



Mosses of the southern Russian Far East, an annotated check-list

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ABSTRACT

The check-list of mosses of the southern part of the Russian Far East includes 816 species and 10 infraspecific taxa with references on their distribution in seven floristic regions within Primorsky and Khabarovsk Territories, Amurskaya and Sakhlinskaya Provinces and Evreiskaya Autonomous District. Seventy one species are excluded in the course of the check-list compilation, and 59 are commented as doubtful and erroneously reported from some of the Far Eastern regions, while 8 of them doubtful for the southern part of Russian Far East in general.

Keywords: bryophyte, flora, biodiversity, taxonomy, synonymy, Primorsky Territory, Khabarovsk Territory, Amurskaya Province, Sakhlinskaya Province, Evreiskaya Autonomous District

РЕЗЮМЕ

Черданцева В.Я., Писаренко О.Ю., Игнатов М.С., Игнатова Е.А., Федосов В.Э., Дудов С.В., Бакалин В.А. Мхи южной части российского Дальнего Востока: аннотированный список. Чеклист мхов юга Российского Дальнего Востока включает 816 видов и 10 внутривидовых таксонов со ссылками на опубликованные данные, иногда гербарные материалы по семи флористическим районам в пределах Приморского и Хабаровского краев, Амурской и Сахалинской областей и Еврейской автономной области. 71 вид исключен из флоры мхов этого региона. Для 59 видов обсуждаются сомнительные и ошибочные указания для некоторых районов, для которых они приводились, из них произрастание 8 видов в пределах рассматриваемой территории в целом сомнительно или не подтверждено образцами.

Ключевые слова: мхи, флора, биоразнообразие, таксономия, Приморский край, Хабаровский край, Амурская область, Сахалинская область, Еврейская автономная область

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INTRODUCTION

Present paper is addressed to the southern part of the Russian Far East, the region within the Primorsky and Khabarovsk Territories, Amurskaya and Sakhlinskaya Provinces and Evreiskaya Autonomous District (Fig. 1). It covers extensive area over 1 500 000 km².

The southern part of the Russian Far East never had shield glaciations, including the coldest intervals of in the Late Pleistocene, although local glaciation at the highest elevations occurred at places. This fact makes the study area to be the largest among North Asian regions with boreo-temperate mesophytic floras survived *in situ* ice age of Pleistocene. Other important characteristics of the territory include great variation in climatic variables, especially temperature and precipitation, providing changes from oceanic climate in Sakhalin and Kuril Islands to continental one in the western part of Amurskaya Province, where Dahurian

steppe vegetation occurs. Mountains of the region are very diverse in chemical composition of both ancient bedrocks and more recent sediments, so both basic, acidic and neutral substrates are widely distributed.

The territory represents a transition between East Asian and Circumboreal floristic provinces, and it obviously comprises migration routes of boreal and temperate taxa followed the climatic fluctuations in the Pleistocene and Holocene. The predominance of north-south migrations corresponds to the sub-meridional orientation of mountain ranges. In addition, important routes occurred along the land bridges united Sakhalin and Kurils with Hokkaido and also Sakhalin with the Asian mainland. They appeared several times during the Late Pleistocene and totally disappeared last time ca. 10 000 BP.

Vegetation of the southern part of Russian Far East exhibits great variation from the boreal (taiga) forests do-

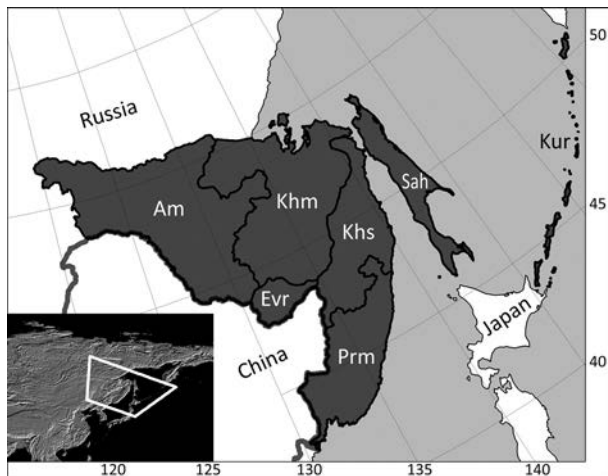


Figure 1 Regions of the Russian Far East: Evr – Evreiskaya [Jewish] Autonomous Province; Khm – Khabarovsk Territory, middle part, Khs – Khabarovsk Territory, southern part; Kur – Kuril Islands [Sakhalin Province]; Prm – Primorye Territory; Sah – Sakhalin Province (excluding Kuril Islands)

minated by *Picea*, *Pinus* and *Larix* in the north of the studied area to the hemiboreal and cool temperate vegetation in the south. The upper elevations in the north are covered by mountain tundra, while southern mountains have only forestless communities without typical tundra elements. Oro-boreal belt is receiving additional precipitation from the wet air masses going from the Pacific. The amazing feature of southern Far Eastern flora is a mixture of southern and northern flora elements: *Abies* trees are often embraced with *Actinidia kolomicta* and grow among Araliaceae, *Phellodendron*, evergreen shrubs of *Skimmia*, *Ilex*, *Sasa*, etc.

Bryological studies in the south of the Russian Far East started in the middle 19th century, with exploration of the territory by K.I. Maximovich, F.B. Schmidt and L.I. Schrenk. Some data on bryophytes were firstly published by Regel (1861) and Schmidt (1869); however, the work of S.O. Lindberg (1872), based on collections made by F.B. Schmidt and P.P. Glehn, may be regarded as the first serious input to the understanding of bryophyte flora of the region. These and some other data of that time were summarized by C. Warnstorff (1913, 1914) in his “Zur Bryo-Geographie der Russischen Reiches”, which obviously showed the incompleteness of available information on moss diversity in the South of the Russian Far East. The important contribution to the Amur flora was the checklist prepared by Brotherus et al. (1916), basing on collections of O.I. Kuzeneva and N.I. Prokhorov.

First professional bryologist who collected bryophytes in the area was J. Podpěra, who however worked here only a short time in February and March of 1920, and his list contains 72 species only (Podpera 1929). First really comprehensive study of the moss flora of Russian Far East was conducted by A.S. Lazarenko, who collected bryophytes in Primorsky Territory in 1930, 1933 and 1935. He has published the “Brief manual of leafy mosses of the Far East” (Lazarenko, 1938) with the first identification key for

mosses of the Soviet Far East. Lazarenko also compiled the first (and last until the present account) detailed checklist of the Russian (Soviet in that time) Far East (Lazarenko, 1940, 1941a, 1941b, 1946), where all literature references available at that time were provided. Bryophyte flora of Sakhalin and Kuril Islands was also studied by Japanese scientists, S. Sugawara (1956) and Y. Horikawa (1940); bryophyte collections were also made on Sakhalin by Reverend U. Faurie (see Bakalin & Katagiri 2014 for details).

The first professional bryologist who lived in Vladivostok and devoted all her life to study of moss diversity and taxonomy in the Russian Far East was Dr. Valentina Yakovlevna Cherdantseva (1939–2013), who prepared the first draft of the present checklist. It includes both published and unpublished materials. Most prominent studies of Cherdantseva concern bryophyte flora of Sakhalin and Primorsky Territory (the latter study was done together with the Dr. L.V. Bardunov). She also organized first moss herbarium in the Russian Far East. Her life and achievements are briefly described in her obituary (Bakalin 2013). After sudden death of Cherdantseva in 2013, Bakalin, her colleague in the Institute of Biology and Soil Sciences, started to revise her unpublished materials. Among others, there was a database in Excel file containing data, both published and unpublished earlier, on distribution of mosses in southern part of the Russian Far East. The authors of the present paper attempted to complete this work and publish it, supplemented by novelties discovered already after Cherdantseva passed away. Recent nomenclatural and taxonomic changes are mostly accepted, and synonyms used by Cherdantseva are given.

CHECK-LIST

The check-list includes 816 species and 10 infraspecific taxa with references on their distribution within seven floristic regions according to subdivisions accepted in the Moss flora of Russia (Ignatov et al. 2017). The nomenclature follows mostly Russian checklist [90], with additions accepted in Moss flora of Russia [97, 99].

We provide mainly the selected publications for respective regions [editor: for this reason the editorial board decided to numerate the list of references in this paper], mostly those that summarize previously published records, thus the check-list does not cite all papers where a taxon is mentioned in a given region. Recent taxonomic treatments of some groups of mosses were also taken into account, providing amended data on species names and distribution. In some cases, mostly for the species rare in the region, unpublished data of the authors of the present paper are also cited, referring to herbaria where they are deposited (more detailed information for these references is available in the database of the project “Moss flora of Russia” (<http://arctoa.ru/Flora/basa.php>)).

Species names are followed by synonymy where ever necessary, given in parenthesis, then the region abbreviations (cf. Fig. 1) are given with respective references. Species commented for their taxonomy and distribution are marked

with (!!). Comments are given on taxonomic status of the species and on doubtful records in some regions. Eight species which are doubtful for all region are given with question mark (?). After the list of taxa that are confirmed or doubtful, but nevertheless may be present in the area (commonly no vouchers found, but occurrence of the taxon is somewhat possible in the Russian Far East), we place the list of excluded taxa with corresponding explanations.

Abietinella Müll. Hal. [Thuidiaceae]

– *abietina* (Hedw.) M. Fleisch.: **Am** [4, 7, 8, 32, 56, 70, 133], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 133], **Sah** [24], **Kur** [23, 27].

Actinothuidium (Besch.) Broth. [Thuidiaceae]

– *hookeri* (Mitt.) Broth. subsp. *boreale* Ignatov, Ignatova, Z. Iwats. & B.C. Tan: **Khm** [88].

Aloina Kindb. [Pottiaceae]

– *rigida* (Hedw.) Limpr.: **Prm** [MHA, 59].

Amblystegium Bruch, Schimp. & W. Gümbel [Amblystegiaceae]

– *radicale* (P. Beauv.) Bruch, Schimp. & W. Gümbel (*A. saxatile* Schimp., *Campylium radicale* (P. Beauv.) Grout): **Prm** [26] – (!!).

– *serpens* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 32, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [21, 23, 25].

– *serpens* var. *juratzkanum* (Schimp.) Rau & Herv. (*A. juratzkanum* Schimp.): **Am** [7, 8], **Prm** [26], **Kur** [21] – (!!).

Amphidium Schimp. [Rhabdoweisiaceae]

– *asiaticum* Sim-Sim, Afonina & M. Stech: **Am** [56], **Khm** [145].

– *lapponicum* (Hedw.) Schimp.: **Am** [7, 8, 32, 56], **Khm** [88], **Khs** [65, 109], **Prm** [26, 28], **Sah** [24], **Kur** [21, 23, 25].

– *mougeotii* (Bruch & Schimp.) Schimp.: **Am** [32, 56], **Khm** [88], **Khs** [163], **Kur** [23].

Anacamptodon Brid. [Amblystegiaceae]

– *kamitchaticus* Czernyadjeva: **Sah** [24, 53], **Kur** [23].

– *latidens* (Besch.) Broth.: **Am** [53], **Khm** [53, 88], **Khs** [109], **Prm** [26, 28, 29, 38, 42, 53, 133], **Sah** [24, 36, 53], **Kur** [23].

Andreaea Hedw. [Andreaeaceae]

– *alpestris* (Thed.) Bruch, Schimp. & W. Gümbel: **Khs** [65], **Sah** [36], **Kur** [27, 25, 141].

– *blyttii* Bruch et al.: **Kur** [23].

– *nivalis* Hook.: **Kur** [21, 25, 141].

– *obovata* Thed.: **Kur** [23].

– *rupestris* Hedw.: **Am** [7, 8, 56, 130], **Khm** [43, 88], **Khs** [40, 65, 109], **Prm** [26, 38, 48], **Sah** [24], **Kur** [21, 23, 25, 141].

Anoetangium Schwägr. [Pottiaceae]

– *thomsonii* Mitt.: **Am** [32, 56, 100], **Khm** [43, 100], **Khs** [65, 109], **Prm** [26, 28, 29, 71, 100], **Kur** [23] – (!!).

Anomobryum Schimp. [Bryaceae]

– *bavaricum* (Warnst.) Holyoak & Köckinger: **Prm** [55].

– *concinatum* (Spruce) Lindb. (*A. filiforme* auct.): **Am** [32, 55, 56], **Khm** [55], **Prm** [26, 55], **Sah** [24, 55], **Kur** [21, 23, 25, 55].

– *nitidum* (Mitt.) A. Jaeger: **Am** [56], **Prm** [55], **Kur** [25].

Anomodon Hook & Taylor [Anomodontaceae]

– *giraldii* Müll. Hal.: **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 48, 71, 132], **Sah** [24, 36], **Kur** [23, 27].

– *longifolius* (Brid.) Hartm.: **Am** [132], **Khm** [41], **Prm** [26, 28], **Sah** [24, 36], **Kur** [23, 27].

– *minor* (Hedw.) Fürnr.: **Am** [4, 7, 8, 32, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 123, 131, 163], **Prm** [26, 28, 29, 38, 42, 48, 71], **Kur** [23].

– *rugelii* (Müll. Hal.) Keissl.: **Am** [32], **Khm** [41], **Khs** [40, 109, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 132], **Sah** [24, 36], **Kur** [23, 27].

– *solovjovii* Laz.: **Prm** [26, 28, 42, 71, 132, MHA].

– *thraustus* Müll. Hal.: **Am** [4, 56, 70, 132], **Khm** [41, 88, 131], **Khs** [40, 109, 123, 131], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 71, 132], **Sah** [24, 36], **Kur** [23, 27].

Archidium Brid. [Archidiaceae]

– *alternifolium* (Hedw.) Mitt.: **Prm** [3, 26, MHA].

Arctoa Bruch, Schimp. & W. Gümbel [Rhabdoweisiaceae]

– *fulvella* (Dicks.) Bruch, Schimp. & W. Gümbel: **Khm** [88], **Khs** [65], **Prm** [144], **Kur** [21, 23, 141].

Arrhenopterum Hedw. [Aulacomniaceae]

– *heterostichum* Hedw. (*Aulacomnium heterostichum* (Hedw.) Bruch & Schimp.): **Am** [4, 70], **Khm** [41], **Khs** [40, 109, 123, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [23, 25].

Atrichum P. Beauv. [Polytrichaceae]

– *flavisetum* Mitt. (*A. haussknechtii* Jur. & Milde): **Am** [8, 32, 56, 70, 130], **Khm** [41, 88], **Khs** [40, 109, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 130], **Sah** [24, 36], **Kur** [23, 25].

– *rhystophyllum* (Müll. Hal.) Paris: **Evr** [39], **Prm** [26, 97].

– *tenellum* (Röhl.) Bruch, Schimp. & W. Gümbel: **Am** [56], **Kur** [27] – (!!).

– *undulatum* (Hedw.) P. Beauv.: **Am** [35, 56], **Khm** [MHA], **Khs** [40, 123, 131], **Prm** [26, 28, 48, 71], **Sah** [24, 36], **Kur** [23, 25].

Aulacomnium Schwägr. [Aulacomniaceae]

– *heterostichum* (Hedw.) Bruch & Schimp., see *Arrhenopterum heterostichum*.

– *palustre* (Hedw.) Schwägr.: **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].

– *turgidum* (Wahlenb.) Schwägr.: **Am** [4, 7, 8, 32, 35, 56], **Khm** [41, 43, 88], **Khs** [65, 109, 123], **Prm** [38, 130], **Sah** [24, 36], **Kur** [21].

Barbula Hedw. [Pottiaceae], see also *Hydrogonium* and *Streblolechium*

– *ungiculata* Hedw.: **Am** [32], **Khm** [88], **Prm** [26, 130], **Sah** [24], **Kur** [23].

Bartramia Hedw. [Bartramiaceae]

– *deciduaefolia* Broth. & Yasuda: **Khm** [99, MHA], **Prm** [99].

– *ithyphylla* Brid.: **Am** [32, 56], **Khm** [88], **Khs** [65], **Prm** [99, MHA], **Sah** [24], **Kur** [21].

– *pomiformis* Hedw.: **Am** [4, 7, 8, 32, 35, 56, 70, 131], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 131], **Sah** [24, 36], **Kur** [23, 25, 27].

Bartramiopsis Kindb. [Polytrichaceae]

– *lescurii* (James) Kindb.: **Khm** [88], **Khs** [65, 123], **Prm** [48, 130], **Sah** [24, 36], **Kur** [23, 25, 27, 141].

Blindia Bruch, Schimp. & W. Gümbel [Seligeriaceae]

– *acuta* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 32, 56], **Khm** [88], **Khs** [65], **Prm** [MHA], **Sah** [24], **Kur** [23].

Blindiadelphus (Lindb.) Fedosov & Ignatov [Seligeriaceae]

– *diversifolius* (Lindb.) Fedosov & Ignatov (*Seligeria diversifolia* Lindb.): **Am** [97], **Khs** [65], **Prm** [97], **Sah** [97].

– *recurvatus* (Hedw.) Fedosov & Ignatov (*Seligeria recurvata*

- (Hedw.) Bruch, Schimp. & W. Gümbel): **Prm** [26] – (!).
- **sibiricus** (Lindb.) Fedosov & Ignatov: **Khs** [67].
- Boulaya** Cardot [Thuidiaceae]
- **mitenii** (Broth.) Cardot: **Khm** [41], **Khs** [40], **Prm** [26, 28, 29, 38, 48, 71, 132], **Sah** [24, 36], **Kur** [23, 25, 27].
- Brachydontium** Fűrnr. [Seligeriaceae]
- **olympicum** (E. Britton) McIntosh & Spense: **Kur** [21].
- Brachymenium** Schwägr. [Bryaceae]
- **exile** (Dozy & Molk.) Bosch & Sande Lac. (*B. exiloides* Bard. & Czerd.): **Prm** [26, 99].
- **nepalense** Hook.: **Am** [70], **Evr** [39], **Prm** [26, 71, 132, MHA].
- Brachytheciastrum** Ignatov & Huttunen [Brachytheciaceae]
- **trachypodium** (Brid.) Ignatov & Huttunen: **Am** [56, 132], **Khs** [65, 109].
- **velutinum** (Hedw.) Ignatov & Huttunen: **Khs** [123], **Prm** [26, 29, 38, 132], **Sah** [24, 36], **Kur** [23].
- Brachythecium** Bruch, Schimp. & W. Gümbel [Brachytheciaceae]
- **albicans** (Hedw.) Bruch, Schimp. & W. Gümbel: **Kur** [21, 86] – (!).
- **auriculatum** A. Jaeger (*Camptothecium auriculatum* (A. Jaeger) Broth.): **Khs** [163], **Prm** [26, 28, 48, 86, 132], **Sah** [24, 36, 86], **Kur** [23, 25, 27].
- **baicalense** Ignatov: **Am** [32, 93], **Khm** [93], **Khs** [109], **Prm** [86, 93], **Sah** [24], **Kur** [113].
- **buchananii** (Hook.) A. Jaeger: **Am** [32, 56, 70], **Khm** [88], **Khs** [109], **Evr** [39], **Prm** [29, 38, 48], **Sah** [24], **Kur** [23].
- **campestre** (Müll. Hal.) Bruch, Schimp. & W. Gümbel: **Sah** [24, 36], **Kur** [23, 86] – (!).
- **cirrosum** (Schwägr.) Schimp.: **Am** [56, 132], **Khm** [88], **Khs** [65], **Sah** [24].
- **complanatum** Broth.: **Am** [32, 70, 93], **Khm** [93, 88], **Khs** [93, 109], **Evr** [39], **Prm** [38, 86, 93].
- **coruscum** I. Hagen: **Sah** [24, 86].
- **dahuricum** Ignatov: **Am** [32, 56], **Khs** [109].
- **erythrorrhizon** Bruch, Schimp. & W. Gümbel (*Brachythecium thedenii* Bruch, Schimp. & W. Gümbel): **Am** [56, 86], **Khm** [86, 88], **Prm** [26, 71, 86], **Sah** [24, 86].
- **extremiorientale** Ignatov: **Prm** [93], **Sah** [24, 86], **Kur** [23, 86].
- **garovaglioides** Müll. Hal.: **Khs** [65].
- **helminthocladum** Broth. & Paris: **Prm** [86].
- **hultenii** (E.B. Bartram) Min Lin & Y.F. Wang (*Bryhnia hultenii* E.B. Bartram, *Brachythecium novae-angliae* subsp. *hultenii* (E.B. Bartram) Huttunen): **Am** [8, 32, 70], **Khm** [41, 88], **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 38, 42], **Sah** [24, 36, 79], **Kur** [21, 27, 141].
- **irinae** Ignatov: **Khs** [109], **Sah** [24], **Kur** [86].
- **jacuticum** Ignatov: **Khs** [109].
- **kuroishicum** Besch.: **Prm** [26, 28, 29, 86], **Sah** [24, 36], **Kur** [23, 25, 26, 86].
- **mildeanum** (Schimp.) Schimp.: **Am** [7, 8, 32, 56], **Khm** [88, 132], **Khs** [109], **Prm** [26, 28, 42, 71, 132], **Sah** [24], **Kur** [23, 25].
- **noesicum** Besch. (*Bryhnia noesica* (Besch.) Broth.): **Prm** [79], **Sah** [24, 79], **Kur** [23, 25, 79, 113].
- **rivulare** Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 32, 35, 56, 70, 132], **Khm** [88], **Khs** [40, 109], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24], **Kur** [21, 23, 25, 27].
- **rotaeantum** De Not.: **Am** [32, 56, 86], **Khm** [88], **Khs** [109], **Evr** [39], **Prm** [29, 38, 48, 71], **Sah** [24], **Kur** [23].
- **rutabulum** (Hedw.) Bruch, Schimp. & W. Gümbel: **Khs** [123, 131], **Prm** [28], **Kur** [23, 25] – (!).
- **salebrosum** (F. Weber & D. Mohr) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 35, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 123], **Prm** [26, 28, 29, 42], **Sah** [24, 36], **Kur** [27] – (!).
- **udum** I. Hagen: **Kur** [23].
- Breidleria** Loeske [Pylaisiaceae]
- **pratensis** (W.D.J. Koch ex Spruce) Loeske (*Hypnum pratense* W.D.J. Koch ex Spruce): **Khs** [123], **Prm** [26, 38], **Sah** [24, 36], **Kur** [128].
- Brothera** Müll. Hal. [Leucobryaceae]
- **leana** (Sull.) Müll. Hal.: **Am** [4, 7, 8, 32, 56, 70, 130], **Khm** [41, 88], **Khs** [40, 109, 123], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 48, 71, 130].
- Brotherella** Loeske ex M. Fleisch. [Pylaisiadelphaceae]
- **henonii** (Duby) M. Fleisch.: **Kur** [23, 27].
- Bryhnia* Kaurin [Brachytheciaceae], see *Brachythecium hultenii*, *B. noesicum*, *Myuroclada longiramea*
- Bryochenea** C. Gao & G.C. Zhang [Thuidiaceae]
- **vestitissima** (Besch.) Touw (*Thuidium vestitissimum* Besch.): **Prm** [5, 26, 28, 132], **Kur** [23].
- Bryoerythrophyllum** P.C. Chen [Pottiaceae]
- **alpigenum** (Venturi) P.C. Chen: **Kur** [23, 61].
- **brachystegium** (Besch.) K. Saito: **Am** [32], **Sah** [24], **Kur** [23, 25, 61].
- **ferruginascens** (Stirt.) Giacom.: **Am** [32, 56], **Khm** [61, 88], **Prm** [MHA], **Sah** [24].
- **inaequalifolium** (Taylor) R.H. Zander: **Am** [32], **Prm** [59, MHA].
- **recurvirostrum** (Hedw.) P.C. Chen: **Am** [8, 32, 34, 56, 61, 70], **Khm** [61, 88], **Khs** [40, 109, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 61], **Sah** [24], **Kur** [21, 23, 25, 61].
- **rubrum** (Jur. ex Geh.) P.C. Chen: **Sah** [24].
- Bryonoguchia** Z. Iwats. & Inoue [Thuidiaceae]
- **molkenboeri** (Sande Lac.) Z. Iwats. & Inoue: **Am** [70], **Evr** [39], **Prm** [26, 28, 42, 48, 71], **Sah** [77].
- Bryoxiphium** Mitt. [Bryoxiphiaceae]
- **japonicum** (Berggr.) E. Britton (*B. savatieri* (Husn.) Mitt.): **Khs** [64, 109], **Evr** [39, 64], **Prm** [26, 29, 64], **Sah** [24, 64], **Kur** [21, 23, 25, 27, 64, 141].
- **norvegicum** (Brid.) Mitt.: **Kur** [64].
- Bryum** Hedw. [Bryaceae]
- **algovicum** Sendtn. ex Müll. Hal. (*B. angustirete* Kindb.): **Am** [32, 164], **Khs** [109, 131], **Prm** [99, MHA], **Sah** [24].
- **altaicum** Broth.: **Kur** [99, MHA, VLA].
- **amblyodon** Müll. Hal. (*B. inclinatum* (Hedw.) Dicks.): **Am** [32, 164], **Khm** [99, MHA], **Khs** [109], **Prm** [26, 38, 164], **Sah** [24, 36, 164], **Kur** [21, 23, 164].
- **archangelicum** Bruch, Schimp. & W. Gümbel: **Prm** [164], **Kur** [23].
- **argenteum** Hedw.: **Am** [7, 8, 32, 56], **Khm** [88], **Khs** [109, 123], **Prm** [26, 28, 29, 42, 71, 164], **Sah** [24, 36], **Kur** [21, 23, 164].
- **binum** (Schreb.) Turner: **Prm** [164], **Sah** [24], **Kur** [23, 164].
- **caespiticium** Hedw.: **Am** [8, 32], **Khm** [88], **Khs** [109, 123], **Prm** [28], **Sah** [24, 36, 164].
- **capillare** Hedw.: **Am** [32, 35], **Khs** [109], **Prm** [26, 28, 29, 164], **Sah** [24, 36, 164], **Kur** [23, 164].
- **creberrimum** Taylor: **Am** [7, 8, 56], **Khs** [109], **Prm** [164], **Sah** [24, 164], **Kur** [21, 23, 164].
- **cryophilum** Mårtensson: **Khm** [88].
- **cyclophyllum** (Schwägr.) Bruch & Schimp.: **Am** [32, 56, 164], **Khm** [88], **Prm** [28, 164], **Kur** [164].
- **dichotomum** Hedw. (*Bryum bicolor* Dicks.): **Prm** [26].

- *elegans* Nees: **Am** [56], **Khm** [88], **Khs** [109], **Prm** [26, 164], **Sah** [24, 36], **Kur** [164].
- *funckii* Schwägr.: **Prm** [26, 164].
- *intermedium* (Brid.) Blandow: **Kur** [23].
- *lonchocaulon* Müll. Hal.: **Am** [8, 32].
- *mayrii* Broth.: **Kur** [21].
- *mildeanum* Jur.: **Am** [32, 164].
- *moravicum* Podp.: **Khm** [88], **Khs** [109], **Prm** [29, 164], **Sah** [24], **Kur** [23].
- *neodamense* Itzigs.: **Prm** [164].
- *pallens* Sw. ex anon.: **Am** [8, 32], **Prm** [26, 28, 29, 42, 164], **Sah** [24, 36, 164].
- *pseudotriquetrum* (Hedw.) G. Gaertn. B. Mey. & Scherb. (*B. pseudocrispulum* (Podp.) L. Savicz): **Am** [7, 8, 32, 56], **Khm** [88], **Khs** [65, 109], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 164], **Sah** [24, 164], **Kur** [23, 27, 141, 164].
- *radiculosum* Brid.: **Prm** [29], **Kur** [23, 164].
- *salinum* I. Hagen ex Limpr.: **Sah** [24, 36, 164], **Kur** [23].
- *sleicheri* DC.: **Prm** [164], **Sah** [24, 164], **Kur** [21, 23].
- *subapiculatum* Hampe (*B. erythrocarpum* Schwägr.): **Prm** [26, 164].
- *uliginosum* (Brid.) Bruch & Schimp.: **Prm** [29], **Sah** [24, 36, 164].
- *violaceum* Crundw. & Nyholm: **Prm** [164].
- *weigeli* Spreng.: **Am** [34], **Sah** [24, 164], **Kur** [23].

Bucklandiella Roiv. [Grimmiaceae]

- *laeta* (Besch. & Cardot) Bedn.-Ochyra & Ochyra (*Racomitrium laetum* Besch. & Cardot): **Khm** [88], **Prm** [38], **Kur** [23, 25].
- *microcarpa* (Hedw.) Bedn.-Ochyra & Ochyra (*Racomitrium microcarpum* (Hedw.) Brid.): **Am** [56, 97], **Khm** [43, 88], **Khs** [65], **Evr** [97], **Prm** [26], **Sah** [24], **Kur** [23, 25].
- *nitidula* (Cardot) Bedn.-Ochyra & Ochyra (*Racomitrium nitidulum* Cardot): **Am** [56], **Kur** [23].
- *sudetica* (Funck) Bedn.-Ochyra & Ochyra (*Racomitrium sudeticum* (Funck) Bruch, Schimp. & W. Gümbel): **Am** [8, 34, 56], **Khm** [88], **Khs** [40], **Evr** [97], **Sah** [24], **Kur** [21, 23, 25, 141] – (!).

Buxbaumia Hedw. [Buxbaumiaceae]

- *aphylla* Hedw.: **Am** [8, 43], **Khm** [88], **Khs** [131], **Sah** [24, 36], **Kur** [141].
- *minakatae* S. Okamura: **Am** [4], **Khs** [65], **Prm** [26, 28, 29, 42, 71].

Callicladium H.A. Crum [Pylaisiaceae]

- *baldanianum* (Grev.) H.A. Crum (*Heterophyllum baldanianum* (Grev.) M. Fleisch.): **Am** [8, 32, 35, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 123, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [23, 25, 27].

Calliargon (Sull.) Kindb. [Calliargonaceae]

- *cordifolium* (Hedw.) Kindb.: **Am** [4, 7, 8, 32, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 109], **Evr** [39], **Prm** [26, 28, 29, 38, 42], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- *giganteum* (Schimp.) Kindb.: **Am** [4, 7, 8, 32, 56], **Khm** [88], **Khs** [123], **Prm** [26, 28], **Sah** [24, 36], **Kur** [25].
- *megalophyllum* Mikut.: **Am** [32].
- *richardsonii* (Mitt.) Kindb.: **Am** [7, 8, 35, 32, 43, 56], **Khm** [41, 88], **Sah** [24], **Kur** [21].

Calliargonella Loeske [Pylaisiaceae]

- *cuspidata* (Hedw.) Loeske: **Am** [32, 56, 70], **Khs** [40], **Prm** [26, 28, 29, 38, 71], **Sah** [24, 36], **Kur** [23, 25, 27].
- *lindbergii* (Mitt.) Hedenäs (*Hypnum lindbergii* Mitt.): **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 109, 123, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 141].

Campyliadelphus (Kindb.) R.S. Chopra [Amblystegiaceae]

- *chrysophyllus* (Brid.) Kanda (*Campyllum chrysophyllum* (Brid.) Lange): **Am** [4, 8, 32, 56], **Khs** [40, 123, 163], **Evr** [39], **Prm** [26, 29, 28], **Sah** [24], **Kur** [23, 25].
- *elodes* (Lindb.) Kanda (*Campyllum elodes* (Lindb.) Kindb.): **Prm** [26, 132], **Kur** [23].

Campylophylopsis W.R. Buck (*Campyloidium* (Kindb.) Ochyra) [Amblystegiaceae]

- *hispidulum* (Brid.) Ochyra (*Campyllum hispidulum* (Brid.) Mitt., *Campyloidium hispidulum* (Brid.) Ochyra): **Am** [8], **Khm** [41, 88], **Khs** [40], **Prm** [26, 28, 29, 42, 71] – (!) (?).
- *sommerfeltii* (Myrin) Ochyra (*Campyllum sommerfeltii* (Myrin) Lange, *Campyloidium sommerfeltii* (Myrin) Ochyra): **Am** [32, 34, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 123, 131], **Evr** [39], **Prm** [26, 28, 38, 48], **Sah** [24, 36], **Kur** [23].

Campyllum (Sull.) Mitt. [Amblystegiaceae]

- *protensum* (Brid.) Kindb.: **Am** [32], **Prm** [29], **Kur** [21, 23, 25].
- *squarrosulum* (Besch. & Cardot) Kanda: **Prm** [28, MHA], **Kur** [23].
- *stellatum* (Hedw.) C.E.O. Jensen: **Am** [32, 56, 70], **Khm** [88], **Khs** [65], **Prm** [26, 29, 38], **Sah** [24], **Kur** [25].

Campylophyllum (Schimp.) M. Fleisch. [Amblystegiaceae]

- *balleri* (Hedw.) M. Fleisch.: **Sah** [24].

Campylopus Brid. [Leucobryaceae]

- *fragilis* (Brid.) Bruch, Schimp. & W. Gümbel: **Am** [32] – (!).
- *introflexus* (Hedw.) Brid.: **Prm** [59].
- *pyriformis* (Schultz) Brid.: **Khs** [130], **Prm** [26, 48, 130], **Kur** [25].
- *schimperi* Milde: **Khm** [88].
- *subulatus* Schimp. ex Milde: **Prm** [59, MHA].

Catoscopium Brid. [Catoscopiaceae]

- *nigritum* (Hedw.) Brid.: **Sah** [24].

Ceratodon Brid. [Ditrichaceae]

- *purpureus* (Hedw.) Brid.: **Am** [7, 8, 32, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 163], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 141].

Cinclidium Sw. [Mniaceae]

- *latifolium* Lindb.: **Kur** [141].

Cirriphyllum Grout [Brachytheciaceae]

- *piliferum* (Hedw.) Grout: **Am** [8], **Khs** [109], **Prm** [26], **Kur** [21, 23, 25].

Claopodium (Lesq. & James) Renaud & Cardot [Leskeaceae]

- *pellucinerve* (Mitt.) Best: **Am** [4, 32, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 123], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [23, 25].

Climacium F. Weber & D. Mohr [Climaciaceae]

- *dendroides* (Hedw.) F. Weber & D. Mohr: **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [43, 88, 131], **Khs** [109, 163], 39, **Prm** [26, 28, 29, 38, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25].
- *japonicum* Lindb.: **Am** [70], **Khm** [41, 131], **Khs** [40, 65, 109, 123, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [36], **Kur** [23, 27].

Cnestrum I. Hagen [Rhabdoweisiaceae]

- *alpestre* (Wahlenb.) Nyholm: **Khm** [88], **Khs** [65, 131], **Sah** [24].
- *glaucescens* (Lindb. & Arnell) Holmen ex Mogensen & Steere (*Cynodontium glaucescens* (Lindb. & Arnell) Paris): **Am** [8], **Prm** [26].
- *schistii* (F. Weber & D. Mohr) I. Hagen: **Am** [8, 32, 56],

- Khm** [88], **Khs** [109, 131], **Prm** [26], **Sah** [24].
- Codriophorus** P. Beauv. [Grimmiaceae], see also *Dilutineuron*
- *acicularis* (Hedw.) P. Beauv.: **Kur** [23, 141] – (!).
 - *carinatus* (Cardot) Bedn.-Ochyra & Ochyra: **Prm** [45], **Kur** [23].
 - *mollis* (Cardot) Bedn.-Ochyra & Ochyra: **Kur** [23, 25].
- Conardia** H. Rob. [Calliergonaceae]
- *compacta* (Drumm. ex Müll. Hal.) H. Rob.: **Kur** [23, 27].
- Conostomum** Sw. ex F. Weber & D. Mohr [Bartramiaceae]
- *tetragonum* (Hedw.) Lindb. – **Khm** [88], **Khs** [65].
- Coscinodon** Spreng. [Grimmiaceae]
- *cribrosus* (Hedw.) Spruce: **Am** [56], **Khm** [MW], **Prm** [29], **Sah** [24] – (!).
 - *pseudohartzii* Hastings, Ignatova & Köckinger: **Prm** [105].
 - *yukonensis* Hastings: **Khm** [105], **Prm** [105], **Sah** [24], **Kur** [23, 105].
- Cratoneuron** (Sull.) Spruce [Amblystegiaceae]
- *filicinum* (Hedw.) Spruce: **Am** [7, 8, 32, 56], **Khs** [109, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
- Cryphaea** D. Mohr. [Cryphaeaceae]
- *amurensis* Ignatov: **Am** [8, 56], **Khm** [81, 88], **Khs** [109], **Prm** [45].
- Cynodontium** Bruch & Schimp. [Rhabdoweisiaceae]
- *asperifolium* (Lindb. & Arnell) Paris: **Am** [8, 32, 56, 130], **Khs** [109, 123], **Prm** [26, 28, 130], **Sah** [24].
 - *polycarpon* (Hedw.) Schimp.: **Am** [8], **Prm** [26, 29] – (!)(?)
 - *strumiferum* (Hedw.) Lindb.: **Am** [7, 8, 56], **Khm** [88], **Khs** [65, 109, 123], **Prm** [26, 28], **Sah** [24], **Kur** [25].
 - *tenellum* (Schimp.) Limpr.: **Am** [8, 56, 130], **Khm** [43, 88], **Khs** [109, 131], **Prm** [26], **Sah** [24], **Kur** [113].
- Cyrtobryum* (Hampe) Hampe & Lorentz. [Thuidiaceae] see *Pelekium*
- Cyrtomnium** Holmen [Mniaceae]
- *hymenophylloides* (Huebener) T.J. Kop.: **Am** [57], **Khm** [88], **Khs** [65], **Prm** [MHA], **Sah** [24].
 - *hymenophyllum* (Bruch, Schimp. & W. Gümbel) Holmen: **Sah** [99], **Kur** [21].
- Dichelyma** Myrin [Fontinalaceae]
- *japonicum* Cardot: **Kur** [23, 54].
- Dichodontium** Schimp. [Rhabdoweisiaceae], see also *Diobelonella*
- *pellucidum* (Hedw.) Schimp.: **Am** [8, 32, 56], **Khm** [88], **Khs** [109], **Prm** [26, 29, 38], **Sah** [24, 36], **Kur** [21, 23, 25, 113, 141].
- Dicranella** (Müll. Hal.) Schimp. [Dicranaceae], see also *Diobelonella*
- *cerviculata* (Hedw.) Schimp.: **Am** [7, 8, 56], **Khm** [88], **Khs** [40], **Prm** [72], **Sah** [24, 36], **Kur** [23, 25, 27].
 - *crispa* (Hedw.) Schimp.: **Am** [8, 32, 130], **Khm** [88], **Kur** [25].
 - *curvipes* (Lindb.) Ignatov: **Am** [56], **Khs** [65], **Sah** [24, 36], **Kur** [23, 25].
 - *grevilleana* (Brid.) Schimp.: **Sah** [24].
 - *heteromalla* (Hedw.) Schimp.: **Am** [32, 70], **Khm** [41, 88], **Khs** [40, 109, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 130], **Kur** [27].
 - *humilis* R. Ruthe (*Anisotbecium rigidulum* (Sw. ex Hedw.) C.E.O. Jensen): **Am** [32], **Prm** [26, 28, 130], **Sah** [24].
 - *rufescens* (Dicks.) Schimp. (*Anisotbecium rufescens* (Dicks.) Lindb.): **Khs** [131], **Prm** [26, 130], **Kur** [27, 25].
 - *schreberiana* (Hedw.) Hilf. ex H.A. Crum & L.E. Anderson (*Anisotbecium schreberianum* (Hedw.) Dixon): **Am** [7, 8, 32], **Khm** [88], **Khs** [65], **Prm** [26], **Sah** [24], **Kur** [23].
 - *subsecunda* Besch.: **Sah** [90] – (!)(?)
 - *subulata* (Hedw.) Schimp.: **Am** [7, 8, 32, 130], **Khm** [88], **Khs** [65, 109], **Prm** [72, MHA], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
 - *varia* (Hedw.) Schimp. (*Anisotbecium varium* (Hedw.) Mitt.): **Am** [32], **Khm** [88], **Prm** [26, 71], **Sah** [24], **Kur** [25, 113].
- Dicranodontium** Bruch, Schimp. & W. Gümbel [Leucobryaceae]
- *asperulum* (Mitt.) Broth.: **Khm** [88].
 - *denudatum* (Brid.) E. Britton: **Khm** [41, 88], **Khs** [40, 65, 109, 123], **Evr** [39], **Prm** [26, 38, 42, 130], **Sah** [36], **Kur** [23, 25, 27, 113].
- Dicranoloma** (Renaud) Renaud [Dicranaceae]
- *cylindrothecium* (Mitt.) Sakurai: **Prm** [45], **Kur** [IRK, MW].
- Dicranum** Hedw. [Dicranaceae]
- *acutifolium* (Lindb. & Arnell) C.E.O. Jensen: **Am** [7, 8, 56], **Khm** [88], **Khs** [163], **Sah** [24], **Kur** [25].
 - *angustum* Lindb.: **Am** [8, 130], **Khm** [88], **Khs** [65, 123].
 - *bardunovii* Tubanova & Ignatova: **Am** [56, 154].
 - *bonjeanii* De Not.: **Am** [4, 8, 56], **Khm** [41, 43, 88], **Khs** [65], **Prm** [29, 38], **Sah** [36], **Kur** [23, 25, 141].
 - *brevifolium* (Lindb.) Lindb.: **Am** [32], **Khm** [88], **Khs** [163], **Sah** [24].
 - *dispersum* Engelmark: **Am** [32], **Prm** [143], **Kur** [113].
 - *drummondii* Müll. Hal.: **Am** [56], **Khs** [2, 109], **Prm** [2], **Sah** [24, 36].
 - *elongatum* Schleich. ex Schwägr.: **Am** [7, 8, 56, 130], **Khm** [43, 88, 157], **Khs** [65, 109], **Prm** [130], **Sah** [24, 157], **Kur** [25].
 - *flagellare* Hedw. (*Orthodicranum flagellare* (Hedw.) Loeske): **Am** [4, 7, 8, 32, 56, 70, 130], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 131], **Evr** [4, 39, 130], **Prm** [26, 28, 29, 38, 42, 71, 130], **Sah** [24, 36], **Kur** [23, 27].
 - *flexicaule* Brid. (*D. congestum* Brid.): **Am** [7, 8, 35, 56, 130], **Khm** [41, 43], **Khs** [109, 131], **Prm** [26, 42], **Sah** [24], **Kur** [21].
 - *fragilifolium* Lindb.: **Am** [4, 7, 8, 32, 56, 101], **Khm** [41, 43, 88, 101], **Khs** [40, 65, 109, 163], **Evr** [39].
 - *fulvum* Hook.: **Am** [8], **Prm** [29, 130].
 - *fuscenscens* Turner: **Am** [7, 8, 32, 35, 56, 130], **Khm** [43, 88], **Khs** [65, 109, 123], **Prm** [26, 29, 38, 130], **Sah** [24, 36], **Kur** [21, 23, 25, 27].
 - *groenlandicum* Brid.: **Am** [56, 130, 157], **Khm** [43, 157], **Khs** [157], **Sah** [24, 36, 157], **Kur** [23].
 - *hakkodense* Cardot: **Khm** [101], **Prm** [29, 48, 101], **Sah** [24], **Kur** [23, 25].
 - *hamulosum* Mitt.: **Sah** [24, 36], **Kur** [21, 23, 25].
 - *ignatovii* Tubanova & Fedosov: **Khs** [159], **Sah** [159], **Kur** [159, 152].
 - *japonicum* Mitt.: **Am** [56], **Khs** [123], **Sah** [36], **Kur** [23].
 - *laevidens* R.S. Williams: **Sah** [24], **Kur** [21].
 - *leioneuron* Kindb.: **Am** [32], **Khs** [109], **Prm** [26], **Sah** [24], **Kur** [21].
 - *lorifolium* Mitt.: **Prm** [128a] – (!)
 - *majus* Turner: **Am** [7, 8, 35, 56, 130], **Khm** [43, 88], **Khs** [65, 109, 123, 131, 163], **Prm** [26, 29, 38, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
 - *majus* var. *orthophyllum* A. Braun ex Milde: **Kur** [21].
 - *mayrii* Broth. (*Orthodicranum mayrii* (Broth.) Smirnova): **Prm** [26, 28, 48], **Sah** [24], **Kur** [23].
 - *montanum* Hedw. (*Orthodicranum montanum* (Hedw.)

- Loeske): **Am** [7, 8, 32, 56], **Khm** [41, 88], **Khs** [65, 109, 123, 163], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36].
- *muehlenbeckii* Bruch, Schimp. & W. Gümbel: **Am** [7, 8], **Khs** [123], 130].
 - *nipponense* Besch.: **Am** [32, 56], **Prm** [28, 142], **Sah** [24], **Kur** [21, 23, 142].
 - *pacificum* Ignatova & Fedosov: **Am** [57], **Khm** [101], **Sah** [24, 101], **Kur** [23, 25, 101].
 - *polysetum* Sw.: **Am** [7, 8, 32, 35, 56, 130], **Khm** [41, 43, 88], **Khs** [109, 123, 131], **Prm** [26, 38, 42, 48, 130], **Sah** [24, 36], **Kur** [25].
 - *schljakovii* Ignatova & Tubanova: **Am** [56], **Khm** [111], **Khs** [65]. **Prm** [111].
 - *scoparium* Hedw.: **Am** [4, 7, 8, 35, 70, 32, 56, 130], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 130], **Sah** [24, 36], **Kur** [21, 23, 27, 141].
 - *septentrionale* Tubanova & Ignatova: **Khs** [65], **Prm** [155], **Sah** [24].
 - *setifolium* Cardot: **Khm** [MW], **Kur** [23].
 - *spadiceum* J.E. Zetterst.: **Am** [7, 8, 56], **Khm** [88], **Prm** [26, 130], **Sah** [24], **Kur** [21, 23, 25].
 - *undulatum* Schrad. ex Brid.: **Am** [4, 7, 8, 32, 35, 56, 130], **Khm** [41, 43, 88], **Khs** [109, 123], **Prm** [38, 130], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- Didymodon* Hedw. [Pottiaceae]
- *asperifolius* (Mitt.) H.A. Crum, Steere & L.E. Anderson: **Am** [32].
 - *brachyphyllus* (Sull.) R.H. Zander: **Kur** [25].
 - *cordatus* Jur. (*Barbula cordata* (Jur.) Loeske): **Prm** [26, 130].
 - *erosodenticulatus* (Müll. Hal.) K. Saito: **Prm** [17].
 - *fallax* (Hedw.) R.H. Zander: **Sah** [24].
 - *ferrugineus* (Schimp. ex Besch.) M.O. Hill (*Barbula reflexa* (Brid.) Brid.): **Am** [32, 34, 56, 130], **Khm** [88], **Prm** [26, 28, 130].
 - *glaucus* Ryan: **Khs** [109], **Prm** [130], **Sah** [24].
 - *hedysarififormis* Otnyukova: **Am** [32, 56].
 - *icmadophilus* (Schimp. ex Müll. Hal.) R.H. Zander: **Am** [56], **Prm** [MHA].
 - *insulanus* (De Not.) M.O. Hill (*Barbula cylindrica* (Taylor) Schimp. ex Boulay): **Prm** [26, 130].
 - *maschalogenia* (Renauld & Cardot) Broth.: **Am** [32], **Prm** [MHA].
 - *perobtusus* Broth.: **Sah** [24].
 - *rigidulus* Hedw. (*Barbula rigidula* (Hedw.) Milde): **Am** [8, 130], **Khm** [88], **Prm** [26, 28], **Sah** [24], **Kur** [23].
 - *spadiceus* (Mitt.) Limpr. (*Barbula spadicea* (Mitt.) Braithw.): **Prm** [130, 147].
 - *tophaceus* (Brid.) Lisa: **Kur** [23, 113].
 - cf. *validus* Limpr. (*Barbula rigidula* var. *valida* (Limpr.) Broth.): **Am** [32, 56], **Prm** [130, 26].
 - *vinealis* (Brid.) R.H. Zander (*Barbula vinealis* Brid.): **Prm** [130].
 - *zanderi* Afonina & Ignatova: **Am** [56], **Khs** [109], **Prm** [12].
- Dilutineuron* Bedn.-Ochyra, Sawicki, Ochyra, Szczecińska & Plášek [Grimmiaceae]
- *brevisetum* (Lindb.) Bedn.-Ochyra, Sawicki, Ochyra, Szczecińska & Plášek (*Racomitrium brevisetum* Lindb., *Codriophorus brevisetus* (Lindb.) Bedn.-Ochyra & Ochyra): **Am** [97], **Khm** [97], **Khs** [40, 65], **Evr** [39], **Prm** [48], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
 - *corrugatum* (Bedn.-Ochyra) edn.-Ochyra, Sawicki, Ochyra, Szczecińska & Plášek (*Codriophorus corrugatus* Bedn.-Ochyra): **Sah** [24], **Kur** [23, 25, 141].
 - *fasciculare* (Hedw.) Bedn.-Ochyra, Sawicki, Ochyra, Szczecińska & Plášek (*Racomitrium fasciculare* (Schrad. ex Hedw.) Brid.): **Khm** [43, 88], **Khs** [123], **Prm** [38, 48], **Kur** [21, 23, 25, 141].
- Diobelonella* Ochyra [Dicranaceae]
- *palustris* (Dicks.) Ochyra (*Anisothecium palustre* (Dicks.) I. Hagen, *Dichodontium palustre* (Dicks.) M. Stech, *Dicranella palustris* (Dicks.) Crundw.): **Kur** [21, 23, 25, 27, 141].
- Diphyscium* D. Mohr [Diphysciaceae]
- *foliosum* (Hedw.) D. Mohr: **Sah** [24], **Kur** [23, 46].
- Discelium* Brid. [Disceliaceae]
- *nudum* (Dicks.) Brid.: **Khm** [88], **Khs** [109], **Sah** [24, 130].
- Distichium* Bruch, Schimp. & W. Gümbel [Ditrichaceae]
- *capillaceum* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 32, 56, 130], **Khm** [41, 88], **Khs** [65, 109, 131], **Prm** [26, 28, 48, 130], **Sah** [24], **Kur** [21, 23, 25, 141].
 - *inclinatum* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 97].
- Ditrichum* Timm ex Hampe [Ditrichaceae], see also *Flexitrichum*
- *heteromallum* (Hedw.) E. Britton: **Am** [56], **Khm** [88], **Khs** [65, 109], **Prm** [26, 42], **Sah** [24], **Kur** [21, 23, 25, 27, 141].
 - *lineare* (Sw.) Lindb.: **Prm** [26, 28], **Kur** [23].
 - *macrorhynchum* Broth.: **Prm** [45], **Sah** [24], **Kur** [23, 25].
 - *pallidum* (Hedw.) Hampe: **Am** [130], **Prm** [26, 130], **Kur** [25].
 - *pusillum* (Hedw.) Hampe: **Am** [32, 56, 130], **Khs** [40, 109], **Prm** [26, 71, 130], **Kur** [23].
 - *rhynchostegium* Kindb.: **Prm** [28], **Kur** [23].
 - *zonatum* (Brid.) Kindb.: **Kur** [113].
- Dolichomitriopsis* S. Okamura [Lembophyllaceae]
- *diversiformis* (Mitt.) Nog. (*Isotbecium diversiforme* (Mitt.) Besch.): **Prm** [29, 131], **Kur** [23, 27].
- Dozya* Sande Lac. [Leucodontaceae]
- *japonica* Sande Lac.: **Prm** [26, 29, 37, 81], **Kur** [23, 81].
- Drepanium* C.E.O. Jensen [Amblystegiaceae]
- *recurvatum* (Lindb. & Arnell) G. Roth (*Hypnum recurvatum* (Lindb. & Arnell) Kindb.): **Am** [34], **Khm** [88], **Prm** [38, 133], **Sah** [24].
- Drepanocladus* (Müll. Hal.) G. Roth [Amblystegiaceae]
- *aduncus* (Hedw.) Warnst.: **Am** [7, 8, 32, 34, 43, 56, 70], **Khm** [41], **Khs** [40, 109, 163], **Evr** [39], **Prm** [26, 29, 38, 133], **Sah** [24, 36], **Kur** [21, 23, 25].
 - *polygamus* (Schimp.) Hedenäs (*Campylium polygamus* (Schimp.) C.E.O. Jensen): **Am** [7, 8, 32], **Prm** [26, 29, 28], **Sah** [24, 36], **Kur** [23].
 - *sendtneri* (Schimp. ex Müll. Hal.) Warnst.: **Am** [4, 7, 8], **Prm** [26, 28, 71].
- Drummondia* Hook. [Drummondaceae]
- *sinensis* Müll. Hal.: **Am** [32, 56, 70], **Khm** [88], **Khs** [40, 123], **Evr** [39], **Prm** [26, 29].
- Echinophyllum* O'Brian [Thuidiaceae]
- *sachalinense* (Lindb.) O'Brian (*Helodium sachalinense* (Lindb.) Broth.): **Khm** [41, 88], **Khs** [40, 109, 123], **Prm** [26, 38, 132], **Sah** [24, 36], **Kur** [23, 27].
- Encalypta* Hedw. [Encalyptaceae]
- *brevicolla* (Bruch & Schimp.) Ångstr.: **Khm** [88].
 - *ciliata* Hedw.: **Am** [8, 32, 56], **Khm** [41, 88], **Khs** [40, 65, 109], **Prm** [26, 28, 29, 42], **Sah** [24, 36], **Kur** [23].
 - *pilifera* Funck: **Am** [58], **Khs** [109].
 - *procera* Bruch: **Am** [97], **Prm** [97], **Sah** [24].
 - *rhaptocarpa* Schwägr.: **Sah** [24, 60].
 - *trachymitria* Ripart: **Am** [60].

Entodon Müll. Hal. [Entodontaceae]

- **challengeri** (Paris) Cardot (*Entodon compressus* (Hedw.) Müll. Hal.): **Am** [32, 133], **Khm** [41, 88], **Khs** [40, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 71, 133].
- **concinus** (De Not.) Paris: **Am** [8, 32, 56], **Khm** [88], **Khs** [40], **Prm** [26, 29, 133], **Sah** [24].
- **diversinervis** Cardot: **Prm** [26, 133] – (!).
- **flavescens** (Hook.) A. Jaeger (*Entodon rubicundus* (Mitt.) A. Jaeger): **Am** [70], **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 38, 48, 71, 133].
- **giraldii** Müll. Hal. (*E. sinense* (Dixon) Laz.): **Am** [56], **Prm** [26, 133].
- **luridus** (Griff.) A. Jaeger: **Prm** [26, 29, 133].
- **scabridens** Lindb.: **Khs** [40], **Evr** [39], **Prm** [26, 29, 38, 71, 133], **Sah** [24, 36], **Kur** [23].
- **schleicheri** (Bruch, Schimp. & W. Gümbel) Demet.: **Am** [7, 8, 32, 56], **Khm** [88], **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24].
- **sullivantii** (Müll. Hal.) Lindb. (*E. rufescens* Laz.): **Khm** [145], **Prm** [26, 133] – (!).

Entosthodon Schwägr. [Funariaceae]

- **pulchellus** (H. Philib.) Brugués (*Funaria pulchella* H. Philib.): **Am** [8, 32, 56].

Ephemerum Hampe [Ephemeraceae]

- **spinulosum** Bruch & Schimp.: **Prm** [94].

Eucladium Bruch, Schimp. & W. Gümbel [Pottiaceae]

- **verticillatum** (Brid.) Bruch, Schimp. & W. Gümbel: **Prm** [26, 130].

Eurhynchidelphus Ignatov & Huttunen [Brachytheciaceae]

- **eustegia** (Besch.) Ignatov & Huttunen (*Eurhynchium eustegium* (Besch.) Dixon): **Am** [7, 8, 32, 56], **Khs** [40, 109, 123], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 132], **Sah** [24, 36], **Kur** [23].

Eurhynchiastrum Ignatov & Huttunen [Brachytheciaceae]

- **pulchellum** (Hedw.) Ignatov & Huttunen (*Eurhynchium pulchellum* (Hedw.) Jenn.): **Am** [7, 8, 32, 35, 56, 70, 132], **Khm** [88], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 132], **Sah** [24, 36], **Kur** [23].

Eurohypnum Ando [Hypnaceae]

- **leptothallum** (Müll. Hal.) Ando: **Am** [56, 133], **Khm** [43, 88], **Khs** [40], **Prm** [26, 29, 28].

Fabronia Raddi [Fabroniaceae]

- **ciliaris** (Brid.) Brid.: **Am** [32, 56, 70, 115, 131], **Khm** [88, 115], **Khs** [109, 115, 131], **Evr** [39], **Prm** [26, 29, 38, 131, 115].
- **rostrata** Broth.: **Am** [56, 115].

Fauriella Besch. [Pylaisiadelphaceae]

- **tenuis** (Mitt.) Cardot: **Khs** [40], **Prm** [26, 28, 29, 71, 131], **Sah** [24, 36], **Kur** [23].

Filibryum W. Kim & T. Yamag. [Taxiphyllaceae]

- **ogatae** (Broth. & Yasuda) W. Kim & T. Yamag. (*Glossadelphus ogatae* Broth. & Yasuda): **Kur** [23].

Fissidens Hedw. [Fissidentaceae]

- **adianthoides** Hedw.: **Prm** [28], **Sah** [24, 36].
- **beckettii** Mitt.: **Prm** [87].
- **bryoides** Hedw.: **Am** [8, 32, 56, 70], **Khm** [88], **Khs** [40, 109, 123], **Evr** [39], **Prm** [26, 28, 29, 42, 130], **Sah** [24], **Kur** [25] – (!).
- **curvatus** Hornsch.: **Am** [32], **Khm** [88], **Kur** [23] – (!).
- **dubius** P. Beauv. (*F. cristatus* Wilson ex Mitt.): **Am** [70], **Khm** [MW], **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 130], **Sah** [24, 36], **Kur** [23, 25, 27, 141].

- **gymnogynus** Besch.: **Evr** [39], **Prm** [28, 71], **Sah** [24], **Kur** [23].
- **hyalinus** Wilson & Hook.: **Prm** [92, 94].
- **marginatulus** Meln.: **Am** [32] – (!).
- **neomagofukui** Z. Iwats. & Tad. Suzuki: **Sah** [24].
- **nobilis** Griff.: **Kur** [23, 25, 27].
- **osmundoides** Hedw.: **Am** [32, 70], **Khm** [88], **Khs** [109], **Evr** [39], **Prm** [26, 28, 29, 38, 71], **Sah** [24], **Kur** [23, 25] – (!).
- **taxifolius** Hedw.: **Am** [32], **Prm** [26, 28, 29, 48, 130], **Sah** [24], **Kur** [23].
- **teysmannianus** Dozy & Molk. (*F. adelphinus* Besch.): **Kur** [23, 27].
- **viridulus** (Sw.) Wahlenb.: **Am** [32], **Sah** [24] – (!).

Flexitrichum Ignatov & Fedosov [Flexitrichaceae]

- **flexicaule** (Schwägr.) Ignatov & Fedosov (*Ditrichum flexicaule* (Schwägr.) Hampe): **Khm** [88], **Khs** [65], **Prm** [26], **Sah** [24] – (!).
- **gracile** (Mitt.) Ignatov & Fedosov (*Ditrichum gracile* (Mitt.) Kuntze): **Khm** [97], **Prm** [97], **Sah** [97], **Kur** [97] – (!).

Fontinalis Hedw. [Fontinalaceae]

- **antipyretica** Hedw.: **Am** [8, 32, 70], **Khs** [40, 109, 131], **Prm** [26, 28], **Sah** [24], **Kur** [23].
- **antipyretica** var. **gracilis** (Lindb.) Schimp.: **Am** [131], **Prm** [26, 29, 38].
- **dalecarlica** Bruch, Schimp. & W. Gümbel: **Am** [34, 56].
- **hypnoides** Hartm.: **Khs** [131], **Kur** [23, 25].
- **squamosa** Hedw.: **Am** [LE], **Khs** [LE], **Prm** [LE].

Forsstroemia Lindb. [Neckeraceae]

- **cryphaeoides** Cardot (*Forsstroemia mandschurica* Broth.): **Prm** [26, 28, 29, 71, 81, 131].
- **goughiana** (Mitt.) S. Olsson, Enroth & D. Quandt (*Neckera goughiana* Mitt.): **Prm** [106].
- **japonica** (Besch.) Paris: **Khs** [123], **Prm** [26, 28, 29, 48, 81, 131], **Sah** [24, 36], **Kur** [23, 27, 81].
- **stricta** Laz.: **Prm** [28, 45, 81, 131] – (!).
- **trichomitria** (Hedw.) Lindb.: **Prm** [26, 28, 29, 71, 81, 131].
- **yezoana** (Besch.) S. Olsson, Enroth & D. Quandt (*Neckera yezoana* Besch.): **Prm** [26, 29, 106, 131], **Sah** [24, 36], **Kur** [2, 23, 25, 27].

Funaria Hedw. [Funariaceae]

- **hygrometrica** Hedw.: **Am** [7, 8, 32, 35, 56, 70], **Khm** [88], **Khs** [109], **Evr** [97], **Prm** [26, 28, 29, 42, 71], **Sah** [24, 36], **Kur** [21, 23, 25].

Glyphomitrium Brid. [Rhabdoweisiaceae]

- **humillimum** (Mitt.) Cardot (*G. warburgii* auct.): **Am** [56, 70], **Khm** [41, 88], **Khs** [40, 65, 109], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 48, 131], **Sah** [24], **Kur** [23, 27] – (!).

Glossadelphus M. Fleisch. – see **Filibryum****Gollania** Broth. [Pylaisiaceae]

- **ruginosa** (Mitt.) Broth. (*G. amurensis* Broth.): **Am** [32, 70, 133], **Khm** [88], **Khs** [123], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 133].
- **turgens** (Müll. Hal.) Ando: **Sah** [24]. **Kur** [141].

Grimmia Hedw. [Grimmiaceae]

- **alpestris** (F. Weber & D. Mohr) Schleich.: **Sah** [24].
- **atrata** Miel. ex Hornsch.: **Kur** [23].
- **donniana** Sm.: **Khm** [88], **Khs** [65], **Prm** [26] – (!).
- **elatior** Bruch ex Bals.-Criv. & De Not.: **Am** [7, 8, 103], **Khm** [88, 103], **Prm** [26, 103].
- **elongata** Kaulf.: **Kur** [23, 76].

- *funalis* (Schwägr.) Bruch, Schimp. & W. Gümbel: **Khm** [88, 103], **Prm** [26, 103], **Sah** [24], **Kur** [97].
- *hartmanii* Schimp.: **Khm** [146a], **Khs** [109], **Prm** [97], **Sah** [24, 36], **Kur** [23, 103].
- *incurva* Schwägr.: **Khm** [88, 103], **Prm** [97].
- *jacutica* Ignatova, Bedn.-Ochya, Afonina & Muñoz: **Am** [8, 56], **Khm** [103], **Khs** [65, 103], **Evr** [39], **Prm** [103].
- *longirostris* Hook. (*G. affinis* Hornsch.): **Am** [7, 8, 32, 56], **Khm** [41, 88, 103], **Khs** [1, 65, 109, 163], **Evr** [39], **Prm** [38, 48, 103], **Sah** [24], **Kur** [23].
- *mollis* Bruch, Schimp. & W. Gümbel: **Khm** [88, 103].
- *muehlenbeckii* Schimp.: **Am** [97], **Khm** [103], **Khs** [109].
- *pilifera* P. Beauv.: **Am** [7, 8, 32, 56, 70, 103], **Khm** [88, 103], **Khs** [40, 109], **Evr** [39], **Prm** [29, 28, 38, 71, 103].
- *reflexidens* Müll. Hal. (*G. sessitana* auct.): **Khm** [88, 103], **Khs** [65], **Prm** [97], **Sah** [24].
- *tergestina* Tomm. ex Bruch, Schimp. & W. Gümbel: **Prm** [103], **Sah** [24].
- *torquata* Drummm.: **Khm** [103], **Khs** [65].
- *unicolor* Hook.: **Khm** [103].
- Gymnostomum** Nees & Hornsch. [Pottiaceae]
- *aeruginosum* Sm.: **Am** [56], **Khm** [88], **Prm** [26, 28, 130], **Sah** [24], **Kur** [23, 25, 27].
- Hamatocaulis** Hedenäs [Scorpidiaceae]
- *vernicosus* (Mitt.) Hedenäs (*Drepanocladus vernicosus* (Mitt.) Warnst.): **Am** [32, 34, 70, 132], **Prm** [26, 132], **Sah** [24].
- Haplocladium** (Müll. Hal.) Müll. Hal. [Thuidiaceae]
- *angustifolium* (Hampe & Müll. Hal.) Broth.: **Am** [4, 32, 56], **Khm** [41, 88], **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 71, 132].
- *discolor* (Broth. & Paris) Broth.: **Prm** [59].
- *microphyllum* (Hedw.) Broth.: **Am** [4, 32, 70], **Khm** [41, 88, 131], **Khs** [40, 131], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 71, 132], **Sah** [24, 36], **Kur** [23, 27].
- *strictulum* (Cardot) Reimers (*H. fauriei* auct.): **Am** [32, 70], **Khs** [40], **Prm** [26, 28, 29, 38, 132], **Sah** [24].
- Haplohymenium** Dozy & Molck. [Anomodontaceae]
- *flagelliforme* L.I. Savicz: **Evr** [39], **Prm** [26, 28, 42, 132].
- *longinerve* (Broth.) Broth.: **Khm** [145], **Prm** [29, 28, 132, MHA].
- *triste* (Ces.) Kindb.: **Am** [32, 70], **Khm** [88], **Khs** [40, 109, 123], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 132], **Kur** [23].
- Hedwigia** P. Beauv. [Hedwigiaceae]
- *czernyadjevae* Ignatova, Ignatov & Fedosov: **Khm** [114].
- *emodica* Hampe ex Müll. Hal. var. *emodica*: **Am** [56, 114], **Khm** [114], **Khs** [114], **Prm** [114].
- *emodica* var. *echinata* Ignatova & Ignatov: **Am** [114a], **Khs** [114a], **Prm** [114a], **Kur** [114a].
- *kuzenevae* Ignatova & Ignatov: **Am** [114a, 56], **Khm** [114a].
- *nemoralis* Ignatova, Ignatov & Fedosov: **Prm** [114].
- Helodium** Warnst. [Thuidiaceae]
- *blandowii* (F. Weber & D. Mohr) Warnst.: **Am** [4, 7, 8, 32, 35, 56, 70, 132], **Khm** [41, 43], **Khs** [40, 109, 163], **Evr** [39], **Prm** [38, 132], **Sah** [24, 36], **Kur** [21].
- *paludosum* (Austin) Austin ex Broth.: **Am** [4, 7, 8, 32, 70, 132], **Khs** [40], **Evr** [4, 39], **Prm** [26, 28, 38, 132], **Kur** [23, 27].
- Herpetineuron** (Müll. Hal.) Cardot [Anomodontaceae]
- *toccoae* (Sull. & Lesq.) Cardot: **Am** [8, 32, 56, 70], **Khm** [145], **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 71, 132].
- Herzogiella** Broth. [Plagiotheciaceae]
- *adscendens* (Lindb.) Z. Iwats. & W.B. Schofield (*Campylium adscendens* (Lindb.) Perss.): **Khs** [131], **Prm** [26, 28, 29, 38], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
- *striatella* (Brid.) Z. Iwats. (*Plagiothecium striatellum* (Brid.) Lindb.): **Khs** [131], **Prm** [133] – (!)(?)
- *turfacea* (Lindb.) Z. Iwats.: **Am** [8, 32, 56, 70, 133], **Khm** [41, 88], **Khs** [40, 109, 123, 131, 163], **Prm** [26, 28, 29, 38, 48, 133], **Sah** [24, 36], **Kur** [21, 23, 25].
- Heterocladium** Bruch, Schimp. & W. Gümbel [Heterocladaceae]
- *dimorphum* (Brid.) Bruch, Schimp. & W. Gümbel: **Am** [37, 43], **Khm** [37], **Sah** [24].
- Heterophyllum** (Schimp.) Kindb. [Pylaisiadelphaceae]
- *affine* (Hook.) M. Fleisch. (*H. nemorosum* (W.D.J.) Koch ex Brid.) Kindb.: **Am** [32, 56, 70], **Khm** [41, 88], **Khs** [40, 65], **Evr** [39], **Prm** [26, 28, 38, 42, 48, 133].
- Homalia** Brid. [Neckeraceae]
- *trichomanoides* (Hedw.) Bruch, Schimp. & W. Gümbel (*H. japonica* Besch.): **Am** [4, 7, 8, 32, 35, 56, 70, 131], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 131], **Evr** [39, 131], **Prm** [26, 28, 29, 38, 42, 48, 71, 131], **Sah** [24, 36], **Kur** [23, 25, 27].
- Homaliadelphus** Dixon & P. de la Varde [Miyabeaceae]
- *targionianus* (Mitt.) Dixon & P. de la Varde (*H. laevidentatus* (S. Okamura) Nog.): **Prm** [26].
- Homalothecium** Bruch, Schimp. & W. Gümbel [Brachytheciaceae]
- *laevisetum* Sande Lac.: **Prm** [26, 28, 29, 42, 48, 71, 132], **Sah** [24, 36], **Kur** [23, 25, 27].
- Homomallium** (Schimp.) Loeske [Pylaisiaceae]
- *connexum* (Cardot) Broth.: **Am** [32, 56], **Khm** [88], **Prm** [26, 29].
- *incurvatum* (Schrad. ex Brid.) Loeske: **Am** [7, 8, 56], **Khs** [40], **Prm** [26, 28, 133].
- *japonico-adnatum* (Broth.) Broth.: **Prm** [72, MHA].
- *plagiangium* (Müll. Hal.) Broth.: **Prm** [72, 133, MHA].
- Hondaella** Dixon & Sakurai [Taxiphyllaceae]
- *caperata* (Mitt.) Ando, B.C. Tan & Z. Iwats. (*H. brachytheciella* (Broth. & Paris) Ando): **Am** [56], **Khs** [40], **Evr** [39], **Prm** [26, 133].
- Hookeria** Sm. [Hookeriaceae]
- *acutifolia* Hook. & Grev.: **Kur** [VLA, NSK]
- Hydrogonium** (Müll. Hal.) A. Jaeger [Pottiaceae]
- *amplexifolium* (Mitt.) P.C. Chen (*Barbula amplexifolia* (Mitt.) A. Jaeger): **Am** [56].
- *consanguineum* (Thwaites & Mitt.) Hilp. var. *kurilensis* (Ignatov & Ignatova) Jan Kučera (*Barbula indica* (Hook.) Spreng. var. *kurilensis* Ignatov & Ignatova): **Kur** [23, 82].
- *gregarium* (Mitt.) Jan Kučera: **Prm** [59].
- Hygroamblystegium** Loeske [Amblystegiaceae]
- *humile* (P. Beauv.) Vanderp. Goffinet & Hedenäs (*Leptodictyum kochii* (Schimp.) Warnst.): **Am** [32, 123], **Khs** [123], **Prm** [26, 28, 29, 132], **Sah** [24, 36], **Kur** [23, 27].
- *tenax* (Hedw.) Jenn.: **Am** [8], **Prm** [26, 28, 29, 38], **Kur** [23].
- *varium* (Hedw.) Mönk. (*Amblystegium varium* (Hedw.) Lindb.): **Prm** [26, 28, 132], **Sah** [24], **Kur** [21].
- Hygrohypnella** Ignatov & Ignatova [Scorpidiaceae]
- *bestii* (Renauld & Bryhn) Ignatov & Ignatova: **Kur** [21, 23, 25, 141].
- *ochracea* (Turner ex Wilson) Ignatov & Ignatova (*Hygrohypnum ochraceum* (Turner ex Wilson) Loeske): **Am** [7, 8, 32, 52, 56, 132], **Khm** [52, 88], **Khs** [40, 65, 109, 123], **Prm** [26, 28, 29, 42, 52], **Sah** [24, 36], **Kur** [21, 23, 25, 141].

- *polaris* (Lindb.) Ignatov & Ignatova (*Hygrohypnum polare* (Lindb.) Loeske): **Am** [4, 7, 8, 52, 132, 32, 56], **Khm** [52, 88], **Khs** [65, 123], **Sah** [24].
- Hygrohypnum* Lindb. [Amblystegiaceae]
– *luridum* (Hedw.) Jenn.: **Am** [34, 52, 56, 132], **Prm** [121].
- Hylocomiastrum* Broth. [Hylocomiaceae]
– *pyrenaicum* (Spruce) M. Fleisch. (*Hylocomium pyrenaicum* (Spruce) Lindb.): **Am** [43], **Khm** [43, 88], **Khs** [40, 65, 123], **Prm** [26, 48, 133], **Sah** [24, 36], **Kur** [21, 23, 25].
– *umbratum* (Hedw.) M. Fleisch.: **Khs** [1], **Prm** [144], **Sah** [36], **Kur** [23].
- Hylocomiopsis* Cardot [Hylocomiaceae]
– *ovicarpa* (Besch.) Cardot: **Prm** [1, 26, 48, 132], **Sah** [24, 36], **Kur** [23].
- Hylocomium* Bruch et al. [Hylocomiaceae]
– *splendens* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [4, 7, 8, 32, 34, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
- Hymenoloma* Ochyra [Rhabdoweisiaceae]
– *crispulum* (Hedw.) Ochyra (*Dicranoweisia crispula* (Hedw.) Milde): **Am** [7, 8], **Khm** [88], **Khs** [65, 131], **Prm** [MW], **Sah** [24], **Kur** [21, 23, 25].
- Hymenostylium* Brid. [Pottiaceae]
– *recurvirostrum* (Hedw.) Dixon: **Am** [56], **Khm** [88], **Prm** [26, 29], **Sah** [24], **Kur** [23].
- Hyophila* Brid. [Pottiaceae]
– *involuta* (Hook.) A. Jaeger: **Am** [56], **Prm** [26, MHA].
- Hypnum* Hedw. [Hypnaceae]
– *cupressiforme* Hedw.: **Am** [7, 8, 32, 56, 133], **Khm** [41, 88], **Khs** [40, 65, 109, 123], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 133], **Sah** [24, 36], **Kur** [23, 25, 27].
– *cupressiforme* var. *subjulaceum* Molendo: **Am** [56], **Khm** [88], **Prm** [133].
– *fujiyamae* (Broth.) Paris: **Kur** [23].
– *saitoi* Ando: **Am** [6, 8, 56], **Khm** [88].
- Hypopterygium* Brid. [Hypopterygiaceae]
– *flavolimbatum* Müll. Hal. (*H. japonicum* Mitt.): **Am** [70], **Khs** [40], **Evr** [39], **Prm** [26, 28, 38, 42, 48, 71, 131], **Sah** [24], **Kur** [23].
- Isopterygiopsis* Z. Iwats. [Plagiotheciaceae]
– *alpicola* (Lindb. & Arnell) Hedenäs: **Am** [8, 32, 56], **Khm** [88], **Khs** [109], **Kur** [23].
– *muelleriana* (Schimp.) Z. Iwats.: **Am** [32, 34, 56, 133], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 71], **Sah** [24, 36], **Kur** [23, 25].
– *pulchella* (Hedw.) Z. Iwats.: **Am** [8, 32, 56, 133], **Khm** [88], **Khs** [65, 109], **Prm** [38, 133], **Sah** [24], **Kur** [21, 23].
- Isothecium* Brid. [Lembophyllaceae]
– *bakkodense* Besch.: **Sah** [24], **Kur** [23, 27].
- Iwatsukiella* W.R. Buck & H.A. Crum [Leskeaceae]
– *leucotricha* (Mitt.) W.R. Buck & H.A. Crum (*Habrodon leucotrichus* (Mitt.) Perss.): **Am** [2, 7, 8, 35, 43, 56], **Khm** [41, 88], **Khs** [65, 109, 163], **Prm** [26, 38, 42, 48, 131], **Sah** [24, 36], **Kur** [23, 25, 27].
- Kiaeria* I. Hagen [Rhabdoweisiaceae]
– *blyttii* (Bruch, Schimp. & W. Gümbel) Broth.: **Khs** [65], **Kur** [23, 25].
– *falcata* (Hedw.) I. Hagen: **Khs** [65], **Kur** [21, 23, 25].
– *glacialis* (Berggr.) I. Hagen: **Kur** [21].
- *starkei* (F. Weber & D. Mohr) I. Hagen: **Khm** [88], **Khs** [65], **Sah** [24], **Kur** [21, 23, 25].
- Leptobryum* (Bruch, Schimp. & W. Gümbel) Wilson [Meesiaceae]
– *pyriforme* (Hedw.) Wilson: **Am** [8, 32, 56], **Khs** [40, 109, 131], **Prm** [131], **Sah** [24, 36], **Kur** [23, 27].
- Leptodictyum* (Schimp.) Warnst. [Amblystegiaceae]
– *riparium* (Hedw.) Warnst.: **Khm** [41], **Khs** [40, 123], **Prm** [26, 28, 42, 131], **Sah** [24, 36] – (!).
- Leptodontium* (Müll. Hal.) Lindb. [Pottiaceae]
– *flexifolium* (Dicks.) Hampe: **Am** [32, 56, 70], **Evr** [39], **Prm** [26] – (!).
- Lescuraea* Bruch, Schimp. & W. Gümbel [Pseudoleskeaceae]
– *incurvata* (Hedw.) E. Lawton: **Khm** [88], **Prm** [72, MW], **Sah** [24].
– *mutabilis* (Brid.) Lindb.: **Khs** [123] – (!)(?)
– *patens* Lindb.: **Sah** [24].
– *radicosa* (Mitt.) Mönk.: **Sah** [24].
– *saxicola* (Bruch, Schimp. & W. Gümbel) Molendo: **Khs** [65, 109, 123], **Prm** [26, 38], **Sah** [24, 36], **Kur** [21, 23, 25].
- Leskea* Hedw. [Leskeaceae]
– *polycarpa* Hedw.: **Am** [32], **Khm** [41, 88, 131], **Khs** [131], **Prm** [26, 38, 131], **Sah** [24, 36], **Kur** [21, 23, 27].
- Leucobryum* Hampe [Leucobryaceae]
– *glaucum* (Hedw.) Ångstr.: **Prm** [26, 29, 38, 71, 130], **Sah** [24, 36].
– *juniperoidum* (Brid.) Müll. Hal.: **Prm** [26, 38], **Sah** [24], **Kur** [23, 25, 46, 128, 141].
- Leucodon* Schwägr. [Leucodontaceae]
– *corensis* Cardot: **Am** [70, 81, 56], **Khm** [81], **Evr** [39], **Prm** [38, 48, 81].
– *pendulus* Lindb.: **Am** [4, 7, 8, 70, 81, 32, 56, 131], **Khm** [41, 81, 88, 131], **Khs** [40, 65, 109, 123, 131], **Evr** [4, 39, 81; 131], **Prm** [26, 28, 29, 38, 42, 48, 71, 81, 131], **Sah** [24].
– *sciuroides* (Hedw.) Schwägr.: **Am** [7, 8, 35, 56], **Khm** [41], **Khs** [40, 109], **Evr** [131], **Prm** [26, 28, 29, 42, 71, 131], **Sah** [24, 81], **Kur** [23, 27].
- Lewinskya* F. Lara, Garilleti & Goffinet [Orthotrichaceae]
– cf. *affinis* (Brid.) F. Lara, Garilleti & Goffinet (*Ortotrichum affine* Brid.): **Am** [56] – (!).
– *elegans* (Schwägr. ex Hook. & Grev.) F. Lara, Garilleti & Goffinet (reported as *Ortotrichum speciosum* Nees): **Am** [8, 34, 35, 56, 131], **Khm** [41, 88], **Khs** [109, 131], **Prm** [28, 131] – (!).
– *iwatsukii* (Ignatov) F. Lara, Garilleti & Goffinet (*Ortotrichum iwatsukii* Ignatov): **Am** [57], **Khm** [99], **Khs** [109].
– *rupestris* (Schleich. ex Schwägr.) F. Lara, Garilleti & Goffinet (*Ortotrichum rupestre* Schleich. ex Schwägr.): **Prm** [26] – (!).
– *sordida* (Sull. & Lesq.) F. Lara, Garilleti & Goffinet (*Ortotrichum sordidum* Sull. & Lesq.): **Am** [8, 32, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 27].
– *transcaucasica* Eckstein, Garilleti & F. Lara: **Am** [56, 66a], **Khm** [66a], **Prm** [IRK] – (!), see *L. striata*.
- Limnophyllum* Ignatov & Czernyadjeva [Climaciaceae]
– *mizushimae* (Sak.) Ignatov & Czernyadjeva (*Leptodictyum mizushimae* (Sakurai) Kanda): **Kur** [23, 95].
- Lindbergia* Kindb. [Leskeaceae]
– *geniculata* (Laz.) Ignatova & Ignatov (*Mamillariella geniculata* Laz.): **Prm** [26, 28, 29, 108, 131].
– *sinensis* (Müll. Hal.) Broth.: **Prm** [26, 108] – (!).
- Loeskeobryum* M. Fleisch. ex Broth. [Hylocomiaceae]

- *brevirostre* (Brid.) M. Fleisch.: **Sah** [24, 36].
- Loeskyppnum* H.K.G. Paul [Calliergonaceae]
- *badium* (Hartm.) H.K.G. Paul (*Drepanocladus badius* (Hartm.) G. Roth): **Am** [34, 43], **Khm** [43, 88], **Khs** [65], **Sah** [24], **Kur** [25].
- *wickesii* (Grout) Tuom.: **Kur** [25].
- Lyellia* R. Br. [Polytrichaceae]
- *aspera* (I. Hagen & C.E.O. Jensen) Frye: **Khm** [117].
- Macrocoma* (Hornsch ex Müll. Hal.) Grout [Orthotrichaceae]
- *tenus* (Hook. & Grev.) Vitt subsp. *sullivantii* (Müll. Hal.) Grout (*Macromitrium hymenostomum* Mont.): **Prm** [26, 28, 131, 99].
- Macromitrium* Brid. [Orthotrichaceae], see also *Macrocoma*
- *japonicum* Dozy & Molk.: **Evr** [39], **Prm** [26, 28, 29, 71, 131], **Kur** [IRK] – (!).
- Meesia* Hedw. [Meesiaceae]
- *longiseta* Hedw. – **Am** [34], **Prm** [131].
- *triquetra* (Jolycl.) Ångstr. (*M. trifaria* H.A. Crum, Steere & L.E. Anderson): **Am** [4, 7, 8, 32, 70, 131], **Khm** [99], **Khs** [99], **Prm** [26, 131], **Sah** [24], **Kur** [127].
- *uliginosa* Hedw.: **Am** [34, 131], **Prm** [131], **Sah** [24], **Kur** [23].
- Meteorium* (Brid) Dozy & Molk. [Meteoriaceae]
- *buchananii* (Brid.) Broth.: **Prm** [29, 136].
- Mielichhoferia* Nees & Hornsch. [Mielichhoferiaceae]
- *asiatica* Tubanova & Ignatova: **Sah** [99, 158].
- *japonica* Besch.: **Kur** [23, 25, 99, 141, 158] – (!).
- *mielichhoferiana* (Funck) Loeske: **Prm** [38] – (!).
- Miyabea* Broth. [Miyabeaceae]
- *fruticella* (Mitt.) Broth.: **Prm** [26].
- *rotundifolia* Cardot: **Prm** [26, 132] – (!)(?).
- Mnium* Hedw. [Mniaceae]
- *heterophyllum* (Hook.) Schwägr.: **Am** [32], **Khs** [109], **Prm** [26, 28, 29, 38, 71, 131], **Sah** [24], **Kur** [23, 27].
- *lycopodioides* Schwägr. (*M. ambiguum* Müll. Hal., *M. laevinerve* Cardot): **Am** [8, 32, 56], **Khm** [88], **Khs** [65, 109, 123, 131], **Prm** [26, 28, 38, 71], **Sah** [24, 36], **Kur** [23, 25] – (!).
- *marginatum* (Dicks.) P. Beauv.: **Am** [7, 8, 32, 56], **Khm** [43, 88], **Khs** [65, 109], **Evr** [39], **Prm** [26], **Sah** [24, 36].
- *orientale* R.E. Wyatt, Odrzykoski & T.J. Kop.: **Khs** [99], **Prm** [131], **Sah** [24], **Kur** [23, 27, 141] – (!).
- *spinosum* (Voit) Schwägr.: **Khm** [88], **Khs** [65, 109], **Prm** [38, 48, 131].
- *spinulosum* Bruch, Schimp. & W. Gümbel: **Am** [8, 56, 70], **Khm** [41, 88], **Khs** [40, 123, 163], **Prm** [26, 38, 42, 131].
- *stellare* Hedw.: **Am** [32], **Khm** [41], **Khs** [109, 123, 131], **Evr** [39], **Prm** [26, 29], **Sah** [24], **Kur** [21, 23, 25].
- *thomsonii* Schimp. (*M. orthorrhynchum* auct.): **Am** [7, 8, 32, 56, 70, 131], **Khm** [88], **Khs** [40, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 131], **Sah** [24], **Kur** [21, 23, 25, 141].
- Molendoa* Lindb. [Pottiaceae]
- *sendtneriana* (Bruch, Schimp. & W. Gümbel) Limpr.: **Am** [32, 56], **Khm** [88], **Prm** [26, 28, 29, 130].
- Myrinia* Schimp. [Amblystegiaceae]
- *pulvinata* (Wahlenb.) Schimp.: **Am** [32], **Sah** [24].
- Myurella* Bruch, Schimp. & W. Gümbel [Plagiotheciaceae]
- *julacea* (Schwägr.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 56], **Khm** [88], **Khs** [65], **Sah** [24], **Kur** [25].
- *sibirica* (Müll. Hal.) Reimers: **Am** [56], **Khm** [88], **Prm** [26], **Sah** [24], **Kur** [23].
- *tenerrima* (Brid.) Lindb.: **Am** [32, 131], **Sah** [24] – (!).
- Myuroclada* Besch. [Brachytheciaceae]
- *longiramea* (Müll. Hal.) Min Li, Y.F. Wang, Ignatov & Huttunen (*Bryhnia brachycladula* Cardot): **Am** [32, 56, 96], **Khs** [96], **Prm** [96], **Sah** [96], **Kur** [25].
- *maximowiczii* (G.G. Borshch.) Steere & W.B. Schofield: **Am** [4, 7, 8, 32, 34, 35, 56, 70, 132], **Khm** [41, 88], **Khs** [40, 109, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 132], **Sah** [24, 36], **Kur** [23, 27].
- Neckera* Hedw. [Neckeraceae] see also *Forsstroemia*
- *borealis* Nog.: **Khm** [145], **Prm** [26, 42, 106], **Sah** [2, 24, 36], **Kur** [23, 27].
- *konoii* Broth. ex Cardot: **Prm** [106].
- *oligocarpa* Bruch (*N. pennata* var. *tenera* Müll. Hal.): **Khm** [145], **Khs** [40, 109].
- *pennata* Hedw.: **Am** [4, 7, 8, 32, 35, 56, 70, 131], **Khm** [41, 88], **Khs** [65, 109, 123, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71, 106, 131], **Sah** [24, 36], **Kur** [23].
- *polyclada* Müll. Hal.: **Prm** [106].
- Neckeropsis* Reichardt [Neckeraceae]
- *nitidula* (Mitt.) M. Fleisch.: **Sah** [153] – (!).
- Niphotrichum* (Bedn.-Ochyra) Bedn.-Ochyra & Ochyra [Grimmiaceae]
- *canescens* (Hedw.) Bedn.-Ochyra & Ochyra (*Racomitrium canescens* (Hedw.) Brid.): **Am** [7, 8, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [65], **Evr** [39], **Prm** [26, 28, 29, 38, 71], **Sah** [24], **Kur** [21, 23, 27].
- *elongatum* (Ehrh. ex Frisvoll) Bedn.-Ochyra & Ochyra: **Kur** [97].
- *ericoides* (Brid.) Bedn.-Ochyra & Ochyra (*Racomitrium ericoides* (Brid.) Brid.): **Am** [97], **Khm** [43], **Prm** [97], **Kur** [23].
- *japonicum* (Dozy & Molk.) Bedn.-Ochyra & Ochyra (*Racomitrium japonicum* Dozy & Molk.): **Am** [97, 32], **Evr** [39], **Prm** [28], **Sah** [24], **Kur** [128].
- *muticum* (Kindb.) Bedn.-Ochyra & Ochyra: **Kur** [21, 23, 141].
- *panschii* (Müll. Hal.) Bedn.-Ochyra & Ochyra (*Racomitrium panschii* (Müll. Hal.) Kindb.): **Am** [32, 56, 97], **Khm** [88], **Khs** [65]. **Prm** [97], **Kur** [97].
- Nyholmia* Holmen & E. Warncke [Orthotrichaceae]
- *obtusifolia* (Brid.) Holmen & Warncke (*Orthotrichum obtusifolium* Brid.): **Am** [8, 32, 56, 70], **Khm** [88], **Khs** [109, 123, 131], **Prm** [26, 38], **Sah** [24], **Kur** [23].
- Oedipodium* Schwägr. [Oedipodiaceae]
- *griffithianum* (Dicks.) Schwägr.: **Khs** [65], **Prm** [91].
- Okamuraea* Broth. [Brachytheciaceae]
- *brachydictyon* (Cardot) Nog.: **Am** [70], **Khs** [40, 123], **Evr** [39], **Prm** [26, 28, 29, 42, 133], **Kur** [23].
- *hakoniensis* (Mitt.) Broth.: **Evr** [39], **Prm** [26, 28, 29, 38, 71], **Sah** [24, 36], **Kur** [23].
- Oligotrichum* DC. [Polytrichaceae]
- *aligerum* Mitt.: **Khs** [109], **Prm** [26], **Sah** [24], **Kur** [21, 23, 25].
- *fulcatum* Steere: **Khm** [88, 118], **Khs** [65].
- *hercynicum* (Hedw.) Lam. & DC.: **Am** [8, 43], **Kur** [21, 23, 25].
- *parallellum* (Mitt.) Kindb.: **Khm** [88], **Khs** [65, 123], **Prm** [26], **Sah** [24], **Kur** [21, 23, 25, 141].
- Oncophorus* (Brid.) Brid. [Rhabdoweisiaceae]
- *crispifolius* (Mitt.) Lindb.: **Khm** [145], **Prm** [26, 29, 48, 130].
- *elongatus* (I. Hagen) Hedenäs: **Am** [56], **Khm** [145] – (!).
- *virens* (Hedw.) Brid.: **Am** [7, 8, 32, 130], **Khm** [145], **Khs** [40, 109], **Prm** [26, 38, 48, 130], **Sah** [24, 36], **Kur** [21].
- *wahlenbergii* Brid.: **Am** [4, 7, 8, 32, 35, 56, 70, 130],

- Khm** [41, 88], **Khs** [40, 65, 109, 123, 131, 163], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 71, 130], **Sah** [24, 36], **Kur** [23, 25, 27, 141].
- Orthothecium** Bruch, Schimp. & W. Gümbel [Plagiotheciaceae]
 – **chryseon** (Schwägr.) Bruch, Schimp. & W. Gümbel: **Khm** [88], **Sah** [24].
 – **strictum** Lorentz: **Sah** [24].
- Orthotrichum** Hedw. [Orthotrichaceae], see also *Nybolmiella* and *Lewinskya*
 – **anomalum** Hedw.: **Khs** [131], **Prm** [29, 131], **Sah** [24].
 – **consobrinum** Cardot: **Prm** [26, 28, 29, 131].
 – **rogeri** Brid.: **Am** [32], **Khm** [145], **Prm** [MHA].
- Oxyrrhynchium** (Bruch, Schimp. & W. Gümbel) Warnst. [Brachytheciaceae]
 – **savatierei** (Schimp. ex Besch.) Broth.: **Prm** [26, 42], **Kur** [MHA] – (!).
- Oxysetegus** (Lindb. ex Limpr.) Hilp. [Pottiaceae]
 – **tenuirostris** (Hook. & Tayl.) A.J.E. Sm. (*O. cylindricus* (Bruch ex Brid.) Hilp.): **Am** [4, 32, 43, 56, 70, 130], **Khm** [41, 88], **Khs** [40, 65, 109], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 48, 71, 130], **Sah** [24, 36], **Kur** [21, 23, 25].
- Paludella** Brid. [Meesiaceae]
 – **squarrosa** (Hedw.) Brid.: **Am** [8, 34, 56, 131], **Khm** [43], **Khs** [109], **Prm** [99], **Sah** [24], **Kur** [21].
- Palustriella** Ochyra [Amblystegiaceae]
 – **commutata** (Hedw.) Ochyra (*Cratoneuron commutatum* (Hedw.) G. Roth): **Am** [7, 8, 132].
 – **decipiens** (De Not.) Ochyra: **Sah** [24].
- Paraleucobryum** (Limpr.) Loeske [Dicranaceae]
 – **enerve** (Thed.) Loeske: **Am** [8], **Prm** [26].
 – **longifolium** (Hedw.) Loeske: **Am** [56], **Khm** [88], **Khs** [40, 109, 163], 39, **Prm** [26, 28, 29, 38, 130], **Sah** [24, 36], **Kur** [23].
- Pelekium** Mitt. [Thuidiaceae]
 – **pygmaeum** (Bruch, Schimp. & W. Gümbel) Touw (*Thuidium pygmaeum* Bruch, Schimp. & W. Gümbel): **Prm** [5, 26, 28, 29, 42, 132], **Kur** [23, 27].
 – **versicolor** (Müll. Hal.) Touw (*Thuidium bipinnatulum* Mitt., *Cyrtolobos versicolor* (Hornsch. ex Müll. Hal.) W.R. Buck & H.A. Crum): **Khs** [40], **Prm** [5, 26, 42, 132], **Sah** [5], **Kur** [125].
- Philonotis** Brid. [Bartramiaceae]
 – **americana** Dism.: **Sah** [24, 124], **Kur** [23, 25, 113, 124].
 – cf. **capillaris** Lindb.: **Am** [56] – (!).
 – **fontana** (Hedw.) Brid.: **Am** [43, 124, 32, 56], **Khm** [88], **Khs** [65, 109, 123], **Evr** [99], **Prm** [26, 29, 124, 131], **Sah** [24, 36, 124], **Kur** [21, 23, 25, 27, 124, 141].
 – **marchica** (Hedw.) Brid.: **Prm** [131], **Kur** [124] – (!).
 – **tomentella** Molendo: **Am** [56, 57] – (!).
 – **jezoana** Besch. & Cardot: **Prm** [124], **Sah** [24, 124], **Kur** [21, 23, 25, 124, 141].
- Physcomitrium** (Brid.) Brid. [Funariaceae]
 – **acuminatum** Bruch, Schimp. & W. Gümbel (*Physcomitrium eurystomum* subsp. *acuminatum* (Bruch, Schimp. & W. Gümbel) Giacom.): **Prm** [130, 26] – (!).
 – **eurystomum** Sendtn.: **Am** [97, 32], **Prm** [26, 29].
 – **sphaericum** (C.F. Ludw. ex Schkuhr) Brid.: **Khs** [131], **Prm** [97, MHA], **Kur** [25].
- Plagiobryum** Lindb. [Bryaceae] – (!).
 – **hultenii** (Ochi & Perss.) Hedd.: **Khm** [88, 99], **Sah** [24, 99].
- **japonicum** Nog.: **Prm** [99], **Kur** [23, 27, 99].
- Plagiomnium** T.J. Kop. [Mniaceae]
 – **acutum** (Lindb.) T.J. Kop. (*Mnium acutum* Lindb.): **Am** [4, 32, 34, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 123, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 27].
 – **confertidens** (Lindb. & Arnell) T.J. Kop. (*Mnium confertidens* (Lindb. & Arnell) Kindb.): **Am** [7, 8, 32, 35, 56, 70], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24].
 – **curvatulum** (Lindb.) Schljakov: **Am** [99], **Sah** [24].
 – **cuspidatum** (Hedw.) T.J. Kop. (*Mnium cuspidatum* Hedw.): **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 71], **Sah** [24, 36], **Kur** [23, 25].
 – **drummondii** (Bruch & Schimp.) T.J. Kop. (*Mnium drummondii* Bruch & Schimp.): **Am** [32, 56], **Khm** [41, 88], **Khs** [40, 109, 131], **Prm** [26, 29, 48], **Sah** [24].
 – **ellipticum** (Brid.) T.J. Kop. (*Mnium rugicum* Laurer): **Am** [4, 7, 8, 32, 56, 70], **Khm** [41, 88], **Khs** [40, 109, 123], **Prm** [26, 28, 29, 42, 71], **Sah** [24, 36], **Kur** [23, 25].
 – **japonicum** (Lindb.) T.J. Kop.: **Khs** [123], **Prm** [28] – (!).
 – **maximowiczii** (Lindb.) T.J. Kop. (*Mnium maximowiczii* Lindb., *Mnium micro-ovale* Müll. Hal.): **Am** [43], **Khm** [88], **Khs** [40], **Prm** [26, 28, 29, 38, 42, 48], **Kur** [23].
 – **medium** (Bruch & Schimp.) T.J. Kop. (*Mnium medium* Bruch & Schimp.): **Am** [34], **Khm** [41, 88], **Khs** [109, 123], **Prm** [26, 28, 29, 38], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
 – **rostratum** (Schrad.) T.J. Kop. (*Mnium rostratum* Schrad.): **Am** [7, 8, 56], **Khm** [MHA], **Prm** [26, 28, 71], **Sah** [24, 36].
 – **tezukae** (Sak.) T.J. Kop.: **Prm** [99].
 – **vesicatum** (Besch.) T.J. Kop. (*Mnium vesicatum* Besch.): **Am** [32], **Prm** [26, 28, 29, 42], **Sah** [24], **Kur** [23].
- Plagiopus** Brid. [Bartramiaceae]
 – **oederianus** (Sw.) H.A. Crum & L.E. Anderson: **Am** [32, 56, 131], **Khm** [41, 88], **Khs** [40, 65, 131], **Prm** [26, 29, 28], **Sah** [24], **Kur** [23, 25].
- Plagiothecium** Bruch, Schimp. & W. Gümbel [Plagiotheciaceae]
 – **cavifolium** (Brid.) Z. Iwats. (incl. records of *P. succulentum* (Wilson) Lindb.): **Am** [32, 56, 70], **Khm** [41, 88], **Khs** [40, 65, 109], **Evr** [39], **Prm** [26, 28, 29, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25] – (!).
 – **cordifolium** Laz.: **Prm** [133] – (!)(?).
 – **curvifolium** Schlieph. ex Limpr.: **Am** [8], **Khs** [109], **Prm** [26], **Kur** [27].
 – **denticulatum** (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 32, 43, 56, 70], **Khm** [43, 88], **Khs** [65, 109, 123, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [21, 23, 25].
 – **eurphyllum** (Cardot & Ther.) Z. Iwats.: **Khs** [65, 109], **Prm** [26], **Sah** [24], **Kur** [23, 25].
 – **laetum** Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 32, 43, 56], **Khm** [41, 88], **Khs** [109, 123], **Evr** [39], **Prm** [26, 28, 38, 42, 48], **Sah** [24, 36], **Kur** [23].
 – **latebricola** Bruch, Schimp. & W. Gümbel: **Am** [8, 32, 70], **Khm** [41], **Khs** [40, 109], **Prm** [1, 26, 28, 29, 42], **Sah** [24, 36], **Kur** [23, 25].
 – **nemorale** (Mitt.) A. Jaeger: **Am** [8, 70], **Khm** [43, 88], **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 27].
 – **obtusissimum** Broth.: **Sah** [24, 36], **Kur** [23, 25, 27, 141].
 – **platycladum** (Cardot) Broth.: **Prm** [133] – (!)(?).
- Platydictya** Berk. [Plagiotheciaceae]
 – **fauriei** (Cardot) Z. Iwats. & Nog.: **Sah** [24].
 – **jungermannioides** (Brid.) H.A. Crum (*Amblystegiella jungermannioides* (Brid.) Giacom.): **Am** [7, 8, 56], **Kur** [23, 25].

- *minutissima* (Sull. & Lesq. ex Sull.) Crum (*Amblystegium minutissimum* (Sull. & Lesq. ex Sull.) A. Jaeger): **Sah** [24].
- Platygyrium** Bruch, Schimp. & W. Gümbel [Pylaisiadelphaceae]
- *repens* (Brid.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 32, 35, 56, 70], **Khm** [41, 88], **Khs** [109, 163], **Evr** [4, 39], **Prm** [26, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [23, 25].
- Platyhypnum** Loeske (*Ochyraea* Váňa, *Hygrohypnum* p.p.) [Amblystegiaceae]
- *alpestre* (Hedw.) Ochyra (*Ochyraea alpestris* (Hedw.) Ignatov & Ignatova): **Khm** [MW], **Sah** [24].
- *cochleariifolium* (Venturi) Broth., *Ochyraea cochleariifolia* (Venturi) Ignatov & Ignatova): **Khm** [52, 88], **Sah** [24].
- *duriusculum* (De Not.) Ochyra (*Hygrohypnum duriusculum* (De Not.) D.W. Jamieson, *H. dilatatum* (Wilson) Loeske, *Ochyraea duriuscula* (De Not.) Ignatov & Ignatova): **Khm** [132], **Khs** [65, 123], **Prm** [26, 28, 42, 52, 71, 132], **Sah** [24], **Kur** [21, 23, 25, 52].
- *norvegicum* (Bruch, Schimp. & W. Gümbel) Ochyra (*Hygrohypnum norvegicum* (Bruch, Schimp. & W. Gümbel) J. Amann, *Ochyraea norvegica* (Bruch, Schimp. & W. Gümbel) Ignatov & Ignatova): **Am** [52], **Khm** [52, 88], **Khs** [109], **Prm** [MHA].
- *smithii* (Sw.) Ochyra (*Ochyraea smithii* (Sw.) Ignatov & Ignatova): **Kur** [21].
- Pleuridium** Rabenh. [Ditrichaceae]
- *subulatum* (Hedw.) Rabenh.: **Prm** [130].
- Pleuroziopsis** Kindb. ex E. Britton [Climaciaceae]
- *ruthenica* (Weinm.) Kindb. ex E. Britton: **Khm** [41], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [23, 25, 27, 141].
- Pleurozium** Mitt. [Hylacomiaceae]
- *schreberi* (Brid.) Mitt.: **Am** [4, 7, 8, 32, 56], **Khm** [41, 43, 88], **Khs** [65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
- Podperaea** Z. Iwats. & Glime [Amblystegiaceae]
- *krylovii* (Podp.) Z. Iwats. & Glime (*Campylium krylovii* (Podp.) Laz.): **Am** [8, 32, 37, 56], **Khm** [41, 88], **Khs** [40, 109], **Prm** [26, 28, 29, 42], **Kur** [23].
- Pogonatum** P. Beauv. [Polytrichaceae]
- *contortum* (Brid.) Lesq. (*P. laterale* (Brid.) Brid.): **Khm** [41], **Khs** [109, 123, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [23, 25, 27].
- *dentatum* (Brid.) Brid. (*P. capillare* (Michx.) Brid.): **Am** [7, 32, 56], **Khm** [43, 88], **Khs** [40, 65, 109, 163], **Prm** [26, 38], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- *inflexum* (Lindb.) Sande Lac.: **Prm** [26], **Kur** [23].
- *japonicum* Sull. & Lesq.: **Khm** [S], **Khs** [40, 65, 109], **Prm** [26, 29, 38, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25].
- *spinulosum* Mitt.: **Khs** [97], **Prm** [26, 28, 29, 71], **Kur** [23, 27].
- *urnigerum* (Hedw.) P. Beauv.: **Am** [4, 7, 8, 32, 56], **Khm** [43, 88], **Khs** [40, 65, 109, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- Pohlia** Hedw. [Mielichhoferiaceae]
- *andalusica* (Höhn.) Broth.: **Am** [32, 56], **Khs** [99], **Sah** [24], **Kur** [25].
- *andrewsii* A.J. Shaw: **Am** [32, 56], **Khm** [88], **Khs** [65, 109], **Prm** [MHA], **Kur** [23].
- *annotina* (Hedw.) Lindb.: **Am** [56], **Sah** [24], **Kur** [23].
- *bulbifera* (Warnst.) Warnst.: **Am** [50, 32, 56], **Khm** [MHA], **Khs** [109], **Kur** [25].
- *cruda* (Hedw.) Lindb.: **Am** [7, 8, 32, 56, 70], **Khm** [43, 88], **Khs** [65, 109, 123, 131, 163], **Prm** [26, 28, 38], **Sah** [24], **Kur** [21, 23, 25, 141].
- *crudoides* (Sull. & Lesq.) Broth.: **Khm** [88], **Sah** [24], **Kur** [23, 25, 141].
- *drummondii* (Müll. Hal.) A.L. Andrews: **Am** [32], **Khm** [88, 50], **Khs** [65], **Sah** [24], **Kur** [21, 23, 25].
- *elongata* Hedw.: **Am** [8, 32, 34, 56], **Khm** [88], **Khs** [40, 109, 131], **Prm** [28, 38], **Kur** [23, 25].
- *elongata* var. *greenii* (Brid.) A.J. Shaw (*P. minor* Schleich. ex Schwägr.): **Am** [56], **Khm** [88], **Prm** [26].
- *filum* (Schimp.) Mårtensson: **Am** [56], **Khs** [109], **Prm** [99], **Sah** [99], **Kur** [23, 25, 141].
- *lescuriana* (Sull.) Ochi: **Am** [32, 56].
- *longicollis* (Hedw.) Lindb.: **Am** [56, 131], **Khm** [41, 88], **Khs** [109], **Evr** [39], **Prm** [26, 38], **Sah** [24], **Kur** [141].
- *ludwigii* (Spreng. ex Schwägr.) Broth.: **Khs** [65], **Prm** [99].
- *lutescens* (Limpr.) H. Lindb.: **Am** [31, 32], **Khs** [31, 109].
- *melanodon* (Brid.) A.J. Shaw: **Khs** [109], **Sah** [24, 36], **Kur** [23].
- *nutans* (Hedw.) Lindb.: **Am** [7, 8, 32, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 131, 163], **Evr** [39], **Prm** [26, 38], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- *proligera* (Kindb.) Lindb. ex Broth.: **Am** [32, 56], **Khm** [88], **Khs** [109], **Evr** [39], **Prm** [26, 50], **Sah** [24], **Kur** [23, 25].
- *sphagnicola* (Bruch, Schimp. & W. Gümbel) Broth.: **Sah** (Cherdantseva, unpubl.) – (!).
- *tundrae* A.J. Shaw: **Am** [56], **Khs** [109], **Prm** [MHA], **Sah** [NSK], **Kur** [23, 25].
- *vexans* (Limpr.) H. Lindb.: **Am** [32 (cf.)], **Khs** [65].
- *wahlenbergii* (F. Weber & D. Mohr) A.L. Andrews: **Am** [32], **Khm** [88], **Khs** [65, 109, 123, 163], **Prm** [131, MHA], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- Polytrichastrum** G.L. Sm. [Polytrichaceae], see also *Polytrichum*
- *alpinum* (Hedw.) G.L. Sm. (*Polytrichum alpinum* Hedw.): **Am** [7, 8, 32, 56, 119], **Khm** [43, 88], **Khs** [40, 65, 109, 123, 131, 163], **Evr** [39], **Prm** [26, 29, 38, 48, 119], **Sah** [24, 36, 119], **Kur** [21, 23, 25, 119, 141].
- *fragile* (Bryhn) Schljakov: **Khm** [43].
- *septentrionale* (Brid.) E.I. Ivanova, N.E. Bell & Ignatov: **Sah** [24, 119].
- *sexangulare* (Flörke ex Brid.) G.L. Sm.: **Khm** [88, 119], **Sah** [24, 119], **Kur** [21, 23, 25, 119].
- *sphaerothecium* (Besch.) J.-P. Frahm: **Kur** [21, 23, 25, 46, 119].
- Polytrichum** Hedw. [Polytrichaceae], see also *Polytrichastrum*
- *commune* Hedw.: **Am** [4, 7, 8, 32, 35, 56], **Khm** [41, 88], **Khs** [40, 65, 109, 131, 163], **Evr** [39], **Prm** [26, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
- *densifolium* Wilson ex Mitt. (*Polytrichastrum formosum* (Hedw.) G.L. Sm. var. *densifolium* (Wilson ex Mitt.) Osada): **Evr** [39], **Prm** [38, 120], **Sah** [135], **Kur** [21, 23, 120] – (!).
- *hyperboreum* R. Br.: **Am** [56, 57], **Khs** [65], **Sah** [97].
- *jensenii* I. Hagen: **Am** [7, 8, 56, 70], **Khm** [43], **Evr** [39], **Prm** [38], **Sah** [24], **Kur** [21, 23, 27].
- *juniperinum* Hedw.: **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 43], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- *longisetum* Sw. ex Brid. (*P. gracile* Menzies): **Am** [7, 8, 32, 35, 56, 119], **Khm** [41, 43], **Khs** [109, 123], **Prm** [26, 28, 38, 119], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- *pallidisetum* Funck (*P. ohioense* auct.): **Am** [7, 8, 35, 70], **Khm** [41], **Khs** [40, 109, 120], **Prm** [1, 26, 28, 38, 42, 119], **Sah** [24, 36, 120], **Kur** [23, 25, 120, 141].
- *piliferum* Hedw.: **Am** [7, 8, 32, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [109, 123, 131], **Prm** [26, 29, 38], **Sah** [24, 36],

- Kur** [21, 23, 25].
- *strictum* Brid. (*P. alpestre* Hoppe): **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 109, 123], **Prm** [26, 29, 38], **Sah** [24, 36], **Kur** [21, 23, 25].
 - *swartzii* Hartm.: **Am** [7, 8, 32, 56], **Sah** [24, 36].
- Pseudobryum** (Kindb) T.J.Kop. [Mniaceae]
- *cinclidioides* (Huebener) T.J. Kop.: **Am** [7, 8, 32, 56], **Khm** [41, 88, 131], **Khs** [109, 123, 131], **Evr** [39], **Prm** [L.E], **Sah** [24, 36], **Kur** [21, 23, 25].
- Pseudocalliergon** (Limpr.) Loeske [Amblystegiaceae]
- *trifarium* (F. Weber & D. Mohr) Loeske (*Calliergon trifarium* (F. Weber & D. Mohr) Kindb.): **Prm** [132].
- Pseudohygrohypnum** Kanda [Pylaisiaceae]
- *eugyrium* (Bruch, Schimp. & W. Gümbel) Kanda (*Hygrohypnum eugyrium* (Bruch, Schimp. & W. Gümbel) Loeske): **Prm** [26, 52, MHA].
 - *subeugyrium* (Renauld & Cardot) Ignatov & Ignatova (*Hygrohypnum subeugyrium* (Renauld & Cardot) Broth.): **Khm** [52, 88], **Khs** [65], **Prm** [29, 52], **Kur** [23, 25, 52].
- Pseudoleskeella** Kindb. [Pseudoleskeellaceae]
- *catenulata* (Brid. ex Schrad.) Kindb.: **Prm** [26, 28], **Sah** [24, 36].
 - *nervosa* (Brid.) Nyholm (*Leskeella nervosa* (Brid.) Loeske): **Khm** [88], **Khs** [163], **Prm** [26], **Sah** [24, 36], **Kur** [23].
 - *papillosa* (Lindb.) Kindb.: **Am** [56], **Khm** [88], **Khs** [65, 109].
 - *rupestris* (Berggr.) Hedenäs & L.Söderstr.: **Sah** [24], **Kur** [25].
 - *tectorum* (Funck ex Brid.) Kindb. ex Broth.: **Am** [8], **Khm** [88], **Khs** [65, 109], **Prm** [26, 28], **Sah** [24], **Kur** [25].
- Pseudoleskeopsis** Broth. [Leskeaceae]
- *zippelii* (Dozy & Molk.) Broth.: **Prm** [30].
- Pseudotaxiphyllum** Z. Iwatz. [Plagiotheciaceae]
- *elegans* (Brid.) Z. Iwats.: **Khs** [65], **Prm** [38].
 - *pobliacarpum* (Sull. & Lesq.) Z. Iwats.: **Sah** [156], **Kur** [23, 25, 113].
- Psilopilum** Brid. [Polytrichaceae]
- *cavifolium* (Wilson) I. Hagen: **Am** [56].
 - *laevigatum* (Wahlenb.) Lindb.: **Kur** [141].
- Pterigynandrum** Hedw. [Pterigynandraceae]
- *filiforme* Hedw.: **Prm** [26, MHA], **Sah** [24], **Kur** [23].
- Ptilium** De Not. [Pylaisiaceae]
- *crista-castrensis* (Hedw.) De Not.: **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 131, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [21, 23, 25, 27].
- Ptychomitrium** Fűrnr. [Ptychomitriaceae]
- *sinense* (Mitt.) A. Jaeger: **Am** [56, 57], **Khm** [97], **Khs** [40], **Prm** [26, 28, 29, 71].
- Pylaisia** Bruch, Schimp. & W. Gümbel [Pylaisiaceae]
- *brotheri* Besch.: **Khm** [43], **Prm** [26, 28, 29, 38], **Kur** [23, 27].
 - *curviramea* Dixon: **Am** [7, 43], **Khm** [88], **Sah** [24, 36] – (!).
 - *falcata* Bruch, Schimp. & W. Gümbel: **Am** [56, 57], **Prm** [MHA], **Sah** [24], **Kur** [23].
 - *obtusata* Lindb.: **Sah** [24, 36], **Kur** [23].
 - *polyantha* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 35, 32, 43, 56], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [23].
 - *selwynii* Kindb.: **Am** [32, 56, 70], **Khm** [41, 88], **Khs** [109, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 71], **Sah** [24, 36], **Kur** [25].
 - *steerei* (Ando & Higuchi) Ignatov: **Am** [32, 56], **Khm** [MHA], **Khs** [109].
 - *stereodontoides* Broth. & Yasuda ex Ihsiba (see also note to *P. intricata* (Hedw.) Bruch, Schimp. & W. Gümbel) – **Khs** [131], **Evr** [39], **Prm** [26, 29, 38].
 - *subcircinata* Cardot: **Prm** [26, 48], **Sah** [24, 36], **Kur** [23].
- Pylaisiadelphus** Cardot [Pylaisiadelphaceae]
- *tenuirostris* (Bruch & Schimp. ex Sull.) W.R. Buck: **Am** [8, 15, 32, 56, 70], **Khm** [15, 41, 88], **Khs** [40, 109], **Evr** [39], **Prm** [15, 26, 28, 29, 38, 42, 48, 71], **Sah** [24], **Kur** [23].
 - *tristoviridis* (Broth.) Afonina, Tsubota & Ignatova: **Khs** [65], **Prm** [15].
- Racomitrium** Brid. [Grimmiaceae]
- *lanuginosum* (Hedw.) Brid.: **Am** [34], **Khm** [43, 88], **Khs** [65], **Prm** [26, 38, 48], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- Rauiella** Reimers [Thuidiaceae]
- *fujisana* (Paris) Reimers: **Am** [4, 32, 70], **Khm** [41, 88], **Khs** [40, 109, 123, 163], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [23, 25, 27].
- Rhabdoweisia** Bruch, Schimp. & W. Gümbel [Rhabdoweisiaceae]
- *crispata* (Dicks. ex With.) Lindb. (*Rhabdoweisia kuzenevae* Broth.): **Am** [8, 32, 56], **Khm** [41, 88], **Khs** [40, 65, 109], **Prm** [26, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [23, 25].
- Rhizomnium** (Broth.) T.J.Kop. [Mniaceae]
- *andrewsianum* (Steere) T.J. Kop.: **Khm** [88].
 - *magnifolium* (Horik.) T.J. Kop.: **Khm** [41, 88], **Khs** [65, 109, 123, 163], **Prm** [38, 48], **Sah** [24, 36], **Kur** [23, 25, 27, 141].
 - *nudum* (E. Britton & R.S. Williams) T.J. Kop.: **Khs** [65, 109], **Sah** [24], **Kur** [21, 23, 25, 141].
 - *parvulum* (Mitt.) T.J. Kop. (*Mnium minutulum* Besch.): **Prm** [26, 28, 29, 48].
 - *pseudopunctatum* (Bruch & Schimp.) T.J. Kop.: **Kur** [21, 23, 25] – (!).
 - *striatulum* (Mitt.) T.J. Kop. (*Mnium striatulum* Mitt.): **Am** [32, 70], **Khm** [88], **Khs** [65, 109, 123], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24], **Kur** [23, 25].
 - *tuomikoskii* T.J. Kop.: **Am** [32], **Khm** [MW], **Prm** [99], **Sah** [24], **Kur** [23].
- Rhodobryum** (Schimp.) Limpr. [Bryaceae]
- *ontariense* (Kindb.) Kindb.: **Am** [32, 56, 57, 70], **Khm** [41], **Prm** [29, MHA], **Sah** [24], **Kur** [23].
 - *roseum* (Hedw.) Limpr.: **Khm** [88], **Khs** [40, 109] – (!).
- Rhynchostegium** Bruch, Schimp. & W. Gümbel [Brachytheciaceae]
- *aquaticum* A. Jaeger (*R. muelleri* A. Jaeger): **Prm** [26, 48], **Sah** [24], **Kur** [23, 25] – (!), see note for *R. riparioides*.
 - *pallidifolium* (Mitt.) A. Jaeger: **Khs** [VLA, MHA], **Prm** [VLA, MHA], **Sah** [24], **Kur** [23].
 - *rotundifolium* (Scop. ex Brid.) Bruch, Schimp. & W. Gümbel: **Sah** [24, 36].
- Rhytidadelphus** (Limpr.) Warnst. [Hylocomiaceae]
- *japonicus* (Reimers) T.J. Kop.: **Khs** [65], **Prm** [26, 29], **Sah** [24], **Kur** [23, 25, 27, 141].
 - *squarrosus* (Hedw.) Warnst.: **Sah** [24, 36], **Kur** [21, 23, 25, 141].
 - *subpinnatus* (Lindb.) T.J. Kop.: **Am** [43], **Khm** [43, 88], **Khs** [109], **Prm** [MHA], **Sah** [24, 36], **Kur** [23, 27, 141].
 - *triquetrus* (Hedw.) Warnst.: **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [23, 25, 27].
- Rhytidium** (Sull.) Kindb. [Rhytidiaceae]

- *rugosum* (Hedw.) Kindb.: **Am** [4, 7, 8, 32, 35, 43, 56], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 48], **Sah** [24, 36], **Kur** [23].
- Rigodiadelphus** Dixon [Pseudoleskeaceae]
- *robustus* (Lindb.) Nog.: **Prm** [26, MHA], **Sah** [24, 36], **Kur** [21, 23, 25, 27].
- Saelania** Lindb. [Ditrichaceae]
- *glaucescens* (Hedw.) Broth.: **Am** [4, 7, 8, 32, 35, 56], **Khm** [41, 88], **Khs** [40, 65, 109, 123], **Prm** [26, 38, 48], **Sah** [24, 36], **Kur** [23].
- Sanionia** Loeske [Scorpidiaceae]
- *uncinata* (Hedw.) Loeske (*Drepanocladus uncinatus* (Hedw.) Warnst.): **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
- Sasaokaea** Broth. [Leskeaceae]
- *aomoriensis* (Paris) Kanda: **Khs** [126]; **Prm** [72].
- Schistidium** Bruch, Schimp. & W. Gumbel [Grimmiaceae]
- *agassizii* Sull. & Lesq.: **Khm** [88].
- *austrosibiricum* Ignatova & H.H. Blom: **Am** [56, 112].
- *bakalinii* Ignatova & H.H. Blom: **Sah** [24], **Kur** [25, 107].
- *crenatum* H.H. Blom: **Khs** [65].
- *elegantulum* H.H. Blom: **Prm** [33].
- *flacidum* (De Not.) Ochyra: **Sah** [24].
- *frigidum* H.H. Blom: **Khm** [33].
- *konoi* (Broth.) Ignatova & H.H. Blom: **Prm** [97], **Kur** [97].
- *lancifolium* (Kindb.) H.H. Blom: **Am** [32, 56, 97], **Khm** [97], **Khs** [65, 109], **Prm** [97], **Sah** [24], **Kur** [23, 25].
- *liliputanum* (Müll. Hal.) Deguchi: **Am** [56], **Khm** [88], **Prm** [97], **Sah** [24], **Kur** [23].
- *marginale* H.H. Blom, Bedn.-Ochyra & Ochyra: **Am** [56].
- *maritimum* (Sm. ex R. Scott) Bruch, Schimp. & W. Gumbel: **Sah** [24], **Kur** [23, 25, 141].
- *papillosum* Culm. (*S. strictum* auct.): **Am** [8, 56], **Khs** [109], **Prm** [26, 28, 29, 38, 48], **Sah** [24], **Kur** [21, 23].
- *platyphyllum* (Mitt.) Perss. (*S. alpicola* (Hedw.) Limpr. var. *alpicola*): **Am** [7, 56], **Prm** [26, 48], **Sah** [24].
- *pruinatum* (Wilson ex Schimp.) G. Roth: **Khs** [109].
- *pulchrum* H.H. Blom: **Am** [32, 56, 97], **Khm** [97], **Khs** [109, 39], **Prm** [97], **Sah** [24], **Kur** [23].
- *rivulare* (Brid.) Podp. (*S. alpicola* (Hedw.) Limpr. var. *rivulare* (Brid.) Limpr.): **Am** [8, 32], **Khm** [41, 88], **Khs** [109, 163], **Prm** [28, 48], **Sah** [24], **Kur** [21, 23] – (!).
- *sibiricum* Ignatova & H.H. Blom: **Am** [32, 56, 107], **Khs** [109], **Prm** [107], **Sah** [97].
- *sordidum* I. Hagen: **Khs** [65].
- *subjulaceum* H.H. Blom: **Am** [56].
- *tenuinerve* Ignatova & H.H. Blom: **Sah** [24], **Kur** [25].
- *trichodon* (Brid.) Poelt: **Sah** [24].
- *trichodon* var. *nutans* H.H. Blom: **Khm** [97], **Sah** [24].
- Schistostega** D. Mohr [Schistostegaceae]
- *pennata* (Hedw.) F.Weber & D. Mohr: **Am** [8, 32, 34, 56], **Khm** [41, 88], **Khs** [40, 65, 109], **Prm** [26, 48], **Sah** [24], **Kur** [23, 27].
- Schwetschkeopsis** Broth. [Pylaisiadelphaceae]
- *fabronia* (Schwägr.) Broth.: **Khs** [40], **Evr** [39], **Prm** [26, 28, 29, 38, 48].
- Sciuro-hypnum** (Hampe) Hampe [Brachytheciaceae]
- *brotheri* (Paris) Ignatov & Huttunen: **Sah** [24, 36], **Kur** [23].
- *curtum* (Lindb.) Ignatov: **Am** [32, 56, 84], **Khm** [88], **Khs** [109, 123], **Prm** [84], **Sah** [24], **Kur** [23, 25].
- *glaciale* (Bruch, Schimp. & W. Gumbel) Ignatov & Huttunen: **Sah** [24], **Kur** [141].
- *latifolium* (Kindb.) Ignatov & Huttunen: **Khm** [84, 88].
- *plumosum* (Hedw.) Ignatov & Huttunen (*Brachythecium plumosum* (Hedw.) Bruch, Schimp. & W. Gumbel): **Am** [8, 32, 56], **Khm** [84], **Khs** [40, 65, 109], **Evr** [39], **Prm** [26, 28, 29, 38, 48, 84], **Sah** [24, 36], **Kur** [21, 23, 25, 84].
- *populeum* (Hedw.) Ignatov & Huttunen (*Brachythecium populeum* (Hedw.) Bruch, Schimp. & W. Gumbel): **Am** [70], **Khm** [41, 84], **Khs** [40, 109, 163], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 71, 84], **Sah** [24, 36, 84], **Kur** [21, 23, 25, 27, 84].
- *reflexum* (Starke) Ignatov & Huttunen (*Brachythecium reflexum* (Starke) Bruch, Schimp. & W. Gumbel): **Am** [8, 32, 56], **Khm** [43, 88], **Khs** [65, 109], **Prm** [26, 28, 29, 38], **Sah** [24, 36], **Kur** [21, 23, 25, 27].
- *starkei* (Brid.) Ignatov & Huttunen (*Brachythecium starkei* (Brid.) Bruch, Schimp. & W. Gumbel): **Khm** [43], **Khs** [84, 109], **Prm** [26, 42, 84], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- *uncinifolium* (Broth. & Paris) Ochyra & Żarnowiec: **Khs** [109], **Prm** (VLA, MHA) **Sah** [24], **Kur** [21, 23, 25, 141].
- Scopelophila** (Mitt.) Lindb. [Pottiaceae]
- *ligulata* (Spruce) Spruce: **Prm** [26].
- Scorpidium** (Schimp.) Limpr. [Scorpidiaceae]
- *cossonii* (Schimp.) Hedenäs (*Drepanocladus intermedius* (Lindb.) Warnst.): **Am** [34], **Sah** [24], **Kur** [25].
- *revolvens* (Sw. ex anon.) Rubers (*Drepanocladus revolvens* (Sw.) Warnst.): **Am** [8, 34], **Khm** [43], **Khs** [65], **Sah** [24], **Kur** [21, 25].
- *scorpioides* (Hedw.) Limpr.: **Kur** [21, 23].
- Scouleria** Hook. [Scouleriaceae]
- *pulcherrima* Broth.: **Am** [32, 110], **Khm** [110].
- Seligeria** Bruch, Schimp. & W. Gumbel [Seligeriaceae], see also *Blindiadelphus*
- *calcareia* (Hedw.) Bruch, Schimp. & W. Gumbel: **Prm** [97], **Sah** [97].
- *donniana* (Sm.) Müll. Hal.: **Am** [58, 56], **Prm** [97].
- *pusilla* (Hedw.) Bruch, Schimp. & W. Gumbel: **Prm** [97].
- *tristichoides* Kindb.: **Am** [56, 58], **Prm** [97], **Kur** [97].
- Sphagnum** L. [Sphagnaceae]
- *alaskense* R.E. Andrus & Janssens: **Am** [56, 139], **Khm** [138], **Khs** [65, 163], **Sah** [24], **Kur** [23, 138].
- *angustifolium* (C.E.O. Jensen ex Russow) C.E.O. Jensen: **Am** [4, 7, 8, 32, 35, 56], **Khm** [41, 43, 88], **Khs** [109, 123], **Evr** [39], **Prm** [26, 38], **Sah** [24, 36], **Kur** [21].
- *aongstroemii* Hartm.: **Am** [8, 34, 43, 56], **Khm** [41, 43, 88], **Khs** [65], **Sah** [24], **Kur** [23].
- *auriculatum* Schimp.: **Am** [4].
- *balticum* (Russow) C.E.O. Jensen: **Am** [4, 7, 8, 43, 56], **Khm** [43, 88], **Khs** [40, 109], **Prm** [29], **Sah** [24, 36].
- *beringiense* A.J. Shaw, R.E. Andrus & B. Shaw: **Am** [56, 138], **Khm** [138], **Khs** [65], **Prm** [138].
- *capillifolium* (Ehrh.) Hedw. (*S. nemoreum* Scop.): **Am** [34, 43, 56], **Khm** [43, 88], **Khs** [109, 123], **Prm** [26, 38], **Sah** [24, 36], **Kur** [21, 23, 25].
- *centrale* C.E.O. Jensen: **Am** [4, 7, 8, 32], **Khs** [40], **Evr** [39], **Prm** [26, 38], **Sah** [24, 36], **Kur** [21].
- *compactum* Lam. & DC.: **Am** [7, 8, 35, 56], **Khm** [43, 88], **Khs** [65, 109, 123], **Sah** [24], **Kur** [21, 23, 25, 141].
- *contortum* Schultz: **Am** [7, 8, 32, 70], **Khm** [43], **Evr** [39], **Prm** [26, 38], **Sah** [24], **Kur** [21, 23, 141] – (!).
- *cuspidatum* Ehrh. ex Hoffm.: **Am** [43], **Sah** [36].
- *divinum* Flatberg & Hassel (*S. magellanicum* auct.): **Am** [4, 7, 8, 32, 35, 43, 56], **Khm** [41, 43, 88], **Khs** [40, 109, 123], **Evr** [39], **Prm** [26, 29, 38], **Sah** [24, 36], **Kur** [23] – (!).

- *fallax* (H. Klinggr.) H. Klinggr.: **Am** [4, 8, 43, 56], **Khm** [43], **Khs** [40, 109, 123], **Evr** [39], **Prm** [72], **Sah** [24, 36], **Kur** [21, 23, 25, 127].
- *fimbriatum* Wilson: **Am** [7, 8, 32], **Khm** [41, 43, 88], **Khs** [109], **Evr** [39], **Prm** [26, 29], **Sah** [24, 36], **Kur** [21, 23, 27, 127].
- *flexuosum* Dozy & Molk.: **Am** [32, 56, 70], **Khm** [88], **Khs** [40, 109], **Prm** [26, 38], **Sah** [24], **Kur** [23].
- *fuscum* (Schimp.) H. Klinggr.: **Am** [4, 7, 8, 32, 35, 43, 56], **Khm** [43, 88], **Khs** [40], **Evr** [39], **Prm** [26, 38], **Sah** [24, 36], **Kur** [23, 25].
- *girgensohnii* Russow: **Am** [4, 7, 8, 32, 35, 43, 56], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123], **Evr** [39], **Prm** [26, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- *imbricatum* Hornsch. ex Russow: **Am** [4, 32, 34, 43, 56, 137, 139], **Evr** [39, 137], **Prm** [26, 29, 137], **Kur** [23].
- *inexpectatum* Flatberg: **Prm** [IRK], **Kur** [25].
- *inundatum* Russow: **Khs** [109], **Sah** [24, 36], **Kur** [23].
- *jenshii* H. Lindb.: **Am** [34, 56], **Khm** [88], **Sah** [24, 36], **Kur** [23].
- *lenense* H. Lindb. ex L.I. Savicz: **Am** [7, 8, 43, 56], **Khm** [43, 88], **Khs** [123], **Prm** [38], **Sah** [24, 36].
- *lindbergii* Schimp.: **Am** [34, 56], **Khm** [43, 88], **Sah** [24, 36], **Kur** [21].
- *majus* (Russow) C.E.O. Jensen: **Am** [69], **Sah** [24].
- *mirum* Flatberg & Thinggaard: **Am** [56].
- *miyabeanum* Warnst.: **Kur** [25].
- *obtusum* Warnst.: **Am** [4, 7, 8, 32, 56, 69], **Khm** [88], **Khs** [109], **Prm** [26, 29, 38], **Sah** [24, 36], **Kur** [23].
- *orientale* L.I. Savicz: **Am** [4, 7, 8, 32, 69], **Khs** [40], **Prm** [26, 28, IRK].
- *palustre* L.: **Am** [43], **Khm** [41, 43, 88], **Prm** [26, 28], **Sah** [24, 36], **Kur** [23, 25, 127].
- *papillosum* Lindb.: **Am** [34], **Sah** [24, 36], **Kur** [21, 23, 25, 128].
- *perfoliatum* L.I. Savicz: **Am** [56], **Kur** [23].
- *platyphyllum* (Lindb. ex Braithw.) Warnst.: **Am** [34], **Prm** [29], **Sah** [24, 36], **Kur** [25].
- *pulchrum* (Lindb. ex Braithw.) Warnst.: **Kur** [23, 25, 128].
- *pungifolium* X.J. Li: **Sah** [24].
- *quinquefarium* (Lindb. ex Braithw.) Warnst.: **Sah** [24], **Kur** [21, 141].
- *riparium* Ångstr.: **Am** [34, 32, 43, 56], **Khm** [43, 88], **Khs** [109], **Sah** [24, 36], **Kur** [21, 23, 141].
- *rubellum* Wilson: **Am** [7, 8, 56], **Khs** [40, 109], **Sah** [24, 36], **Kur** [23].
- *rubiginosum* Flatberg: **Khs** [11, 109, 163], **Sah** [24].
- *russowii* Warnst.: **Am** [7, 8, 32, 43, 56], **Khm** [43, 88], **Khs** [109, 123, 163], **Prm** [38], **Sah** [24, 36], **Kur** [21, 23, 128].
- *squarrosus* Crome: **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 65, 109, 123], **Evr** [39], **Prm** [26, 28, 29, 38, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
- *steerei* R.E. Andrus: **Sah** [24].
- *subfulvum* Sjörs: **Am** [32], **Kur** [23, 25].
- *subnitens* Russow & Warnst.: **Am** [34].
- *subsecundum* Nees: **Am** [32, 34], **Khm** [MHA], **Prm** [26, 29, 38], **Sah** [24, 36], **Kur** [21, 23, 25].
- *subtile* (Russow) Warnst.: **Kur** [23].
- *tenellum* (Brid.) Pers. ex Brid.: **Am** [56], **Sah** [24, 36], **Kur** [21, 25, 128].
- *teres* (Schimp.) Ångstr.: **Am** [4, 7, 8, 32, 43, 56, 70], **Khm** [41, 88], **Khs** [109], **Evr** [39], **Prm** [38], **Sah** [24, 36], **Kur** [21, 23, 25, 27].
- *tundrae* Flatberg: **Am** [56, 57], **Khs** [109].
- *warnstorffii* Russow: **Am** [4, 7, 8, 34, 32, 43], **Khm** [43, 88], **Khs** [65, 109], **Sah** [24, 36], **Kur** [21, 23, 25, 27].
- *wulfianum* Girg.: **Am** [8, 43], **Prm** [38], **Sah** [24, 36].
- Splachnum* Hedw. [Splachnaceae]
- *ampullaceum* Hedw.: **Am** [35, 130], **Khs** [109].
- *luteum* Hedw.: **Am** [MW], **Khm** [99].
- *rubrum* Hedw.: **Am** [8], **Khm** [43, 88], **Khs** [131], **Prm** [38].
- *sphaericum* Hedw.: **Khm** [88].
- Stereodon* (Brid.) Mitt. [Pylaisiaceae]
- *bambergeri* (Schimp.) Lindb.: **Khs** [163], **Sah** [24] – (!!).
- *callicola* (Ando) Afonina & Cherd.: **Am** [56], **Prm** [13].
- *callichrous* (Brid.) Lindb. var. *japonicus* Ando: **Am** [35], **Khm** [43, 88], **Prm** [26, 133], **Kur** [141] – (!!).
- *densirameus* (Ando) Afonina & Ignatova (*Hypnum densirameum* Ando): **Am** [32], **Khs** [13], **Prm** [13, 42], **Kur** [13, 23].
- *dieckei* (Renauld & Cardot) Broth.: **Kur** [13, 23, 25].
- *fauriei* (Cardot) Afonina (*Hypnum fauriei* Cardot): **Am** [8, 13, 32, 56], **Khm** [13, 88], **Khs** [163], **Evr** [39], **Prm** [13, 26, 28, 38, 42, 48].
- *hamulosus* (Bruch, Schimp. & W. Gümbel) Lindb.: **Khm** [88], **Kur** [MHA] – (!!).
- *holmenii* (Ando) Ignatov & Ignatova: **Am** [32], **Khm** [9], **Khs** [65], **Kur** [23, MHA].
- *pallescens* (Hedw.) Mitt. (*Hypnum pallescens* (Hedw.) P. Beauv.): **Am** [8, 32, 56], **Khm** [88], **Khs** [40, 109, 123, 163], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 71], **Sah** [24, 36], **Kur** [21, 23, 25].
- *plicatulus* Lindb. (*Hypnum plicatum* (Lindb.) A. Jaeger): **Am** [9, 32, 34, 56, 70], **Khm** [41, 43, 88], **Khs** [65, 109, 123], **Evr** [39], **Prm** [26, 29, 38, 48], **Sah** [24, 36], **Kur** [9, 21, 23, 25, 27, 141].
- *plumiformis* (Wilson) Mitt. (*Hypnum plumiforme* Wilson): **Prm** [13, 26, 29, 37], **Kur** [23, 127].
- *procerrimus* (Molendo) Bauer: **Sah** [24].
- *subimponens* (Lesq.) Broth. var. *subimponens*: **Am** [56], **Prm** [9], **Kur** [23, MHA].
- *subimponens* var. *ulophyllum* (Müll. Hal.) Afonina: **Khm** [9].
- *vaucheri* (Lesq.) Lindb. ex Broth. (*Hypnum vaucheri* Lesq.): **Am** [56], **Prm** [26, 29, 28], **Sah** [24].
- Straminergon* Hedenäs [Calliergonaceae]
- *stramineum* (Dicks. ex Brid.) Hedenäs (*Calliergon stramineum* (Dicks. ex Brid.) Kindb.): **Am** [4, 7, 8, 32, 43, 56], **Khm** [43, 88], **Khs** [109, 123], **Prm** [29, 38], **Sah** [24, 36], **Kur** [21, 23, 25, 141].
- Streblotrichum* P. Beauv.
- *convolutum* (Hedw.) P. Beauv. (*Barbula convoluta* Hedw.): **Prm** [26, 28, 130], **Sah** [24].
- Struckia* Müll. Hal. [Plagiotheciaceae]
- *enervis* (Broth.) Ignatov, T.J. Kop. & D.G. Long: **Khm** [59].
- Symblepharis* Mont. [Dicranaceae]
- *vaginata* (Hook.) Wijk & Margad.: **Prm** [16].
- Syntrichia* Brid. [Pottiaceae]
- *amphidiacea* (Müll. Hal.) R.H. Zander: **Prm** [14].
- *laevipila* Brid. (*Tortula laevipila* (Brid.) Schwägr.): **Am** [32, MHA], **Khm** [145], **Khs** [109], **Prm** [26, 28] – (!!).
- *norvegica* F. Weber: **Sah** [24], **Kur** [21].
- *pagorum* Milde: **Am** [56], **Khm** [MW] – (!!).
- *ruralis* (Hedw.) F. Weber & D. Mohr (*Tortula ruralis* (Hedw.) G. Gaertn., B. Mey. & Scherb.): **Khs** [131], **Sah** [24], **Kur** [21].
- *sinensis* (Müll. Hal.) Ochyra (*Tortula sinensis* (Müll. Hal.) Broth.): **Am** [18, 56], **Prm** [18, 26, 29, 28].
- Taxiphyllum* M. Fleisch. [Taxiphyllaceae]
- *alternans* (Cardot) Z. Iwats.: **Prm** [26].
- *aomoriense* (Besch.) Z. Iwats.: **Am** [70], **Khs** [40], **Evr**

- [39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [23, 27].
- *taxiphyloides* (Ando & Higuchi) Higuchi: **Prm** [75].
 - *taxirameum* (Mitt.) M. Fleisch.: **Am** [70], **Khs** [40, 131], **Prm** [26, 28, 42, 48, 71], **Kur** [25].
- Tayloria* Hook. [Splachnaceae]
- *lingulata* (Dicks.) Lindb.: **Sah** [24].
- Tetraphis* Hedw. [Tetraphidaceae]
- *geniculata* Girg. ex Milde: **Khm** [41], **Khs** [40, 65, 109, 123, 131], **Prm** [26, 28, 29, 38], **Sah** [24, 36], **Kur** [23, 27].
 - *pellucida* Hedw.: **Am** [4, 7, 8, 32, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 109, 123, 131, 163], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [23].
- Tetraplodon* Bruch, Schimp. & W. Gümbel [Splachnaceae]
- *angustatus* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 43, 56], **Khm** [41, 88], **Khs** [109, 123], **Prm** [130], **Sah** [24, 36], **Kur** [23].
 - *nnioides* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [8, 34, 35], **Khm** [88], **Khs** [65, 123], **Prm** [26, 38, 130], **Sah** [24], **Kur** [21, 23, 141].
- Tetrodontium* Schwägr. [Tetraphidaceae]
- *ovatum* (Funck) Schwägr. (*T. brownianum* var. *ovatum* (Funck) Wijk & Margad.): **Khm** [97].
 - *repandum* (Funck) Schwägr.: **Khm** [88], **Sah** [156], **Kur** [23, 25, 46].
- Thamnobryum* Nieuwl. [Neckeraceae]
- *coreanum* (Cardot) Nog. & Z. Iwats.: **Prm** [102], **Sah** [24].
 - *neckeroides* (Hook.) E. Lawton (*T. obtusatum* (Lindb. & Arnell) Bard. & Cherd., *T. vorobjovii* (Laz.) Ochrya): **Khs** [109], **Prm** [26, 28, 29, 38, 42, 48, 102], **Sah** [24], **Kur** [23, 25, 102].
 - *subseriatum* (Mitt. ex Sande Lac.) B.C. Tan (*Thamnobryum sandei* (Besch.) Z. Iwats.): **Prm** [28, 102], **Kur** [23].
 - *subseriatum* (Hook. ex Harv.) Nog. & Z. Iwats.: **Prm** [102], **Kur** [23, 102].
- Thuidium* Bruch, Schimp. & W. Gümbel [Thuidiaceae]
- *assimile* (Mitt.) A. Jaeger (*T. philibertii* Limpr.): **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [41, 88], **Khs** [40, 65, 109, 123, 131, 163], **Evr** [4, 39], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [23].
 - *cymbifolium* (Dozy & Molk.) Dozy & Molk.: **Khs** [40], **Prm** [26, 28, 29, 42, 71], **Kur** [113].
 - *delicatulum* (Hedw.) Bruch, Schimp. & W. Gümbel: **Am** [7, 8, 34, 132], **Khm** [132], **Sah** [24], **Kur** [23, 25, 27] – (!).
 - *glaucinoides* Broth.: **Prm** [72], **Kur** [23, 25].
 - *kanedae* Sakurai: **Prm** [5, 26], **Kur** [23, 27].
 - *pristocalyx* (Müll. Hal.) A. Jaeger (*Thuidium glaucinum* (Mitt.) Bosch & Sande Lac.): **Am** [5], **Khs** [40], **Evr** [39], **Prm** [26, 29, 38], **Kur** [23].
 - *subglaucinum* Cardot: **Prm** [45], **Kur** [113].
 - *submicropteris* Cardot: **Khs** [40], **Evr** [39], **Prm** [5, 26, 28, 29, 48], **Kur** [5, 23, 27].
 - *tamariscinum* (Hedw.) Bruch, Schimp. & W. Gümbel: **Sah** [24, 36], **Kur** [23, 25, 27].
- Timmia* Hedw. [Timmiaceae]
- *bavarica* Hessel.: **Am** [8, 56], **Sah** [24].
 - *comata* Lindb. & Arnell: **Am** [56], **Sah** [24].
 - *megapolitana* Hedw.: **Am** [32, 56], **Khm** [88], **Prm** [26, 28], **Sah** [24].
 - *norvegica* J.E. Zetterst.: **Khm** [88], **Kur** [27, 23].
- Timmiella* (De Not.) Limpr. [Pottiaceae]
- *anomala* (Bruch & Schimp.) Limpr.: **Am** [4, 56], **Prm** [26].
- Tomentypnum* Loeske [Amblystegiaceae]
- *nitens* (Hedw.) Loeske: **Am** [4, 7, 8, 32, 35, 56, 70], **Khm** [43], **Khs** [40, 109], **Evr** [39], **Prm** [132], **Sah** [24], **Kur** [21].
- Tortella* (Müll. Hal.) Limpr. [Pottiaceae]
- *alpicola* Dixon: **Sah** [24].
 - *fragilis* (Hook. & Wilson) Limpr.: **Am** [7, 8, 56], **Khs** [109], **Sah** [24, 36], **Kur** [23, 25].
 - *inclinata* (R. Hedw.) Limpr.: **Prm** [130].
 - *tortuosa* (Hedw.) Limpr.: **Am** [7, 8, 32, 56], **Khm** [88], **Prm** [MHA], **Sah** [24], **Kur** [23, 25].
- Tortula* Hedw. [Pottiaceae]
- *acaulon* R.H. Zander: **Prm** [MHA].
 - *cernua* (Huebener) Lindb.: **Prm** [146], **Kur** [23].
 - *edentula* Ignatova & Ignatov: **Kur** [23, 82].
 - *hoppeana* (Schultz) Ochrya: **Khm** [88], **Sah** [24].
 - *mucronifolia* Schwägr.: **Khs** [130], **Prm** [26, 130], **Sah** [24].
 - *truncata* (Hedw.) Mitt. (*Pottia truncata* (Hedw.) Bruch & Schimp.): **Prm** [26, 28].
 - *ucrainica* (Laz.) R.H. Zander (*Desmatodon ucrainicus* Laz.): **Prm** [130] – (!).
- Trachycystis* Lindb. [Mniaceae]
- *flagellaris* (Sull. & Lesq.) Lindb.: **Khm** [41], **Khs** [40, 123, 131], **Prm** [26, 28, 29, 38, 42, 48, 71], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].
 - *microphylla* (Dozy & Molk.) Lindb.: **Khs** [40], **Prm** [26, 29], **Sah** [24].
 - *ussuriensis* (Maack & Regel) T.J. Kop. (*Mnium ussuriense* Maack & Regel, *Mnium immarginatum* Broth.): **Am** [4, 7, 8, 32, 56, 70], **Khm** [41, 43, 88], **Khs** [40, 131], **Evr** [39], **Prm** [26, 28, 29, 38, 42, 48], **Sah** [24, 36], **Kur** [21, 23].
- Trematodon* Michx. [Bruchiaceae]
- *ambiguus* (Hedw.) Hornsch.: **Khm** [145], **Prm** [26], **Sah** [24], **Kur** [23].
 - *longicollis* Michx.: **Khm** [88], **Sah** [24], **Kur** [23, 113].
- Trichodon* Schimp.
- *cylindricus* (Hedw.) Schimp. (*Ditrichum cylindricum* (Hedw.) Grout): **Am** [8, 32, 56], **Khm** [41, 88], **Khs** [109], **Evr** [39], **Prm** [26, 29], **Kur** [23].
- Trichostomum* Bruch [Pottiaceae]
- *crispulum* Bruch: **Am** [7, 8, 32, 56], **Prm** [26, 28], **Kur** [23].
- Ulotia* D. Mohr [Orthotrichaceae]
- *crispula* Bruch: **Khm** [99], **Khs** [62], **Sah** [62], **Kur** [62] – (!).
 - *crispa* (Hedw.) Brid.: **Am** [32], **Prm** [26, 28, 29, 42, 48, 62].
 - *curvifolia* (Wahlenb.) Sw.: **Am** [8, 34], **Khm** [88], **Khs** [131].
 - *drummondii* (Hook. & Grev.) Brid.: **Prm** [26], **Sah** [24, 36, 62], **Kur** [21, 23, 62, 141].
 - *intermedia* Schimp.: **Khm** [62], **Khs** [62], **Prm** [62], **Sah** [62], **Kur** [62].
 - *japonica* (Sull. & Lesq.) Mitt.: **Khs** [99], **Prm** [99, 62], **Sah** [24, 36, 62], **Kur** [23, 62].
 - *orientalis* Fedosov & Ignatova: **Khs** [62], **Sah** [99], **Kur** [IRK].
 - *pacifica* Fedosov & Ignatova: **Sah** [99], **Kur** [62].
 - *rehmannii* Jur.: **Am** [56, 62], **Khm** [62], **Khs** [62], **Prm** [62], **Sah** [62], **Kur** [62].
 - *reptans* Mitt.: **Am** [56, 99], **Khm** [88, 62], **Khs** [109, 62], **Sah** [24, 62] – (!).
- Venturiella* Müll. Hal. [Erpodiaceae]
- *sinensis* (Venturi) Müll. Hal.: **Prm** [66].
- Vesicularia* (Müll. Hal.) Müll. Hal. [Pylaisiaceae]

– *flaccida* (Sull. & Lesq.) Z. Iwats.: **Prm** [26, 29, 28].

Warnstorfia Loeske [Calliergonaceae]

– *exannulata* (Bruch, Schimp. & W. Gümbel) Loeske (*Drepanocladus exannulatus* (Bruch, Schimp. & W. Gümbel) Warnst.): **Am** [4, 8, 32, 34, 56], **Khm** [43, 88], **Khs** [40, 65, 109], **Prm** [26, 28], **Sah** [24, 36], **Kur** [21, 23].

– *fluitans* (Hedw.) Loeske (*Drepanocladus fluitans* (Hedw.) Warnst.): **Am** [4, 34, 43, 56], **Khm** [41, 43], **Khs** [40], **Evr** [39], **Prm** [38], **Sah** [24, 36], **Kur** [21, 23, 25, 27, 141].

– *procera* (Renauld & Arnell) Tuom. (*Drepanocladus procera* (Renauld & Arnell) Warnst.): **Am** [132].

– *pseudostraminea* (Müll. Hal.) Tuom. & T.J. Kop.: **Sah** [24], **Kur** [23, 128].

– *sarmentosa* (Wahlenb.) Hedenäs (*Calliergon sarmentosum* (Wahlenb.) Kindb., *Sarmentypnum sarmentosum* (Wahlenb.) Tuom. & T.J. Kop.): **Am** [8, 43, 56], **Khm** [88], **Khs** [65], **Kur** [21, 25].

– *trichophylla* (Warnst.) Tuom. & T.J. Kop.: **Sah** [104].

– *tundrae* (Arnell) Loeske – **Khm** [88].

Weissia Hedw. [Pottiaceae]

– *brachycarpa* (Nees & Hornsch.) Jur.: **Am** [32, 34, 56], **Khs** [40, 109], **Prm** [26, MHA].

– *controversa* Hedw.: **Am** [32], **Prm** [26, 28, 29, 38], **Sah** [24], **Kur** [23, 25].

– *edentula* Mitt.: **Khm** [88].

– *longifolia* Mitt.: **Prm** [94].

– *planifolia* Dixon: **Prm** [26, 48] – (!).

– *rutilans* (Hedw.) Lindb.: **Am** [32], **Prm** [26, 29, 28].

Zygodon Hook & Taylor [Orthotrichaceae]

– *sibiricus* Ignatov, Ignatova, Z. Iwats. & B.C. Tan: **Am** [8, 32, 56], **Khm** [41, 88], **Khs** [109], **Prm** [26, 29, 42], **Sah** [24] – (!).

Comments on species doubtful and erroneously reported from at least some regions

(species are given in the checklist with (!))

Amblystegium radicale was reported for Primorsky Territory by Bardunov & Cherdantseva [26], however no one specimen was confirmed in the course of the present revision, so its occurrence in RFE seems doubtful, though not impossible.

Amblystegium serpens var. *juratzkanum* is not separated from *A. serpens* by most authors.

Atrichum tenellum: according to Cherdantseva (unpubl.), records of *Atrichum tenellum* from Primorsky Territory [26, 27] are erroneous, however this mainly European species occurs in Asian Russia as a rare adventive plant.

Brachythecium campestre: earlier it was cited for many regions of the Russian Far East. In the refined sense of the species it seems to be rare in the region [93].

Brachythecium rutabulum: early records of *Brachythecium rutabulum* from Sakhalin after revision of the samples were relegated by Cherdantseva to *B. rivulare*. Records from Prm she also considered to be doubtful. Most likely, the Far Eastern plants belong to a separate species, while the *B. rutabulum* s. str. does not occur in the Russian Far East at all.

Brachythecium salebrosum: variation of this species in the Russian Far East exceeds what is known in other regions, and it is likely that so-called specimens represent another species, but until a special study will be conducted, there is no better choice than to retain this name for specimens which we leave. All known reports of this species from the Russian Far East are doubtful and awaiting a special revision.

Bucklandiella sudetica was reported from Prm [72], however, we could not locate specimens in herbaria; the occurrence of this northern and high mountain species in Vladivostok area is highly unlikely.

Campylophyloopsis hispidulum (*Campylidium hispidulum*, *Campylium hispidulum*) was thought to be an American species by [73]. It remains unclear if *C. hispidulum* occurs in Asia, and if so, what are its distinctions from *C. sommerfeltii*, and what are their distribution ranges in Asia.

Campylopus fragilis: record from Prm [72] can not be checked as the specimen was lost. Previously this species was considered in broader sense.

Codriophorus acicularis (*Racomitrium aciculare*): records from Am [8], Khm [88] were erroneous [97].

Coscinodon cribrus: the specimen from Khm, Badzhall Range, lacks sporophytes, thus it was tentatively referred to *C. cribrus* basing only on gametophyte traits, ecology and our knowledge about distribution of *Coscinodon* species in the Russian Far East.

Cynodontium polycarpon: all record from the Russian Far East are doubtful, as this species was earlier understood in a broader sense.

Dicranella subsecunda: status and distribution of this species are still poorly known.

Dicranum lorifolium: Lang & Stech [128a] in the course of molecular phylogenetic analysis revealed separate position of *Dicranum* samples from Primorsky Territory, which form a well supported clade sister to *D. japonicum*. They referred these specimens to *Dicranum* cf. *lorifolium* Mitt. (described from Himalayas).

Entodon diversinervis: all specimens found in VLA which were previously referred to this species were reidentified as *E. scabridens*; however, we have not seen specimens of Lazarenko.

Flexitrichum gracile: for a long time this species has not been distinguished from *F. flexicaule*, so distribution of both species in Russian Far East needs in revision. The former species is more common in the area.

Fissidens osmundoides: before ca. 2000 this name was often erroneously applied to *F. gymnogynus*, e.g. in Prm [26, 29], so its distribution in the Russian Far East remains insufficiently known.

Forsstroemia stricta and *F. producta* (Hornsch.) Paris comprise a taxonomic problem. Lazarenko [131] in original description and later Ignatov & Cherdantseva [81] thought that the plants are dioicous, likely partly due to a relatively small collection of *Forsstroemia stricta*. However, recent collections provided evidence that the species is autoicous, and therefore almost totally fits the description of pantropical *F. producta*. At the same time, preliminary molecular data indicate possible difference between American (from where *F. producta* was described) and Afro-Asian population, thus we prefer reserve *Forsstroemia stricta* as a name for Asian plants.

Forsstroemia trichomitria: record from Am [7] is based on specimen later re-identified as *Cryphaea amurensis*.

Glyphomitrium humillimum (Mitt.) Cardot (*G. warburgii* auct.): we provide here the names under which it was cited in Russia, but its taxonomic identity remains unclear.

Grimmia donniana: records from Khm [88] are based on erroneous identifications, records from Prm [26] have to be revised.

Herzogiella striatella: no vouchers were found in the

course of the present revision, we consider its occurrence in the Russian Far East as doubtful.

Leptodictyum riparium was reported from **Am** [8, 7], but no one specimen was found in herbaria.

Leptodontium styriacum (Jur.) Limpr. was recorded from **Prm** [26], but later its records were referred to *L. flexifolium* [90]. However, this genus needs in a revision. It is likely that two species occur in Russia, including Russian Far East, but nomenclature of these species remains unclear.

Lescuraea mutabilis (Brid.) Lindb.: record from **Khs** [123] is probably erroneous and belongs to *L. saxicola*, which was included in *L. mutabilis* as a variety in some taxonomic treatments.

Lewinskya elegans is reported based on partly revised collections of *L. speciosa*, which does not occur eastward Ural [99].

Lewinskya rupestris (*Orthotrichum rupestre*): records from **Prm** [26] have to be confirmed.

Lewinskya striata: records from the Russian Far East belong to *L. transcaucasica* [99].

Lindbergia (incl. *Mamillariella*) in Russia was revised by Ignatova et al. [108], resulting in exclusion of *L. brachyptera*, *L. duthei* and *L. japonica* from moss flora of Russia.

Macromitrium japonicum: records from **Sah** [24], **Kur** [23] were found to be erroneous [99], however later in IRK we found this species in **Kur**.

Mielichhoferia: revision by Tubanova et al. [158] found that records of *M. japonica* from **Sah** [24], belong to *M. asiatica*. Some unrevised records of *M. mielichhoferiana* from **Prm** [38], most likely also belong to *M. asiatica*.

Miyabea rotundifolia was reported from from **Prm** [26, 132], but all so-named specimens studied by us were found to be *M. fruticella*.

Mnium laevinerve was reported from **Khs** [40], **Prm** [26, 29, 42, 131]. T.J. Koponen synonymized it with *M. lycopodioides* [99].

Mnium orientale: all records of *Mnium hornum* from the Russian Far East belong to *Mnium orientale* [99].

Myurella tenerrima (Brid.) Lindb. was reported for **Prm** basing on [132] record for Kedrovaya Pad Reserve, which is likely an error; recent lists of this reserve [71, 75a] do not include this species.

Neckeropsis nitidula was reported from South Sakhalin by Sugawara [153]; it was not collected since then in the area and voucher specimens were not located. So this record seems to be doubtful.

Oncophorus is considered here according to the taxonomic revision by Hedenäs [74], though only few most recent collections were identified basing on his splitting concept, in particular, specimens from Badzhal Range (**Khm**) and Zeya State Reserve (**Am**). Distribution of *O. wahlenbergii* s.str. (incl. *O. compactus*) and *O. elongatus*, as well as other species, which have not been found in considered area yet, need in further study.

Oxyrinchium savatieri: record from **Prm** [72] can not be confirmed, as the specimen was lost. This is a rare species, known in Russia only from southern Kuril Islands.

Philonotis capillaris was found to be composed of two different lineages in Russia [124]; one lineage from the Russian Far East, reported from **Am** [32] and **Khs** [109]. After additional study these specimens were re-identified [89].

However, plants with morphological characters of *P. capillaris* were later collected in **Am** [56]; taxonomy of this group needs an additional study.

Philonotis tomentella: records of this species from **Khm** [43] and **Kur** [21] were not confirmed by the recent revision [124].

Physcomitrium acuminatum remains a poorly known taxon, its occurrence in Russian Far East remains to be confirmed [97].

Plagiobryum: species delimitation and distribution was revised and changed considerably in ФМР-4, with a number of reconsideration of species identity in various previous records.

Plagiomnium japonicum: record from **Am** [8] is not confirmed and likely erroneous.

Plagiothecium cavifolium according to our observations does not differ from *P. succulentum* (reported from **Prm** [26, 29, 133]), although the problem of species delimitation requires further studies.

Plagiothecium cordifolium remains insufficiently known species, regarding both its status and distribution.

Plagiothecium platycladum remains insufficiently known species, regarding both its status and distribution.

Plagiothecium succulentum: according to our observations, this species does not differ from *P. cavifolium*, although collections from the Russian Far East were not specially revised.

Pohlia sphagnicola remains a poorly known species, requiring special revision.

Pylaisia curviramea: morphological differentiation of this species from *P. polyantha* is not very distinct, although molecular data support its independent status [19].

Rhizomnium pseudopunctatum: according to [95], records of this species from **Khm** and **Sah** belong to *R. magnifolium*.

Rhodobryum roseum was repeatedly reported instead of *R. ontariense* in old publications, e.g. in **Am** [7, 8, 35], before the latter species was assumed as a more common in many regions of Asian Russia. However, *R. roseum* is rare in the south and usually avoids calcareous substrates.

Sphagnum contortum: according to a preliminary revision of A.I. Maksimov [140], *S. contortum* does not occur in the Russian Far East. Majority of so called specimens belong to closely related *S. beringiense*.

Sphagnum divinum Brid.: all specimens from the Russian Far East referred previously to *S. magellanicum* belong to this species, based on study of Hassel et al. [72a]; our revision of specimens from the study area confirms this conclusion.

Stereodon bambergeri: collection from **Prm** [26] belongs to *Hyppnum cupressiforme*.

Stereodon callichrous: record of this species from **Prm** [26, 133] likely belongs to *S. callichrous* var. *japonicus* Ando.

Stereodon hamulosum: all records from the Russian Far East need in revision; it is likely that this species does not occur in the area.

Syntrichia laevipila: records from the Russian Far East likely belong to *S. pagorum*.

Thuidium delicatulum: records from **Prm** [26, 29, 42] were considered by Cherdantseva (unpublished) to be erroneous.

Tortula ucrainica: this species is almost inseparable

from *T. cernua* and its taxonomic independence requires confirmation [89].

Ulota crispula: material from the Russian Far East likely belongs to undescribed species closely related to *U. crispula* (62, 99).

Ulota reptans was reported from **Prm** by Gorobets [72], but specimens were not available and record seems doubtful.

Weissia planifolia was reported from **Prm** by [26] under the name *W. platyphylla* Broth., which is illegitimate.

List of excluded species

(not included in the check-list)

Anacamptodon splachmoides (Froel. ex Brid.) Brid. was recorded for **Prm** [26] as a doubtful species; Czernyadjeva [53] excluded it from Asian Russia.

Anoetangium stracheyanum Mitt. and *A. thomsonii* Mitt. is a problematic pair of species. Ignatova [100] thought the former name is preferable, however later it became clear that the usage of *A. thomsonii* for Russian plants should be reinstated.

Anomobryum julaceum (Schrad ex G. Gaertn., B. Mey. & Scherb.) Schimp.: this name was for a long time used for Russian plants instead of *Anomobryum concinnatum*, moreover the latter species was occasionally treated as a variety of *A. julaceum*; *A. julaceum* s. str. was never found in Russia [55].

Anomodon abbreviatus Mitt.: record from **Prm** [44] based on erroneous identification of *A. solovjovii*.

Astomum multicapsulare (Sm.) Bruch, Schimp. & W. Gümbel was reported from **Prm** [147]; however Bardunov & Cherdantseva considered this record doubtful [26].

Atractilcarpus alpinus (Schimp. ex Milde) Lindb. was excluded from Russian moss flora [90].

Aulacomnium androgynum (Hedw.) Schwägr. was reported from Sakhalin by Sugawara [153]. We consider this record as erroneous, as the species was never found in Asian Russia and we never saw any correctly identified East Asian collections.

Blindiadelphus campylopodus (Kindb.) Fedosov & Ignatov (*Seligeria campylopada* Kindb.) was reported from Khabarovsk Territory [47] and Sakhalin [24] and Kuriles [23], however all so-named specimens were referred later to *B. diversifolius* [97].

Blindiadelphus recurvatus (Hedw.) Fedosov & Ignatov was erroneously recorded for **Sah** instead of **Prm** [97].

Brotherella yokobamae (Broth.) Broth.: all records of this species from the Russian Far East belong to *Pylaisiadelphus tenuirostris*.

Bryhnia novae-angliae (Sull. & Lesq.) Grout: according to Huttunen et al. [79], most records of this species from the Russian Far East belong to *Brachythecium novae-angliae* subsp. *bultenii*, while some should be referred to *B. noesicum*.

Bucklandiella heterosticha (Hedw.) Bedn.-Ochyra & Ochyra (*Racomitrium heterostichum* (Hedw.) Brid.) was excluded from the flora of the Russian Far East [90].

Brachymenium exiloides Bard. & Czerd. was synonymized with *B. exile* [99].

Bryum arcticum (R. Br.) Bruch, Schimp. & W. Gümbel: Bardunov & Cherdantseva [26] considered the record of Podpěra [147] from **Prm** as erroneous. Zolotov [164, 99] also does not report this species from the southern Russian Far East.

Clastobryella kusatsuensis (Besch.) Z. Iwats.: all records of this species from the southern Russian Far East belong to *Pylaisiadelphus tenuirostris*.

Ctenidium capillifolium (Mitt.) Broth. was reported from South Sakhalin by Sugawara [153], though specimens could not be located in herbaria; this species was never subsequently found in that area, as well as in other parts of the Russian Far East.

Ctenidium molluscum (Hedw.) Mitt.: records from **Am** [7, 8, 68] are dubious. No vouchers were found in MW and VLA.

Cynodontium fallax Limpr. was excluded from the flora of the Russian Far East [90]: so-named specimens from **Khm** [88] belong to *C. asperifolius*.

Dicranum viride (Sull. & Lesq.) Lindb. was excluded from the flora of the Russian Far East [101]: so-named specimens belong to *D. hakkodense* and *D. pacificum*.

Didymodon acutus (Brid.) K.Saito: record from **Prm** [72] seems dubious; no vouchers were found in VLA.

Encalypta streptocarpa Hedw. was excluded from the flora of the Russian Far East [90].

Entodon rufescens Laz. was synonymized with *E. sullivantii* [83].

Entodon cladorrhizans (Hedw.) Müll. Hal.: all collections from the Russian Far East previously identified as this species actually belong to *E. schleicheri*.

Entosthodon mühlenbergii (Turner) Fife (*Funaria mühlenbergii* Turner): according to the revision by Crundwell & Nyholm [49], all re-studied collections from Far East were proved to be *E. pulchellus*, while *E. mühlenbergii* occurs in Russia only in the Caucasus [63].

Fontinalis dalecarlica Bruch, Schimp. & W. Gümbel: records from **Am** [8, 7] are based on erroneous identifications.

Fissidens bryoides Hedw., *F. curvatus* Hornsch., *F. marginatulus* Meln., and *F. viridulus* (Sw.) Wahlenb. belong to *Fissidens bryoides*-complex, which remains unrevised in Pacific Asia, thus the data on their distribution and even presence in the region have to be considered as preliminary.

Fissidens minutulus Sull. was reported by Podpera [147] for Russky Island near Vladivostok, but the current approach to this species (American in distribution), makes this record improbable.

Gollania neckerella (Müll. Hal.) Broth.: records for **Prm** [26] were based on misidentified specimens.

Gollania varians (Mitt.) Broth.: records for **Prm** [26] were based on misidentified specimens.

Grimmia ovalis (Hedw.) Lindb.: records from **Am** and **Prm** [103] belong to *G. longirostris*.

Hedwigia ciliata (Hedw.) P. Beauv. was excluded from the flora of the Russian Far East [114, 114a]: so-named specimens from Pacific Asia belong to other species of *Hedwigia*.

Hedwigia stellata Hedenäs: all so-named specimens from Far East belong to *H. czernyadjevae* [114].

Hypnum imponens Hedw. was reported from **Prm** [26], but no correctly identified specimens were seen from Asian Russia, thus all its records from Far East seems to be erroneous [90].

Isoetecium alopecuroides (Lam. ex Dubois) Isov. – this species does not occur in Asian Russia [90]. A record of Lazarenko [131] repeated in Red Data Book of Primorsky

Territory likely belongs to superficially similar *Isoetecium hakkodense* or *Dolichomitriopsis diversiformis*.

Kindbergia praelonga (Hedw.) Ochyra (*Eurhynchium praelongum* (Hedw.) Bruch, Schimp. & W. Gümbel): record from **Prm** [26] is based in misidentification.

Leskea gracilescens Hedw. was reported from **Am** [32], but recent revision revealed that these specimens belong to *L. polycarpa* [98].

Lewinskya speciosa (Nees) F. Lara, Garilleti & Goffinet (*Orthotrichum speciosum* Nees) does not occur in Asian Russia: all so-names specimens from Russian Far East have to be referred to *L. elegans* [99].

Lindbergia brachyptera (Mitt.) Kindb. was excluded from the Russian moss flora [108].

Lindbergia duthiei (Broth.) Broth. was excluded from the Russian moss flora [108]; all records belong to *Lindbergia sinensis*.

Lindbergia japonica Cardot was excluded from the Russian moss flora [108]; all records belong to *Lindbergia sinensis* [131].

Lyellia crispa R. Br.: record from **Khm** [117] belongs to *L. aspera* [97].

Mnium hornum Hedw.: all records from the Russian Far East, e.g. **Prm** [131], belong to *Mnium orientale*.

Orthodontium lignicola (*Orthodontopsis bardunovii* Ignatov & B.C. Tan) was reported for **Khm** [99] by mistake.

Oxyrrhynchium bians (Hedw.) Loeske (*Eurhynchium bians* (Hedw.) Sande Lac.): according to the unpublished revision of Cherdantseva, all records of *Oxyrrhynchium bians* from the Russian Far East (**Am** [7, 8, 68], **Khs** [40], **Prm** [26, 42]) belong to other species.

Oxyrrhynchium schleicheri (R. Hedw.) Roell (*Eurhynchium schleicheri* (R. Hedw.) Milde): most records from Russia, including all from Far East, e.g. **Prm** [26] were thought to be erroneous [90].

Philonotis caespitosa Jur. was reported from **Kur** by [23], but according to Koponen et al. [124] all so-named specimens from Russian Far East belong to *P. fontana*.

Philonotis marchica (Hedw.) Brid.: Koponen et al. [124] do not cite this species from **Prm** since specimens from this area were not available for examination.

Philonotis turneriana (Schwägr.) Mitt. was reported from Iturup by Bakalin et al. [23], but subsequent molecular phylogenetic studies unexpectedly revealed the identity of this specimen with *P. marchica* [124].

Plagiothecium neckeroideum Bruch, Schimp. & W. Gümbel: records of this species from **Prm** [26] were based on erroneous identification of *P. eurhyphyllum* [90].

Plagiothecium piliferum (Sw.) Bruch, Schimp. & W. Gümbel: according to Ukrainskaya [160], numerous records from Russia were based on the misidentifications, mostly of *Isopterygiopsis muelleriana*. This species does not occur in the Russian Far East.

Plagiothecium sylvaticum (Brid.) Bruch, Schimp. & W. Gümbel: according to Ignatov & Afonina [80], records of this species belong to *P. denticulatum* or *P. canifolium*.

Pogonatum neesii (Müll. Hal.) Dozy was reported from **Prm** [72], however the specimens are not available for our study; difficulty in separation of this species from *P. inflexum* makes this record dubious.

Poblia leucostoma (Bosch & Sande Lac.) M. Fleisch. (*P. gracillima* (Cardot) Horik. & Ochi) was recorded for **Prm** [26]; however, according to Czernyadjeva [51], all records of this species from Primorsky Territory belong to *P. prolifera*.

Polytrichum formosum Hedw.: all records of this species from the Russian Far East belong to *P. densifolium* [120].

Pylaisia intricata (Hedw.) Bruch, Schimp. & W. Gümbel: according to Arikawa [19], all records of this species from Asia belong to *P. stereodontoides*.

Rhizomnium hattori T.J. Kop. was reported from **Khs** [109], but during the revision of this and some other collections, putatively representing *R. hattori*, it turned out that they belong to *R. tuomikoskii*.

Rhizomnium punctatum (Hedw.) T.J. Kop. was reported from **Am** [8, 36] and **Khs** [131, MHA], but according to Koponen & Afonina [122], this species is absent in Far Eastern region [99].

Rhynchostegium riparioides (Hedw.) Cardot (*Platyhypnidium riparioides* (Hedw.) Dix.) was excluded from the flora of the Russian Far East [90]; all so-named specimens belong to *Rhynchostegium aquaticum* [78].

Rhynchostegium confertum (Dicks.) Bruch, Schimp. & W. Gümbel was reported from **Prm** [132], however the occurrence of this European species in Pacific Asia seems to be highly unlikely.

Schistidium apocarpum (Hedw.) Bruch, Schimp. & W. Gümbel was excluded from the moss flora of the Russian Far East [90, 99]: all so-named specimens belong to other species.

Schistidium brunnescens Limpr. was reported from **Prm** [26] based on [130]. According to [97], it does not occur in the Russian Far East.

Schistidium confertum (Funck) Bruch, Schimp. & W. Gümbel: all records of this species from the southern Russian Far East have to be referred to other species [97].

Schistidium strictum (Turner) Loeske ex Mårtensson: all records of this species from the Russian Far East belong to other species, mainly *S. papillosum* and *S. lancifolium* [97].

Sciuro-hypnum oedipodium (Mitt.) Ignatov & Huttunen: records from the southern Russian Far East have to be referred to *Sciuro-hypnum curtum* (Lindb.) Ignatov [85].

Scouleria aquatica Hook.: records of this species from southern Russian Far East have to be referred to *S. pulcherrima* [110].

Seligeria trifaria (Brid.) Lindb. was recorded from **Am** [34, 130], but all studied specimens, which could resemble *S. trifaria* from **Am** in fact represent large plants of *S. tristichoides*; according to our experience, *S. trifaria* does not occur in the Russian Far East.

Serpolekea subtilis (Hedw.) Loeske (*Amblystegium subtile* (Hedw.) Bruch, Schimp. & W. Gümbel, *Amblystegiella subtilis* (Hedw.) Loeske, *Platydictya subtilis* (Hedw.) H.A. Crum): according to unpublished data of V.Ya. Cherantseva, this species is absent in the Russian Far East; all revised specimens belong to *Amblystegium serpens*.

Sphagnum magellanicum Brid.: all records of this species from the Russian Far East (and likely whole Asian Russia) belong to *Sphagnum divinum* [72a]; our revision of additional specimens confirms this conclusion.

Stereodon fertilis (Sendtn.) Lindb. (*Hypnum fertile* Sendtn.): according to [90], this species does not occur in the Russian

Far East; its records from Prm [26] likely belong to *S. fauriei*.

Thamnobryum plicatulum (Sande Lac.) Z. Iwats. does not occur in Russia [102].

Trichostomum brachydontium Bruch was reported for the Russian Far East by Podpěra [143]; Bardunov & Cherdantseva [26] considered it as doubtful. The species is known in Russia only from the Caucasus. Later Podpěra also did not mention East Asia in the species distribution [144].

Zygodon viridissimus (Dicks.) Brid.: all records of this species from the Russian Far East belong to *Z. sibiricus* [99].

List of synonyms

(synonyms are in *italic*, accepted names are in **bold italic**)

Amblystegiella jungermannioides = **Platydictya jungermannioides**

Amblystegium saxatile = **Amblystegium radicale**

Amblystegium juratzkanum = **Amblystegium serpens** var. **juratzkanum**

Amblystegium minutissimum = **Platydictya minutissima**

Amblystegium varium = **Hygroamblystegium varium**

Anisothecium palustre = **Diobelonella palustris**

Anisothecium rigidulum = **Dicranella humilis**

Anisothecium rufescens = **Dicranella rufescens**

Anisothecium schreberianum = **Dicranella schreberiana**

Anisothecium varium = **Dicranella varia**

Anomobryum filiforme = **Anomobryum concinnatum**

Atrichum haussknechtii = **Atrichum flavisetum**

Aulacomnium heterostichum = **Arrhenopterum heterostichum**

Barbula amplexifolia = **Hydrogonium amplexifolium**

Barbula convoluta = **Streblotrichum convolutum**

Barbula cordata = **Didymodon cordatus**

Barbula cylindrica = **Didymodon insulanus**

Barbula indica var. *kurilensis* = **Hydrogonium consanguineum** var. **kurilensis**

Barbula reflexa = **Didymodon ferrugineus**

Barbula rigidula = **Didymodon rigidulus**

Barbula spadicea = **Didymodon spadiceus**

Barbula vinealis = **Didymodon vinealis**

Barbula rigidula var. *valida* = **Didymodon validus**

Brachymenium exciloides = **Brachymenium exile**

Brachythecium novae-angliae subsp. *hultenii* = **Brachythecium hultenii**

Brachythecium plumosum = **Sciuro-hypnum plumosum**

Brachythecium populeum = **Sciuro-hypnum populeum**

Brachythecium reflexum = **Sciuro-hypnum reflexum**

Brachythecium starkei = **Sciuro-hypnum starkei**

Brachythecium thedenii = **Brachythecium erythrorrhizon**

Bryhnia brachycladula = **Myuroclada longiramea**

Bryhnia hultenii = **Brachythecium hultenii**

Bryhnia noesica = **Brachythecium noesicum**

Bryoxiphium savatieri = **Bryoxiphium japonicum**

Bryum angustirete = **Bryum algovicum**

Bryum bicolor auct. Fl. Extrmior. = **Bryum dichotomum**

Bryum inclinatum = **Bryum amblyodon**

Bryum pseudocrispulum = **Bryum pseudotriquetrum**

Bryum erythrocarpum auct. Fl. Extrmior. = **Bryum subapiculatum**

Calliergon sarmentosum = **Warnstorfia sarmentosa**

Calliergon stramineum = **Straminergon stramineum**

Calliergon trifarium = **Pseudocalliergon trifarium**

Campyloblebium auriculatum = **Brachythecium auriculatum**

Campylidium hispidulum = **Campylophyllopsis hispidulum**

Campylidium sommerfeltii = **Campylophyllopsis sommerfeltii**

Campylium chrysophyllum = **Campyliadelphus chrysophyllum**

Campylium elodes = **Campyliadelphus elodes**

Campylium hispidulum = **Campylophyllopsis hispidulum**

Campylium krylovii = **Podperaea krylovii**

Campylium polygamum = **Drepanocladus polygamus**

Campylium radicale = **Amblystegium radicale**

Campylium sommerfeltii = **Campylophyllopsis sommerfeltii**

Codriophorus brevisetus = **Dilutineuron brevisetum**

Codriophorus corrugatus = **Dilutineuron corrugatum**

Cratoneuron commutatum = **Palustriella commutata**

Cyrtio-hypnum versicolor = **Pelekium versicolor**

Desmatoda ucrainicus = **Tortula ucrainica**

Dichodontium palustre = **Diobelonella palustris**

Dicranella palustris = **Diobelonella palustris**

Dicranoweisia crispula = **Hymenoloma crispulum**

Dicranum congestum = **Dicranum flexicaule**

Ditrichum cylindricum = **Trichodon cylindricus**

Ditrichum flexicaule = **Flexitrichum flexicaule**

Ditrichum gracile = **Flexitrichum gracile**

Drepanocladus badius = **Loeskyopnum badium**

Drepanocladus exannulatus = **Warnstorfia exannulata**

Drepanocladus fluitans = **Warnstorfia fluitans**

Drepanocladus intermedius = **Scorpidium cossonii**

Drepanocladus procerus = **Warnstorfia procera**

Drepanocladus revolvens = **Scorpidium revolvens**

Drepanocladus uncinatus = **Sanionia uncinata**

Drepanocladus vernicosus = **Hamatocaulis vernicosus**

Entodon compressus = **Entodon challengerii**

Entodon rufescens = **Entodon sullivantii**

Entodon sinense = **Entodon giraldii**

Entodon rubicundus = **Entodon flavescens**

Eurhynchium eustegium = **Eurhynchiadelphus eustegia**

Eurhynchium pulchellum = **Eurhynchiastrum pulchellum**

Fissidens adelphinus = **Fissidens teysmannianus**

Fissidens cristatus = **Fissidens dubius**

Forsstroemia mandschurica = **Forsstroemia cryphaeoides**

Funaria pulchella = **Entosthodon pulchellus**

Glossadelphus ogatae = **Filibryum ogatae**

Glyphomitrium warburgii auct. Fl. Extrmior. = **Glyphomitrium humillimum**

Gollania amurensis = **Gollania ruginosa**

Grimmia affinis = **Grimmia longirostris**

Grimmia sessitana = **Grimmia reflexidens**

Habrodon leucotrichus = **Iwatsukiella leucotricha**

Haplocladium auriei = **Haplocladium strictulum**

Helodium sachalinense = **Echinophyllum sachalinense**

Heterophyllum baldanianum = **Callicladium baldanianum**

Heterophyllum nemorosum = **Heterophyllum affine**

Homalia japonica = **Homalia trichomanoides**

Homaliadelphus laevidentatus = **Homaliadelphus targionianus**

Hondaella brachytheciella = **Hondaella caperata**

Hygrohypnum cochleariifolium = **Platyhypnum cochleariifolium**

Hygrohypnum dilatatum = **Platyhypnum duriusculum**

Hygrohypnum duriusculum = **Platyhypnum duriusculum**

Hygrohypnum eugyrium = **Pseudohygrohypnum eugyrium**

Hygrohypnum norvegicum = **Platyhypnum norvegicum**

Hygrohypnum ochraceum = **Hygrohypnella ochracea**

Hygrohypnum polare = **Hygrohypnella polaris**

Hygrohypnum subeugyrium = **Pseudohygrohypnum subeugyrium**

Hylocomium pyrenaicum = **Hylocomiastrum pyrenaicum**

Hypnum demsirameum = **Stereodon densirameus**

Hypnum fauriei = **Stereodon fauriei**

Hypnum pallens = **Stereodon pallens**

Hypnum plicatulum = **Stereodon plicatulus**

Hypnum plumiforme = **Stereodon plumiformis**

Hypnum pratense = **Breidleria pratensis**

Hypnum recurvatum = **Drepanium recurvatum**

Hypnum vaucheri = **Stereodon vaucheri**

Hypopterygium japonicum = **Hypopterygium flavolimbatum**

Isoetecium diversiforme = **Dolichomitriopsis diversiformis**

Leptodictyum kochii = **Hygroamblystegium humile**

Leptodictyum mizushimae = **Limnophyllum mizushimae**

Leskeella nervosa = **Pseudoleskeella nervosa**

Macromitrium hymenostomum = **Macrocoma tenuis** subsp. **sullivantii**

Mamillariella geniculata = *Lindbergia geniculata*
Meesia trifaria = *Meesia triquetra*
Mnium acutum = *Plagiomnium acutum*
Mnium ambiguum = *Mnium lycopodioides*
Mnium confertidens = *Plagiomnium confertidens*
Mnium cuspidatum = *Plagiomnium cuspidatum*
Mnium drummondii = *Plagiomnium drummondii*
Mnium immarginatum = *Trachycystis ussuriensis*
Mnium maximowiczii = *Plagiomnium maximowiczii*
Mnium medium = *Plagiomnium medium*
Mnium micro-ovale = *Plagiomnium maximowiczii*
Mnium minutulum = *Rhizomnium parvulum*
Mnium orthorrhynchum = *Mnium thomsonii*
Mnium rostratum = *Plagiomnium rostratum*
Mnium rugicum = *Plagiomnium ellipticum*
Mnium striatulum = *Rhizomnium striatulum*
Mnium ussuriense = *Trachycystis ussuriensis*
Mnium vesicatum = *Plagiomnium vesicatum*
Neckera pennata var. *tenera* = *Neckera oligocarpa*
Neckera goughiana = *Forstroemia goughiana*
Neckera yezoana = *Forstroemia yezoana*
Ochyraea alpestris = *Platyhypnum alpestre*
Ochyraea cochleariifolia = *Platyhypnum cochleariifolium*
Ochyraea duriuscula = *Platyhypnum duriusculum*
Ochyraea norvegica = *Platyhypnum norvegicum*
Ochyraea smithii = *Platyhypnum smithii*
Pohlia minor = *Pohlia elongata* var. *greenii*
Orthodicranum flagellare = *Dicranum flagellare*
Orthodicranum mayrii = *Dicranum mayrii*
Orthodicranum montanum = *Dicranum montanum*
Orthotrichum iwatsukii = *Lewinskya iwatsukii*
Orthotrichum obtusifolium = *Nyholmia obtusifolia*
Orthotrichum rupestre = *Lewinskya rupestris*
Orthotrichum sordidum = *Lewinskya sordida*
Orthotrichum speciosum auct. Fl. Extrmior. = *Lewinskya elegans*
Oxystegus cylindricus = *Oxystegus tenuirostris*
Physcomitrium eurystomum subsp. *acuminatum* = *Physcomitrium acuminatum*
Plagiothecium striatellum = *Herzogiella striatella*
Plagiothecium succulentum auct. Fl. Extrmior. = *Plagiothecium cavifolium*
Pogonatum capillare = *Pogonatum dentatum*
Pogonatum laterale = *Pogonatum contortum*
Polytrichastrum formosum var. *densifolium* = *Polytrichum densifolium*
Polytrichum alpestre = *Polytrichum strictum*
Polytrichum alpinum = *Polytrichastrum alpinum*
Polytrichum gracile = *Polytrichum longisetum*
Polytrichum ohioense auct. Fl. Extrmior. = *Polytrichum pallidisetum*
Pottia truncata = *Tortula truncata*
Racomitrium brevisetum = *Dilutineuron brevisetum*
Racomitrium canescens = *Niphotrichum canescens*
Racomitrium ericoides = *Niphotrichum ericoides*
Racomitrium fasciculare = *Dilutineuron fasciculare*
Racomitrium japonicum = *Niphotrichum japonicum*
Racomitrium laetum = *Bucklandiella laeta*
Racomitrium microcarpum = *Bucklandiella microcarpa*
Racomitrium nitidulum = *Bucklandiella nitidula*
Racomitrium panschii = *Niphotrichum panschii*
Racomitrium sudeticum = *Bucklandiella sudetica*
Rhabdoweisia kuzenevae = *Rhabdoweisia crispata*
Rhynchostegium muelleri = *Rhynchostegium aquaticum*
Sarmentypnum sarmentosum = *Warnstorfia sarmentosa*
Schistidium alpicola var. *alpicola* = *Schistidium platyphyllum*
Schistidium alpicola var. *rivulare* = *Schistidium rivulare*
Seligeria diversifolia = *Blindia delphus diversifolius*
Seligeria recurvata = *Blindia delphus recurvatus*
Sphanum magellanicum = *Sphanum divinum*
Tetradontium brownianum var. *ovatum* = *Tetradontium ovatum*

Thamnobryum obtusatum = *Thamnobryum neckeroides*
Thamnobryum vorobjovii = *Thamnobryum neckeroides*
Thamnobryum sandei = *Thamnobryum subseriatum*
Thuidium bipinnatum = *Pelekium versicolor*
Thuidium glaucinum = *Thuidium pristocalyx*
Thuidium philibertii = *Thuidium assimile*
Thuidium pygmaeum = *Pelekium pygmaeum*
Thuidium vestitissimum = *Bryochenea vestitissima*
Tortula laevipila = *Syntrichia laevipila*
Tortula ruralis = *Syntrichia ruralis*
Tortula sinensis = *Syntrichia sinensis*

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