [I, IV / 36], AMU [I, II, III, V, VI, VII / 6, 66, 67, 91, 135, 156, 170, 297], SAKH [II, III / 182], S-KUR [II, III / 39, 184], PRIM [II / 89] – {84}
- Plectocolea* (Mitt.) Mitt. [Solenostomataceae]
- *biloba* Amakawa – **FAR EAST:** S-KUR [II / 39]
- *flagellata* S.Hatt. var. *kurilensis* Bakalin – **FAR EAST:** S-KUR [II / 39]
- *hattoriana* Amakawa – **FAR EAST:** S-KUR [II / 39]
- *hyalina* (Lyell) Mitt. – **ARC:** EURO [I, IV / 113, 147, 151, 283], WS [III / 195], ES [III / 295], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 284], KLN [115], C [I / 85, 274], N-UR [I, IV / 41, 80, 136, 299], S-UR [138], **CAUC:** [I / 107, 131, 263], **SIB:** W [69, 70, 169], E [UPS, 261], YAK [I / 246], S [I, V / 112, 146, 155, 267], **FAR EAST:** CHUK [I / 145], KAM [I, II / 36], SAKH [I, II / 38], S-KUR [II / 39], PRIM [II / 89]
- *infusca* Mitt. var. *infusca* – **FAR EAST:** SAKH [II / 34], S-KUR [II, III / 39, 50]
- var. *ovalifolia* Amakawa – **FAR EAST:** KAM [I, II / 36], SAKH [I, II / 38], S-KUR [II / 32, 39], PRIM [II / 89]
- var. *ovicalyx* (Steph.) Bakalin – **FAR EAST:** SAKH [II / 34], S-KUR [II / 32, 39] – {85}
- *obovata* (Nees) Lindb. – **ARC:** EURO [141, 151], WS [I, III / 195], ES [III / 295], ARCYAK [142, 246], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 47, 80], N-UR [I, IV / 41, 136, 252, 299], S-UR [I / 21, 138], **CAUC:** [I / 131, 263], **SIB:** YAK [I / 246], S [I / 112, 146, 155], **FAR EAST:**

- CHUK [I / 145], KAM [I, III / 36, 184], AMU [I, II, V, VI / 6, 66, 135], PRIM [II / 89] – {86}
- *obscura* A.Evans – **FAR EAST:** KAM [I, III / 36, 184]
- *otiana* S.Hatt. – **FAR EAST:** S-KUR [II / 39]
- *rigidula* S.Hatt. – **FAR EAST:** S-KUR [II / 32, 39]
- *rupicola* (Amakawa) Bakalin comb. nov. Basionym: *Jungermannia rupicola* Amakawa, J. Hattori Bot. Lab. 22: 23. f. 18. 1960. – **FAR EAST:** S-KUR [II / 32, 39], PRIM [II / 33]
- *subelliptica* (Lindb. ex Kaal.) A.Evans – **ARC:** WS [296], BE [I, III / 10], **EUR:** NW [I / 140a], **CAUC:** [I / 107, 131], **SIB:** E [292], YAK [246], S [I, V / 267], **FAR EAST:** CHUK [III / 10], MAG [III / 51], KAM [I / 36], SAKH [II / 34] – {86}
- *virgata* Mitt. – **FAR EAST:** S-KUR [II / 32, 39]
- *vulcanicola* Schiffn. – **FAR EAST:** KAM [I / 36], S-KUR [II, III / 39, 183] – {87}
- Pleurocladula* Grolle [Cephaloziaceae]
- *albescens* (Hook.) Grolle – **ARC:** EURO [I, IV / 117, 141, 147, 151, 283], WS [I, III / 195], ES [III / 18, 295], ARCYAK [246], BE [I, III / 10], **EUR:** NW [I / 24, 234], N-UR [I, IV / 41, 136, 191], **CAUC:** [I / 263], **SIB:** E [292], YAK [I / 246], S [I, V / 112, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II, III / 51], KAM [I / 36], AMU [I, II, V / 135], SAKH [II / 34], S-KUR [II, III / 39, 50] – {88}
- Plicanthus* R.M.Schust. [*Scapaniaceae s.l.]
- *birmensis* (Steph.) R.M.Schust. – **FAR EAST:** PRIM [II / 89]
- Porella* L. [Porellaceae]
- *arboris-vitae* (With.) Grolle – **EUR:** ?C [?193], **CAUC:** [I / 107, 131, 263] – {89}
- *baueri* (Schiffn.) C.E.O.Jensen – **CAUC:** [281a] – {90}
- *caespitans* (Steph.) S.Hatt. – **FAR EAST:** AMU [II / 66], PRIM [II / 89]
- *chinensis* (Steph.) S.Hatt. – **FAR EAST:** AMU [II / 66, 91, 92], SAKH [II / 34], PRIM [II / 89]
- *cordaeana* (Huebener) Moore – **EUR:** NW [I, III / 24, 54, 221, 234], **CAUC:** [I / 107, 263], **SIB:** S [I / 127]
- *densifolia* (Steph.) S.Hatt. – **FAR EAST:** PRIM [II / 89]
- *faurieri* (Steph.) S.Hatt. – **FAR EAST:** AMU [II / 66, 67, 91], SAKH [KYO? / 114], S-KUR [II, III / 32, 39, 50], PRIM [II / 89]
- *gracillima* Mitt. – **SIB:** E [I], S [V / 112, 267, 268], **FAR EAST:** AMU [II, G?, 60, 91], SAKH [III / 183], PRIM [II / 89] – {91}
- *grandiloba* Lindb. – **FAR EAST:** AMU [II / 66], SAKH [II, V / 114, 170], S-KUR [II, III / 32, 39, 184], PRIM [II / 89]
- *nitens* (Steph.) S.Hatt. – **FAR EAST:** SAKH [II / 34], PRIM [II / 35]
- *nitidula* (C.Massal.) S.Hatt. – **FAR EAST:** PRIM [II / 35] – {92}
- *oblongifolia* S.Hatt. – **FAR EAST:** AMU [96], PRIM [II / 89]
- *platyphylla* (L.) Pfeiff. – **EUR:** NW [I / 13, 24, 234], NE [IV / 80], KLN [72a, 115], C [103, 180, 193], N-UR [IV / 47, 136, 252], S-UR [I / 21, 46, 138], **CAUC:** [I / 1a, 75, 104, 107, 131], **SIB:** W [169], E [171], YAK [246, 249], S [I, V / 42, 112, 155, 267], **FAR EAST:** KAM [I, II / 36], AMU [II, III / 66, 67, 91, 297], SAKH [KYO? / 114], PRIM [II / 89]
- *spinulosa* (Steph.) S.Hatt. – **FAR EAST:** PRIM [III / 208]
- *tosana* (Steph.) S.Hatt. – **FAR EAST:** PRIM [II / 33]
- *ulophylla* (Steph.) S.Hatt. – **FAR EAST:** AMU [II / 60, 67, 91, 92], PRIM [II / 89]
- *vernica* Lindb. – **SIB:** S [96], **FAR EAST:** AMU [II, VII / 66, 67, 91, 92, 156], ?SAKH [I, III, / 38, 114, 226], ?S-KUR [III / 1], PRIM [II / 89] – {93}
- Prasanthus* Lindb. [Gymnomitriaceae]
- *jamalicus* Potemkin – **ARC:** WS [III / 195]
- *suecicus* (Gottsche) Lindb. – **ARC:** EURO [141, 151, 299], WS [I, III / 195, 296], ES [III / 171, 222, 295], BE [III / 10], **EUR:** NW [I / 150, 234], N-UR [IV / 299], **SIB:** YAK [246, 247], S [I / 112, 132], **FAR EAST:** CHUK [III / 10], KAM [I, IV / 36]

Preissia Corda [Marchantiaceae]

- *quadrata* (Scop.) Nees – **ARC:** EURO [I, IV / 18, 19, 141, 147, 151, 287], WS [III / 195], ES [I, III / 171, 295], ARCYAK [142, 246, 248], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV/86, 111, 191, 266, 284, 298], KLN [72a, 115], C [I / 11, 12, 14, 85, 103, 193], N-UR [I, III, IV / 41, 80, 136, 252, 299], S-UR [I / 21, 23, 46, 138], **CAUC:** [I / 75, 107, 131, 263], **SIB:** E [171, 292], YAK [I / 246], S [I, V / 112, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II, III / 51], KAM [I, IV / 36], AMU [I, II, V / 66, 135], SAKH [II / 114], S-KUR [II / 39], PRIM [II / 33]

Protolophozia (R.M.Schust.) Schljakov [Scapaniaceae]

- *elongata* (Steph.) Schljakov – **ARC:** EURO [I / 141, 151], **EUR:** NW [I / 118, 234], N-UR [136], **SIB:** S [132], **FAR EAST:** CHUK [III / 10] – {94}

Pseudolepicolea Fulford & J.Taylor [Pseudolepicoleaceae]

- *fryei* (Pers.) Grolle & Ando – **ARC:** WS [III / 195], ES [III / 239, 295], ARCYAK [I / 142, 246, 247], BE [III / 10, 239], **SIB:** YAK [246], **FAR EAST:** CHUK [III / 10]

Pseudolophozia Konstant. & Vilnet [*Scapaniaceae s.l.] – {6}

- *debiliformis* (R.M.Schust. & Damsh.) Konstant. & Vilnet (*Protolophozia debiliformis* (R.M.Schust.) Konstant.) – **ARC:** EURO [I / 141, 147, 151, 181], WS [III / 195], **EUR:** NW [I / 127, 140, 148], **CAUC:** [I / 107], **FAR EAST:** KAM [I / 36], S-KUR [II / 32, 39], SAKH [II / 34]

- *sudetica* (Nees ex Huebener) Konstant. & Vilnet (*Lophozia sudetica* (Nees ex Huebener) Grolle) – **ARC:** EURO [I, III, IV / 18, 117, 151, 283, 288], WS [III / 18, 195, 296], ES [I / 171, 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I / 24, 204, 234], NE [IV / 86, 284], N-UR [I, IV / 41, 136, 191, 252], S-UR [I / 138], **CAUC:** [I / 107, 131], **SIB:** YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [III / 10, 51], MAG [III / 51], KAM [I / 36], AMU [I, V, VI / 6, 135], SAKH [II, III / 114, 183], S-KUR [II / 39], PRIM [II / 89]

Pseudotritomaria Konstant. & Vilnet [Scapaniaceae] – {6}

- *heterophylla* (R.M.Schust.) Konstant. & Vilnet (*Tritomaria heterophylla* R.M.Schust.) – **ARC:** EURO [III / 151, 288], WS [III / 195], ES [I, III / 295], ARCYAK [I / 142, 246], BE [7, 151], **SIB:** YAK [246], S [224]

Ptilidium Nees [Ptilidiaceae]

- *californicum* (Austin) Pearson – **FAR EAST:** KAM [I, III / 36, 158], SAKH [I, II / 38], S-KUR [II / 39]
- *ciliare* (L.) Hampe – **ARC:** EURO [I, IV / 18, 19, 117, 141, 147, 151, 283], WS [I, III / 18, 195, 296], ES [I, III / 18, 171, 222, 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 191, 266, 284, 298], KLN [72a, 73], C [I, IV / 11, 12, 14, 15, 85, 103, 125, 173, 193, 274, 275], N-UR [I, IV / 41, 80, 136, 252, 286], S-UR [I / 21, 22, 138], SE [177], **CAUC:** [I / 131], **SIB:** W [70, 168, 169], E [171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II, III / 51], KAM [I, IV / 36], AMU [I, II, III, V, VI, VII / 6, 27, 66, 67, 91, 135, 156, 170, 297], SAKH [I, II, III / 38, 226], S-KUR [II / 39], PRIM [II / 89]
- *pulcherrimum* (Weber) Vain. – **ARC:** EURO [I, IV / 141, 151, 283, 299], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284], KLN [73], C [I, IV / 11, 12, 14, 15, 74, 85, 103, 105, 106, 125, 173, 193, 202, 274, 275], N-UR [I, IV / 41, 80, 136, 252, 286], S-UR [I / 21, 22, 23, 46, 138], SE [177, 253], **CAUC:** [I / 107, 131], **SIB:** W [I / 69, 70, 168, 169, 171], E [171, 292], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [III / 51], MAG [II, III / 51], KAM [I, IV / 36], AMU [I, II, V / 6, 27, 67, 91, 135, 156], SAKH [I, II / 38, 114], S-KUR [II, III / 1, 39, 50], PRIM [II / 89]

Radula Dumort. [Radulaceae]

- *auriculata* Steph. – **FAR EAST:** PRIM [II / 89]
- *brunnea* Steph. – **FAR EAST:** SAKH [NICH, 279], S-KUR [II / 39]

- *complanata* (L.) Dumort. – **ARC:** ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 79, 80], KLN [73, 115], C [I, V, IV / 12, 14, 15, 74, 85, 103, 105, 106, 125, 173, 193, 202, 275], N-UR [I, IV / 41, 136, 252, 286], S-UR [I / 21, 46, 138, 171, 180a], SE [177, 253], **CAUC:** [I / 1a, 75, 107, 131], **SIB:** W [168, 169, 256, 257], E [171], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [III / 10], KAM [I / 36], AMU [I, II, V, VII, G?, 60, 66, 67, 91, 135, 156], SAKH [I, II, VII / 38, 114, 170], S-KUR [II, III / 1, 39, 157], PRIM [II / 89]
 - *constricta* Steph. – **FAR EAST:** KAM [I / 36], AMU [II / 91], SAKH [I, II / 38], S-KUR [II / 32, 39], PRIM [II / 89]
 - *japonica* Gottsche ex Steph. – **FAR EAST:** SAKH [II / 34], PRIM [III / 201], S-KUR [II / 32, 39]
 - *lindenbergiana* Gottsche ex C.Hartm. – **EUR:** NW [I / 24, 118, 234], N-UR [I / 41], **CAUC:** [I / 75, 104, 107, 131, 263], **SIB:** S [I / 42], **FAR EAST:** ?AMU [66], ?SAKH [KYO? / 114] – {95}
 - *obtusiloba* Steph. – **FAR EAST:** AMU [II / 67], S-KUR [III / 50, 183], SAKH [II / 34], S-KUR [II / 39], PRIM [II / 89]
 - *prolifera* Arnell – **ARC:** EURO [151], WS [296], ES [III / 18, 222, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** N-UR [299], **SIB:** E [292], YAK [246, 247], **FAR EAST:** CHUK [III / 10], KAM [I, II / 36], AMU [I, V / 135], SAKH [II / 34]
- Reboulia** Raddi [Aytoniaceae]
- *hemisphaerica* (L.) Raddi – **EUR:** NW [I / 14, 55, 214], NE [IV / 80], N-UR [I, IV / 41, 80, 252], S-UR [21, 138], **CAUC:** [I / 1a, 131, 277], **SIB:** W [178], E [III / 171], S [I, III, V / 42, 112, 155, 267], YAK [I / 27, 246], **FAR EAST:** AMU [I, II, VII, G?, 27, 60, 66, 67, 91, 170], SAKH [II, III / 29a, 114, 226], S-KUR [II, III / 39, 50], PRIM [II / 89]
- Riccardia** Gray [Aneuraceae]
- *aeruginosa* Furuki – **FAR EAST:** KAM [I, II / 36], S-KUR [II / 39]
 - *chamedryfolia* (With.) Grolle – **ARC:** WS [III / 195], ARCYAK [?246], **EUR:** NW [I, III / 24, 118, 204, 234], NE [IV / 284], KLN [72a], C [III / 15, 223], **CAUC:** [I / 107], **SIB:** W [168], YAK [?246], S [I / 42], **FAR EAST:** KAM [I / 36], SAKH [I, II / 38], S-KUR [II, III / 32, 39, 184]
 - *incurvata* Lindb. – **EUR:** NW [I, III / 214, 221, 234], NE [V / 266], C [174a], **SIB:** S [V / 267]
 - *latifrons* (Lindb.) Lindb. – **ARC:** EURO [151], WS [III / 195], ES [I,], ARCYAK [142, ?246], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 284], KLN [72a], C [I, IV / 11, 12, 15, 85, 103, 105, 106, 125, 173, 202], N-UR [I, IV / 252], S-UR [138], **CAUC:** [I / 107, 263], **SIB:** W [168, 169, 171], E [I / 171], YAK [I / 27, ?246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** KAM [I / 36], AMU [II, VI / 6], MAG [II / 37], SAKH [I, II / 38], S-KUR [II, III / 32, 39, 184], PRIM [II / 89]
 - *multifida* (L.) Gray – **EUR:** NW [I, III / 24, 214, 234], NE [IV / 284], C [103], **CAUC:** [I / 75, 104, 107, 131], **SIB:** W [169], YAK [I, ?246], S [I, V / 42, 267], **FAR EAST:** AMU [I, V, VI / 6, 135], S-KUR [II, III / 39, 184], PRIM [II / 89]
 - *palmata* (Hedw.) Carruth. – **EUR:** NW [I, III / 24, 119, 150, 214], NE [IV / 80, 113, 266], KLN [72a], C [I, IV / 11, 12, 14, 15, 85, 103, 105, 106], S-UR [I / 138, 171], **CAUC:** [I / 75, 107, 131, 263], **SIB:** W [168, 169, 256], E [171], YAK [I / 27, 246], S [I, V / 42, 132, 267], **FAR EAST:** CHUK [III / 51], MAG [III / 51], KAM [I / 36], AMU [I, II, V / 67, 91, 135], SAKH [I, II, III / 38, 114, 183], S-KUR [II, III / 39, 183], PRIM [II / 89]
 - *subalpina* Furuki – **FAR EAST:** S-KUR [II / 32, 39]
 - *vitrea* Furuki – **FAR EAST:** S-KUR [II / 32, 39]
- Riccia** L. [Ricciaceae]
- *beyrichiana* Hampe ex Lehm. – **EUR:** ?NW [24, 214], **SIB:** W [255] – {96}
 - *bifurca* Hoffm. – **ARC:** ES [171], **EUR:** NW [13, 24], KLN [72a, 277], C [12, 13, 14, 15], SE [14], **CAUC** [59], **SIB:** S [I / 13, 269], E [44], **FAR EAST:** CHUK [III / 9, 10], PRIM [13] – {97}
 - *canaliculata* Hoffm. – **EUR:** C [84, 106, 274], SE [13], **SIB:** W [I / 44, 257], S [I / 44]
 - *cavernosa* Hoffm. – **ARC:** ES [171], **EUR:** NW [III / 24, 214, 234], NE [80, 298], KLN [73], C [I / 12, 14, 15, 85, 103, 106, 193, 274, 275], N-UR [252], S-UR [21], SE [I / 177, 253], **SIB:** W

- [I / 44, 169, 256, 257, 258], E [171], YAK [250], S [I, V / 267], **FAR EAST:** CHUK [III / 10], KAM [I / 36], PRIM [13]
- *ciliata* Hoffm. – **EUR:** NW [III / 219], C [103, 193, 275], S-UR [180a], SE [I / 13] – {98}
- *crinita* Taylor (*Riccia canescens* Steph., *R. trichocarpa* M.Howe) – **EUR:** NW [III / 214], C [12, 13], SE [I / 253], **SIB:** W [13] – {98}
- *fluitans* L. – **EUR:** NW [III / 24, 214], NE [IV / 80, 286], KLN [73], C [I, IV / 12, 14, 15, 74, 85, 103, 105, 106, 125, 173, 193, 274, 275], N-UR [252, 299], S-UR [21], SE [177, 253], **SIB:** W [I / 44, 169, 171, 256, 257, 258], YAK [246], S [I, V / 42, 267], **FAR EAST:** AMU [II / 67, 90, 91], S-KUR [II / 39], PRIM [II / 89]
- *frostii* Austin – **ARC:** WS [163], ES [163], **EUR:** C [163], S-UR [21], SE [I / 163, 253], **SIB:** W [I / 44, 163, 169, 210, 256, 257], E [163], YAK [163, 249, 250], S [I / 163], **FAR EAST:** AMU [163]
- *glauca* L. – **ARC:** WS [13], ES [13, 171], ARCYAK [246], **EUR:** NW [24, 214], KLN [115], C [I / 12, 14, 103, 105, 106, 193, 275], S-UR [I / 21], **SIB:** E [I / 292], S [I / 44, 112], **FAR EAST:** KAM [I / 36], AMU [VII? / 170], PRIM [II / 35] – {99}
- *huebeneriana* Lindenb. – **EUR:** NW [13, 20, 167, 214], C [I / 13, 85, 167, 275, 276], S-UR [21, 167], SE [167], **SIB:** W [I / 44, 169], **FAR EAST:** KAM [I / 36], AMU [I, V / 67, 135], PRIM [II / 13, 89] – {100}
- *lamellosa* Raddi – **EUR:** SE [I / 253], **CAUC:** [I / 107], **SIB:** S [I / 44], **FAR EAST:** KAM [I / 36]
- *rhenana* Lorb. ex Müll.Frib. – **EUR:** NW [III / 219, 220], C [13], **SIB:** W [175, 256], YAK [248], S [III / 225]
- *sorocarpa* Bisch. – **ARC:** WS [III / 195], ES [171, 295], BE [13], **EUR:** NW [III / 24, 214], KLN [73], C [12, 14, 15, 85, 103, 105, 106, 125, 193, 202, 276], S-UR [21, 171], SE [177], **CAUC:** [13, 277], **SIB:** E [13], S [V / 267], **FAR EAST:** CHUK [13], KAM [13] – {101}
- Ricciocarpos** Corda [Ricciaceae]
- *natans* (L.) Corda – **EUR:** NW [III / 24, 214], NE [IV / 80, 286], KLN [72a, 73], C [I / 12, 14, 85, 103, 106, 125, 193, 223, 274, 275], S-UR [47a], SE [177, 253], **SIB:** W [169, 256, 257, 258], YAK [246], S [I, III / 226a], **FAR EAST:** KAM [36], AMU [II / 90], SAKH [III / 114, 183], PRIM [II / 89]
- Saccobasis** H.Buch [Scapaniaceae]
- *polita* (Nees) H.Buch – **ARC:** EURO [151, 209], BE [I, III / 10], **EUR:** NW [I / 24, 234], N-UR [252, 299], **SIB:** S [I, V / 146, 155, 267], **FAR EAST:** CHUK [III / 10], KAM [I, II / 36], SAKH [II / 34],
- *polymorpha* (R.M.Schust.) Schljakov – **ARC:** BE [I, III / 10], **EUR:** NW [I / 234], **FAR EAST:** CHUK [I, III / 10, 145]
- Sauteria** Nees [Cleveaceae]
- *alpina* (Nees) Nees – **ARC:** EURO [19, 151], ES [I, III / 171, 295], ARCYAK [142, 246], BE [I, III / 7, 10], **EUR:** NW [I / 53, 55, 234], NE [IV / 80], N-UR [IV / 47], **CAUC:** [I / 131], **SIB:** E [13, 171, 292], YAK [246], S [V / 267], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I, II / 36], SAKH [II / 34]
- *japonica* (Shimizu & S.Hatt.) S.Hatt. – **FAR EAST:** SAKH [II / 40]
- Scapania** (Dumort.) Dumort. [Scapaniaceae]
- *aequiloba* (Schwägr.) Dumort. – **EUR:** NW [I / 24, 234], **CAUC:** [I / 59, 131]
- *ampliata* Steph. – **FAR EAST:** S-KUR [II / 32, 39]
- *apiculata* Spruce – **EUR:** NW [I, III / 24, 140, 214, 234], NE [IV / 78, 79, 80], C [57, 74, 105], N-UR [136], **CAUC:** [I / 107, 131, 263], **SIB:** W [168, 169, 171], E [171], YAK [I / 246, 247], S [I, V / 42, 132, 146, 155, 267], **FAR EAST:** MAG [III / 51], AMU [I, II, V, VII / 91, 135, 156], PRIM [II / 89]
- *aspera* M.Bernet & Bernet – **EUR:** CAUC [I / 59, 131]

- *brevicaulis* J.Taylor – **ARC:** ES [III / 222, 295], ARCYAK [246], BE [III / 10], **CAUC:** [I / 131], **SIB:** E [62], YAK [246], **FAR EAST:** KAM [I / 36], AMU [62] – {102}
- *callicola* (Arnell & J.Perss.) Ingham – **ARC:** ARCYAK [246], **EUR:** NW [I / 24], **SIB:** YAK [246] – {103}
- *carinthiaca* J.B.Jack ex Lindb. – **EUR:** **CAUC:** [I / 107, 131], **SIB:** YAK [62], S [I, V / 132, 267], **FAR EAST:** AMU [135] – {104}
- *ciliata* Sande Lac. – **FAR EAST:** ?S-KUR [99, 183] – {105}
- *compacta* (A.Roth) Dumort. – **EUR:** NW [III / 214, 221]
- *crassiretis* Bryhn – **ARC:** WS [III / 195], ES [III / 222, 295], ARCYAK [246], BE [III / 10], **EUR:** NW [I / 234], **SIB:** E [127, 292, 294], YAK [I / 246], S [I, V / 127, 132, 155, 267], **FAR EAST:** CHUK [III / 10, 51], AMU [I, V / 135], SAKH [II / 34], S-KUR [II / 32, 39], PRIM [II / 33] – {106}
- *curta* (Mart.) Dumort. – **ARC:** EURO [IV / 18, 19, 141, 283], WS [I, III / 18, 195], ES [III / 18, 171, 222, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [I, IV / 80, 284, 298], KLN [72a, 115], C [I / 12, 85, 103, 105, 125, 173, 193, 202, 275, 276], N-UR [I, IV / 41, 80, 136, 191, 252, 286], S-UR [138], **SIB:** W [169, 171], E [171], YAK [I / 246], S [I, V / 42, 112, 267], **FAR EAST:** CHUK [III / 51], KAM [I / 36], AMU [III / 170, 297], S-KUR [II / 32, 39]
- var. *grandiretis* R.M.Schust. – **ARC:** WS [III / 195], **EUR:** NW [I / 234], **FAR EAST:** CHUK [III / 10]
- *cuspiduligera* (Nees) Müll.Frib. – **ARC:** EURO [IV / 18, 19, 151, 287], WS [III / 195, 296], ES [III / 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 234], N-UR [I, IV / 80, 136, 252], **CAUC:** [I / 107, 131], **SIB:** E [292], YAK [246], S [I, V / 112, 146, 155, 267], **FAR EAST:** CHUK [III / 10], KAM [I, II, IV / 36], SAKH [II / 34]
- *degenii* Schiffn. ex Müll.Frib. – **ARC:** EURO [151], WS [III / 195], ES [III / 222, 295], BE [III / 10], **EUR:** NW [I / 24, 204], **SIB:** W [169], YAK [246], S [I, V / 42, 112, 267], **FAR EAST:** CHUK [III / 10, 51], KAM [I / 36]
- *diplophylloides* Amakawa & S.Hatt. – **FAR EAST:** KAM [I / 36], SAKH [II / 34], S-KUR [II / 39]
- *glaucocephala* (Taylor) Austin – **EUR:** NW [20, 24], **SIB:** YAK [I / 246, 247], S [I / 112], **FAR EAST:** KAM [I / 36] – {107}
- *gymnostomophila* Kaal. – **ARC:** EURO [I, III, IV / 151, 283, 288, 299], WS [III / 195], ES [III / 222, 295], ARCYAK [142, 246], BE [III / 7, 10], **EUR:** NW [I / 24, 128, 234], NE [IV / 80, 284], N-UR [IV / 47, 136, 191, 299], S-UR [138], **CAUC:** [I / 107], **SIB:** E [292], YAK [I / 246], S [I, V / 146, 155, 267], **FAR EAST:** CHUK [III / 10], KAM [I / 36], AMU [I / 27], SAKH [II / 40]
- *helvetica* Gottsche – **CAUC:** [I / 107, 131]
- *hirosakiensis* Steph. – **SIB:** S [268], **FAR EAST:** S-KUR [II, III / 39, 184] {108}
- *hyperborea* Jørg. – **ARC:** EURO [I / 19, 117, 147, 151, 191, 299], WS [195], ES [I / 222, 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I / 24, 234], N-UR [IV / 252, 286, 299], **SIB:** YAK [I / 246], S [I, V / 27, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], KAM [I, II / 36]
- *integerrima* Steph. – **FAR EAST:** S-KUR [II / 32, 39]
- *irrigua* (Nees) Nees – **ARC:** EURO [I, IV / 19, 141, 147, 191, 283, 299], WS [III / 18, 195, 296], ES [I, III / 171, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284, 299], KLN [72a], C [I / 12, 85, 103, 105, 106, 125, 173, 202, 275], N-UR [I, IV / 41, 80, 136, 286, 299], S-UR [I / 21, 22, 138, 241], SE [177], **CAUC:** [I / 107, 131, 263], **SIB:** W [168, 169], E [70, 171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III / 51], KAM [I / 36], AMU [I, II, III, VI, VII / 6, 27, 91, 156, 297], SAKH [I, II, VII / 38, 114, 170], S-KUR [II, III / 39, 50]

- *kauringii* Ryan – **ARC:** EURO [19, 151, 299], ?WS [III / 195], ES [III / 295], BE [III / 10], **EUR:** NW [I / 234], N-UR [252, 299], **SIB:** E [27], YAK [I / 246], S [I / 155], **FAR EAST:** CHUK [III / 10], KAM [I / 36] – {109}
- *ligulata* Steph. – **FAR EAST:** S-KUR [I, II, III / 39, 184]
- *ligulifolia* (R.M.Schust.) R.M.Schust. – **ARC:** EURO [151, 288], ES [III / 295], BE [I, III / 10]
- *lingulata* H.Buch – **ARC:** EURO [III / 19, 151, 288], ?WS [?III / 199], ES [III / 222], **EUR:** NW [I / 24, 140], **CAUC:** [I / ?107], **FAR EAST:** CHUK [I / 145], KAM [I, II / 36], AMU [II / 91], S-KUR [III / 184]
- *matveyevae* Potemkin – **ARC:** ES [III / 200]
- *mucronata* H.Buch – **ARC:** EURO [19, 151], WS [III / 195], ARCYAK [246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 284], C [I / 125, 223], N-UR [I, IV / 136, 252, 299], S-UR [I / 22, 138], **SIB:** W [70, 168, 169], E [I / 27], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [III / 10, 51], MAG [III / 51], KAM [I / 36], AMU [II, VI / 6, 91, 68]
- *nemorea* (L.) Grolle – **EUR:** NW [I, III / 20, 24, 110, 221], NE [IV / 80, 83], KLN [72a, 115], N-UR [I, IV / 41, 83, 252 ?], S-UR [138], **CAUC:** [75, 131], **SIB:** YAK [246], S [I, V / 112, 267], **FAR EAST:** SAKH [KYO? / 188], S-KUR [III / 157] – {110}
- *obcordata* (Berggr.) S.W.Arnell – **ARC:** EURO [I / 141, 147, 151], WS [I, III / 195], ES [I, III / 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I / 234], NE [IV / 284], N-UR [IV / 252, 299], **SIB:** S [I, V / 155, 267], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I / 36], MAG [II / 37]
- *obscura* (Arnell & C.E.O.Jensen) Schiffn. – **EUR:** NW [I / 234], **FAR EAST:** CHUK [III / 51], KAM [I / 36]
- *paludicola* Loeske & Müll.Frib. – **ARC:** EURO [I, IV / 19, 117, 141, 147, 151, 283], WS [III / 18, 195], ES [III / 222, 295], ARCYAK [142, 246], BE [III, I / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284], KLN [72a], C [I, IV / 85, 223], N-UR [I, IV / 41, 136, 252, 286, 299], S-UR [I / 138, 217, 241], **SIB:** W [70, 168, 169], YAK [I / 246], S [I, V / 42, 146, 155, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [III / 51], KAM [I / 36], AMU [II, III, VI / 6, 91, 297, 68], S-KUR [II / 39],
- *paludosa* (Müll.Frib.) Müll.Frib. – **ARC:** EURO [IV / 82, 141], ARCYAK [142, 246], BE [III, I / 10], **EUR:** NW [I / 24, 234], NE [IV / 266, 284], N-UR [IV / 136, 252, 286, 299], S-UR [I / 22, 138], **CAUC:** [I / 107, 131], **SIB:** E [293], S [I / 127, 146], **FAR EAST:** MAG [II], KAM [I, IV / 36], AMU [II], SAKH [I, II / 38], S-KUR [II, III / 39, 50]
- *paradoxa* R.M.Schust. – **EUR:** NW [I / 118]
- *parvifolia* Warnst. – **ARC:** ARCYAK [246], WS [296], BE [III, I / 10], **EUR:** NW [I / 140a], N-UR [I / 136], **SIB:** YAK [I / 246], S [I / 42, 146], **FAR EAST:** CHUK [III / 10, 51], MAG [II, III / 51], KAM [I / 36], AMU [VI / 6], SAKH [I, II / 38], S-KUR [II / 32, 39], PRIM [II / 33] – {111}
- *parvitexta* Steph. – **FAR EAST:** S-KUR [II / 32, 39]
- *praetervisa* Meyl. – **ARC:** EURO [19], WS [III / 195], ES [III / 222, 295], ARCYAK [246], BE [I, III / 10], **EUR:** NW [I / 24, 234], NE [IV / 266, 284], N-UR [I, IV / 80, 136], S-UR [138], C [I], **CAUC:** [I / 107, 131], **SIB:** YAK [246], S [I / 127, 146], **FAR EAST:** KAM [I / 36]
- *rufidula* Warnst. – **ARC:** BE [I, III / 10], **SIB:** YAK [I / 246], S [I / 155, 268], **FAR EAST:** CHUK [III / 10], AMU [I, V / 135, 196]
- *scandica* (Arnell & H.Buch) Macvicar – **ARC:** EURO [IV / 83, 117, 141, 151, 283], WS [I, III / 195], ES [I, III / 222, 295], ARCYAK [142], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 83], C [I / 14, 15, 17, 125], N-UR [I / 41, 83, 136], S-UR [138], **CAUC:** [I / 107, 131, 263], **SIB:** YAK [I], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [I / 145], KAM [I, III / 36, 185], AMU [II, VI / 6, 66, 67, 91], SAKH [KYO? / 114], PRIM [II / 89] – {111}
- *simmonsii* Bryhn & Kaal. – **ARC:** EURO [151, 299], WS [III / 195], ES [III / 18, 222, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 128, 148, 234], **SIB:** E [292], YAK [246], **FAR EAST:** CHUK [III / 10]

- *sphaerifera* H.Buch & Tuom. – **EUR:** NW [63, 234], **SIB:** YAK [246, 247], S [I / 112, 153, 155, 268], **FAR EAST:** KAM [IV / 84], SAKH [II / 34], PRIM [II / 33]
 - *spitsbergensis* (Lindb.) Müll.Frib. – **ARC:** EURO [151, 196, 288], ES [III / 18, 295], ARCYAK [I / 142, 246], BE [III / 10], **EUR:** NW [I / 148, 234], **SIB:** E [I / 27, 292, 293] YAK [I / 246], S [I, V / 112, 155, 267], **FAR EAST:** CHUK [III / 10]
 - *subalpina* (Nees ex Lindenb.) Dumort. – **ARC:** EURO [IV / 19, 141, 151, 191], WS [III / 195], ES [III / 171, 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 266, 284], C [84], N-UR [I, IV / 41, 80, 136, 299], S-UR [138, 217], **CAUC:** [I / 107, 131, 263], **SIB:** E [171], YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [III / 10, 51], MAG [II, III / 51], KAM [I, III / 36, 184], AMU [II / 67, 91], S-KUR [II / 39], PRIM [II / 89]
 - *tundrae* (Arnell) H.Buch – **ARC:** EURO [I / 19, 117, 147, 151], WS [III / 195], ES [III / 295], ARCYAK [I, 246], BE [III / 10], **EUR:** NW [I / 234], **SIB:** [I / 132, 224], **FAR EAST:** CHUK [I / 145] – {112}
 - *uliginosa* (Sw. ex Lindenb.) Dumort. – **ARC:** WS [III / 195], ES [I, III / 127, 295], ARCYAK [246], BE [III / 10], **EUR:** NW [I / 24, 234], N-UR [I, IV / 41, 136], S-UR [21], **SIB:** E [294], S [112, 155], **FAR EAST:** CHUK [III / 10, 51], MAG [III / 51], KAM [I, III / 36, 184], S-KUR [II / 39]
 - *umbrosa* (Schrad.) Dumort. – **ARC:** ?EURO [19], **EUR:** NW [I, III / 24, 204, 206, 214, 234], NE [IV / 80, 266, 284], ?C [193], **CAUC:** [I / 131], **SIB:** S [I / 42], **FAR EAST:** KAM [I / 36], AMU [I / 27], S-KUR [II / 32, 39]
 - *undulata* (L.) Dumort. – **ARC:** EURO [I, IV / 113, 151], ES [III / 222, 295], BE [III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 284], C [I, IV / 11, 14, 15, 17, 85, 105], N-UR [I, IV / 41, 80, 136, 299], S-UR [I / 22, 138], **CAUC:** [I / 107, 131, 263], **SIB:** W [70, 169], YAK [I / 27, 246], S [I, V / 42, 112, 146, 155, 267], E [171], **FAR EAST:** CHUK [III / 10, 51], MAG [III / 51], KAM [I, IV / 36], AMU [I, II, V, VII / 66, 91, 135, 156], SAKH [KYO? / 114], S-KUR [II / 39], PRIM [II / 89]
 - *verrucosa* Heeg – **CAUC:** [I / 1a, 107, 131], **FAR EAST:** ?CHUK [III / 51], ?MAG [III / 51], ?PRIM [III / 201] – {113}
 - *zemliae* S.W.Arnell – **ARC:** EURO [19, 151], WS [III / 195], ES [III / 222], BE [III / 7], **SIB:** YAK [246], **FAR EAST:** CHUK [I / 145]
- Schistochilopsis* (N.Kitag.) Konstant. [Scapaniaceae]
- *cornuta* (Steph.) Konstant. – **FAR EAST:** AMU [II / 91], SAKH [II / 114], S-KUR [II, III / 39, 183], PRIM [II / 89]
 - *grandiretis* (Lindb. ex Kaal.) Konstant. – **ARC:** EURO [III / 151, 288], WS [III / 195], ES [III / 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I / 24, 234], **SIB:** YAK [I / 246], S [I / 132, 155], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I / 36], SAKH [II / 34]
 - *hyperarctica* (R.M.Schust.) Konstant. – **ARC:** ?BE [III / 10, 151], **EUR:** NE [I, IV / 80, 83, 86, 266], **SIB:** YAK [I / 246], **FAR EAST:** KAM [I / 36], SAKH [II / 34] – {114}
 - *incisa* (Schrad.) Konstant. – **ARC:** EURO [I, IV / 18, 19, 141, 147, 283], WS [I, III / 195], ES [I, III / 171, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284, 299], KLN [72a, 115], C [11, 12, 14, 85, 103, 105, 106, 173], N-UR [I, IV / 41, 136, 191, 252, 299], S-UR [I / 21, 22, 138], **CAUC:** [I / 75, 107, 131, 263], **SIB:** W [I / 168, 169], E [171, 292], YAK [I / 246], S [I, V / 42, 112, 146, 155, 267], **FAR EAST:** CHUK [III / 10, 51], MAG [II, III / 51], KAM [I, IV / 36], AMU [I, II, V / 6, 27, 66, 91, 135], SAKH [I, II / 38, 114], S-KUR [II, III / 39, 157], PRIM [II / 89]
 - *opacifolia* (Culm. ex Meyl.) Konstant. – **ARC:** EURO [I / 141, 147, 151], WS [I, III / 195, 296], ES [I, III / 295], ARCYAK [142, 246], BE [I, III / 10], **EUR:** NW [I / 234], S-UR [217], **CAUC:** [I / 107, 131], **SIB:** E [292], YAK [I / 246], S [I, V / 155, 267], **FAR EAST:** CHUK [I, III / 10, 145], KAM [I, IV / 36], SAKH [II / 34], S-KUR [II / 39] – {115}

Schljakovia Konstant. & Vilnet [*Scapaniaceae s.l.] – {6}

- *kunzeana* (Huebener) Konstant. & Vilnet (*Orthocaulis kunzeanus* (Huebener) H.Buch) – **ARC**: EURO [I, III, IV / 19, 141, 147, 151, 191, 283, 288], WS [III / 195, 296], ES [I, III / 18, 171, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR**: NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284, 298], KLN [73], C [I, TVBG / 11, 85, 125, 180, 298], N-UR [I, IV / 136, 252, 286], S-UR [I / 21, 22, 23, 138], **SIB**: W [70, 169, 171], E [171, 292, 294] YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST**: CHUK [I, III / 10, 51, 145], MAG [III / 51], KAM [I, III, IV / 36, 184], AMU [I, II, III, V / 135, 297, 68], SAKH [II / 34]

Schljakovianthus Konstant. & Vilnet [*Scapaniaceae s.l.] – {6}

- *quadrilobus* (Lindb.) Konstant. & Vilnet (*Orthocaulis quadrilobus* (Lindb.) H.Buch) – **ARC**: EURO [I, III, IV / 18, 19, 147, 151, 191, 287, 288], WS [III / 195, 296], ES [I / 171, 222, 295], BE [I, III / 10], ARCYAK [142, 246], **EUR**: NW [I / 24, 234], NE [IV / 80, 284], N-UR [I, IV / 136, 191, 252, 299], **CAUC**: [131], **SIB**: E [171, 292], YAK [I / 246], S [I, V / 42, 146, 267], **FAR EAST**: CHUK [I, III / 10, 145], MAG [II], KAM [I / 36], AMU [II / 67], SAKH [II / 34]

Schofieldia J.D.Godfrey [Cephaloziaceae]

- *monticola* J.D.Godfrey – **FAR EAST**: KAM [I / 29, 36]

Solenostoma Mitt. [Solenostomataceae]

- *caespiticium* (Lindenb.) Steph. – **ARC**: ARCYAK [?246], BE [III / 10], **EUR**: NW [I, III / 24, 118, 214, 234], NE [IV / 80, 266, 284, 285], C [I / 85, 103, 105], ?N-UR [299], **SIB**: W [169], YAK [I], S [I / 127], **FAR EAST**: CHUK [III / 51], KAM [I / 36], SAKH [II / 34], S-KUR [II / 32, 39] – {116}
- *confertissimum* (Nees) Schljakov – **ARC**: EURO [I / 141, 147, 151, 283], WS [I, III / 195], ES [III / 295], ARCYAK [246, 260], BE [I, III / 10], **EUR**: NW [I / 24, 234], NE [IV / 80, 284], N-UR [I, IV / 41, 136], **CAUC**: [I / 107, 131, 263], **SIB**: E [260], YAK [I / 246], S [I, V / 127, 146, 155, 267], **FAR EAST**: CHUK [I / 145], KAM [I / 36], AMU [I, V / 135], SAKH [II / 40]
- *fusiforme* (Steph.) R.M.Schust. – **FAR EAST**: KAM [I / 36], S-KUR [II / 32, 39]
- *gracillimum* (Sm.) R.M.Schust. – **EUR**: NW [III / 214, 234, 260], NE [IV / 113, 266], C [298], **CAUC**: [131], **SIB**: S [155], **FAR EAST**: KAM [I / 36] – {117}
- *koreanum* Steph. – **FAR EAST**: KAM [I / 36], S-KUR [II / 39]
- *pusillum* (C.E.O.Jensen) Steph. – **ARC**: EURO [IV / 141, 151, 282, 283], WS [III / 195], ES [III / 295], **EUR**: NW [I / 24, 234], C [193], **SIB**: YAK [246, 247], **FAR EAST**: KAM [I / 36], SAKH [KYO? / 114], S-KUR [II / 32, 39]
- *pseudopyriflorum* Bakalin & Vilnet – **SIB**: S [II, V / 44a], **FAR EAST**: SAKH [II / 44a], S-KUR [II / 44a], PRIM [II / 44a]
- *rishiriense* Amakawa – **FAR EAST**: MAG [II / 44a], S-KUR [II / 32, 39]
- *sphaerocarpum* (Hook.) Steph. – **ARC**: EURO [I, IV / 19, 147, 151, 191, 282, 1982], WS [I, III / 195], ES [171], BE [I, III / 10], **EUR**: NW [I, III / 24, 214, 234], NE [I, IV / 80, 284, 299], C [14, 85, 106], N-UR [I, IV / 41, 136, 252, 299], **CAUC**: [131], **SIB**: W [171], E [171], YAK [I / 246], S [I, V / 42, 146, 155, 267], **FAR EAST**: CHUK [I, III / 10, 145], KAM [I / 36], AMU [II, III / 297], SAKH [I, II / 38], S-KUR [II / 32, 39], PRIM [II / 33]
- var. *nanum* (Nees) R.M.Schust. – **ARC**: EURO [141, 151], WS [III / 195], **SIB**: S [155], **FAR EAST**: KAM [I / 36]

Southbya Spruce [Arnellaceae]

- *tophacea* (Spruce) Spruce – **CAUC**: [I / 104, 131, 154]

Sphenolobus (Lindb.) Berggr. [*Scapaniaceae s.l.]

- *cavifolius* (H.Buch & S.W.Arnell) Müll.Frib. – **ARC**: EURO [83], WS [III / 195], ES [III / 222, 295], ARCYAK [142, 246], **EUR**: NW [I / 234], N-UR [IV / 83, 286, 299], **SIB**: YAK [246], **FAR EAST**: KAM [I / 36]
- *minutus* (Schreb.) Berggr. – **ARC**: EURO [I, III, IV / 18, 19, 117, 141, 147, 283, 288], WS [I, III / 18, 195, 296], ES [I, III / 18, 171, 222, 295], ARCYAK [142, 246], BE [I, III / 10], **EUR**: NW

- [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284], C [103, 105, 193], N-UR [I, IV / 41, 47, 136, 299], S-UR [I / 21, 22, 138], **CAUC:** [I / 107, 131, 263], **SIB:** W [169, 171], E [I / 171, 292, 294], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II, III / 51], KAM [I, II, III, IV / 36, 184], AMU [I, II, V, VI / 6, 27, 91, 135, 68], SAKH [I, II / 38], S-KUR [II / 39], PRIM [II / 89]
- *saxicola* (Schrad.) Steph. – **ARC:** EURO [I, IV / 151, 283], WS [III / 195], ES [I, III / 171, 295], ARCYAK [I / 142, 246], BE [I / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 284], N-UR [I, IV / 41, 136, 299], S-UR [I / 21, 138], **SIB:** E [171, 292], YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II, III / 51], KAM [I / 36], AMU [I, II, V, VI, VII / 6, 91, 135, 156], SAKH [I, II / 38, 114], PRIM [II / 89]
- Targionia* L. [Targioniaceae]
- *hypophylla* L. – **SIB:** S [III, V / 112, 162, 212, 267, 268], **FAR EAST:** ?KAM [36], AMU [II, III / 13, 91, 162, 297], PRIM [II / 13, 89]
- *indica* Udar & A.Gupta – **FAR EAST:** PRIM [II / 89]
- Tetralophozia* (R.M.Schust.) Schljakov [*Scapaniaceae s.l.]
- *filiformis* (Steph.) Urmi – **SIB:** S [I / 123], **FAR EAST:** AMU [I, V / 27, 123, 135]
- *setiformis* (Ehrh.) Schljakov – **ARC:** EURO [I, III, IV / 18, 19, 82, 141, 151, 288, 299], WS [III / 195], ES [I, III / 18, 222, 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 221, 234], NE [I, IV / 284], N-UR [I, IV / 41, 136, 252, 286, 299], S-UR [I / 21, 22, 138, 241], **SIB:** E [I / 123, 292], YAK [I / 246], S [I, V / 112, 146, 267], **FAR EAST:** CHUK [I, III / 10, 145], MAG [I, III / 51], KAM [I / 36], AMU [I, II, V / 68, 135], SAKH [II / 38], PRIM [II / 33]
- Trichocolea* Dumort. [Trichocoleaceae]
- *tomentella* (Ehrh.) Dumort. – **EUR:** NW [III / 24, 214], C [IV, V / 12, 14, 85, 103, 105, 180], **SIB:** S [V / 267], **FAR EAST:** S-KUR [II, III / 39, 184]
- Trichocoleopsis* S.Okamura [Neotrichocoleaceae]
- *sacculata* (Mitt.) S.Okamura – **FAR EAST:** PRIM [II / 89]
- Tritomaria* Schiffn. ex Loeske [Scapaniaceae]
- *exsecta* (Schmidel) Loeske – **EUR:** NW [I / 214], NE [IV / 80, 298], C [I / 106, 125], N-UR [299], S-UR [21], **CAUC:** [I / 107, 131, 263], **SIB:** W [169, 171], E [171, 292], YAK [I / 27, 246], S [I, V / 112, 146, 267], **FAR EAST:** KAM [I / 36], AMU [I, II, III, V, VI, VII / 6, 27, 66, 67, 91, 135, 156, 170, 297], SAKH [I, II / 38], S-KUR [II, III / 32, 39, 184], PRIM [II / 89]
- *exsectiformis* (Breidl.) Loeske – **ARC:** WS [III / 195], ES [I, III / 295], ARCYAK [246], BE [I / 151], **EUR:** NW [I, III / 24, 150, 206, 214, 234], NE [I, IV / 80, 113, 266, 284], C [103, 105, 173, 180, 193], N-UR [I, IV / 41, 80], S-UR [22, 138], **CAUC:** [107, 263], **SIB:** W [69, 70, 168, 169], E [292, 294] YAK [I / 246], S [I, V / 42, 112, 146, 267], **FAR EAST:** CHUK [I / 145], KAM [I, IV / 36], MAG [II / 37], AMU [VI / 6]
- *quinquedentata* (Huds.) H.Buch – **ARC:** EURO [I, IV / 18, 19, 117, 141, 147, 151, 191, 283], WS [III / 18, 195, 296], ES [I, III / 18, 222, 295], ARCYAK [I / 142, 246], BE [I, III / 10], **EUR:** NW [I, III / 24, 214, 234], NE [IV / 80, 111, 266, 284], C [173, 193], N-UR [I, IV / 41, 47, 80, 136, 191, 252, 299], S-UR [I / 21, 22, 138, 241], **CAUC:** [I / 107, 131, 263], **SIB:** E [292, 294] YAK [I / 246], S [I, V / 42, 112, 146, 267], E [171], **FAR EAST:** CHUK [I, III / 10, 51, 145], MAG [II, III / 51], KAM [I, IV / 36], AMU [I, II, III, V, VI, VII / 6, 27, 91, 135, 156, 297], SAKH [II / 114], S-KUR [II, III / 39, 183], PRIM [II, III / 50, 89]
- *scitula* (Taylor) Jørg. – **ARC:** EURO [I, IV / 19, 113, 151, 288, 299], WS [III / 195], ES [I, III / 295], ARCYAK [142, 246], BE [III / 10], **EUR:** NW [I / 24, 234], NE [I, IV / 80, 266, 284], N-UR [I, IV / 41, 252, 299], S-UR [138], **SIB:** E [292, 294] YAK [246], S [I, V / 132, 155, 267], **FAR EAST:** CHUK [I, III / 10, 51, 145]
- Trocholejeunea* Schiffn. [Lejeuneaceae]
- *sandvicensis* (Gottsche) Mizut. – **FAR EAST:** AMU [II / 92], PRIM [I, II / 89]

EXCLUDED TAXA

Anomylia cuneifolia (Hook.) R.M. Schust. was reported by Cherdantseva & Gambaryan [67] and Gambaryan [89] from the Russian Far East but two specimens so labeled in VLA contain plants of *Crossogyna autumnalis* only.

Apotreubia nana (S.Hatt. & Inoue) S.Hatt. & Mizut. Records from Russia belong to *Apotreubia hortonae* [238, 239].

Crossocalyx koriakensis Schljakov is known from the original description, but no type specimens were found neither in LE, nor KPABG. According to J. Váňa (pers. comm.), he saw the type (just two stems on microslide) that is clearly belong to *C. hellerianus*. The main difference of these two species is the absence of attenuate branches with gemmae in *C. koriakensis*, while they are characteristic of *C. hellerianus*. However, in north-east Asia such are not rare in *C. hellerianus*.

Fossombronina longiseta Austin was reported from the Amurskaya Province by Ladyzhenskaya [165], but the specimen was not found in LE. The occurrence of this taxon with strictly North American distribution is doubted by us, as well as by Kravesky et al. [161].

Fossombronina pusilla (L.) Nees – Records of this taxon are erroneous cf. Kravesky et al. [161].

Gymnomitrium crenulatum Gottsche ex Carington was reported from the Polar Urals [299], but the location of the voucher is unknown. It is a species characteristic to oceanic climates, so its occurrence in this continental region is doubtful, cf. [152].

Lepidozia cf. *vitrea* Steph. Record of Bakalin [32] is based on poorly developed plants, probably a form of *L. reptans*.

Riccia ciliifera Link ex Lindenb. Reported by e.g. [152, 193], but no one correctly identified specimen from Russia has been seen.

Riccia crystallina L. All checked records of this species appear to be *R. cavernosa*, so it was excluded from Russian flora [152].

Scapania bolanderi Austin was recorded by Potemkin [91] as mod. *parvifolia-subintegra*. The sample contains some weakly developed shoots of a small *Scapania*, with leaves without the teeth characteristic of *S. bolanderi*. The plants most probably belong to *S. scan-*

dica, as it was identified by S.K. Gambaryan. The report of *Scapania bolanderi* from the South Kuril Islands [32] is based on a misidentification of *S. hirosakiensis*.

Solenostoma faurianum (Beauverd) Bakalin. The record of this species in Bakalin [32] is erroneous.

Solenostoma handelii Müll. Frib. The report of this species in Bakalin [23] from Kunashir Island is erroneous, the plants belong to *Plectocolea hyalina*.

Solenostoma pyriflorum Steph. All records of this species from Russia [34, 39, 267] should be referred to *S. pseudopyriflorum* [44a]

Solenostoma rubrum (Gottsche ex Underw.) R.M.Schust. – Record is doubtful. We did not find any voucher specimens in LE, where they supposed to be kept according to [10, 152].

Sphenolobopsis pearsonii (Spruce) Schiffn. All recored from Russia belong to *Eremonotus myriocarpus* [121].

Sphenolobopsis kitagawae R.M.Schust. The only record of this species [9] is based on misidentification of *Eremonotus myriocarpus* [121].

ANNOTATIONS

1. The record of the predominantly tropical *Aneura maxima* from Karelia [219] seems to be erroneous. According to D. Long (pers. comm.) records of *A. maxima* from Europe should be referred to new not yet validated taxon.
2. The placement of *Cryptothallus mirabilis* within *Aneura* follows Wickett & Goffinet [278].
3. The distribution of *Anthelia julacea* is unclear due to numerous misidentifications of *Anthelia juratzkana* as *A. julacea*.
4. *Apomarsupella revoluta* was reported by J. Váňa [264] based on specimens collected by L.V. Bardunov. The specimens are located in the herbarium of Hattori. Bot. Lab. (NICH) (J. Váňa, pers. comm.).
5. Sofronova [247] recorded *Apotreubia* sp. from the Suntar-Khayata Range (the upper reaches of Vostochnaya Khandyga River). Only one shoot was collected, so it is impossible to identify it exactly, but we think it should be *Apotreubia hortonae*.
6. For a formal description of new taxa and combinations see Konstantinova & Vilnet [155a].

7. *Biantheridion undulifolium* (as *Crossogyna undulifolia*) was first reported from Russia by Schljakov [231] based on a revision of specimens labeled as *Cryptocolea imbricata* from the Chukotka Peninsula and the Koryakskiy Range [228]. The record of *Biantheridion undulifolium* from the Kuril Islands [184] is erroneous, the specimens were re-identified as *Nardia compressa* [185]
8. *Blepharostoma arachnoideum*, a western North American species was recorded by L.S. Korotkevich [157] from Kunashir and Shikotan Islands. Nyushko (pers. comm.) studied the specimen from Shikotan Island and found it to be *B. trichophyllum*. That's why we consider the other specimens as belonging to the same species.
9. The distribution of *Blepharostoma trichophyllum* var. *brevirete* is poorly known because it is not always distinguished. In our opinion it is a good taxon which may be better treated as a separate species.
10. Records of *Calycularia crispula* from South Siberia (127) represent *C. laxa*.
11. Most publications in which *C. trichomanis* was automatically transferred to *C. azurea* were not cited here. According to Konstantinova & Potemkin [151] all records of *C. azurea* from the Russian Arctic should be referred to *C. muelleriana*. The most appropriate character to distinguish two taxa is the color of the oil-bodies which decay quite soon after collecting. According to our experience *Calypogeia azurea* is restricted to the subalpine belt of mountains and the middle and south taiga and do not occur in the far north.
12. The record of *Calypogeia fissa* from Ivanovo Province [227] needs to be verified. The records of this temperate species from tundras in Northern Urals [299] seem to be erroneous. All studied specimens identified as *C. fissa* from the Russian Far East belong to *C. neogaea* [cf. 39].
13. The distribution of *Cephalozia ambigua* is poorly known because of misidentifications of *C. bicuspidata* as *C. ambigua*.
14. *Cephalozia lacunculata* was cited with a question mark from the European Arctic, the Northern Urals, central Russia and the south of Far East [152]. Since then the taxon has been confirmed from the Leningrad Province only [214]. Most records remain dubious and we do not cite them here.
15. The report of the helophytic *Cephalozia loitlesbergeri* from the moss-lichen tundra of Polar Urals [299] seems to be erroneous. The voucher specimen was not found.
16. The record of *Cephalozia macounii* from the Putorana Plateau [292] seems to be erroneous because of the habitat described as "on peat in tundra", which is uncharacteristic of the species.
17. The records of *Cephaloziella elachista* from the Polar and North Urals [299] seem to be erroneous because of the habitat (particularly "in tundra among *Gymnomitrium*" etc.), which is uncharacteristic of the species.
18. *Cephaloziella elegans* is a poorly known taxon, often treated as a variety of *C. rubella* [71, 236]. Its distribution and variability are poorly known.
19. The record of *Cephaloziella hampeana* from the Urals by Zinovjeva [299] is dubious because the species is reported from quite uncharacteristic habitats. The vouchers were not found.
20. The record of *Cephaloziella stellulifera* from West Siberia [159] seems to be erroneous, cf. [152].
21. The recognition in Russia of four *Chiloscyphus* taxa is troublesome. The species concept in this group varies from including all taxa as varieties of *C. polyanthos* [240] to recognizing all four on the specific level [152, 233a]. Here we follow Schuster [236]: *C. rivularis* is treated as a variety of *C. polyanthos*, and *C. fragilis* is treated as a variety of *C. pallescens*.
22. *Chonecolea verae* was formally described in a non-periodic publication [205] and is known from this publication only. The status and affinities of the taxon seem to be unclear.
23. *Cololejeunea ornata* was reported from South Siberia by Bakalin et al. [42], but later Bakalin re-identified the specimen as *C. subkodamae* [31]. The nomenclatural history of this taxon is quite complicated, see Bakalin [31].

24. *Cololejeunea subkodamae*: see previous annotation on *C. ornata*.
25. The distributions of *Conocephalum conicum* and the recently described *C. salebrosum* are given according to Borovichev et al. [56].
26. The record of *Crossogyna autumnalis* from the Kamchatka Peninsula [190] seems to be erroneous.
27. *Fossombronina wondraczekii* was excluded from the Russian Far East by Krayesky et al. [161].
28. The genus *Frullania* is poorly studied in Russia and needs to be revised.
29. All specimens from the Urals identified as *Frullania dilatata* by Zinovieva [299] were referred to *F. bolanderi* by E. Andrejeva. S. Hattori (pers. comm. to Gambaryan) revised many specimens of *F. dilatata* from the South of Russian Far East collected before 1960 and re-identified them as *F. muscicola*. He confirmed only two samples of *F. dilatata* from the South of Primorskiy Territory.
30. The record of *Frullania fauriana* Steph. [60] from Amur seems to be erroneous.
31. The identification of *Frullania fuscovirens* is based on a study of sterile plants so it is doubtful.
32. The record of *Frullania schensiana* [60] from Amur seems to be erroneous.
33. All records of *Geocalyx graveolens* from the Arctic are erroneous [152].
34. All identifications of *Geocalyx lancistipulus* are based on sterile collections and remain dubious until generative structures are found.
35. The taxonomical status of *Gymnocolea inflata* subsp. *acutiloba* is unclear to us. We follow Schuster here [237] and do not distinguish it as a separate species.
36. Recent molecular data [271] supports the placement of *Marsupella adusta*, *M. alpina*, *M. brevissima*, *M. commutata* in *Gymnomitrium*.
37. *Gymnomitrium laceratum* was recorded from the Altai Mountains [264, 267] but we did not find any plants of the species in the voucher specimen preserved in MHA.
38. The report of *Gymnomitrium obtusum* from the Russian Arctic [288] is erroneous and the taxon was excluded from the Liverwort Flora of Russian Arctic [151]. The report of this oceanic species from the North Urals [299] seems to be erroneous, the vouchers were not found. This taxon is very similar to the closely related *G. concinnatum* and misidentifications are quite possible. In Caucasus the species was reported from “regione alpina montis Kasbek” [59] which probably is situated in the current North Osetia.
39. The records of *Harpanthus scutatus* from Polar and North Urals [299] seem to be erroneous, because this epixyloous species was reported from uncharacteristic habitats, namely from a meadow. The voucher specimens were not found.
40. The record of *Hattoriella morrisoncola* (as *Lophozia diversiloba*) from Altai Mountains [267] actually belongs to *Leiocolea gillmanii* [25].
41. According to Schljakov [152] all records of *Herbertus aduncus* from the Russian Arctic should be referred to *H. sakuraii* (*H. sakuraii* var. *arcticus* or *H. arcticus*), which now is synonymized with *H. dicranus* [108]. The differentiation of *H. aduncus* and *H. dicranus* is very troublesome. In Konstantinova [120a] all records known from Russia were referred to *H. sakuraii*. The delimitation of *H. buchii* represents even more difficulties. Most probably the latter “species” is only a weakly developed form of *H. dicranus*. Further studies are required to resolve taxonomic problems in this complex in Russia.
42. The record of *Heteroscyphus planus* from the Far East of Russia [203] is based on a study of sterile poorly developed material, which probably should be referred to *Chiloscyphus*.
43. Verification of all cited specimens of *Jungermannia exsertifolia* is needed because of the uncertain circumscription of this species.
44. We follow Grolle and Long [93] and treat *Leiocolea alpestris* as a synonym of *L. collaris* [152]. Schuster [235] stressed that the distribution in North America of *Leiocolea collaris* has been badly confused with that of *L. badensis*. In Russia these two taxa are often confused as well.
45. The placement *Lejeunea ulicina* within *Lejeunea* follows Yamada & Iwatsuki [279a]
46. Some authors [71] treat *Liochlaena lanceola-*

- ta* (*Jungermannia leiantha*) as a variety or subspecies of *L. subulata*. We prefer to keep these two taxa separate.
47. We prefer not to merge *Lophocolea* with *Chiloscyphus* and follow Grolle & Long [93] and Hill et al. [101] in treating them as separate genera.
 48. The occurrence of *Lophocolea bidentata*, a temperate species, in the Arctic (a quite unusual habitat) [299] is dubious. The vouchers were not located.
 49. *Lophocolea cuspidata* is often treated as a subspecies of *L. bidentata* [101, 240] or even as conspecific with the latter [189], but we prefer to not merge these taxa for now.
 50. The records of *L. heterophylla* from Arctic regions are dubious.
 51. The record of the obligate epixylous *Lophozia ascendens* from Arctic Yakutia [246] is dubious.
 52. It was recently shown by Vilnet et al. [272] that *L. austro-sibirica* is genetically conspecific with *L. guttulata*, but *L. austro-sibirica* is parioicous and *L. guttulata* is dioicous.
 53. *Lophozia ciliata* was reduced to synonymy with *L. ascendens* by Bakalin [28].
 54. The specimens of *Lophozia heteromorpha* from the Yamal Peninsula [195] were re-identified by Bakalin [28] as *L. ventricosa* var. *longiflora*.
 55. The distribution of *Lophozia silvicola* is given mainly according to Bakalin [28]. We cite recent records as well.
 56. The distribution of *Lophozia ventricosa* is not clearly known. Before the middle of the 20th century and sometimes later, authors frequently united all green-gemmous species of *Lophozia* under *L. ventricosa*. Not all of these reports could be checked in the present study.
 57. *Lophozia wenzelii* var. *lapponica* is a long forgotten and misinterpreted taxon [28]. The present reports are based on samples verified by the authors.
 58. The distributions of the critical and poorly known arctic varieties of *Lophozioopsis excisa* (var. *infuscata* (R.M.Schust. & Damsh.) Konstant. & Vilnet, var. *succulenta* (R.M.Schust. & Damsh.) Konstant. & Vilnet) are not clear.
 59. Bakalin [28] treated *Lophozia longidens* (*Lophozioopsis longidens*) subsp. *arctica* R.M.Schust as a form of *Lophozia pellucida* var. *rubrigemma* = *Lophozioopsis rubrigemma* f. *arctica* (R.M.Schust.) Bakalin comb. nov. Basionym: *Lophozia longidens* (Lindb.) Macoun subsp. *arctica* R.M.Schust. Hepat. and Anth. North America 2:539. 1969.
 60. We can not find any definite differences between *Lophozioopsis pellucida* var. *pellucida* and *Lophozioopsis pellucida* var. *minor* (R.M.Schust.) Konstant. & Vilnet. Both “varieties” have been united here.
 61. The record of *Lophozioopsis perssonii* from the Yamal Peninsula [120a, map 55] is erroneous.
 62. *Lunularia cruciata* was collected on the wall of the Greenhouse of the Moscow University Botanical Garden (Moscow) [298] and in Caucasus it is fairly common on the Black Sea coast on bare soil under shrubs and grasses on river banks [131, 154].
 63. Numerous records of *Mannia* spp. in Russian literature are erroneous [13, 14]. Most specimens of this genus from LE were re-identified by Andrejeva.
 64. *M. androgyna* (as *Grimaldia dichotoma* Rad-di) was recorded from “Osetia, Lars & Kobi ad fl. Terek” [59] as well. It is hard to tell if this part of Osetia now belongs to Russia or not.
 65. One specimen from the Anadyr’ River basin identified as *Mannia fragrans* [10] was re-identified by Andrejeva as *Mannia triandra* [13].
 66. One specimen of *Mannia sibirica* from Wrangel Island [7] was re-identified by Andrejeva as *Peltolepis quadrata* [13].
 67. *Mannia triandra* is often confused with other species of Cleveaceae and Aytoniaceae. As a result the distribution of this taxon in Russia is poorly known.
 68. We follow Bischler-Causse [48] and Bischler-Causse & Boisselier-Dubayle [49] here and distinguish three subspecies of *M. polymorpha* which earlier were treated as separate species.
 69. Recent molecular data [271] supports the placement of *Gymnomitrium apiculatum* (Schiffn.) Müll.Frib. within *Marsupella*.

70. In specimens from Wrangel Island (Somnitel'naya Bay, *Salix*-sedge-moss tundra, coll. Afonina, 20.08.1985) *M. aquatica* f. *pearsonii* was found as admixture in mats with *Tritomaria quinquedentata*, *Marsupella boeckii*, *Cephaloziella varians*, *Schistochilopsis opacifolia*, *Cephalozia bicuspidata*.
71. *Marsupella boeckii* was found as admixture in several specimens of *M. arctica* from Chukotka (Konstantinova).
72. The distribution of *Marsupella tubulosa* is poorly known because it is often hard to distinguish it from the closely allied *M. emarginata*.
73. According M.L. So [243] specimens identified as *Metzgeria conjugata* from the Eastern Asia should be referred to *M. lindbergii*.
74. Recently Crandall-Stotler & Stotler [64] revised *Moerckia* and clarified its taxonomy. They showed that *Moerckia hibernica* and *M. flotoviana* are distinct species and "has been repeatedly confused by both ancient and modern authors" [64: 52]. During preparation of this checklist Yu.S. Mamontov studied specimens of *Moerckia* preserved in KPABG and LE and determined that all collections from the Murmansk Province and Karelia, as well as specimen from South Siberia labeled as *Moerckia hibernica* should be referred to *M. flotoviana*.
75. In Russia *M. flotoviana* was recognized by Schljakov [229] as a form of *M. hibernica* (f. *flotoviana* (Nees) De Sloover). As a result it is unclear which of two recently recognized taxa [64] are recorded in publications cited here. *Moerckia hibernica* was reported from the Primorsky Territory [89] but Bakalin re-identified the specimen as *Calycularia crispula* [34a]. The reports of the species from the Arctic seem to be erroneous.
76. *Mylia anomala* has frequently been reported from the central part of European Russia in old literature. Its distribution in this region is now considerably reduced due to agricultural and melioration activity.
77. V. Bakalin collected *Nardia hiroshii* in Iturup Island (Kurils) with sporogonia for the first time and found elaters are 2-spiral, therefore this taxon is not conspecific with *N. unispiralis*, as it proposed by Váňa [262, cf. 39 as well].
78. All identifications of *Nardia unispiralis* are based on studies of sterile collections and remain doubtful.
79. The records of *Odontoschisma denudatum* from the Arctic Russia seem to be erroneous and should be referred to *O. elongatum* [152, 197]. According to Schljakov [232] reports of *O. denudatum* from Yenisey River [171] should also be referred to *O. elongatum*.
80. The record of *Odontoschisma elongatum* from the Primorskiy Territory [89] is based on a misidentification of *O. denudatum* [cf. 34a].
81. The distribution of *Plagiochila arctica* in the Russian Arctic is poorly known because of misunderstanding of this critical taxon [151].
82. *Plagiochila asplenoides* is a very variable species and it is often hard to distinguish it from large forms of *P. porelloides*. It leads to numerous erroneous recordings of *P. asplenoides* especially in old literature. Most old records of *P. asplenoides* should be referred to *P. porelloides*. We have omitted the most doubtful records here.
83. The taxonomic status of *Plagiochila ovalifolia* is unclear due to the presence of forms transitional to *P. porelloides*. We nevertheless prefer to treat it as a separate species here.
84. We follow So [242] who treated *Plagiochila satoi* S.Hatt. as a synonym of *P. porelloides*.
85. The intraspecific variability and taxonomy of *Plectocolea infusca* are poorly known. Some of the varieties probably merit specific rank.
86. The distribution of *Plectocolea subelliptica* in Russia is unclear due to frequent treatment of it as a synonym of *P. obovata*, particularly in the previous checklist [152]. We accept *P. subelliptica* as a distinct species here.
87. *Plectocolea subelliptica* and *P. vulcanicola* were mixed up on page 263 in [127]. The distribution data under number 218 should be referred to *P. subelliptica* and the data under number 219 should be referred to *P. vulcanicola*. *Plectocolea vulcanicola* is a quite common species in volcanically active areas in the Russian Far East, but the so labeled sam-

- ple which was published in the 2nd fascicle of *Hepaticae Rossicae Exsiccatae* belongs to *Solenostoma fusiforme*.
88. *Pleurocladula albescens* is a very variable species and var. *islandica* (Nees) L.Söderstr. & Váňa is no more than a modification.
 89. The record of *Porella arboris-vitae* from the Leningrad Province is erroneous [13]. The record of this species from the central part of European Russia [109] is evidently erroneous too.
 90. *Porella baueri* is “an allopolyploid hybrid (n=12) with *P. platyphylla* and *P. cordaeana* as putative parents” [240]. According Schumacker & Váňa [240] this taxon is found everywhere where both parents occur. So the species should be much more widespread at least in Caucasus than it is know at present.
 91. Earlier [152] *Porella urogea* was treated as a distinct species. However, we follow Hattori [96] who considered it to be synonymous with *P. gracillima*.
 92. The taxonomic status and relationships of *Porella nitidula* are poorly known.
 93. All records of *Porella vernicosa* from Sakhalin and the Kuril Islands in old literature are doubtful due to the treatment of *P. fauriei* as a variety of *P. vernicosa*. No voucher specimens were found.
 94. The report of *Protolophozia elongata* from Franz-Josef Land [288] is erroneous [151].
 95. *Radula lindenbergiana* was recorded from the Russian Far East only twice [66, 114], both records most probably belong to *R. constricta* – a very similar East-Asiatic taxon. The taxa are probably even synonymous [cf. 279].
 96. No vouchers confirming the occurrence of *Riccia beyrichiana* in the north-west part of European Russia were found.
 97. The specimens of *Riccia bifurca* from western Siberia [169] were re-identified as *R. frostii* and other taxa [44: 1285]. The only known specimen of *R. bifurca* from Chukotka [10] was re-identified by Andrejeva as *R. sorocarpa*.
 98. According to Schumacker & Váňa [240] the distribution of *Riccia ciliata* is unclear because “in the literature *R. ciliata*, in fact, results often of confusion with *R. crinita*”. Andrejeva revised some specimens of the genus from LE and suggested that several specimens from the Moscow Province [103] should be referred to *R. crinita*.
 99. Several specimens of *Riccia glauca* from the Moscow Province [103] were re-identified by Andrejeva as *R. bifurca*.
 100. All studied specimens of *Riccia huebeneriana* from Siberia belong to *R. frostii*, the remaining reports are doubtful [44, 250].
 101. According to unpublished data of Andrejeva all specimens of *R. papillosa* Moris (*R. pseudopapillosa* Levier ex Steph.) from the former USSR are ecological forms of *R. sorocarpa*. We therefore excluded this taxon.
 102. Potemkin synonymized *Scapania degenii* with *S. brevicaulis* [198]. His records of *S. brevicaulis* from Karelia [204] can be referred to “*S. brevicaulis* phenotype *S. degenii*” (Potemkin, pers. comm.). We treat these taxa as separate species and agree with Hill et al. [101] that “further work is required ... before taxonomic changes are made.”
 103. The records of *Scapania calcicola* from Franz-Josef Land are erroneous [151].
 104. Schljakov [232] and following him Konstantinova et al. [152] erroneously suggested that records of *S. carinthiaca* from the Lena River Basin (Schigalovo) [62] should be referred to *S. glaucocephala*. What the reasons for such a decision were is unclear to us.
 105. *Scapania ciliata* was recorded by Y. Horikawa [99] from Shikotan Island. In our opinion this report should be referred to *S. hirosakiensis*, which is similar to *Scapania ciliata* and quite frequent in the Southern Kuril Islands including Shikotan Island.
 106. Potemkin [196] treated *Scapania crassiretis* as a subsp. of *S. nemorea*, but the distribution of these taxa as well as morphological and molecular differences [270] advocate their treatment as a distinct species.
 107. The record of *Scapania glaucocephala* from Polar Ural [299] is erroneous. That is evident from the description of the specimen which is described as having colorless gemmae. The habitat (tundra community) is uncharacteristic as well.

108. The report of *Scapania bolanderi* from the South Kuril Islands [32] is based on a misidentification of *S. hirosakiensis*.
109. All records of *S. kaurinii* from the Kamchatka Peninsula, Novaya Zemlya and the Yamal Peninsula [151] are based on identifications of sterile collections and remain dubious.
110. All reports of *Scapania nemorea* from the Arctic and the Far East represent *S. crassiretis*, which is treated by some authors as a subsp. of *S. nemorea* [196, comments on *S. crassiretis*]. As was shown recently, these taxa differ molecularly [270] as well as morphologically.
111. The distribution of *Scapania parvifolia* in Russia is poorly known due to the treatment of it as a form of *S. scandica* in Schljakov [233] and the previous checklist [152].
112. We do not agree with Potemkin [198] who treated *Scapania tundrae* as a variety of *S. hyperborea*. Molecular data [270] also does not support his conclusions.
113. The records of European *Scapania verrucosa* from the Russian Far East [51, 201] and Siberia [233] are dubious. Particularly Potemkin [201] reported this species based on a study of specimens containing several shoots which were collected with *Asterella leptophylla* and *Lophocolea minor* in habitats quite uncharacteristic of the species.
114. We did not find any plants of *Schistochilopsis hyperarctica* in the specimens from the Pinezhskiy Strict Nature Reserve located in MHA.
115. *Schistochilopsis opacifolia* is sometimes treated as a subsp. of *S. incisa* [71]. We prefer to distinguish it on the species level until this problem has been solved [cf. 272].
116. The record of *Solenostoma caespiticium* from North Ural [299] is dubious.
117. *Solenostoma gracillimum* was reported from Chukotka, but later excluded from this area by Schljakov [152]. The voucher was not found in LE.
- SYNONYMS
- Anastrophyllum cavifolium* (H.Buch & S.W.Arnell) Lammes = *Sphenolobus cavifolius*
- *hellerianum* (Nees ex Lindenb.) R.M.Schust. = *Crossocalyx hellerianus*
- *minutum* (Schreb.) R.M.Schust. = *Sphenolobus minutus*
- *minutum* var. *grandis* (Lindb.) R.M.Schust. = *Sphenolobus minutus* var. *grandis*
- *saxicola* {„saxicolus“} (Schrad.) R.M.Schust. = *Sphenolobus saxicola*
- Anthelia julacea* subsp. *juratzkana* (Limpr.) Meyl. = *Anthelia juratzkana*
- *julacea* var. *gracilis* (Hook.) Nees = *Anthelia juratzkana*
- *nivalis* (Sw.) Lindb. = *Anthelia juratzkana*
- Aplozia atrovirens* (Dumort.) Dumort. = *Jungermannia atrovirens*
- *lanceolata* Dumort. = *Liochlaena lanceolata*
- *polaris* (Lindb.) Bryhn & Kaal. = *Jungermannia polaris*
- *pusilla* C.E.O.Jensen = *Solenostoma pusillum*
- *sphaerocarpa* (Hook.) Dumort. = *Solenostoma sphaerocarpum*
- Asterella fragrans* Trevis. = *Asterella saccata*
- *ludwigii* auct. non (Schwägr.) A.Evans = *Asterella gracilis*
- *pilosa* (Wahlenb.) Trevis. = *Asterella gracilis*
- *pusilla* Shimizu & S.Hatt. = *Asterella leptophylla*
- *sanoana* Shimizu & S.Hatt. = *Asterella leptophylla*
- *umbelliformis* Shimizu & S.Hatt. = *Asterella leptophylla*
- Athalamia glauco-virens* Shimizu & S.Hatt. = *Athalamia nana*
- Barbilophozia atlantica* (Kaal.) Müll.Frib. = *Orthocaulis atlanticus*
- *attenuata* (Mart.) Loeske = *Orthocaulis attenuatus*
- *binsteadii* (Kaal.) Loeske = *Orthocaulis binsteadii*
- *floerkei* (F.Weber & D.Mohr) Loeske = *Orthocaulis floerkei*
- *gracilis* Müll.Frib. = *Orthocaulis attenuatus*
- *hatcheri* (A.Evans) Loeske var. *grandiretis* H.Buch ex Lammes = *Barbilophozia rubescens*
- *hyperborea* (R.M.Schust.) Stotler & Crand.-Stotl. ex Potemkin = *Orthocaulis hyperboreus*
- *kunzeana* (Huebener) Müll.Frib. = *Schljakovia kunzeana*

- *lycopodioides* var. *grandiretis* (Lammes) Schljakov = *Barbilophozia rubescens*
- *lycopodioides* var. *hatcheri* (A.Evans) Schljakov = *Barbilophozia hatcheri*
- *obtusa* H.Buch = *Obtusifolium obtusum*
- *quadriloba* (Lindb.) Loeske = *Schljakovianthus quadrilobus*
- Bazzania denudata* auct. eur. non (Torr. ex Lindenb.) Trevis. = *Bazzania flaccida*
- *denudata* (Torr. ex Lindenb.) Trevis. subsp. *ovifolia* (Steph.) S.Hatt. = *Bazzania ovifolia*
- Blepharostoma setiforme* (Ehrh.) Lindb. = *Tetralophozia setiformis*
- *trichophyllum* subsp. *brevirete* (Bryhn & Kaal.) R.M.Schust. = *Blepharostoma trichophyllum* var. *brevirete*
- Blepharozia sacculata* Mitt. = *Trichocoleopsis sacculata*
- Brachiolejeunea sandvicensis* (Gottsche) A.Evans = *Trocholejeunea sandvicensis*
- Calypogeia concinnata* (Lightf.) Gray = *Gymnomitrium concinnatum*
- *corallioides* (Nees) Carruth. = *Gymnomitrium corallioides*
- *fissa* (L.) Raddi subsp. *neogaea* R.M.Schust. = *Calypogeia neogaea*
- *meylanii* H.Buch = *Calypogeia integristipula*
- *neesiana* auct. non (C.Massal. & Carestia) Müll.Frib. = *Calypogeia integristipula*
- *neesiana* var. *meylanii* auct. non (H.Buch) R.M.Schust. = *Calypogeia integristipula*
- *submersa* (Arnell) Warnst. = *Calypogeia sphagnicola*
- *trichomanis* auct. non (L.) Corda = *Calypogeia azurea*
- Cephalozia affinis* Lindb. ex Steph. = *Cephalozia lunulifolia*
- *albescens* (Hook.) Dumort. = *Pleurocladula albescens*
- *bicuspidata* subsp. *ambigua* (C.Massal.) R.M.Schust. = *Cephalozia ambigua*
- *bicuspidata* subsp. *lammersiana* (Huebener) R.M.Schust. = *Cephalozia bicuspidata*
- *bicuspidata* subsp. *otaruensis* (Steph.) S.Hatt. = *Cephalozia otaruensis*
- *bicuspidata* var. *atra* Arnell = *Cephalozia ambigua*
- *bicuspidata* var. *cavifolia* Arnell = *Cephalozia ambigua*
- *bifida* (Schreb.) Lindb. = *Cephaloziella rubella*
- *compacta* Warnst. = *Cephalozia connivens*
- *denudata* (Nees) Spruce = *Odontoschisma denudatum*
- *divaricata* (Sm.) Dumort. = *Cephaloziella divaricata*
- *fluitans* (Nees) Spruce = *Cladopodiella fluitans*
- *francisci* (Hook.) Dumort. = *Cladopodiella francisci*
- *helleri* (Nees) Lindb. = *Crossocalyx hellerianus*
- *lammersiana* (Huebener) Spruce = *Cephalozia bicuspidata*
- *media* Lindb. = *Cephalozia lunulifolia*
- *media* (Spruce) C.Massal. = *Cephalozia lunulifolia*
- *myriantha* Lindb. = *Cephaloziella rubella*
- *striatula* C.E.O.Jensen = *Cephaloziella spinigera*
- Cephaloziella alpina* Douin = *Cephaloziella grimsulana*
- *alpina* var. *kaalaasii* Douin = *Cephaloziella varians*
- *arctica* Bryhn & Douin = *Cephaloziella varians*
- *arctica* var. *alpina* R.M.Schust. = *Cephaloziella varians*
- *bifida* (Schreb.) Schiffn. = *Cephaloziella rubella* var. *bifida*
- *byssacea* sensu R.M.Schust., 1980, non (Roth) Warnst. = *Cephaloziella divaricata*
- *divaricata* var. *polystratosa* (R.M.Schust. & Damsh.) Potemkin = *Cephaloziella polystratosa*
- *divaricata* var. *incurva* Lindb. = *Cephaloziella divaricata*
- *divaricata* var. *scabra* M.Howe = *Cephaloziella aspericaulis*
- *gracillima* (Douin) Douin = *Cephaloziella stellulifera*
- *integerrima* (Lindb.) Warnst. = *Dichiton integerrimum*
- *rubella* (Nees) Warnst. var. *arctogena* R.M.Schust. = *Cephaloziella arctogena*
- *rubella* var. *elegans* (Heeg) R.M.Schust. = *Cephaloziella elegans*

- *starkei* (Funck ex Nees) Schiffn. = *Cephaloziella divaricata*
- *stellulifera* var. *limprichtii* (Warnst.) Macvicar = *Cephaloziella stellulifera* s. str.
- *striatula* (C.E.O.Jensen) Douin = *Cephaloziella spinigera*
- *subdentata* Warnst. = *Cephaloziella spinigera*
- *turfacea* Douin = *Cephaloziella rubella*
- Cesius* = *Gymnomitrium*
- *suecicus* (Gottsche) Lindb. = *Prasanthus suecicus*
- Chandonanthus birmensis* Steph. = *Plicanthus birmensis*
- *setiformis* (Ehrh.) Lindb. = *Tetralophozia setiformis*
- Chiloscyphus coadunatus* (Sw.) J.J. Engel & R.M.Schust. var. *coadunatus* = *Lophocolea cuspidata*
- *coadunatus* var. *rivularis* (Raddi) Frisvoll, Elvebakk, Flatberg & Økland = *Lophocolea bidentata*
- *cuspidatus* (Nees) J.J.Engel & R.M.Schust. = *Lophocolea cuspidata*
- *fragilis* (Roth) Schiffn. = *Chiloscyphus pallescens* var. *fragilis*
- *itoanus* (Inoue) J.J.Engel & R.M.Schust. = *Lophocolea itoana*
- *latifolius* (Nees) J.J.Engel & R.M.Schust. = *Lophocolea bidentata* non *Chiloscyphus bidentatus*
- *minor* (Nees) J.J.Engel & R.M.Schust. = *Lophocolea minor*
- *nordstedtii* Schiffn. = *Chiloscyphus pallescens*
- *polyanthos* var. *fragilis* (A.Roth) Müll.Frib. = *Chiloscyphus pallescens* var. *fragilis*
- *polyanthos* var. *pallescens* (Ehrh. ex Hoffm.) C.Hartm. = *Chiloscyphus pallescens*
- *profundus* (Nees) J.J.Engel & R.M.Schust. = *Lophocolea heterophylla*
- *rivularis* (Schrad.) Hazsl. = *Chiloscyphus polyanthos* var. *rivularis*
- Chomiocarpon* = *Preissia*
- *quadratus* (Scop.) Nees = *Preissia quadrata*
- *commutatus* (Lindenb.) Lindb. = *Preissia quadrata*
- Cladopus fluitans* (Nees) Spruce = *Cladopodiella fluitans*
- Clevea hyalina* (Sommerf.) Lindb. = *Athalamia hyalina*
- *suecica* (Lindb.) Lindb. = *Athalamia hyalina*
- Cololejeunea kodamae* auct. non Kamim., sensu Mizutani, 1961 = *Cololejeunea subkodamae*
- Conocephalum supradecompositum* Steph. = *Conocephalum japonicum*
- *supradecompositum* var. *propaguliferum* C.Massal. = *Conocephalum japonicum*
- Crossocalyx koriakensis* Schljakov = *Crossocalyx hellerianus*
- Crossogyna undulifolia* (Nees) Schljakov = *Biantheridium undulifolium*
- Cryptothallus mirabilis* Malmb. = *Aneura mirabilis*
- Diplophyllum gymnostomophilum* (Kaal.) Kaal. = *Scapania gymnostomophila*
- *microdontum* (Mitt.) H.Buch = *Macrodiplrophyllum microdontum*
- *plicatum* Lindb. = *Macrodiplrophyllum plicatum*
- Eucalyx* = *Plectocolea*
- *hyalinus* (Lyell) Breidl. = *Plectocolea hyalina*
- *obovatus* (Nees) Breidl. = *Plectocolea obovata*
- Fegatella conica* (L.) Corda = *Conocephalum conicum* aggr.
- Fimbriaria fragrans* auct. (Schleich.) Nees = *Asterella saccata*
- *saccata* = *Asterella saccata*
- *ludwigii* auct. = *Asterella gracilis*
- *lindenbergiana* Corda ex Nees = *Asterella lindenbergiana*
- *pilosa* (Wahlenb.) Taylor = *Asterella gracilis*
- Fossombronia dumortieri* Huebener & Genth ex Lindb., nom. illeg. = *Fossombronia foveolata*
- *loitlesbergeri* Schiffn. = *Fossombronia wondraczekii*
- Frullania caucasica* Steph. = *Frullania parvistipula*
- *davurica* subsp. *jackii* (Gottsche) S.Hatt. = *Frullania jackii*
- *eboracensis* Gottsche subsp. *caucasica* (Steph.) R.M.Schust. = *Frullania parvistipula*
- *eboracensis* subsp. *parvistipula* (Steph.) R.M.Schust. = *Frullania parvistipula*

- *fragilifolia* var. *microphylla* Schiffn. = *Frullania parvistipula*
- *fragilifolia* var. *parvistipula* (Steph.) Schiffn. = *Frullania parvistipula*
- *moniliata* auct. non (Reinw., Blume & Nees) Mont. = *Frullania appendiculata*
- *saxicola* Austin = *Frullania inflata*
- *tamarisci* subsp. *nisquallensis* (Sull.) S.Hatt. = *Frullania nisquallensis*
- *tamarisci* subsp. *obscura* (Verd.) S.Hatt. = *Frullania appendiculata*
- *tenera* Lindb. non Spruce = *Frullania parvistipula*
- Grimaldia dichotoma* auct. = *Mannia androgyna*
- *fragrans* (Balb.) Corda = *Mannia fragrans*
- *fragrans* var. *sibirica* (Müll.Frib.) Ladyz. = *Mannia sibirica*
- *pilosa* (Hornem.) Lindb. = *Mannia pilosa*
- *pilosa* var. *sibirica* Müll.Frib. = *Mannia sibirica*
- *rupestris* (Nees) Lindenb. = *Mannia triandra*
- *sibirica* (Müll.Frib.) Müll.Frib. = *Mannia sibirica*
- Gymnocolea acutiloba* (Schiffn.) Müll.Frib. = *Gymnocolea inflata* subsp. *acutiloba*
- *inflata* var. *acutiloba* (Schiffn.) S.W.Arnell = *Gymnocolea inflata* subsp. *acutiloba*
- *inflata* var. *heterostipa* (Carrington & Spruce) Müll.Frib. = *Gymnocolea inflata*
- Gymnomitrium apiculatum* (Schiffn.) Müll.Frib. = *Marsupella apiculata*
- *suecicum* (Gottsche) Lindb. = *Prasanthus suecicus*
- *varians* (Lindb.) Schiffn. = *Gymnomitrium brevissimum*
- Haplozia* = *Jungermannia*
- *polaris* (Lindb.) Müll.Frib. = *Jungermannia polaris*
- Harpanthus flotowii* (Nees) Nees = *Harpanthus flotovianus*
- Hattoriella diversiloba* (S.Hatt.) Inoue = *Hattoriella morrisoncola*
- Hepatica* = *Conocephalum*
- *conica* (L.) Lindb. = *Conocephalum conicum*
- Herberta* = *Herbertus*
- *aduncus* auct. non (Dicks.) Gray = *Herbertus dicranus*
- *arcticus* (Inoue & Steere) Schljakov = *Herbertus dicranus*
- *sakurarii* (Warnst.) S.Hatt. = *Herbertus dicranus*
- Jamesoniella autumnalis* (DC.) Steph. = *Crossogyna autumnalis*
- *undulifolia* (Nees) Müll.Frib. = *Biantheridion undulifolium*
- Jubula javanica* Steph. = *Jubula hutchinsiae* subsp. *javanica*
- *pennsylvanica* auct. non (Steph.) A.Evans = *Jubula hutchinsiae* subsp. *javanica*
- Jungermannia alpestris* auct. non Schleich. ex F.Weber = *Pseudolophozia sudetica*
- *alpestris* Schleich. ex F.Weber = *Leiocolea collaris*
- *autumnalis* DC. = *Crossogyna autumnalis*
- *badensis* Gottsche ex Rabenh. = *Leiocolea badensis*
- *barbata* Schmidel ex Schreb. = *Barbilophozia barbata*
- *bicrenata* Schmidel ex Hoffm. = *Isopachetes bicrenatus*
- *binsteadii* Kaal. = *Orthocaulis binsteadii*
- *caespiticia* Lindenb. = *Solenostoma caespiticium*
- *capitata* Hook. = *Heterogemma capitata*
- *caucasica* Váňa = *Solenostoma causicum*
- *cephalozioides* Amakawa = *Plectocolea biloba*
- *confertissima* Nees = *Solenostoma confertissimum*
- *cordifolia* Hook. = *Jungermannia eucordifolia*
- *crenulata* Sm. non Schmidel = *Solenostoma gracillimum*
- *crenulata* var. *crustulata* (Dumort.) C.Massal. = *Solenostoma gracillimum*
- *crenulata* var. *exundata* Schiffn. = *Solenostoma gracillimum*
- *crenulata* Sm. non Schmidel var. *gracillima* (Sm.) Hook. = *Solenostoma gracillimum*
- *crustulata* (Dumort.) C.Massal. = *Solenostoma gracillimum*
- *evansii* Váňa = *Plectocolea obscura*
- *excisa* Dicks. = *Lophozia excisa*
- *exsecta* Schmidel ex Schrad. = *Tritomaria exsecta*
- *exsertifolia* subsp. *cordifolia* (Dumort.) Váňa = *Jungermannia eucordifolia*

- *fertilis* Lindb. = *Anastrophyllum michauxii*
- *flagellata* (S.Hatt.) Amakawa = *Plectocolea flagellata*
- *floerkei* F.Weber & D.Mohr = *Orthocaulis floerkei*
- *fusiformis* (Steph.) Steph. = *Solenostoma fusiforme*
- *globulifera* C.E.O.Jensen = *Scapania obcordata*
- *gracillima* Sm. = *Solenostoma gracillimum*
- *gracilis* Schleich. ex Steph. = *Orthocaulis attenuatus*
- *guttulata* Lindb. & Arnell = *Lophozia guttulata*
- *handelii* (Schiffn.) Amakawa = *Solenostoma handelii*
- *hatcheri* A.Evans = *Barbilophozia hatcheri*
- *hattoriana* (Amakawa) Amakawa = *Plectocolea hattoriana*
- *heterocolpos* Thed. ex C.Hartm. = *Leiocolea heterocolpos*
- *hyalina* Lyell = *Plectocolea hyalina*
- *incisa* Schrad. = *Schistochilopsis incisa*
- *inflata* Huds. = *Gymnocolea inflata*
- *inflata* var. *heterostipa* (Carrington & Spruce) Lindb. = *Gymnocolea inflata*
- *infusca* (Mitt.) Steph. = *Plectocolea infusca*
- *julacea* L. = *Anthelia julacea*
- *juratzkana* Limpr. = *Anthelia juratzkana*
- *jenseniana* Grolle = *Solenostoma pusillum*
- *karl-muelleri* auct. non Grolle = *Jungermannia borealis*
- *kaurinii* Limpr. = *Leiocolea gillmanii*
- *koreana* (Steph.) Amakawa = *Solenostoma koreanum*
- *kunzeana* Huebener = *Schljakovia kunzeana*
- *kyushuensis* Amakawa = *Plectocolea rigidula*
- *lanceolata* auct. non L. = *Liochlaena lanceolata*
- *lanceolata* L. emend. Grolle = *Jungermannia atrovirens*
- *leiantha* Grolle = *Liochlaena lanceolata*
- *levieri* (Steph.) H.Buch = *Solenostoma confertissimum*
- *limprichtii* (Lindb. ex C.Massal. & Carestia) Warnst. = *Lophozia excisa*
- *longidens* Lindb. = *Lophozia longidens*
- *lophocoleoides* Lindb. = *Leiocolea rutheana*
- *lurida* Dumort. = *Solenostoma sphaerocar-*
- pum*
- *lycopodioides* Wallr. = *Barbilophozia lycopodioides*
- *minuta* Schreb. = *Sphenolobus minutus*
- *muelleri* Nees in Lindenb. = *Leiocolea collaris*
- *murmanica* (Kaal.) Arnell = *Lophozia wenzelii* var. *groenlandica* (L. confertifolia)
- *oblongifolia* auct. non (Müll.Frib.) H.Buch, A.Evans & Verd. = *Jungermannia borealis*
- *obovata* Nees = *Plectocolea obovata*
- *otiana* (S.Hatt.) Amakawa = *Plectocolea otiana*
- *porphyroleuca* auct. non Nees = *Lophozia longiflora*
- *porphyroleuca* Nees = *Lophozia ventricosa*
- *potamophila* Müll.Arg. ex Moug., Nestl. & Schimp. = *Jungermannia atrovirens*
- *pulvinata* Raddi = *Marsupella emarginata*
- *pumila* subsp. *polaris* (Lindb.) R.M.Schust. & Damsh. = *Jungermannia polaris*
- *pusilla* (C.E.O.Jensen) H.Buch, nom. illeg. = *Solenostoma pusillum*
- *pyriflora* (Steph.) Steph. = *Solenostoma pyriflorum*
- *pyriflora* (Steph.) Steph. var. *minutissima* Amakawa = *Solenostoma rishiriense*
- *rubra* Gottsche ex Underw. = *Solenostoma rubrum*
- *quadriloba* Lindb. = *Schljakovianthus quadrilobus*
- *quinquedentata* Huds. = *Tritomaria quinquedentata*
- *quinquedentata* var. *tenera* C.E.O.Jensen = *Tritomaria quinquedentata* f. *gracilis*
- *quinquedentata* var. *turgida* Lindb. = *Tritomaria quinquedentata* var. *turgida*
- *sahlbergii* Lindb. & Arnell = *Mesoptychia sahlbergii*
- *saxicola* Schrad. = *Sphenolobus saxicola*
- *scalariformis* Nees = *Solenostoma confertissimum*
- *schiffneri* (Loitl.) A.Evans = *Jungermannia polaris*
- *schultzii* Nees = *Leiocolea rutheana*
- *sphaerocarpa* Hook. = *Solenostoma sphaerocar-*
- carpum*
- *subelliptica* (Lindb. ex Kaal.) Levier = *Plectocolea obovata*

- *subulata* A.Evans var. *subulata* = *Liochlaena subulata*
- *subulata* var. *leiantha* (Grolle) Damsh. = *Liochlaena lanceolata*
- *thermarum* Steph. = *Plectocolea vulcanicola*
- *tristis* Nees = *Jungermannia atrovirens*
- *ventricosa* Dicks. = *Lophozia ventricosa*
- *virgata* (Mitt.) Steph. = *Plectocolea virgata*
- *vulcanicola* (Schiffn.) Steph. = *Plectocolea vulcanicola*
- *virgata* (Mitt.) Steph. = *Plectocolea virgata*
- *wenzelii* Nees = *Lophozia wenzelii*
- Kantius* = *Calypogeia*
- [“*Kantia*”] *trichomanis* auct. = *Calypogeia azurea*
- Kurzia sylvatica* (A.Evans) Grolle = *Kurzia makinoana*
- Leiocolea alpestris* (F.Weber) Isov. = *Leiocolea collaris*
- *heterocolpos* var. *savicziae* Schljakov = *Leiocolea heterocolpos* var. *arctica*
- *katenninii* Schljakov = *Leiocolea badensis* [25]
- *kaurinii* (Limpr.) Jørg. = *Leiocolea gillmanii*
- *muelleri* (Nees ex Lindenb.) Jørg. = *Leiocolea collaris*
- Lepicolea fryei* Perss. = *Pseudolepicolea fryei*
- Lepidozia setacea* auct. non (Weber) Mitt. = *Kurzia pauciflora*
- *sylvatica* A.Evans = *Kurzia makinoana*
- Leptoscyphus anomalus* (Hook.) Lindb. = *Mylia anomala*
- *interruptus* (Nees) Lindb. = *Pedinophyllum interruptum*
- *taylorii* (Hook.) Mitt. = *Mylia taylorii*
- Lophochaete fryei* (Perss.) R.M.Schust. = *Pseudolepicolea fryei*
- Lophocolea alata* (Gottsche, Lindenb. & Nees) Mitt. ex Larter = *Lophocolea cuspidata*
- *bidentata* (L.) Dumort. var. *cuspidata* (Nees) Limpr. = *Lophocolea cuspidata*
- *incisa* Lindb. = *Lophocolea heterophylla*
- *reflexula* Lindb. & Arnell = *Lophocolea heterophylla*
- Lophozia alboviridis* R.M.Schust. = *Isopaches alboviridis*
- *alpestris* auct. non (Schleich. ex F.Weber) A.Evans = *Pseudolophozia sudetica*
- *alpestris* (Schleich. ex F.Weber) A.Evans = *Leiocolea collaris*
- *alpestris* auct. non (Schleich. ex F.Weber) A.Evans var. *amphigastrata* (C.E.O.Jensen) Kaal. = *Pseudolophozia debiliformis*
- *alpestris* var. *anomala* (Schljakov) Schljakov = *Pseudolophozia sudetica* var. *anomala*
- *alpestris* var. *gelida* (Hook.f. & Taylor) Macvicar = *Pseudolophozia sudetica*
- *alpestris* var. *major* C.E.O.Jensen = *Lophozioopsis excisa*
- *alpestris* auct. non (Schleich. ex F.Weber) A.Evans subsp. *polaris* R.M.Schust. = *Lophozioopsis polaris*
- *major* (C.E.O.Jensen) Schljakov = *Lophozioopsis polaris*
- *atlantica* (Kaal.) Müll.Frib. = *Orthocaulis atlanticus*
- *attenuata* (Mart.) Dumort. = *Orthocaulis attenuatus*
- *badensis* (Gottsche ex Rabenh.) Schiffn. = *Leiocolea badensis*
- *bantriensis* (Hook.) Steph. = *Leiocolea bantriensis*
- *barbata* (Schmidel ex Schreb.) Dumort. = *Barbilophozia barbata*
- *bicrenata* (Schmidel ex Hoffm.) Dumort. = *Isopaches bicrenatus*
- *binsteadii* (Kaal.) A.Evans = *Orthocaulis binsteadii*
- *capitata* (Hook.) Macoun = *Heterogemma capitata*
- *cavifolia* (H.Buch & S.W.Arnell) R.M.Schust. = *Sphenolobus cavifolius*
- *confertifolia* Schiffn. = *Lophozia wenzelii* var. *groenlandica*
- *cornuta* (Steph.) S.Hatt. = *Schistochilopsis cornuta*
- *debiliformis* R.M.Schust. & Damsh. = *Pseudolophozia debiliformis*
- *debiliformis* var. *concolor* R.M.Schust. & Damsh. = *Pseudolophozia debiliformis* var. *concolor* (syn. nov.)
- *decolorans* (Limpr.) Steph. = *Isopaches decolorans*
- *diversiloba* S.Hatt. = *Hattoriella morrisoncola*
- *ehrhartiana* (F.Weber) Inoue & Steere = *Lophozia ventricosa*
- *elongata* Steph. = *Protolophozia elongata*
- *excisa* (Dicks.) Dumort. = *Lophozioopsis excisa*

- *excisa* var. *grandiretis* S.W.Arnell = *Lophoziaopsis pellucida*
- *excisa* var. *limprichtii* (Lindb.) C.Massal. = *Lophoziaopsis excisa*
- *fauriana* Steph. = *L. guttulata*
- *floerkei* (F.Weber & D.Mohr) Schiffn. = *Orthocaulis floerkei*
- *gillmanii* (Austin) R.M.Schust. = *Leiocolea gillmanii*
- *gracilis* (Schleich. ex Steph.) Steph. = *Orthocaulis attenuatus*
- *grandiretis* (Lindb. ex Kaal.) Schiffn. = *Schistochilopsis grandiretis*
- *groenlandica* (Nees) Macoun = *Lophozia wenzelii* var. *groenlandica*
- *groenlandica* sensu R.M.Schust. 1969, non (Nees) Macoun = *Lophozia schusteriana*
- *guttulata* var. *lapponica* Schljakov = *Lophozia ventricosa* var. *longiflora*
- *hatcheri* (A.Evans) Steph. = *Barbilophozia hatcheri*
- *heterocolpos* (Thed. ex C.Hartm.) M.Howe = *Leiocolea heterocolpos*
- *heterocolpos* var. *arctica* (S.W.Arnell) R.M.Schust. & Damsh. = *Leiocolea heterocolpos* var. *arctica*
- *heterocolpos* var. *harpanthoides* (Bryhn & Kaal.) R.M.Schust. = *Leiocolea heterocolpos* var. *harpanthoides*
- *hyperarctica* R.M.Schust. = *Schistochilopsis hyperarctica*
- *iremelsensis* Schljakov = *Lophozia ventricosa*
- *incisa* (Schrad.) Dumort. = *Schistochilopsis incisa*
- *incisa* subsp. *opacifolia* (Culm. ex Meyl.) R.M.Schust. & Damsh. = *Schistochilopsis opacifolia*
- *jurensis* Meyl. ex Müll.Frib. = *Lophoziaopsis propagulifera*
- *kateninii* (Schljakov) Duda = *Leiocolea badensis*
- *kaurinii* (Limpr.) Steph. = *Leiocolea gillmanii*
- *kiaeri* Jørg. = *Lophoziaopsis excisa*
- *kunzeana* (Huebener) A.Evans = *Schljakovia kunzeana*
- *latifolia* R.M.Schust. = *Lophoziaopsis propagulifera*
- *laxa* (Lindb.) Grolle = *Heterogemma laxa*
- *longidens* (Lindb.) Macoun = *Lophoziaopsis longidens*
- *longidens* subsp. *arctica* R.M.Schust. = *Lophoziaopsis rubrigemma* f. *arctica*
- *longiflora* (Nees) Schiffn. = *Lophozia ventricosa* var. *longiflora*
- *longiflora* var. *guttulata* (Lindb. & Arnell) Schljakov = *Lophozia guttulata*
- *lycopodioides* (Wallr.) Cogn. = *Barbilophozia lycopodioides*
- *major* (C.E.O.Jensen) Schljakov = *Lophoziaopsis excisa*
- *major* (C.E.O.Jensen) Schljakov sensu Schljakov 1980, non *Jungermannia alpestris* var. *major* C.E.O. Jensen = *Lophoziaopsis polaris*
- *marchica* (Nees ex Limpr.) Steph. = *Heterogemma laxa*
- *muelleri* (Nees ex Lindenb.) Dumort. = *Leiocolea collaris*
- *murmanica* Kaal. = ?*Lophozia wenzelii* var. *groenlandica*
- *murmanica* auct. non Kaal. = *Lophozia savicziae*
- *obtusa* (Lindb.) A.Evans = *Obtusifolium obtusum*
- *opacifolia* Culm. ex Meyl. = *Schistochilopsis opacifolia*
- *pellucida* R.M.Schust. = *Lophoziaopsis pellucida*
- *pellucida* var. *rubrigemma* (R.M.Schust.) Bakalin = *Lophoziaopsis rubrigemma*
- *pellucida* var. *rubrigemma* f. *arctica* (R.M.Schust.) Bakalin = *Lophoziaopsis rubrigemma* f. *arctica*
- *perssonii* H.Buch & S.W.Arnell = *Lophoziaopsis perssonii*
- *polaris* (R.M.Schust.) R.M.Schust. & Damsh. = *Lophoziaopsis polaris*
- *propagulifera* (Gottsche) Steph. = *Lophoziaopsis propagulifera*
- *porphyroleuca* auct. non Schiffn. = *Lophozia silvicola*
- *proteidea* (Arnell) S.W.Arnell = *Schistochilopsis grandiretis*
- *quadriloba* (Lindb.) A.Evans = *Schljakovianthus quadrilobus*
- *quinquedentata* (Huds.) Cogn. = *Tritomaria quinquedentata*
- *rubescens* R.M.Schust. & Damsh. = *Barbilophozia rubescens*

- *rubrigemma* R.M.Schust. = *Lophoziaopsis rubrigemma*
- *rufescens* Schljakov = *Pseudolophozia sudetica*
- *rutheana* (Limpr.) M.Howe = *Leiocolea rutheana*
- *schultzi* Schiffn. var. *schultzi* = *Leiocolea rutheana*
- *silvicola* var. *grandiretis* H.Buch & S.W.Arnell = *Lophozia savicziae*
- *turbinata* (Raddi) Steph. = *Leiocolea turbinata*
- *uncinata* Schljakov = *Lophoziaopsis polaris* [28]
- *ventricosa* auct. non (Dicks.) Dumort. = *L. wenzelii* var. *groenlandica*
- *ventricosa* var. *grandiretis* (H.Buch & S.W.Arnell) R.M.Schust. & Damsh. = *Lophozia savicziae*
- *ventricosa* var. *guttulata* (Lindb. & Arnell) Bakalin = *Lophozia guttulata*
- *ventricosa* var. *porphyroleuca* Macoun, nom. illeg. = *Lophozia ventricosa* var. *ventricosa*
- *ventricosa* var. *subarctica* Schljakov = *Lophozia ventricosa* var. *ventricosa*
- Lophozia integerrima* (Lindb.) Douin = *Dichiton integerrimum*
- Lunularia vulgaris* Raddi = *Lunularia cruciata*
- Macvicaria* W.E.Nicholson = *Porella*
- *ulophylla* (Steph.) S.Hatt. = *Porella ulophylla*
- Madotheca* = *Porella*
- *cordaeana* (Huebener) Dumort. = *Porella cordaeana*
- *laevigata* (Schrad.) Dumort. = *Porella arboris-vitae*
- *platyphylla* (L.) Dumort. = *Porella platyphylla*
- *ussuriensis* Steph. = *Porella gracillima*
- Mannia pilosa* var. *sibirica* (Müll.Frib.) S.W.Arnell = *Mannia sibirica*
- *rupestris* (Nees) Frye & L.Clark = *Mannia triandra*
- Marchantia alpestris* (Nees) Burgeff = *Marchantia polymorpha* subsp. *montivagans*
- *aquatica* (Nees) Burgeff = *Marchantia polymorpha* subsp. *polymorpha*
- *polymorpha* L. = *Marchantia polymorpha* subsp. *ruederalis*
- *polymorpha* var. *alpestris* (Nees) Gottsche, Lindenb. & Nees = *Marchantia polymorpha* subsp. *montivagans*
- *polymorpha* var. *aquatica* (Nees) Gottsche, Lindenb. & Nees = *Marchantia polymorpha* subsp. *polymorpha*
- Marsilea endiviifolia* (Dicks.) Lindb. = *Pellia endiviifolia*
- *epiphylla* (L.) Lindb. = *Pellia epiphylla*
- *neesii* Lindb. = *Pellia neesiana*
- Marsupella adusta* (Nees) Spruce = *Gymnomitrium adustum*
- *alpina* (Gottsche ex Limpr.) Bernet = *Gymnomitrium alpinum*
- *brevissima* (Dumort.) Grolle = *Gymnomitrium brevissimum*
- *cochlearis* (Lindb.) Müll.Frib. = *Gymnomitrium brevissimum*
- *commutata* (Limpr.) Bernet = *Gymnomitrium commutatum*
- *emarginata* var. *aquatica* (Lindenb.) Dumort. = *Marsupella aquatica*
- *emarginata* var. *densifolia* (Nees) Breidler = *Marsupella emarginata*
- *emarginata* var. *pearsonii* (Schiffn. ex Macvicar) Jørg. = *Marsupella aquatica* f. *pearsonii*
- *emarginata* subsp. *tubulosa* (Steph.) N.Kitag. = *Marsupella tubulosa*
- *filiformis* (Lindb.) Lindb. = *Marsupella boeckii*
- *joergensenii* Schiffn. = *Marsupella sphaclata*
- *pearsonii* Schiffn. = *Marsupella aquatica* f. *pearsonii*
- *revoluta* (Nees) Dumort. = *Apomarsupella revoluta*
- *robusta* (De Not.) A.Evans = *Marsupella emarginata*
- *sullivantii* (De Not.) A.Evans = *Marsupella sphaclata*
- *ustulata* Spruce = *Marsupella sprucei*
- *ustulata* var. *sprucei* (Limpr.) R.M.Schust. = *Marsupella sprucei*
- *varians* (Lindb.) Müll.Frib. = *Gymnomitrium brevissimum*
- Martinellia paludosa* (Müll.Frib.) Arnell & C.E.O.Jensen = *Scapania paludosa*
- Martinellius apiculatus* (Spruce) Trevis. = *Scapania*

- nia apiculata*
 — *bartlingii* Trevis., nom. illeg. = *Scapania cuspiduligera*
 — *curtus* (Mart.) Lindb. = *Scapania curta*
 — *curtus* var. *viridissimus* Müll.Frib. = *Scapania irrigua*
 — *hyperboreus* (Jørg.) H.A.Möller = *Scapania hyperborea*
 — *irriguus* (Nees) Lindb. = *Scapania irrigua*
 — *irriguus* var. *alpinus* (Bryhn) H.A.Möller = *Scapania hyperborea*
 — *paludicola* (Loeske & Müll.Frib.) C.E.O.Jensen = *Scapania paludicola*
 — *rosaceus* (Corda) Lindb. = *Scapania curta*
 — *simmonsii* (Bryhn & Kaal.) Arnell = *Scapania simmonsii*
 — *spitsbergensis* Lindb. = *Scapania spitsbergensis*
 — *subalpinus* (Nees ex Lindenb.) Trevis. = *Scapania subalpina*
 — *undulatus* (L.) Lindb. = *Scapania undulata*
Massula elegans (R.M.Schust.) Schljakov = *Lophozia excisa* var. *elegans*
 — *grandiretis* (Lindb. ex Kaal.) Schljakov = *Schistochilopsis grandiretis*
 — *hyperarctica* (R.M.Schust.) Schljakov = *Schistochilopsis hyperarctica*
 — *incisa* (Schrad.) Schljakov = *Schistochilopsis incisa*
 — *laxa* (Lindb.) Schljakov = *Heterogemma laxa*
 — *opacifolia* (Culm. ex Meyl.) Schljakov = *Schistochilopsis opacifolia*
Massularia capitata (Hook.) Schljakov = *Heterogemma capitata*
 — *cornuta* (Steph.) Gambaryan = *Schistochilopsis cornuta*
 — *elegans* (R.M.Schust.) Schljakov = *Lophozia excisa* var. *elegans*
 — *elongata* (Steph.) Schljakov = *Protolophozia elongata*
 — *grandiretis* (Lindb. ex Kaal.) Schljakov = *Schistochilopsis grandiretis*
 — *hyperarctica* (R.M.Schust.) Schljakov = *Schistochilopsis hyperarctica*
 — *incisa* (Schrad.) Schljakov = *Schistochilopsis incisa*
 — *laxa* (Lindb.) Schljakov = *Heterogemma laxa*
 — *opacifolia* (Culm. ex Meyl.) Schljakov = *Schistochilopsis opacifolia*
Mastigophora reptans (L.) Trevis. = *Lepidozia reptans*
Metacalypogeia schusterana S.Hatt. & Mizut. = *Eocalypogeia schusterana*
Metzgeria conjugata auct. non Lindb. (material from eastern Asia only) = *Metzgeria lindbergii*
 — *fruticulosa* auct. non (Dicks.) A.Evans (material from eastern Asia) = *Metzgeria temperata*
 — *fruticulosa* auct. = *Metzgeria violacea*
 — *furcata* var. *ulvula* Nees = *Metzgeria furcata*
 — *pubescens* (Schrank) Raddi = *Apometzgeria pubescens*
 — *simplex* Lorb. = *Metzgeria lindbergii*
Microlepidozia pauciflora (Dicks.) Schljakov = *Kurzia pauciflora*
 — *setacea* auct. non (Weber) Jørg. = *Kurzia pauciflora*
Moerckia erimona (Steph.) S.Hatt. = *Hattorianthus erimonus*
 — *hibernica* (Hook.) Gottsche f. *flotoviana* = *Moerckia flotoviana*
Nardia hyalina (Lyell) Carrington = *Plectocolea hyalina*
 — *levieri* Steph. = *Solenostoma confertissimum*
 — *kamtschatica* Arnell & C.E.O.Jensen = ?*Nardia assamica*
 — *sieboldii* (Sande Lac.) Steph. = *Nardia assamica*
Nardiocalyx apiculata (Schiffn.) Jørg. = *Marsupella apiculata*
Neesiella pilosa (Hornem.) Schiffn. = *Mannia pilosa*
Orthocaulis cavifolius H.Buch & S.W.Arnell = *Sphenolobus cavifolius*
 — *elongatus* (Steph.) A.Evans = *Protolophozia elongata*
 — *kunzeanus* (Huebener) H.Buch = *Schljakovia kunzeana*
 — *gracilis* (Schleich. ex Steph.) H.Buch = *Orthocaulis attenuatus*
 — *quadrilobus* (Lindb.) H.Buch = *Schljakovianthus quadrilobus*
Pallavicinia blyttii (Morch ex Hornem) Lindb. = *Moerckia blyttii*
 — *erimona* Steph. = *Hattorianthus erimonus*
Pedinophyllum interruptum (Nees) Lindb. subsp. *truncatum* (Steph.) Inoue = *Pedinophyllum truncatum*

- Pellia borealis* Lorb. = *Pellia epiphylla*
 — *epiphylla* var. *borealis* (Müll.Frib.) Schljakov = *Pellia epiphylla*
 — *fabbroniana* Raddi, nom. illeg. = *Pellia endiviifolia*
Peltolepis grandis (Lindb.) Lindb. = *Peltolepis quadrata*
 — *grandis* var. *angustifrons* Lindb. = *Peltolepis quadrata*
 — *grandis* var. *sibirica* (Lindb.) Lindb. = *Peltolepis quadrata*
 — *quadrata* var. *japonica* Shimizu & S.Hatt. = *Peltolepis japonica*
Physocolea venusta auct. non (Sande Lac.) Steph. = *Cololejeunea subkodamae*
Plagiochila arctica var. *subarctica* (Jørg.) Inoue = *Plagiochila porelloides*
 — *asplenioides* auct. non (L. emend. Taylor) Dumort. = *Plagiochila porelloides*
 — *asplenioides* subsp. *arctica* (Bryhn & Kaal.) R.M.Schust. = *Plagiochila arctica*
 — *asplenioides* subsp. *porelloides* (Torr. ex Nees) R.M.Schust. = *Plagiochila porelloides*
 — *asplenioides* var. *subarctica* Jørg. = *Plagiochila arctica*
 — *major* (Nees) S.W.Arnell = *Plagiochila asplenioides*
 — *porelloides* var. *subarctica* Jørg. = *Plagiochila arctica*
 — *satoi* S.Hatt. = *Plagiochila porelloides*
Plectocolea rubra (Gottsche ex Underw.) H.Buch = *Solenostoma rubrum*
 — *thermarum* (Steph.) S.Hatt. = *Plectocolea vulcanicola*
Pleuroclada = *Pleurocladula*
Pleurocladula islandica (Nees) Grolle = *Pleurocladula albescens*
Pleuroschisma trilobatum (L.) Dumort. = *Bazzania trilobata*
 — *triangulare* (Schleich.) Warnst. = *Bazzania tricrenata*
Porella acutifolia (Lehm. & Lindenb.) Trevis subsp. *tosana* (Steph.) S.Hatt. = *Porella tosana*
 — *gracillima* var. *urogea* (C.Massal.) S.Hatt. = *Porella gracillima*
 — *laevigata* (Schrad.) Pfeiff. = *Porella arborisvitae*
 — *urogea* (C.Massal.) P.C.Chen = *Porella gracillima*
Protolophozia debiliformis (R.M.Schust. & Damsh.) Konstant. = *Pseudolophozia debiliformis*
Ptilidium ciliare var. *pulcherrimum* (Weber) Hoffm. ex Pfeiff. = *Ptilidium pulcherrimum*
Radula complanata subsp. *lindbergiana* (Gottsche ex C.Hartm.) R.M.Schust. = *Radula lindenbergiana*
Riccardia pinguis (L.) Gray = *Aneura pinguis*
 — *sinuata* (Hook.) Trevis. = *Riccardia chamedryfolia*
Riccia arvensis Austin = *Riccia bifurca*
 — *bischoffii* Huebener = *Riccia ciliifera*
 — *canescens* Steph. = *Riccia crinita*
 — *crystallina* auct. Fl. Ross., non L. = *Riccia cavernosa*
 — *huebeneriana* Lindenb. var. *cavernosa* (Hoffm.) Ast = *Riccia cavernosa*
 — *lescuriana* Austin = *Riccia beyrichiana*
 — *minima* L. = *Riccia sorocarpa*
 — *nigrella* auct. non DC. = *Riccia papillosa*
 — *pseudopapillosa* Levier ex Steph. = *Riccia papillosa*
 — *subinermis* Lindb. = *Riccia glauca*
 — *trichocarpa* M.Howe = *Riccia crinita*
Ricciocarpos natans var. *decipiens* Schiffn. = *Riccia rhenana*
 — *velutinus* (Wilson ex Hook.) Steph. = *Ricciocarpos natans*
Saccobasis polita subsp. *polymorpha* (R.M.Schust.) Konstant. = *Saccobasis polymorpha*
Saccogyna graveolens (Schrad.) Lindb. = *Geocalyx graveolens*
Scapania arnellii H.Buch = *Scapania brevicaulis*
 — *bartlingii* (Hampe ex Nees) Nees = *Scapania cuspiduligera*
 — *calcicola* subsp. *ligulifolia* (R.M.Schust.) Damsh. & D.G.Long = *Scapania ligulifolia*
 — *calcicola* var. *ligulifolia* R.M.Schust. = *Scapania ligulifolia*
 — *curta* var. *rosacea* (Corda) Carrington = *Scapania curta*
 — *globulifera* Schljakov = *Scapania obcordata*
 — *invisa* R.M.Schust. = *Scapania zemljae*
 — *irrigua* var. *alpina* Bryhn = *Scapania hyperborea*
 — *jensenii* (Müll.Frib.) Schljakov = *Scapania obcordata*

- *lapponica* (Arnell & C.E.O.Jensen) Steph. = *Scapania obcordata*
- *lingulata* var. *microphylla* (Warnst.) R.M.Schust. = *Scapania lingulata*
- *massalongii* (Müll.Frib.) Müll.Frib. = *Scapania carinthiaca*
- *mucronata* subsp. *praetervisa* (Meyl.) R.M.Schust. = *Scapania praetervisa*
- *mucronata* var. *praetervisa* (Meyl.) H.Buch = *Scapania praetervisa*
- *nemorea* subsp. *crassiretis* = *Scapania crassiretis* Bryhn
- *nemorosa* (L.) Dumort., nom. illeg. = *Scapania nemorea*
- *parvifolia* var. *grandiretis* Schljakov = *Scapania scandica* var. *grandiretis*
- *rosea* (Corda) Nees = *Scapania curta*
- *sarekensis* (Arnell & C.E.O.Jensen) Steph. = *Scapania hyperborea*
- *scandica* (Arnell & H.Buch) Macvicar f. *parvifolia* (Warnst.) Schljakov = *Scapania parvifolia*
- *scandica* var. *argutedentata* H.Buch = *S. scandica* s. l.
- *scapanioides* (C.Massal.) Grolle = ?*Scapania glaucocephala*
- *spiniformis* Warnst. = *Scapania rufidula* Warnst.
- *undulata* var. *paludosa* Müll.Frib. = *Scapania paludosa*
- *vexata* C.Massal. = *Scapania glaucocephala*
- Scapaniella glaucocephala* (Taylor) A.Evans ex Verd. = *Scapania glaucocephala*
- *massalongii* (Müll.Frib.) H.Buch = *Scapania carinthiaca*
- *vexata* (C.Massal.) H.Buch = *Scapania glaucocephala*
- Schistochilopsis capitata* (Hook.) Konstant. = *Heterogemma capitata*
- *elegans* (R.M.Schust.) Konstant. = *Lophozopsis excisa* var. *elegans*
- *laxa* (Lindb.) Konstant. = *Heterogemma laxa*
- Solenostoma atrovirens* (Dumort.) Müll.Frib. = *Jungermannia atrovirens*
- *cordifolium* (Dumort.) Steph. = *Jungermannia eucordifolia*
- *crenulatum* Mitt. = *Solenostoma gracillimum*
- *hyalinum* (Lyell) Mitt. = *Plectocolea hyalina*
- *jenseniana* (Grolle) Bakalin, nom. illeg. = *Solenostoma pusillum*
- *levieri* (Steph.) Steph. = *Solenostoma confertissimum*
- *oblongifolium* auct. non (Müll.Frib.) Müll.Frib. = *Jungermannia borealis*
- *obovatum* (Nees) R.M.Schust. = *Plectocolea obovata*
- *ontariense* R.M.Schust. = *Plectocolea hyalina*
- *polare* (Lindb.) R.M.Schust. = *Jungermannia polaris*
- *pumilum* (With.) Müll.Frib. = *Jungermannia pumila*
- *pumilum* subsp. *polare* (Lindb.) R.M.Schust. = *Jungermannia polaris*
- *schiffneri* (Loitl.) Müll.Frib. = *Jungermannia polaris*
- *subellipticum* (Lindb. ex Kaal.) R.M.Schust. = *Plectocolea subelliptica*
- *triste* (Nees) Müll.Frib. = *Jungermannia atrovirens*
- Southbya stillicidiorum* (Raddi) Lindb. = *Southbya tophacea*
- Sphenolobopsis kitagawae* R.M.Schust. = *Sphenolobopsis pearsonii*
- Sphenolobus exsectiformis* (Breidl.) Steph. = *Tritomaria exsectiformis*
- *exsectiformis* var. *aequilobus* (Culm.) Müll.Frib. = *Tritomaria scitula*
- *exsectus* (Schmidel ex Schrad.) Steph. = *Tritomaria exsecta*
- *hellerianus* (Nees ex Lindenb.) Steph. = *Crossocalyx hellerianus*
- *michauxii* (F.Weber) Steph. = *Anastrophyllum michauxii*
- *politus* (Nees) Steph. = *Saccobasis polita*
- Telaranea setacea* auct. non (Weber) Müll.Frib. = *Kurzia pauciflora*
- Temnoma setiforme* (Ehrr.) M.Howe = *Tetralophozia setiformis*
- Tritomaria heterophylla* R.M.Schust. = *Pseudotritomaria heterophylla*
- Tritomaria polita* (Nees) Jørg. = *Saccobasis polita*
- Tritomaria polita* subsp. *polymorpha* R.M.Schust. = *Saccobasis polymorpha*
- Tritomaria scitula* var. *spinosa* Herzog = *Tritomaria quinquedentata*

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