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SOCIETAS PRO FAUNA ET FLORA FENNICA

FLORA FENNICA

6

Timo Koponen, Pekka Isoviita and Tapio Lammes:
The bryophytes of Finland: An annotated checklist



HELSINKI—HELSINGFORS
1977

5

FLORA FENNICA

1. V. F. BROTHÉRUS: Die Laubmoose Fennoskandias. 635 S. (1923).
2. ALVAR PALMGREN: Carex-gruppen Fulvella Fr. i Fennoskandien I. 165 s. + tavlor I—XXV. (1959).
3. GUNNAR MARKLUND: Der Ranunculus auricomus-Komplex in Finnland I. Diagnosen und Fundortslisten einiger Sippen des R. auricomus L. coll. (s. str.). 129 S. + 94 Tafeln. (1961).
4. GUNNAR MARKLUND: Der Ranunculus auricomus-Komplex in Finnland II. Diagnosen und Fundortslisten einiger Sippen von R. fallax (W. & Gr.) Schur, R. monophyllus Ovc. und R. cassubicus L. 198 S. (1965).
5. K.-G. WIDÉN: The genus Agrostis L. in Eastern Fennoscandia. Taxonomy and distribution. 209 pp. (1971).
6. TIMO KOPONEN, PEKKA ISOVIITA & TAPIO LAMMES: The bryophytes of Finland: An annotated checklist. 77 pp. (1977).

FLORA FENNICA 6
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SOCIETAS PRO FAUNA ET FLORA FENNICA

THE BRYOPHYTES OF FINLAND:
AN ANNOTATED CHECKLIST

Timo Koponen, Pekka Isoviita and Tapio Lammes



HELSINKI—HELSINGFORS
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Abstract

KOPONEN, TIMO, ISOVIITA, PEKKA & LAMMES, TAPIO (Bot. Mus., Univ. Helsinki): The bryophytes of Finland: An annotated checklist. — *Flora Fennica* 6:1—77. 1977.

The list comprises 213 hepatic and 591 moss species, and numerous infraspecific taxa. Commonly used synonyms are included. There are 300 annotations, giving references to the literature on the taxonomy, nomenclature and distribution of the taxa. Many contributions are made to the nomenclature, and two new combinations of hepatic names are published: *Barbilophozia quadriloba* (Lindb.) Loeske var. *glareosa* (Jørg.) Lammes and *Plagiocbila porelloides* (Torrey ex Nees) Lindenb. var. *subarctica* (Jørg.) Lammes. New for Finland are the mosses *Ditrichum giganteum* Williams and *Plagiobryum demissum* (Hook.) Lindb. and the hepatic *Scapania aequiloba* (Schwaeagr.) Dum. and eight varieties of hepatics. A systematic list of the families and genera is included.

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I. INTRODUCTION

The earliest noteworthy checklists for the Finnish bryophytes were published by NYLANDER & SAELAN (1859:60—72) and by LINDBERG (1879), whose 'Musci Scandinavici' includes a checklist for each Nordic country. These were followed by the list of BOMANSSON & BROTHÉRUS (1894), which, like that of NYLANDER & SAELAN, gives the biogeographical provinces from which each taxon was known. At that time Finnish botanists were actively exploring the areas east of Finland, e.g. the Kola Peninsula, and these works include the Russian part of Eastern Fennoscandia as well. The latest checklist for the bryophytes of the Nordic countries was published by WEIMARCK (1937a).

Besides being a standard handbook for the whole of Fennoscandia, BROTHÉRUS' (1923) 'Die Laubmoose Fennoscandias' gives particular attention to the distribution of mosses in Finland (i.e. Eastern Fennoscandia, as the distribution in Soviet Fennoscandia was included). When JENSEN (1939) compiled his flora, R. Tuomikoski sent him the information provided by the most recent studies of the Finnish moss flora (cf. TUOMIKOSKI 1940b, 1952), and the distribution of Finnish mosses is also given in NYHOLM'S (1954—1969) flora. As to hepatics, the knowledge accumulated after BOMANSSON & BROTHÉRUS (1894) was summarized in BUCH'S (1936) flora, and the latest treatment of the Fennoscandian hepatics is that by ARNELL (1956), in which the Finnish data have been contributed by H. Buch.

Since the 'Index Muscorum' (WIJK et al. 1959—1969) was completed, a number of moss checklists have been published for several European countries (e.g., JÓHANSSON 1968, DAMSHOLT et al. 1969), for Japan (IWATSUKI & NOGUCHI 1973, NOGUCHI 1974) and for North America (e.g., WORLEY & IWATSUKI 1970, CRUM

et al. 1973, VITT 1974, IRELAND & CAIN 1975).

No up-to-date world index exists for hepatics, but mention should be made of GROLLE'S numerous nomenclatural studies, including those first presented in the checklists of DUDA & VÁŇA (1967, 1974) and DÜLL (1972), and in particular his fundamental list of the European hepatics (GROLLE 1976). Other recent checklists of hepatics are those by SCHOFIELD (1968), DAMSHOLT et al. (1969), MIZUTANI & HATTORI (1969), WORLEY (1970), and SCHLJAKOV (1973a.)

The present paper is an attempt to meet the long-felt need for a standard work on the nomenclature of the bryophytes of Finland.

In our nomenclatural decisions, we have followed the International Code of Botanical Nomenclature (STAFLEU et al. 1972, including the alterations to the Code accepted at the Leningrad Congress in 1975, cf., e.g., VOSS 1976). Accordingly, the nomenclature recommended here often deviates widely from the traditional treatments. This concerns the hepatics in particular, since, before the studies of GROLLE, the nomenclature of European hepatics was often quite inconsistent with the Code. Even now, the taxonomy and nomenclature of hepatics still present many problems (see, e.g., GROLLE 1976), but, thanks to GROLLE'S revisions, the number of nomenclatural changes found necessary in future may be expected to be fewer in hepatics than in mosses. Much work is still required on, for instance, the typification of the specific names of moss genera and the generic taxonomy of certain groups (e.g. Amblystegiaceae). When carried out, such studies will inevitably lead to numerous nomenclatural alterations.

The Finnish bryophyte flora has often been considered well known, but, as can

be seen in the published distribution maps and the papers of ISOVIITA & KOPONEN (1967a, 1967b), very large gaps still exist in our bryo-floristic knowledge. The great number of new species recently recorded from Finland is further evidence of this fact, and indicates that many new species may still be expected. Here, it should also be noted that the Finnish material of many genera and species groups, in both mosses and hepatics, is in need of thorough investigation; cases in point are *Cephaloziella*, *Lophozia*, *Eurhynchium* and *Drepanocladus*.

The checklist comprises 213 hepatic and 591 moss species. For the reasons presented by, e.g., TUOMIKOSKI (1958), the infraspecific taxa accepted here are fairly few. The majority of the bryophyte varieties described are mere habitat modifications and the present limited knowledge of the microevolution of bryophytes suggests that the taxa whose distinguishing

characters are clearly genetic can usually be regarded as species. Many of the taxa treated as varieties in our list are so-called large-celled varieties of hepatics (whose origin and taxonomic status also need further study; cf. e.g. ARNELL 1947, SCHUSTER & DAMSHOLT 1974).

The introductory texts were written by Isoviita and Koponen. In the list and annotations of hepatics, Lammes is generally responsible for the taxonomic decisions, and Isoviita for the nomenclatural ones and for the greater part of the text of the annotations. The sections dealing with mosses were mainly prepared by Koponen, but those on the genus *Sphagnum* and some other contributions were made by Isoviita. The systematic list was compiled by Isoviita for hepatics and by Koponen for mosses.

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II. CHECKLIST

The compilation of the checklist. The basis of the present list is the nomenclature of Finnish bryophytes used by the following authors: mosses — BROTHERUS (1923), JENSEN (1939) and NYHOLM (1954—1969); *Sphagnum* — KROHN (1931), TUOMIKOSKI (1946), ISOVIITA (1966), NYHOLM (1969) and CRUM et al. (1973); hepatics — BUCH (1936), MÜLLER (1954—1958), ARNELL (1956), SCHUSTER (1966, 1969, 1974) and GROLE (1976). The list includes the names of all the species, subspecies and varieties reported in the above works as occurring in Finland.

In addition, other bryological literature, monographs and revisions have been consulted to ensure that the information on the taxonomy, nomenclature and distribution of Finnish bryophytes is as up-to-date as possible. However, some scattered notes may have escaped our attention.

Since the works of BROTHERUS (1923), BUCH (1936), JENSEN (1939) and TUOMI-

KOSKI (1946) are still useful for the identification of specimens, the present checklist may serve as a list of revised names for these floras. In order to facilitate the interpretation of the literature records and the labels of herbarium specimens, especially old ones, the synonymous generic names of LINDBERG (1879) and some later works are also included, with references to the correct equivalents. For LINDBERG's specific nomenclature, consult, e.g., BROTHERUS (1923) and ARNELL (1956).

The order and typography. The checklist is in alphabetical order. The names included can be grouped into five categories and this is indicated by the way in which they are printed. (1) The names whose use we recommend are printed in boldface. However, among them are names whose inclusion does not indicate our complete acceptance but is often merely due to the lack of reliable revisions.

(2) The synonyms are in ordinary type, and are followed by the correct name. (3) The names of numerous doubtful infra-specific taxa are also printed in ordinary type, with a reference to an annotation indicating their questionable status (see Section III, Notes 7 and 133). (4) The taxa whose presence in Finland needs confirmation are presented in a similar manner. (5) The taxa erroneously reported from Finland and those known only from the areas annexed to the U.S.S.R. in the 1940s are given in ordinary type in square brackets (see Section III, Notes 23 and 126).

The author citations of mosses are according to WIJK et al. (1959—1969), except when reliable alternative information has been available. As regards the hepatics, the majority of names and author citations were checked from the original publications (during the preparation of this checklist no up-to-date European index existed). For the remaining ones, GROLLE (1976) has been followed in the case of accepted names, and other sources for the synonyms.

For the sake of brevity, and because this checklist will no doubt mainly be used outside the field of bryotaxonomy, only the name of the most important author (the one actually supplying the description or the reference to a description) is given in the cases where a name proposed by one author was published in a work by another; e.g., *Jungermannia hyalina* Lyell in Hook. and *Sphagnum lindbergii* Schimp. ex Lindb. are abbreviated to *Jungermannia hyalina* Lyell and *Sphagnum lindbergii* Lindb. Unfortunately, the sometimes inconsistent use of *in*-type citations in WIJK et al. (1959—1969) (cf. ISOVIITA 1966:217) has presumably often contributed to the erroneous omission of the author actually validating the name. (Concerning the opposite case, i.e., the excessive use of *ex* citations by CRUM et al., 1973, see Section III, Note 300.) For many names, full author citations can be found in the annotations (see p. 47).

In accordance with WIJK et al. (1959—

1969), the citation B.S.G. is used for all the names published in the 'Bryologia europaea' of Bruch, Schimper and Güm-
bel, although most of these names should actually be attributed to Bruch & Schimper or to Schimper only (cf., e.g., CRUNDWELL 1970).

The abbreviations of the authors' names have usually been made according to the list of SAYRE et al. (1964); exceptions and additions:

H. Arn. (H. W. Arnell)
S. Arn. (S. Arnell)
Balbis (G. B. Balbis)
Bomanss. (J. O. Bomansson)
A. Braun (A. Braun)
R. Brown (R. Brown)
Carringt. (B. Carrington)
Cogn. (A. Cogniaux)
Cohn (F. Cohn)
Collins (J. F. Collins)
Cranz (D. Cranz)
Damsh. (K. Damsholt)
De Sloover (J. L. De Sloover)
Gieseke (C. L. Gieseke)
Gottsche (C. M. Gottsche)
Hartm. f. (C. Hartman; Hartm. = C. J. Hartman)
M. O. Hill (M. O. Hill)
Hinneri (S. Hinneri)
Isov. (P. Isoviita)
Itzigs. (E. F. H. Itzigsohn)
Kalliola (R. Kalliola)
T. Kop. (T. Koponen)
Lammes (T. Lammes)
Lees (F. A. Lees)
H. Lindb. (H. Lindberg)
Lorb. (G. Lorbeer)
Maass (W. S. G. Maass)
Martens (G. v. Martens)
Mikut. (J. Mikutowicz)
Mörch (A. M. Mörch)
J. Perss. (J. Persson)
Richter (H. F. E. Richter)
K. Saito (K. Saito)
Sapëhin (A. A. Sapëhin)
F. Schultz (F. Schultz)
Z. Smirn. (Z. Smirnova)
A. J. E. Sm. (A. J. E. Smith)
G. L. Sm. (G. L. Smith)
Sommerf. (S. C. Sommerfelt)
Torrey (J. Torrey)
Underw. (L. M. Underwood)
Vaarama (A. Vaarama)
Vána (J. Vána)
Warncke (E. Warncke)

The numbers in parentheses after the names of taxa refer to the annotations (Section III).

A. Hepaticophytina

- Acolea* Dum. = *Gymnomitrium* Corda
Alicularia Corda = *Nardia* S. Gray
Anastrophyllum (Spruce) Steph. (1)
 cavifolium (Buch & S. Arn.) Lammes (1, 2)
 hellerranum (Lindenb.) Schust. (1, 3, 4)
 michauxii (Web.) Buch (5)
 minutum (Schreb.) Schust. (1, 6)
 var. *grande* (Lindb.) Schust. = *A. minutum* (Schreb.) Schust. var. *minutum* (7)
 var. *minutum* (6, 7)
 var. (6)
 saxicola (Schrad.) Schust. (1, 4)
 sphenoloboides Schust. (8)
Aneura Dum. (9)
 pinguis (L.) Dum. (9)
 spp. = *Riccardia* S. Gray
Anthelia (Dum.) Dum.
 julacea (L.) Dum. (10)
 juratzkana (Limpr.) Trev. (10)
Anthoceros L. (11)
 crispulus auct. fenn. = *A. punctatus* L. var. *cavernosus* Prosk. (11)
 laevis auct. fenn. = *Phaeoceros carolinianus* (Michx.) Prosk.
 [*laevis* L. = *Phaeoceros laevis* (L.) Prosk.] (23A, 94)
 punctatus L.
 [var. *cavernosus* Gottsche et al. = *A. punctatus* L. var. *punctatus*] (11)
 var. *cavernosus* Prosk., homon. illeg. (11)
Aplozia Dum. = *Jungermannia* L., p. p.
Arnellia Lindb.
 fennica (Gottsche) Lindb. (12)
Aspiromitus Steph. = *Anthoceros* L.
Asterella P. Beauv.
 gracilis (Web.) Underw. (13)
 lindenbergiana (Nees) H. Arn. (3, 14)
 ludwigii auct. = *A. gracilis* (Web.) Underw.
Athalamia Falc. (15)
 hyalina (Sommerf.) Hatt. (15)
Barbilophozia Loeske (16)
 atlantica (Kaal.) K. Müll.
 attenuata (Mart.) Loeske
 barbata (Schreb.) Loeske
 binsteadii (Kaal.) Loeske
 floerkei (Web. & Mohr) Loeske
 gracilis (Nees) K. Müll. = *B. attenuata* (Mart.) Loeske
 hatcheri (Evans) Loeske (17)
 var. *grandiretis* Lammes (17)
 var. *hatcheri*
 kunzeana (Hüb.) K. Müll. (18)
 lycopodioides (Wallr.) Loeske (19)
 quadriloba (Lindb.) Loeske
 var. *glareosa* (Jørg.) Lammes (20, 21)
 var. *quadriloba*

- Bazzania** S. Gray, nom. cons.
tricrenata (Wahlenb.) Lindb. (22)
trilobata (L.) S. Gray
- Blasia** L.
pusilla L.
- Blepharostoma** (Dum.) Dum.
trichophyllum (L.) Dum.
 ssp. *brevirete* (Bryhn & Kaal.) Schust. = *B. trichophyllum* (L.) Dum.
 var. *brevirete* Bryhn & Kaal.
 var. *brevirete* Bryhn & Kaal. (21)
 var. *trichophyllum*
- Blepharozia** (Dum.) Dum. = *Ptilidium* Nees
- Calypogeia** Raddi, nom. cons. prop.
 [*fissa* (L.) Raddi] (23A)
integristipula Steph. (24)
meylanii Buch = *C. integristipula* Steph.
muellerana (Schiffn.) K. Müll. (4, 23A)
neesiana (Mass. & Carest.) K. Müll. (4, 25)
 var. *meylanii* (Buch) Schust. = *C. integristipula* Steph.
sphagnicola (H. Arn. & J. Perss.) Warnst. & Loeske
suecica (H. Arn. & J. Perss.) K. Müll.
trichomanis auct. fenn. = *C. muellerana* (Schiffn.) K. Müll.
 [*trichomanis* (L.) Corda] (23A, 26)
- Cephalozia** (Dum.) Dum.
affinis Steph. (27)
ambigua Mass. = *C. bicuspidata* (L.) Dum. ssp. *ambigua* (Mass.) Schust.
bicuspidata (L.) Dum.
 ssp. *ambigua* (Mass.) Schust. (28)
 ssp. *bicuspidata*
catenulata (Hüb.) Lindb.
connivens (Dicks.) Lindb.
lacunculata Spruce (3, 29)
leucantha Spruce
loitlesbergeri Schiffn.
lunulifolia (Dum.) Dum. (4, 27, 30)
macounii (Aust.) Aust.
media Lindb. = *C. lunulifolia* (Dum.) Dum.
 var. *pallida* (Spruce) Jørg. = *C. lunulifolia* (Dum.) Dum. (7)
pleniceps (Aust.) Lindb. (31)
 spp. = genera diversa: *Cephaloziaceae*, *Cephaloziella* (Spruce) Schiffn., etc.
- Cephaloziella** (Spruce) Schiffn., nom. cons. (32)
alpina Douin = *C. arctica* Bryhn & Douin
arctica Bryhn & Douin
byssacea auct. = *C. divaricata* (Sm.) Schiffn. (33, 35)
cornowii auct. fenn. = *C. hampeana* (Nees) Schiffn.?
divaricata (Sm.) Schiffn. (33)
 var. *divaricata*
 var. *scabra* (M. A. Howe) S. Arn. (21)
elachista (Gottsche & Rabenh.) Schiffn. (3)
elegans (Heeg) Schiffn. (2, 34)
hampeana (Nees) Schiffn. (35)
integerrima (Lindb.) Warnst. (36)

- rubella** (Nees) Warnst.
 var. *bifida* (Lindb.) Douin (7)
starkei (Spruce) Schiffn. = *C. divaricata* (Sm.) Schiffn.
 var. *scabra* (M. A. Howe) Clark & Frye = *C. divaricata* (Sm.) Schiffn.
 var. *scabra* (M. A. Howe) S. Arn.
striatula (C. Jens.) Douin = *C. subdentata* Warnst.
subdentata Warnst.
Cesius S. Gray (*Cesia*) = *Gymnomitrium* Corda, *Prasanthus* Lindb.
Chandonanthus Mitt.
setiformis (Ehrh.) Lindb.
 var. *alpinus* (Hook.) Kaal. (7)
 var. *nemoides* Kaal. = *C. setiformis* (Ehrh.) Lindb. (7)
Chiloscyphus Corda, nom. cons.
pallescens (Hoffm.) Dum.
 var. *fragilis* (A. Roth) K. Müll.
 var. **pallescens**
polyanthos (L.) Corda (4)
 var. *fragilis* (A. Roth) K. Müll. = *C. pallescens* (Hoffm.) Dum. var. *fragilis*
 (A. Roth) K. Müll.
 var. **polyanthos**
 var. *rivularis* (Schrad.) Gottsche et al.
Chomiocarpon Corda = *Preissia* Corda
Cincinnulus Dum. = *Calypogeia* Raddi
Cladopodiella Buch
fluitans (Nees) Buch (37)
francisci (Hook.) Jørg. (3, 4, 37)
Clevea Lindb.
hyalina (Sommerf.) Lindb. = *Athalamia hyalina* (Sommerf.) Hatt.
Conocephalum Wigg., nom. cons.
conicum (L.) Lindb. (3, 38)
Crossocalyx Meyl.
helleranus (Lindenb.) Meyl. = *Anastrophyllum helleranum* (Lindenb.)
 Schust.
Crossogyna (Schust.) Schljak. = *Jamesoniella* (Spruce) Carringt., p.p.
Cryptothallus Malmb.
mirabilis Malmb. (39)
Dichiton Mont.
integerrimum (Lindb.) Buch = *Cephaloziella integerrima* (Lindb.) Warnst.
Diplophyllia Trev. = *Diplophyllum* (Dum.) Dum.
Diplophyllum (Dum.) Dum., nom. cons.
albicans (L.) Dum. (12)
obtusifolium (Hook.) Dum.
taxifolium (Wahlenb.) Dum.
 var. **macrosticta** Buch
 var. **taxifolium**
Douinia (C. Jens.) Buch
ovata (Dicks.) Buch (40)
Eremonotus Pears. (1, 3)
myriocarpus (Carringt.) Pears. (2, 3)
Eucalyx (Lindb.) Carringt.
hyalinus (Lyell) Carringt. = *Jungermannia hyalina* Lyell
obovatus (Nees) Carringt. = *Jungermannia obovata* Nees
Fegatella Raddi = *Conocephalum* Wigg.

Fimbriaria Nees

lindenbergiana Nees = *Asterella lindenbergiana* (Nees) H. Arn.
ludwigii auct. = *Asterella gracilis* (Web.) Underw.

Fossombronia Raddi

dumortieri Lindb. = *F. foveolata* Lindb.
foveolata Lindb. (41)
incurva Lindb. (42)
wondraczekii (Corda) Lindb. (43)
 var. *cristata* H. Arn. (43)

Frullania Raddi (44)

dilatata (L.) Dum.
fragilifolia (Tayl.) Gottsche et al. (44)
tamarisci (L.) Dum.

Geocalyx Nees

graveolens (Schrad.) Nees (45)

Grimaldia Raddi

fragrans (Balbis) Corda = *Mannia fragrans* (Balbis) Frye & Clark
pilosa (Hornem.) Lindb. = *Mannia pilosa* (Hornem.) Frye & Clark

Gymnocolea (Dum.) Dum.

inflata (Huds.) Dum. (46)
 var. *heterostipa* (Carringt. & Spruce) K. Müll. = *G. inflata* (Huds.) Dum. (7)

Gymnomitrium Corda, nom. cons. (4)

apiculatum (Schiffn.) K. Müll.
concinatum (Lightf.) Corda (47)
 var. **concinatum**
 var. *intermedium* Limpr. (23A, 47)

corallioides Nees (47)

[*crenulatum* Carringt.] (23A)

obtusum (Lindb.) Pears. (47, 48)

varians (Lindb.) Schiffn. = *Marsupella brevissima* (Dum.) Grolle

Haplomitrium Nees, nom. cons.

hookeri (Sm.) Nees

Haplozia K. Müll. = *Jungermannia* L., p.p.**Harpanthus** Nees

flotovianus (Nees) Nees (4, 45)

scutatus (Web. & Mohr) Spruce (45)

Hepatica Lindb. = *Conocephalum* Wigg.**Hygrobiella** Spruce

laxifolia (Hook.) Spruce

Isopaches Buch

bicrenatus (Hoffm.) Buch = *Lophozia bicrenata* (Hoffm.) Dum.

helleranus (Lindenb.) Buch = *Anastrophyllum helleranum* (Lindenb.) Schust.

Jamesoniella (Spruce) Carringt. (49)

autumnalis (DC.) Steph. (49)

schraderi auct. = *J. undulifolia* (Nees) K. Müll.

undulifolia (Nees) K. Müll. (49)

Jungermannia L. (50, 56)

[*atrovirens* Dum.] (23B, 51)

caespiticia Lindenb. (4)

cordifolia Hook. = *J. exsertifolia* Steph. ssp. *cordifolia* (Dum.) Váňa

crenulata Sm. = *J. gracillima* Sm.

var. *gracillima* (Sm.) Hook. = *J. gracillima* Sm.

exsertifolia Steph.

ssp. **cordifolia** (Dum.) Váňa (52)

gracillima Sm. (53)

hyalina Lyell

jenseniana Grolle (54)

[**karl-muelleri** Grolle] (23A, 55)

lanceolata auct. = *J. leiantha* Grolle

[**lanceolata** L., nom. ambig. = *J. atrovirens* Dum.] (23B, 35)

leiantha Grolle (56)

[**oblongifolia** (K. Müll.) Buch et al. = *J. karl-muelleri* Grolle] (23A)

obovata Nees

polaris Lindb. (57)

pumila With.

var. **alpestris** Gottsche & Rabenh. (7, 23A)

var. **pumila**

pusilla (C. Jens.) Buch = *J. jenseniana* Grolle

[**riparia** Tayl. = *J. atrovirens* Dum.] (23B)

schiffneri (Loitl.) Evans = *J. polaris* Lindb.

sphaerocarpa Hook.

var. **nana** (Nees) Frye & Clark (7)

[**tristis** Nees = *J. atrovirens* Dum.] (23B)

spp. = genera diversa: Jungermanniaceae, etc.

Kantia S. Gray (*Kantia*) = *Calypogeia* Raddi

Kurzia Martens (58)

pauciflora (Dicks.) Grolle (58)

Leiocolea (K. Müll.) Buch (59)

badensis (Gottsche) Jørg. (3)

bantriensis (Hook.) Jørg.

collaris (Nees) Schljak. (60)

gillmanii (Aust.) Evans (12)

heterocolpos (Hartm.) Buch (3, 4, 61)

var. **arctica** (S. Arn.) S. Arn. (21, 62)

var. **harpanthoides** auct. scand. = *L. heterocolpos* (Hartm.) Buch var. **arctica** (S. Arn.) S. Arn.

var. **heterocolpos**

kaurinii (Limpr.) Jørg. = *L. gillmanii* (Aust.) Evans

obtusa (Lindb.) Buch = *Lophozia obtusa* (Lindb.) Evans

muelleri (Lindenb.) Jørg. = *L. collaris* (Nees) Schljak.

rutheana (Limpr.) K. Müll. (63)

schultzei Jørg. = *L. rutheana* (Limpr.) K. Müll.

Lejeunea Lib., nom. cons.

cavifolia (Ehrh.) Lindb.

Lepidozia (Dum.) Dum., nom. cons.

reptans (L.) Dum.

setacea Mitt. = *Kurzia pauciflora* (Dicks.) Grolle

Leptoscyphus Mitt.

anomalus (Hook.) Lindb. = *Mylia anomala* (Hook.) S. Gray

taylorii (Hook.) Mitt. = *Mylia taylorii* (Hook.) S. Gray

Lioclaena Nees = *Jungermannia* L., p.p.

Lophocolea (Dum.) Dum.

bidentata (L.) Dum. (45)

cuspidata (Nees) Limpr. (45)

- heterophylla** (Schrad.) Dum. (45, 64)
incisa Lindb. = *L. heterophylla* (Schrad.) Dum. (64)
minor Nees (45)
- Lophozia** (Dum.) Dum. (59)
alpestris auct. = *L. sudetica* (Hüb.) Grolle
alpestris (Web.) Evans, nom. ambig. = *Leiocolea collaris* (Nees) Schljak. (35)
 var. *major* auct. scand. = *L. sudetica* (Hüb.) Grolle var. (75)
- ascendens** (Warnst.) Schust.
atlantica (Kaal.) K. Müll. = *Barbilophozia atlantica* (Kaal.) K. Müll.
attenuata (Mart.) Dum. = *Barbilophozia attenuata* (Mart.) Loeske
badensis (Gottsche) Schiffn. = *Leiocolea badensis* (Gottsche) Jørg.
bantriensis (Hook.) Steph. = *Leiocolea bantriensis* (Hook.) Jørg.
barbata (Schreb.) Dum. = *Barbilophozia barbata* (Schreb.) Loeske
bicrenata (Hoffm.) Dum. (65)
binsteadii (Kaal.) Evans = *Barbilophozia binsteadii* (Kaal.) Loeske
capitata (Hook.) Mac. (66)
cavifolia (Buch & S. Arn.) Schust. = *Anastrophyllum cavifolium* (Buch & S. Arn.) Lammes
collaris (Nees) Dum. = *Leiocolea collaris* (Nees) Schljak.
elongata Steph. (2, 67)
excisa (Dicks.) Dum.
 var. *limprichtii* (Lindb.) Mass. (7)
floerkei (Web. & Mohr) Schiffn. = *Barbilophozia floerkei* (Web. & Mohr) Loeske
gillmanii (Aust.) Schust. = *Leiocolea gillmanii* (Aust.) Evans
gracilis (Nees) Steph. = *Barbilophozia attenuata* (Mart.) Loeske
gracillima Buch = *L. ascendens* (Warnst.) Schust.
grandiretis (Kaal.) Schiffn. (3, 68)
guttulata (Lindb.) Evans (3, 69)
hatcheri (Evans) Steph. = *Barbilophozia hatcheri* (Evans) Loeske
heterocolpos (Hartm.) M. A. Howe = *Leiocolea heterocolpos* (Hartm.) Buch
 var. *harpanthoides* auct. p.p. = *Leiocolea heterocolpos* (Hartm.) Buch
 var. *arctica* (S. Arn.) S. Arn.
incisa (Schrad.) Dum.
kunzeana (Hüb.) Evans = *Barbilophozia kunzeana* (Hüb.) K. Müll.
laxa (Lindb.) Grolle (70)
longidens (Lindb.) Mac. (71)
longiflora (Nees) Schiffn. (2, 72)
lycopodioides (Wallr.) Cogn. = *Barbilophozia lycopodioides* (Wallr.) Loeske
marchica (Limpr.) Steph. = *L. laxa* (Lindb.) Grolle
mildeana (Gottsche) Schiffn. = *L. capitata* (Hook.) Mac.
obtusata (Lindb.) Evans
opacifolia Meyl. (3, 73)
perssonii Buch & S. Arn.
porphyroleuca Schiffn. = *L. guttulata* (Lindb.) Evans
 var. *guttulata* (Lindb.) Warnst. = *L. guttulata* (Lindb.) Evans
quadriloba (Lindb.) Evans = *Barbilophozia quadriloba* (Lindb.) Loeske
 var. *glareosa* (Jørg.) Jørg. = *Barbilophozia quadriloba* (Lindb.) Loeske
 var. *glareosa* (Jørg.) Lammes
rutheana (Limpr.) M. A. Howe = *Leiocolea rutheana* (Limpr.) K. Müll.
silvicola Buch = *L. ventricosa* (Dicks.) Dum. var. *silvicola* (Buch) Schust.
 var. *grandiretis* Buch & S. Arn. = *L. ventricosa* (Dicks.) Dum. var. *grandiretis* (Buch & S. Arn.) Schust. & Damsh.

- sudetica** (Hüb.) Grolle (3, 74)
 var. **sudetica**
 var. (21, 75)
ventricosa (Dicks.) Dum.
 var. **grandiretis** (Buch & S. Arn.) Schust. & Damsh. (21, 76)
 var. **longiflora** (Nees) Mac. = *L. longiflora* (Nees) Schiffn.
 var. **silvicola** (Buch) Schust. (76)
 var. **ventricosa**
wenzelii (Nees) Steph.
 var. **lapponica** Buch & S. Arn.
 var. **wenzelii**
Lophoziella Douin & Schiffn. = *Cephaloziella* (Spruce) Schiffn., p.p.
Lunularia Adans.
cruciata (L.) Lindb. (77)
Madotheca Dum.
cordaeana (Hüb.) Dum. = *Porella cordaeana* (Hüb.) Moore
 var. **simplicior** (Zett.) K. Müll. = *Porella cordaeana* (Hüb.) Moore var.
simplicior (Zett.) H. Arn. ? (7)
platyphylla (L.) Dum. = *Porella platyphylla* (L.) Pfeiff.
rivularis Nees = *Porella cordaeana* (Hüb.) Moore
Mannia Opiz
fragrans (Balbis) Frye & Clark
pilosa (Hornem.) Frye & Clark
Marchantia L.
alpestris (Nees) Burgeff (78)
aquatica (Nees) Burgeff = *M. polymorpha* L. var. *aquatica* Nees
polymorpha L. (79)
 var. **alpestris** Nees = *M. alpestris* (Nees) Burgeff
 var. **aquatica** Nees (79)
 var. **polymorpha** (79)
Marsilia Lindb. = *Pellia* Raddi
Marsupella Dum.
apiculata Schiffn. = *Gymnomitrium apiculatum* (Schiffn.) K. Müll.
aquatica (Lindenb.) Schiffn. (80)
boeckii (Aust.) Kaal. (3, 81)
 var. **intricata** (Lindb.) H. Arn. & C. Jens. (7)
brevissima (Dum.) Grolle (82)
condensata (Hartm. f.) Kaal. (3, 83)
emarginata (Ehrh.) Dum.
 var. **aquatica** (Lindenb.) Dum. = *M. aquatica* (Lindenb.) Schiffn.
funckii (Web. & Mohr) Dum.
sparsifolia (Lindb.) Dum.
sphacelata (Lindenb.) Dum. (3)
sprucei (Limpr.) H. Bern. (84)
ustulata Spruce = *M. sprucei* (Limpr.) H. Bern.
 var. **sprucei** (Limpr.) Schust. = *M. sprucei* (Limpr.) H. Bern.
varians (Lindb.) K. Müll. = *M. brevissima* (Dum.) Grolle
Martinellius S. Gray (*Martinellia*) = *Scapania* (Dum.) Dum.
Massula Schljak., nom. inval. = *Lophozia* (Dum.) Dum., p.p.
Metzgeria Raddi
furcata (L.) Dum.
Microlepidozia (Spruce) Jørg.
setacea Jørg. = *Kurzia pauciflora* (Dicks.) Grolle

- Moerckia** Gottsche (4)
blyttii (Mörch) Brockm. (2)
flotoviana (Nees) Schiffn. = *M. hibernica* (Hook.) Gottsche
hibernica (Hook.) Gottsche (85)
- Mylia** S. Gray, nom. cons.
anomala (Hook.) S. Gray
taylorii (Hook.) S. Gray
- Nardia** S. Gray, nom. cons.
breidleri (Limpr.) Lindb. (86)
geoscyphus (De Not.) Lindb.
 var. *suberecta* (Kaal.) Jørg. = *N. geoscyphus* (De Not.) Lindb. (7)
insecta Lindb. (87)
scalaris S. Gray (88)
 spp. = *Jungermannia* L., p.p., *Marsupella* Dum.
- Nardiocalyx** Jørg. = *Gymnomitrium* Corda, p.p.
- Neesiella** Schiffn.
pilosa (Hornem.) Schiffn. = *Mannia pilosa* (Hornem.) Frye & Clark
- Nowellia** Mitt.
curvifolia (Dicks.) Mitt.
- Obtusifolium** S. Arn.
obtusum (Lindb.) S. Arn. = *Lophozia obtusa* (Lindb.) Evans
- Odontoschisma** (Dum.) Dum.
denudatum (Mart.) Dum. (3)
elongatum (Lindb.) Evans (89)
macounii (Aust.) Underw. (12)
- Orthocaulis** Buch
atlanticus (Kaal.) Buch = *Barbilophozia atlantica* (Kaal.) K. Müll.
attenuatus (Mart.) Evans = *Barbilophozia attenuata* (Mart.) Loeske
binsteadii (Kaal.) Buch = *Barbilophozia binsteadii* (Kaal.) Loeske
cavifolius Buch & S. Arn. = *Anastrophyllum cavifolium* (Buch & S. Arn.)
 Lammes
elongatus (Steph.) Evans = *Lophozia elongata* Steph.
floerkei (Web. & Mohr) Buch = *Barbilophozia floerkei* (Web. & Mohr)
 Loeske
gracilis (Nees) Buch = *Barbilophozia attenuata* (Mart.) Loeske
kunzeanus (Hüb.) Buch = *Barbilophozia kunzeana* (Hüb.) K. Müll.
 var. *plicatus* (Hartm.) S. Arn., nom. inval. = *Barbilophozia kunzeana*
 (Hüb.) K. Müll. (7)
quadrilobus (Lindb.) Buch = *Barbilophozia quadriloba* (Lindb.) Loeske
 var. *glareosus* (Jørg.) S. Arn. = *Barbilophozia quadriloba* (Lindb.) Loeske
 var. *glareosa* (Jørg.) Lammes
- Pallavicinia** S. Gray, nom. cons., p.p. = *Moerckia* Gottsche
- Pellia** Raddi, nom. cons. prop.
borealis Lorb. = *P. epiphylla* (L.) Corda (90)
endiviifolia (Dicks.) Dum. (4, 91)
epiphylla (L.) Corda (90)
fabbroniana auct. = *P. endiviifolia* (Dicks.) Dum.
neesiana (Gottsche) Limpr.
- Peltolepis** Lindb. (92)
grandis (Lindb.) Lindb. = *P. quadrata* (Saut.) K. Müll.
quadrata (Saut.) K. Müll. (93)
- Phaeoceros** Prosk. (11, 94)
carolinianus (Michx.) Prosk. (94)

- laevis auct. fenn. = *P. carolinianus* (Michx.) Prosk.
 [laevis (L.) Prosk.] (23A, 94)
 ssp. *carolinianus* (Michx.) Prosk. = *P. carolinianus* (Michx.) Prosk.
- Plagiochila** (Dum.) Dum., nom. cons.
arctica Bryhn & Kaal. var. *subarctica* (Jørg.) H. Inoue = *P. porelloides*
 (Nees) Lindenb. var. *subarctica* (Jørg.) Lammes
asplenioides auct. = *P. porelloides* (Nees) Lindenb.
asplenioides (L.) Dum. (95)
 var. *subarctica* Jørg. = *P. porelloides* (Nees) Lindenb. var. *subarctica*
 (Jørg.) Lammes
major S. Arn. = *P. asplenioides* (L.) Dum.
porelloides (Nees) Lindenb. (95)
 var. **porelloides**
 var. **subarctica** (Jørg.) Lammes (96)
- Plectocolea** (Mitt.) Mitt.
hyalina (Lyell) Mitt. = *Jungermannia hyalina* Lyell
obovata (Nees) Mitt. = *Jungermannia obovata* Nees
- Pleuroclada** Spruce
albescens (Hook.) Spruce (97)
 var. *islandica* (Nees) Spruce = *P. albescens* (Hook.) Spruce (7)
islandica (Nees) Pears. = *P. albescens* (Hook.) Spruce (7)
- Porella** L.
cordaeana (Hüb.) Moore (98)
 var. *simplicior* (Zett.) H. Arn. (7)
platyphylla (L.) Pfeiff. (98)
- Prasanthus** Lindb.
suecicus (Gottsche) Lindb.
- Preissia** Corda
quadrata (Scop.) Nees
- Ptilidium** Nees
ciliare (L.) Hampe
pulcherrimum (G. Web.) Vain. (99)
- Radula** Dum., nom. cons.
complanata (L.) Dum.
lindbergiana Gottsche = *R. lindenbergiana* Hartm. f.
lindenbergiana Hartm. f. (100)
- Reboulia** Raddi, nom. cons.
hemisphaerica (L.) Raddi
- Riccardia** S. Gray, nom. cons.
chamedryfolia (With.) Grolle (4, 101)
incurvata Lindb. (102)
latifrons (Lindb.) Lindb. (103)
multifida (L.) S. Gray
palmata (Hedw.) Carruth.
pinguis (L.) S. Gray = *Aneura pinguis* (L.) Dum.
sinuata (Hook.) Trev. = *R. chamedryfolia* (With.) Grolle
 var. *major* (Nees) H. Arn. = *R. chamedryfolia* (With.) Grolle (var.?) (7)
- Riccia** L.
arvensis Aust. = *R. bifurca* Hoffm.
beyrichiana Lehm.
bifurca Hoffm.
canaliculata Hoffm.

- cavernosa* Hoffm. (104)
ciliata Hoffm.
crystallina auct. fenn. = *R. cavernosa* Hoffm.
 [crystallina L.] (23A, 104)
fluitans L. (105)
glauca L.
 var. *glauca*
 var. *subinermis* (Lindb.) Warnst. (106)
huebenerana Lindenb.
lescuriana Aust. = *R. beyrichiana* Lehm.
natans L. = *Ricciocarpos natans* (L.) Corda
rhenana Lorb. (105)
sorocarpa Bisch. (107)
subinermis Lindb. = *R. glauca* L. var. *subinermis* (Lindb.) Warnst.
Ricciocarpos Corda (4)
 natans (L.) Corda (105)
Saccobasis Buch
 polita (Nees) Buch = *Tritomaria polita* (Nees) Jørg.
Sauteria Nees
 alpina (Nees) Nees (108)
Scalius S. Gray (Scalia) = *Haplomitrium* Nees
Scapania (Dum.) Dum., nom. cons. (109)
 aequiloba (Schwaegr.) Dum. (110)
 apiculata Spruce
 calcicola (H. Arn. & J. Perss.) Ingh.
 compacta (A. Roth) Dum. (40)
 crassiretis Bryhn
 curta (Mart.) Dum.
 cuspiduligera (Nees) K. Müll.
 gymnostomophila Kaal. (12)
 hyperborea Jørg.
irrigua (Nees) Nees (3, 111)
 ssp. *rufescens* (Loeske) Schust. = *S. irrigua* (Nees) Nees var. *rufescens*
 (Loeske) Buch
 var. *irrigua*
 var. *rufescens* Buch = *S. irrigua* (Nees) Nees (7)
 var. *rufescens* (Loeske) Buch
kaurinii Ryan (112)
lapponica (H. Arn. & C. Jens.) Steph. = *S. obcordata* (Berggr.) S. Arn.
lingulata Buch (113)
massalongi (K. Müll.) K. Müll. (4, 109)
microphylla Warnst. = *S. lingulata* Buch
mucronata Buch
 ssp. *praetervisa* (Meyl.) Schust. = *S. praetervisa* Meyl.
 var. *arvernica* (Culm.) K. Müll. = *S. praetervisa* Meyl.
 var. *praetervisa* (Meyl.) Buch = *S. praetervisa* Meyl.
nemorea (L.) Grolle (40, 114)
nemorosa Dum. = *S. nemorea* (L.) Grolle
obcordata (Berggr.) S. Arn. (2, 115)
obscura (H. Arn. & C. Jens.) Schiffn. (116)
paludicola Loeske & K. Müll.
paludosa (K. Müll.) K. Müll. (117)
parvifolia Warnst.

praetervisa Meyl. (2, 118)
scandica (H. Arn. & Buch) Macv.
 var. **argutedentata** Buch
 var. **scandica**

[**simmonsii** Bryhn & Kaal.] (23B)
 [**sphaerifera** Buch & Tuom.] (23B)
spitsbergensis (Lindb.) K. Müll. (4, 93)
subalpina (Lindenb.) Dum. (3)
uliginosa (Lindenb.) Dum. (3, 40)
umbrosa (Schrad.) Dum.
undulata (L.) Dum.

Scapaniella Buch

massalongi (K. Müll.) Buch = *Scapania massalongi* (K. Müll.) K. Müll.

Simodon (Lindb.) Schiffn. = *Fossombronia Raddi*, p.p.

Solenostoma Mitt., nom. cons. (119)

[**atrovirens** (Dum.) K. Müll. = *Jungermannia atrovirens* Dum.] (23B)
caespiticium (Lindenb.) Steph. = *Jungermannia caespiticia* Lindenb.
cordifolium (Dum.) Steph. = *Jungermannia exsertifolia* Steph. ssp. *cordifolia*
 (Dum.) Váňa

crenulatum Mitt. = *Jungermannia gracillima* Sm.

gracillimum (Sm.) Schust. = *Jungermannia gracillima* Sm.

hyalinum (Lyell) Mitt. = *Jungermannia hyalina* Lyell

[**oblongifolium** (K. Müll.) K. Müll. = *Jungermannia karl-muelleri* Grolle]
 (23A)

obovatum (Nees) Schust. = *Jungermannia obovata* Nees

pumilum (With.) K. Müll. = *Jungermannia pumila* With.

ssp. **polare** (Lindb.) Schust. = *Jungermannia polaris* Lindb.

pusillum (C. Jens.) Steph. = *Jungermannia jenseniana* Grolle

schiffneri (Loitl.) K. Müll. = *Jungermannia polaris* Lindb.

sphaerocarpum (Hook.) Steph. = *Jungermannia sphaerocarpa* Hook.

var. **nanum** (Nees) Schust. = *Jungermannia sphaerocarpa* Hook. var. *nana*
 (Nees) Frye & Clark? (7)

[**triste** (Nees) K. Müll. = *Jungermannia atrovirens* Dum.] (23B)

Soythbya Spruce, p.p. = *Arnellia* Lindb.

Sphenolobus (Lindb.) Berggr.

cavifolius (Buch & S. Arn.) K. Müll. = *Anastrophyllum cavifolium* (Buch &
 S. Arn.) Lammes

helleranus (Lindenb.) Steph. = *Anastrophyllum helleranum* (Lindenb.)
 Schust.

minutus (Schreb.) Berggr. = *Anastrophyllum minutum* (Schreb.) Schust.

var. **grandis** (Lindb.) Jørg. = *Anastrophyllum minutum* (Schreb.) Schust.
 var. **minutum**

saxicola (Schrad.) Steph. = *Anastrophyllum saxicola* (Schrad.) Schust.

Telaranea Schiffn.

setacea K. Müll. = *Kurzia pauciflora* (Dicks.) Grolle

Temnoma Mitt.

setiformis (Ehrh.) M. A. Howe = *Chandonanthus setiformis* (Ehrh.) Lindb.

Tetralophozia (Schust.) Schljak. = *Chandonanthus* Mitt., p.p.

Trichocolea Dum., nom. cons.

tomentella (Ehrh.) Dum.

Tritomaria Loeske (120)

exsectiformis (Breidl.) Loeske (3, 121)

polita (Nees) Jørg. (120, 121)

- quinquedentata* (Huds.) Buch (122)
 var. *grandiretis* Buch & S. Arn. (21)
 var. *quinquedentata*
 var. *turgida* (Lindb.) Weim. (21)
scitula (Tayl.) Jørg.

B. Bryophytina

- Abietinella* C. Müll.
abietina (Hedw.) Fleisch.
Acaulon C. Müll.
muticum (Hedw.) C. Müll.
 var. *minus* (Hook. & Tayl.) B.S.G. (133)
Acrocladium Mitt.
cuspidatum (Hedw.) Lindb. = *Calliergonella cuspidata* (Hedw.) Loeske
Aloina Kindb., nom. cons.
brevirostris (Hook. & Grev.) Kindb. (123)
Amblyodon B.S.G., nom. cons.
dealbatus (Hedw.) B.S.G. (124)
Amblystegiella Loeske (125)
alpicola (Lindb. & H. Arn.) Broth. = *Isopterygium alpicola* (Lindb. & H. Arn.) Nyh.
 [confervoides (Brid.) Loeske = *Platydictya confervoides* (Brid.) Crum] (126)
jungermannioides (Brid.) Giac. = *Platydictya jungermannioides* (Brid.) Crum
sprucei (Bruch) Loeske = *Platydictya jungermannioides* (Brid.) Crum
subtilis (Hedw.) Loeske = *Platydictya subtilis* (Hedw.) Crum
Amblystegium B.S.G.
compactum (C. Müll.) Aust. = *Rhynchostegiella compacta* (C. Müll.) Loeske
fluviatile (Hedw.) B.S.G. = *Hygroamblystegium fluviatile* (Hedw.) Loeske
juratzkanum Schimp.
kochii B.S.G. = *Leptodictyum kochii* (B.S.G.) Warnst.
radicale (P. Beauv.) Mitt. = *Amblystegium saxatile* Schimp.
riparium (Hedw.) B.S.G. = *Leptodictyum riparium* (Hedw.) Warnst.
saxatile Schimp. (127)
serpens (Hedw.) B.S.G.
 ssp. *juratzkanum* (Schimp.) Ren. & Card. = *A. juratzkanum* Schimp.
 var. *juratzkanum* (Schimp.) Rau & Herv. = *A. juratzkanum* Schimp.
tenax (Hedw.) C. Jens. = *Hygroamblystegium tenax* (Hedw.) Jenn.
trichopodium (K. F. Schultz) Hartm. f. var. *curvipes* (B.S.G.) Broth. = *Leptodictyum kochii* (B.S.G.) Warnst.
 var. *kochii* (B.S.G.) Lindb. = *Leptodictyum kochii* (B.S.G.) Warnst.
varium (Hedw.) Lindb. (127)
 spp. = genera diversa: Amblystegiaceae
Amphidium Schimp., nom. cons.
lapponicum (Hedw.) Schimp.
mougeotii (B.S.G.) Schimp.
Andreaea Hedw.
alpestris (Thed.) B.S.G. = *A. rupestris* Hedw.
blyttii B.S.G.
crassinervia Bruch
nivalis Hook.

obovata Thed.var. *papillosa* (Lindb.) Nyh. (133)var. *sparsifolia* (Zett. & Björnstr.) Nyh. (133)**petrophila** Fürnr. = *A. rupestris* Hedw.var. *rupestris* (Hedw.) Wallr. = *A. rupestris* Hedw.**rothii** Web. & Mohr**rupestris** Hedw.ssp. *alpestris* (Thed.) C. Jens. = *A. rupestris* Hedw.ssp. *obovata* (Thed.) C. Jens. = *A. obovata* Thed.ssp. *papillosa* (Lindb.) C. Jens. = *A. obovata* Thed.ssp. *sparsifolia* (Zett. & Björnstr.) C. Jens. = *A. obovata* Thed.var. *alpestris* (Thed.) Sharp = *A. rupestris* Hedw.var. *thedenii* (B.S.G.) C. Jens. = *A. obovata* Thed.**Anisothecium** Mitt.*crispum* (Hedw.) C. Jens. = *A. vaginale* (With.) Loeske*crispum* Lindb. = *A. schreberanum* (Hedw.) Dix.**grevilleanum** (Brid.) Broth.*humile* (Ruthe) Lindb. = *A. rigidulum* (Hedw.) C. Jens.**palustre** (Dicks.) I. Hag.**rigidulum** (Hedw.) C. Jens.*rubrum* Lindb. = *A. varium* (Hedw.) Mitt.**rufescens** (With.) Lindb.**schreberanum** (Hedw.) Dix.*squarrosum* (Schrud.) Lindb. = *A. palustre* (Dicks.) I. Hag.**vaginale** (With.) Loeske**varium** (Hedw.) Mitt.**Anoetangium** Lindb. = *Amphidium* Schimp.**Anoetangium** Schwaegr., nom. cons.**aestivum** (Hedw.) Mitt.*compactum* Schwaegr. = *A. aestivum* (Hedw.) Mitt.**Anomobryum** Schimp.*concinatum* (Spruce) Lindb. = *A. julaceum* (Gaertn. et al.) Schimp.*filiforme* (Dicks.) Husn. = *A. julaceum* (Gaertn. et al.) Schimp.**julaceum** (Gaertn. et al.) Schimp.**Anomodon** Hook. & Tayl.**attenuatus** (Hedw.) Hüb.**longifolius** (Brid.) Hartm.**rugelii** (C. Müll.) Keissl.**viticulosus** (Hedw.) Hook. & Tayl.**Antitrichia** Brid.**curtipendula** (Hedw.) Brid.**Aongstroemia** B.S.G.**longipes** (Sommerf.) B.S.G.**Aplodon** R. Brown (128)**wormskioldii** (Hornem.) R. Brown**Archidium** Brid.**alternifolium** (Hedw.) Schimp. (129)**Arctoa** B.S.G.**fulvella** (Dicks.) B.S.G.**hyperborea** (With.) B.S.G.**Astomum** Hampe**crispum** (Hedw.) Hampe**Astrophyllum** Lindb. = *Mnium* Hedw., s. lat.

- Atrichum** P. Beauv., nom. cons.
 [haussknechtii Jur. & Milde] (126)
 tenellum (Röhl.) B.S.G.
 undulatum (Hedw.) P. Beauv.
- Aulacomnium** Schwaegr., nom. cons.
 androgynum (Hedw.) Schwaegr. (130)
 palustre (Hedw.) Schwaegr.
 turgidum (Wahlenb.) Schwaegr. (130)
- Barbula** Hedw., nom. cons. (131)
 convoluta Hedw.
 curvirostris Lindb. = *Gymnostomum recurvirostre* Hedw.
 cylindrica (Tayl.) Schimp.
 fallax Hedw.
 icmadophila C. Müll. = *Didymodon icmadophila* (C. Müll.) K. Saito
 recurvirostris (Hedw.) Dix. = *Bryoerythrophyllum recurvirostre* (Hedw.)
 Chen
 reflexa (Brid.) Brid. (132)
 rigidula (Hedw.) Mitt. = *Didymodon rigidulus* Hedw.
 tophacea (Brid.) Mitt. = *Didymodon tophaceus* (Brid.) Lisa
 unguiculata Hedw.
 vinealis Brid. var. *cylindrica* (Tayl.) Boul. = *B. cylindrica* (Tayl.) Schimp.
- Bartramia** Hedw., nom. cons.
 hallerana Hedw. (300)
 ithyphylla Brid.
 [var. *breviseta* (Lindb.) Kindb.] (126, 133)
 var. *strigosa* (Wahlenb.) Hartm. f. (133)
 norvegica Lindb. = *B. hallerana* Hedw.
 oederi Brid. = *Plagiopus oederi* (Brid.) Limpr.
 pomiformis Hedw.
 var. *crispa* (Brid.) B.S.G. = *B. pomiformis* Hedw. (134)
- Blindia** B.S.G.
 acuta (Hedw.) B.S.G.
- Brachythecium** B.S.G.
 albicans (Hedw.) B.S.G.
 campestre (C. Müll.) B.S.G.
 collinum (C. Müll.) B.S.G.
 curtum (Lindb.) C. Jens. (135)
 erythrorrhizon B.S.G.
 var. *thedenii* (B.S.G.) Lindb. (133)
 glaciale B.S.G.
 glareosum (Spruce) B.S.G.
 latifolium Kindb.
 mildeanum (Schimp.) Schimp.
 var. *udum* (I. Hag.) Mönk. (133)
 plumosum (Hedw.) B.S.G.
 populeum (Hedw.) B.S.G.
 reflexum (Starke) B.S.G.
 rivulare B.S.G.
 rutabulum (Hedw.) B.S.G.
 salebrosum (Web. & Mohr) B.S.G.
 ssp. *turgidum* (Hartm.) Hartm. f. = *B. turgidum* (Hartm.) Kindb.
 starkei (Brid.) B.S.G.
 ssp. *curtum* (Lindb.) Amann = *B. curtum* (Lindb.) C. Jens.

trachypodium (Brid.) B.S.G.

turgidum (Hartm.) Kindb.

velutinum (Hedw.) B.S.G.

Breidleria Loeske = *Hypnum* Hedw., p.p.

Bryoerythrophyllum Chen (131)

recurvirostre (Hedw.) Chen

Bryum Hedw. (136)

[*acutiforme* Limpr.] (126)

[*acutum* Lindb. = *B. acutiforme* Limpr.] (126)

affine F. Schultz = *B. creberrimum* Tayl.

var. *cylindricum* H. Arn. = *B. pallescens* Schwaegr. (137)

alandense Bomanss. (138)

algovicum C. Müll. (138, 139)

alpinum With.

angustirete Kindb. (138, 139)

archangelicum B.S.G.

arcticum (R. Brown) B.S.G. (142, 143)

arctogaeum I. Hag. = *B. intermedium* (Brid.) Bland.

argenteum Hedw.

bergoeense Bomanss. = *B. salinum* Limpr. (140)

bicolor Dicks.

bimum (Schreb.) Turn.

bomanssonii Lindb. = *B. rubens* Mitt. (141)

brownii B.S.G. = *B. arcticum* (R. Brown) B.S.G. (142)

var. *stenocarpum* (Limpr.) C. Jens. (143)

bulbifolium Lindb. = *B. pallescens* Schwaegr. (144)

caespiticium Hedw.

ssp. *comense* (Schimp.) Amann (145)

var. *comense* (Schimp.) Husn. (145)

capillare Hedw. (145, 146)

var. *flaccidum* (Brid.) B.S.G. = *B. flaccidum* Brid.

castaneum I. Hag. var. *bomanssonii* I. Hag. = *B. pseudocastaneum* C. Jens.

cernuum (Hedw.) B.S.G. = *B. uliginosum* (Brid.) B.S.G.

cirrhatum Hoppe & Hornsch. = *B. pallescens* Schwaegr. (137)

clathratum Amann = *B. pallescens* Schwaegr. (147)

creberrimum Tayl.

crispulum Hampe = *B. pallescens* Schwaegr. (148)

cyclophyllum (Schwaegr.) B.S.G.

duvalii Voit = *B. weigelii* Spreng.

elegans Brid. (146)

var. *barbatum* C. Jens. = *B. stirtonii* Schimp.

var. *carinthiacum* (B.S.G.) Breidl. = *B. stirtonii* Schimp.

var. *ferchelii* (Brid.) Breidl. = *B. elegans* Brid. (146)

erythrocarpum auct. = *B. rubens* Mitt., *B. tenuisetum* Limpr., *B. violaceum*

Crundw. & Nyh. (141)

[*erythrocarpum* Schwaegr.] (126, 141)

ssp. *bomanssonii* (Lindb.) Broth. = *B. rubens* Mitt. (141)

var. *bomanssonii* (Lindb.) Podp. = *B. rubens* Mitt. (141)

var. *pachydermum* (Bomanss.) C. Jens. = *B. tenuisetum* Limpr. (141)

finmarkicum Kaur. var. *lutescens* Broth. = *B. pallens* Sw. (149)

fissum Ruthe = *B. salinum* Limpr. (140)

flaccidum Brid. (150)

flavidum Bomanss. = *B. stenotrichum* C. Müll. (151)

- flexisetum* Lindb. & H. Arn. = *B. pallescens* Schwaegr. (144)
globosum Lindb. = *B. wrightii* Sull. & Lesq.
grandiflorum H. Arn. = *B. stenotrichum* C. Müll.
haematostomum Jørg. var. *fennicum* Broth. = *B. salinum* Limpr. (140, 152)
hagenii Limpr. = *B. stenotrichum* C. Müll. (151)
inclinatum (Brid.) Bland. = *B. stenotrichum* C. Müll. (151)
 ssp. *hagenii* (Limpr.) C. Jens. & Perss. = *B. stenotrichum* C. Müll. (151)
 ssp. *kaurinianum* (Warnst.) Amann = *B. stenotrichum* C. Müll.
 var. *brotheri* (Bomanss.) C. Jens. = *B. stenotrichum* C. Müll. (151)
 var. *contractum* (Bomanss.) C. Jens. = *B. stenotrichum* C. Müll. (151)
 var. *grandiflorum* (H. Arn.) C. Jens. & Perss. = *B. stenotrichum* C. Müll.
 var. *insularum* (Bomanss.) C. Jens. = *B. salinum* Limpr. (140)
 var. *leptocercis* (Philib.) C. Jens. & Perss. (133)
 var. *litorum* (Bomanss.) Podp. = *B. stenotrichum* C. Müll.
 var. *stenothea* (Bomanss.) Broth. = *B. stenotrichum* C. Müll. (151)
intermedium (Brid.) Bland. (156)
 ssp. *fuscum* (Lindb.) Bryhn (133)
 ssp. *luteum* (Bomanss.) Amann (133)
kaurinianum Warnst. = *B. stenotrichum* C. Müll.
klingsgraeffii Schimp.
knowltonii Barnes (154)
lacustre (Web. & Mohr) Bland. = *B. knowltonii* Barnes (154)
lapponicum Kaur. = *B. salinum* Limpr. (153)
litorum Bomanss. = *B. stenotrichum* C. Müll.
longisetum Schwaegr.
luteum Bomanss. = *B. intermedium* (Brid.) Bland.
mamillatum Lindb.
maritimum Bomanss. = *B. knowltonii* Barnes (154)
marratii Wils.
mildeanum Jur.
muehlenbeckii B.S.G.
 [murmanicum Broth.] (126)
neodamense Itzigs.
 var. *ovatum* (C. Jens.) Lindb. & H. Arn. (133)
nitidulum Lindb.
oblongum Lindb. (155)
orarium Limpr. = *B. ovarium* Bomanss. = *B. salinum* Limpr.
ovarium Bomanss. = *B. salinum* Limpr. (140)
 var. *bergoeense* (Bomanss.) C. Jens. = *B. salinum* Limpr. (140)
pachydermum Bomanss. = *B. tenuisetum* Limpr. (141)
pallens Sw. (149, 157)
 var. *alpinum* (B.S.G.) Podp. (133)
 var. *brevisetum* Lindb. & H. Arn. (149)
 var. *fallax* Jur. = *B. pallens* Sw. var. *alpinum* (B.S.G.) Podp. (133)
 var. *lutescens* (Broth.) C. Jens. (149)
pallescens Schwaegr. (137, 144, 147, 148)
 var. *boreale* (Web. & Mohr) B.S.G. (133)
pendulum (Hornsch.) Schimp. = *B. algovicum* C. Müll. (138, 139)
 var. *compactum* (Hornsch.) Hartm. = *B. algovicum* C. Müll. (139)
pseudocastaneum C. Jens.
pseudotriquetrum (Hedw.) Gaertn. et al.
 ssp. *crispulum* (G. Roth) C. Jens. = *B. pallescens* Schwaegr. (148)
 var. *gracilescens* Schimp. (133)

- var. *montanum* (Bomanss.) C. Jens. = *B. pseudotriquetrum* (Hedw.) Gaertn. et al. (134)
 var. *qvarnboënsë* (Bomanss.) C. Jens. = *B. pallescens* Schwaegr. (144)
 var. *versifolium* (Bomanss.) C. Jens. (133)
purpurascens (R. Brown) B.S.G.
 ssp. *serotinum* (Lindb.) Podp. (133)
 var. *serotinum* (Lindb.) C. Jens. (133)
rubens Mitt. (141)
rutilans Brid.
salinum Limpr. (138, 140, 152, 153)
stenotrichum C. Müll. (151, 152)
stirtonii Schimp. (150)
subcirratum Bomanss. = *B. pallescens* Schwaegr. (144)
tenuisetum Limpr. (141)
tortifolium Brid. = *B. cyclophyllum* (Schwaegr.) B.S.G.
tumidulum Bomanss. = *B. salinum* Limpr. (140)
tumidum Bomanss. = *B. stenotrichum* C. Müll. (151)
turbinatum (Hedw.) Turn.
uliginosum (Brid.) B.S.G.
ventricosum Relh. = *B. pseudotriquetrum* (Hedw.) Gaertn. et al.
 var. *gracilescens* (Schimp.) Lindb. = *B. pseudotriquetrum* (Hedw.) Gaertn. et al.
venustum Bomanss. = *B. intermedium* (Brid.) Bland. (156)
versisporum Bomanss. = *B. pallens* Sw. (157)
violaceum Crundw. & Nyh. (141)
warneum (Röhl.) Brid. (143)
 ssp. *oelandicum* (Philib.) Amann (143)
 var. *oelandicum* (Philib.) G. Roth (143)
weigeli Spreng.
wrightii Sull. & Lesq. (288)
 spp. = *Anomobryum* Schimp., *Rhodobryum* (Schimp.) Limpr.
- Buxbaumia** Hedw.
- aphylla** Hedw. (158)
foliosa auct. = *B. viridis* (DC.) Moug. & Nestl. (159)
foliosa Hedw. = *Diphyscium foliosum* (Hedw.) Mohr
indusiata Brid. = *B. viridis* (DC.) Moug. & Nestl.
viridis (DC.) Moug. & Nestl. (158)
- Callicladium** Crum (160)
- haldanianum** (Grev.) Crum
Calliergidium Grout = *Drepanocladus* (C. Müll.) G. Roth, p.p.
- Calliergon** (Sull.) Kindb. (161)
- cordifolium** (Hedw.) Kindb.
 var. *angustifolium* G. Roth = *C. cordifolium* (Hedw.) Kindb. (134)
giganteum (Schimp.) Kindb.
megalophyllum Mikut. (161)
richardsonii (Mitt.) Kindb.
sarmentosum (Wahlenb.) Kindb.
 var. *fontinaloides* (Berggr.) G. Roth = *C. sarmentosum* (Wahlenb.) Kindb. (134)
stramineum (Brid.) Kindb.
 var. *patens* (Lindb.) G. Roth = *C. stramineum* (Brid.) Kindb. (134)
trifarium (Web. & Mohr) Kindb.
turgescens (T. Jens.) Kindb. = *Scorpidium turgescens* (T. Jens.) Loeske

- Calliergonella** Loeske
cuspidata (Hedw.) Loeske
- Camptothecium** B.S.G.
lutescens (Hedw.) B.S.G.
trichoides Lindb. = *Tomentypnum nitens* (Hedw.) Loeske
- Campylium** (Sull.) Mitt.
calcareum Crundw. & Nyh. (162)
chrysophyllum (Brid.) J. Lange
elodes (Lindb.) Kindb.
halleri (Hedw.) Lindb. (163)
helodes Broth. = *C. elodes* (Lindb.) Kindb.
hispidulum auct. = *C. sommerfeltii* (Myr.) J. Lange (162)
 var. *sommerfeltii* auct. = *C. calcareum* Crundw. & Nyh.
 [hispidulum (Brid.) Mitt.] (126)
polygamum (B.S.G.) C. Jens.
 var. *stagnatum* (Wils.) Dix. = *C. polygamum* (B.S.G.) C. Jens. (134)
protensum (Brid.) Kindb.
sommerfeltii (Myr.) J. Lange (162)
stellatum (Hedw.) C. Jens.
 ssp. *protensum* (Brid.) C. Jens. = *C. protensum* (Brid.) Kindb.
 var. *protensum* (Brid.) Bryhn = *C. protensum* (Brid.) Kindb.
- [**Campylopus** Brid.]
 [schimperi Milde = *C. subulatus* Schimp.] (126)
 [subulatus Schimp.] (126)
- Catharinaea** Web. & Mohr
 [haussknechtii (Jur. & Milde) Broth. = *Atrichum haussknechtii* Jur. & Milde] (126)
tenella Röhl. = *Atrichum tenellum* (Röhl.) B.S.G.
undulata (Hedw.) Web. & Mohr = *Atrichum undulatum* (Hedw.) P. Beauv.
- Catocopium** Brid.
nigritum (Hedw.) Brid.
- Ceratodon** Brid.
purpureus (Hedw.) Brid.
 ssp. *conicus* (Hampe) Dix. (133)
 var. *conicus* (Hampe) Husn. (133)
- Chrysohypnum** G. Roth = *Campylium* (Sull.) Mitt.
- Cinclidium** Sw.
hymenophyllum (B.S.G.) Lindb. = *Cyrtomnium hymenophyllum* (B.S.G.) Holmen
stygium Sw. (164)
subrotundum Lindb. (164)
- Cirriphyllum** Grout
cirrosum (Schwaegr.) Grout
piliferum (Hedw.) Grout
tenuinerve (Lindb.) Wijk & Marg.
vaucheri Loeske & Fleisch. = *C. tenuinerve* (Lindb.) Wijk & Marg.
- Climacium** Web. & Mohr
dendroides (Hedw.) Web. & Mohr (165)
- Cnestrum** I. Hag.
alpestre (Hüb.) Nyh., nom. inval. = *Cynodontium alpestre* (Hüb.) Milde (166)
schisti (Web. & Mohr) I. Hag.

Conostomum Sw.**tetragonum** (Hedw.) Lindb.**Coscinodon Spreng.****cribrosus** (Hedw.) Spruce**Cratoneuron (Sull.) Spruce****commutatum** (Hedw.) G. Rothvar. **falcatum** (Brid.) Mönk. = **C. falcatum** (Brid.) G. Rothvar. **irrigatum** (Zett.) Mönk. (134, 167)**decipiens** (De Not.) Loeske**falcatum** (Brid.) G. Roth (168)**filicinum** (Hedw.) Sprucessp. **curvicaule** (Jur.) Broth. (133)var. **curvicaule** (Jur.) Mönk. (133)**glaucum** Broth. = **C. commutatum** (Hedw.) G. Rothvar. **falcatum** (Brid.) C. Jens. = **C. falcatum** (Brid.) G. Rothvar. **irrigatum** (Zett.) Broth. = **C. commutatum** (Hedw.) G. Roth (134, 167)**Ctenidium (Schimp.) Mitt.****molluscum** (Hedw.) Mitt.**Cynodontium Schimp., nom. cons.****alpestre** (Hüb.) Milde (166)**bruntonii** (Sm.) B.S.G.**hyperboreum** (With.) I. Hag. = **Arctoa hyperborea** (With.) B.S.G.**jeneri** (Schimp.) Stirt.**polycarpon** (Hedw.) Schimp. (169)var. **laxirete** Dix. = **C. jeneri** (Schimp.) Stirt.**strumiferum** (Hedw.) Lindb.**suecicum** (H. Arn. & C. Jens.) I. Hag.**tenellum** Limpr.**Cyrtomnium Holmen (170)****hymenophylloides** (Hüb.) T. Kop. (171)**hymenophyllum** (B.S.G.) Holmen**Desmatodon Brid.****cernuus** (Hüb.) B.S.G. (172)**latifolius** (Hedw.) Brid. (173)var. **brevicaulis** Schimp. (133)var. **muticus** (Brid.) Brid. (133)**systylius** Schimp.**Dichelyma Myr.****capillaceum** (With.) Myr. (174)**falcatum** (Hedw.) Myr.**Dichodontium Schimp.**[**flavescens** (With.) Lindb.] (126, 133)**pellucidum** (Hedw.) Schimp. (175)[var. **flavescens** (With.) Moore] (126, 133)[var. **mildei** Limpr.] (126, 133, 134)**Dicranella (C. Müll.) Schimp.****cerviculata** (Hedw.) Schimp.**crispa** (Hedw.) Schimp. = **Anisothecium vaginale** (With.) Loeske**crispa** Lindb. = **Anisothecium schreberianum** (Hedw.) Dix.**grevilleana** (Brid.) Schimp. = **Anisothecium grevilleanum** (Brid.) Broth.**heteromalla** (Hedw.) Schimp.var. **sericea** (Schimp.) Jur. = **D. heteromalla** (Hedw.) Schimp. (134)

palustris (Dicks.) Crundw. = *Anisothecium palustre* (Dicks.) I. Hag.
 rigidula (Hedw.) Dix. = *Anisothecium rigidulum* (Hedw.) C. Jens.
 [riparia (H. Lindb.) Mårt. & Nyh.] (126)
 rufescens (With.) Schimp. = *Anisothecium rufescens* (With.) Lindb.
 schreberi Schimp. = *Anisothecium schreberianum* (Hedw.) Dix.
 secunda Lindb. = *D. subulata* (Hedw.) Schimp.
 squarrosa (Schrad.) Schimp. = *Anisothecium palustre* (Dicks.) I. Hag.
 subulata (Hedw.) Schimp.
 varia (Hedw.) Schimp. = *Anisothecium varium* (Hedw.) Mitt.

Dicranodontium B.S.G.

denudatum (Brid.) Britt.

Dicranoweisia Milde

cirrata (Hedw.) Milde

crispula (Hedw.) Milde

var. **compacta** (Schwaegr.) Lindb. = *D. crispula* (Hedw.) Milde (134)

Dicranum Hedw.

acutifolium (Lindb. & H. Arn.) C. Jens. = *D. sendtneri* Limpr. (176)

angustum Lindb. (178)

bergeri Bland. = *D. undulatum* Brid. (177)

blyttii B.S.G. = *Kiaeria blyttii* (B.S.G.) Broth.

bonjeanii De Not.

var. **anomalum** C. Jens. = *D. leioneuron* Kindb.

var. **integrifolium** H. Lindb. = *D. leioneuron* Kindb.

brevifolium (Lindb.) Lindb. = *D. muehlenbeckii* B.S.G. var. **cirrhatum** (Schimp.) Lindb.

drummondii C. Müll. (177)

elatum Lindb. = *D. drummondii* C. Müll. (177)

elongatum Schwaegr.

ssp. **groenlandicum** (Brid.) Mönk. = *D. groenlandicum* Brid.

falcatum Hedw. = *Kiaeria falcata* (Hedw.) I. Hag.

flagellare Hedw. = *Orthodicranum flagellare* (Hedw.) Loeske

fragilifolium Lindb.

fulvum Hook. var. **viride** (Sull. & Lesq.) Frye = *D. viride* (Sull. & Lesq.) Lindb.

fuscescens Turn. (179)

ssp. **congestum** (Brid.) Kindb. = *D. fuscescens* Turn. var. **congestum** (Brid.) Husn.

ssp. **spadiceum** (Zett.) C. Jens. = *D. spadiceum* Zett.

var. **congestum** (Brid.) Husn. (180)

var. **falcifolium** Braithw. = *D. fuscescens* Turn. (134)

var. **flexicaule** (Brid.) Wils. (180)

glaciale Berggr. = *Kiaeria glacialis* (Berggr.) I. Hag.

groenlandicum Brid. (181)

leioneuron Kindb. (182)

majus Turn. (179)

montanum Hedw. = *Orthodicranum montanum* (Hedw.) Loeske

muehlenbeckii B.S.G.

var. **acutifolium** (Lindb. & H. Arn.) Nyh., nom. inval. = *D. sendtneri* Limpr. (176)

var. **brevifolium** Lindb. = *D. muehlenbeckii* B.S.G. var. **cirrhatum** (Schimp.) Lindb.

var. **cirrhatum** (Schimp.) Lindb.

polysetum Sw. (177, 179)

robustum B.S.G. = *D. drummondii* C. Müll. (177)

- rugosum (Funck) Brid. = *D. polysetum* Sw. (177)
scoparium Hedw.
 [*var. integrifolium* Lindb.] (126, 133)
 var. laticuspis Loeske & Bauer = *D. scoparium* Hedw. (134)
 var. orthophyllum Brid. = *D. scoparium* Hedw. (134)
 var. paludosum Schimp. = *D. scoparium* Hedw. (134)
 var. tectorum Limpr. = *D. scoparium* Hedw. (134)
sendtneri Limpr. (176)
spadiceum Zett.
spurium Hedw. (179)
starkei Web. & Mohr = *Kiaeria starkei* (Web. & Mohr) I. Hag.
strictum Mohr = *Orthodicranum tauricum* (Sapěhin) Z. Smirn.
tauricum Sapěhin = *Orthodicranum tauricum* (Sapěhin) Z. Smirn.
undulatum Brid. (177)
undulatum Web. & Mohr = *D. polysetum* Sw.
viride (Sull. & Lesq.) Lindb.
 spp. = *Arctoa* B.S.G., *Kiaeria* I. Hag., *Orthodicranum* (B.S.G.) Loeske,
 Paraleucobryum (Limpr.) Loeske
Didymodon Hedw. (131)
denudatus (Brid.) Opiz = *Dicranodontium denudatum* (Brid.) Britt.
icmadophila (C. Müll.) K. Saito (183)
rigidulus Hedw.
rubellus B.S.G. = *Bryoerythrophyllum recurvirostre* (Hedw.) Chen
tophaceus (Brid.) Lisa
Diphyscium Mohr
foliosum (Hedw.) Mohr (184)
sessile Lindb. = *D. foliosum* (Hedw.) Mohr
Discelium Brid.
nudum (Dicks.) Brid.
Distichium B.S.G., nom. cons.
capillaceum (Hedw.) B.S.G.
 var. compactum (Hüb.) Dalla Torre & Sarnth. (133)
hagenii Philib. (185)
inclinatum (Hedw.) B.S.G.
montanum I. Hag. = *D. capillaceum* (Hedw.) B.S.G.
 var. brevifolium (B.S.G.) Roiv. = *D. capillaceum* (Hedw.) B.S.G. *var.*
 compactum (Hüb.) Dalla Torre & Sarnth. (133, 186)
Ditrichum Hampe, nom. cons.
cylindricum (Hedw.) Grout
 var. oblongum (Lindb.) C. Jens. (133)
flexicaule (Schwaegr.) Hampe
giganteum Williams (187)
heteromallum (Hedw.) Britt.
 var. zonatum (Brid.) Podp. (133)
homomallum (Hedw.) Hampe = *D. heteromallum* (Hedw.) Brid.
lineare (Sw.) Lindb.
pusillum (Hedw.) Hampe
 var. tortile (Schrad.) I. Hag. (133)
tenuifolium Lindb. = *D. cylindricum* (Hedw.) Grout
tortile (Schrad.) Brockm. = *D. pusillum* (Hedw.) Hampe
 var. pusillum (Hedw.) Brockm. = *D. pusillum* (Hedw.) Hampe
vaginans (Sull.) Hampe *var. zonatum* (Brid.) I. Hag. = *D. heteromallum*
 (Hedw.) Britt.

- Dolichotheca* Lindb. (188)
seligeri (Brid.) Loeske = *Herzogiella seligeri* (Brid.) Iwats.
striatella (Brid.) Loeske = *Herzogiella striatella* (Brid.) Iwats.
turfacea (Lindb.) Loeske = *Herzogiella turfacea* (Lindb.) Iwats.
- Dorcadion* (Reichenb.) Lindb. = *Orthotrichum* Hedw.
- Drepanocladus*** (C. Müll.) G. Roth (189)
aduncus (Hedw.) Warnst. (194)
 var. *polycarpus* (Voit) G. Roth = *D. aduncus* (Hedw.) Warnst.
badius (Hartm.) G. Roth (194)
capillifolius (Warnst.) Warnst. (190)
exannulatus (B.S.G.) Warnst. (191)
 [var. *brachydictyon* (Ren.) G. Roth] (126, 133)
 var. *exannulatus*
 var. *pinnatus* (Boul.) G. Roth = *D. exannulatus* (B.S.G.) Warnst. (134)
 var. *procerus* (Ren. & H. Arn.) Broth. = *D. procerus* (Ren. & H. Arn.)
 Warnst.
 var. *purpurascens* (Schimp.) Herz.
- fluitans* (Hedw.) Warnst.
 var. *amphibius* (Sanio) Broth. (133)
 var. *falcatus* (C. Jens.) G. Roth = *D. schulzei* G. Roth (197)
- intermedius* (Lindb.) Warnst.
lapponicus (Norrl.) Z. Smirn. (192)
lycopodioides (Brid.) Warnst. (193)
polycarpus (Voit) Warnst. = *D. aduncus* (Hedw.) Warnst. (194)
 var. *capillifolius* (Warnst.) Nyh. = *D. capillifolius* (Warnst.) Warnst. (195)
- procerus* (Ren. & H. Arn.) Warnst. (191)
pseudostramineus (C. Müll.) G. Roth (196)
- revolvens* (Sw.) Warnst.
 ssp. *intermedius* (Lindb.) Grout = *D. intermedius* (Lindb.) Warnst.
 var. *intermedius* (Lindb.) Grout = *D. intermedius* (Lindb.) Warnst.
- schulzei* G. Roth (197)
- sendtneri* (H. Müll.) Warnst. (198)
 var. *tenuinervis* Tuom., nom. inval. = *D. tenuinervis* T. Kop. (198)
- simplicissimus* Warnst. (194)
- tenuinervis* T. Kop. (198)
- triphophyllus* (Warnst.) Podp. (191)
- tundrae* (H. Arn.) Loeske (191)
- uncinatus* (Hedw.) Warnst.
 var. *gracilescens* (B.S.G.) Warnst. = *D. uncinatus* (Hedw.) Warnst. (134)
 var. *plumosus* (Schimp.) Warnst. = *D. uncinatus* (Hedw.) Warnst. (134)
 var. *plumulosus* (B.S.G.) Warnst. = *D. uncinatus* (Hedw.) Warnst. (134)
 var. *subjulaceus* (B.S.G.) Warnst. (133)
- vernicosus* (Mitt.) Warnst.
 var. *gigas* Warnst. = *D. lapponicus* (Norrl.) Z. Smirn.
 var. *lapponicus* (Norrl.) G. Roth = *D. lapponicus* (Norrl.) Z. Smirn.
 var. *major* (Ren.) Warnst. = *D. vernicosus* (Mitt.) Warnst. (134)
- Dryptodon* Brid. = *Grimmia* Hedw., p.p.
- Encalypta*** Hedw.
affinis Hedw. f. (199)
alpina Sm.
brevicollis (B.S.G.) Ångstr.
ciliata Hedw.
contorta Lindb. = *E. streptocarpa* Hedw.

- extinctoria* Lag. et al. = *E. vulgaris* Hedw.
laciniata Lindb. = *E. ciliata* Hedw.
mutica I. Hag. (199)
procera Bruch
rhaptocarpa Schwaegr. (200)
 [*var. arctica* I. Hag.] (126, 133)
 [*var. spathulata* (C. Müll.) Husn. = *E. spathulata* C. Müll.] (126)
 [*spathulata* C. Müll.] (126)
streptocarpa Hedw.
vulgaris Hedw.
Entodon C. Müll.
 repens (Brid.) Grout = *Platygyrium repens* (Brid.) B.S.G.
Entosthodon Schwaegr.
 fascicularis (Hedw.) C. Müll. = *Funaria fascicularis* (Hedw.) Lindb.
Ephemerella C. Müll., nom. cons.
 recurvifolia (Dicks.) Schimp. = *Ephemerum recurvifolium* (Dicks.) Boul.
 sessilis (Bruch) Nyh. = *Ephemerum sessile* (Bruch) C. Müll.
Ephemerum Hampe, nom. cons.
 recurvifolium (Dicks.) Boul.
 serratum (Hedw.) Hampe
 sessile (Bruch) C. Müll.
Eucladium B.S.G.
 aeruginosum (Sm.) C. Jens. = *Gymnostomum aeruginosum* Sm.
 calcareum (Nees & Hornsch.) C. Jens. = *Gymnostomum calcareum* Nees & Hornsch.
 recurvirostre (Hedw.) C. Jens. = *Gymnostomum recurvirostre* Hedw.
Eurhynchium B.S.G.
 angustirete (Broth.) T. Kop. (201)
 distans Bryhn = *E. praelongum* (Hedw.) B.S.G. *var. distans* (Bryhn) Nyh.
 hians (Hedw.) Sande Lac. = *E. praelongum* (Hedw.) B.S.G.
 praelongum (Hedw.) B.S.G.
 var. distans (Bryhn) Nyh. (202)
 var. praelongum
 pulchellum (Hedw.) Jenn.
 var. praecox (Hedw.) Dix. (133)
 stokesii (Turn.) B.S.G.
 striatum (Hedw.) Schimp. (201)
 strigosum (Web. & Mohr) B.S.G. = *E. pulchellum* (Hedw.) Jenn.
 var. praecox (Hedw.) Husn. = *E. pulchellum* (Hedw.) Jenn.
 swartzii (Turn.) Curn. = *E. praelongum* (Hedw.) B.S.G.
 var. distans (Bryhn) C. Jens. = *E. praelongum* (Hedw.) B.S.G. *var. distans* (Bryhn) Nyh.
 zetterstedtii Størm. = *E. angustirete* (Broth.) T. Kop. (201)
Fissidens Hedw.
 adianthoides Hedw. (300)
 bloxamii Wils. = *F. exilis* Hedw.
 bryoides Hedw.
 var. gymnandrus (Buse) Ruthe (133)
 var. viridulus (Sw.) Broth. = *F. viridulus* (Sw.) Wahlenb.
 crassipes B.S.G.
 cristatus Mitt.
 [*var. mucronatus* (Limpr.) Waldh.] (126, 133)
 exilis Hedw.

- haraldii** (Lindb.) Limpr.
julianus (DC.) Schimp. = *Octodiceras fontanum* (B. Pyl.) Lindb.
minutulus Sull.
osmundoides Hedw.
pusillus (Wils.) Milde = *F. minutulus* Sull.
taxifolius Hedw.
viridulus (Sw.) Wahlenb.
 ssp. *minutulus* (Sull.) Kindb. = *F. minutulus* Sull.
Fissidens Lindb. = *Leucodon* Schwaegr.
Fontinalis Hedw.
 antipyretica Hedw.
 var. *gracilis* (Lindb.) Schimp. (133, 204)
 [var. *montana* H. Müll. = *F. antipyretica* Hedw.] (126, 134)
 dalecarlica B.S.G.
 dichelymoides Lindb. (203)
 gothica Card. & H. Arn. = *F. antipyretica* Hedw. var. *gracilis* (Lindb.)
 Schimp. (204)
 hypnoides Hartm.
Funaria Hedw.
 fascicularis (Hedw.) Lindb.
 hygrometrica Hedw.
 var. *nana* Hartm. (133)
Georgia C. Müll.
 brownii Lindb. = *Tetradontium brownianum* (Dicks.) Schwaegr.
 pellucida (Hedw.) Rabenh. = *Tetraphis pellucida* Hedw.
Grimmia Hedw.
 affinis Hornsch. (207)
 alpestris (Web. & Mohr) Nees f. *subsulcata* (Limpr.) Loeske = *G. sessitana*
 De Not.
 alpicola Hedw. = *Schistidium alpicola* (Hedw.) Limpr.
 var. *rivularis* (Brid.) Wahlenb. = *Schistidium alpicola* (Hedw.) Limpr. var.
 rivulare (Brid.) Limpr.
 angusta (I. Hag.) Broth. = *Schistidium agassizii* Sull. & Lesq.
 anodon B.S.G.
 anomala Hampe (205)
 apiculata Hornsch.
 apocarpa Hedw. = *Schistidium apocarpum* (Hedw.) B.S.G.
 var. *gracilis* Röhl. = *Schistidium strictum* (Turn.) Mårt.
 calvescens Kindb. = *G. funalis* (Schwaegr.) B.S.G.
 [*campestris* Hook. = *G. laevigata* (Brid.) Brid.] (126)
 commutata Hüb. = *G. ovalis* (Hedw.) Lindb. (207)
 conferta Funck = *Schistidium apocarpum* (Hedw.) B.S.G.
 curvata (Brid.) De Sloover (206)
 decipiens (K. F. Schultz) Lindb.
 donniana Sm.
 var. *arenaria* (Hampe) Loeske (133)
 elatior Bals. & De Not.
 elongata Kaulf.
 [*flaccida* (De Not.) Lindb. = *Schistidium pulvinatum* (Hedw.) Brid.] (126)
 funalis (Schwaegr.) B.S.G.
 var. *calvescens* (Kindb.) Möll. (133)
 hartmanii Schimp. (205)
 var. *anomala* (Hampe) Mönk. = *G. anomala* Hampe

- incurva** Schwaegr.
 [laevigata (Brid.) Brid.] (126)
 maritima Turn. = Schistidium maritimum (Turn.) B.S.G.
 mollis B.S.G. = Hydrogrimmia mollis (B.S.G.) Loeske
montana B.S.G.
muehlenbeckii Schimp.
 ovalis auct. = G. affinis Hornsch. (207)
 ovalis (Hedw.) Lindb. (207)
 patens (Hedw.) B.S.G. = G. curvata (Brid.) De Sloover
pulvinata (Hedw.) Sm.
sessitana De Not.
 var. subsulcata (Limpr.) Breidl. = G. sessitana De Not.
torquata Grev.
 var. flettii (Holz.) Vaarama (133, 208)
 [trichophylla Grev.] (126)
 var. muehlenbeckii (Schimp.) Husn. = G. muehlenbeckii Schimp.
 var. tenuis (Wahlenb.) Wijk & Marg. = G. muehlenbeckii Schimp.
unicolor Hook.
 spp. = Hydrogrimmia (I. Hag.) Loeske, Racomitrium Brid., Schistidium Brid.
 Gymnocybe Fr. = Aulacomnium Schwaegr.
Gymnostomum Nees & Hornsch., nom. cons. (131)
aeruginosum Sm.
calcareum Nees & Hornsch.
 pyriforme Hedw. = Physcomitrium pyriforme (Hedw.) Brid.
recurvirostre Hedw.
Haplodon Kindb. (128)
 wormskioldii (Hornem.) Kindb. = Aplodon wormskioldii (Hornem.) R.
 Brown
Hedwigia P. Beauv., nom. cons.
 albicans Lindb. = H. ciliata (Hedw.) P. Beauv.
 ciliata (Hedw.) P. Beauv.
Helicodontium Schwaegr.
 pulvinatum (Wahlenb.) Lindb. = Myrinia pulvinata (Wahlenb.) Schimp.
Helodium Warnst., nom. cons.
 blandowii (Web. & Mohr) Warnst.
 lanatum (Brid.) Broth. = H. blandowii (Web. & Mohr) Warnst.
Herzogiella Broth. (188)
 seligeri (Brid.) Iwats.
 striatella (Brid.) Iwats.
 turfacea (Lindb.) Iwats.
Heterocladium B.S.G.
 dimorphum (Brid.) B.S.G.
 papillosum (Lindb.) Lindb. = Pseudoleskeella papillosa (Lindb.) Kindb.
 squarrosulum Lindb. = H. dimorphum (Brid.) B.S.G.
Heterophyllum (Schimp.) Kindb.
 haldanianum (Grev.) Fleisch. = Callicladium haldanianum (Grev.) Crum
 (160)
Holmgrenia Lindb. = Orthothecium B.S.G.
Homalia (Brid.) B.S.G.
 trichomanoides (Hedw.) B.S.G.
Homalothecium B.S.G.
 lutescens (Hedw.) Robins. = Camptothecium lutescens (Hedw.) B.S.G.
 sericeum (Hedw.) B.S.G.

- Homomallium** (Schimp.) Loeske
incurvatum (Brid.) Loeske
- Hydrogrimmia** (I. Hag.) Loeske
mollis (B.S.G.) Loeske
- Hygroamblystegium** Loeske, nom. cons.
fluviatile (Hedw.) Loeske
irriguum (Hook. & Wils.) Loeske = *H. tenax* (Hedw.) Jenn.
tenax (Hedw.) Jenn.
- Hygrohypnum** Lindb.
alpestre (Hedw.) Loeske
alpinum (Lindb.) Loeske
dilatatum (Wils.) Loeske
luridum (Hedw.) Jenn.
 [var. *subsphaericarpon* (Brid.) C. Jens.] (126, 133)
molle (Hedw.) Loeske
 [var. *schimperianum* (Lor.) Loeske] (126, 133)
norvegicum (B.S.G.) Amann
ochraceum (Wils.) Loeske
 var. *simplicinerve* (Lindb.) Spindl. = *H. ochraceum* (Wils.) Loeske (134)
palustre Loeske = *H. luridum* (Hedw.) Jenn.
 [var. *subsphaericarpon* (Brid.) Loeske = *H. luridum* (Hedw.) Jenn.] (126, 133)
 [polare (Lindb.) Loeske] (126)
rivulare Broth. = *H. alpestre* (Hedw.) Loeske
smithii (Sw.) Broth.
viridulum (Kindb.) Broth. = *H. norvegicum* (B.S.G.) Amann
- Hylocomiastrum** Broth. = **Hylocomium** B.S.G., p.p.
- Hylocomium** B.S.G.
loreum (Hedw.) B.S.G. = *Rhytidiadelphus loreus* (Hedw.) Warnst.
parietinum Lindb. = *Pleurozium schreberi* (Brid.) Mitt.
proliferum (Brid.) Lindb. = *Hylocomium splendens* (Hedw.) B.S.G.
pyrenaicum (Spruce) Lindb. (209)
rugosum (Hedw.) De Not. = *Rhytidium rugosum* (Hedw.) Kindb.
schreberi (Brid.) De Not. = *Pleurozium schreberi* (Brid.) Mitt.
splendens (Hedw.) B.S.G. (210)
squarrosus (Hedw.) B.S.G. = *Rhytidiadelphus squarrosus* (Hedw.) Warnst.
 ssp. *calvescens* Kindb. = *Rhytidiadelphus subpinnatus* (Lindb.) T. Kop.
triquetrum (Hedw.) B.S.G. = *Rhytidiadelphus triquetrus* (Hedw.) Warnst.
umbratum (Hedw.) B.S.G. (210)
- Hymenostomum** R. Brown (211)
microstomum (Hedw.) R. Brown = *Weissia brachycarpa* (Nees & Hornsch.)
 Jur. (211)
squarrosus Nees & Hornsch. = *Weissia squarrosa* (Nees & Hornsch.) C. Müll.
- Hymenostylium** Brid. (131)
curvirostre Mitt. = *Gymnostomum recurvirostre* Hedw.
 var. *scabrum* (Lindb.) Limpr. = *Gymnostomum recurvirostre* Hedw. (131)
recurvirostre (Hedw.) Dix. = *Gymnostomum recurvirostre* Hedw.
- Hypnum** Hedw., nom. cons.
arcuatum Lindb. = *H. lindbergii* Mitt.
bambergeri Schimp.
bridelianum Crum et al. = *H. recurvatum* (Lindb. & H. Arn.) Kindb. (212)
 var. *recurvatum* (Lindb. & H. Arn.) Nyh. = *H. recurvatum* (Lindb. & H. Arn.) Kindb.

callichroum Brid.**cupressiforme** Hedw.spp. *mammillatum* (Brid.) Nyl. & Sael. (133)spp. *resupinatum* (Tayl.) Hartm. f. (133)var. *ericetorum* B.S.G. = *H. jutlandicum* Holmen & Warncke (213)var. *filiforme* Brid. (133)var. *lacunosum* Brid. (133)var. *mammillatum* Brid. (133)var. *resupinatum* (Tayl.) Schimp. (133)var. *vaucheri* (Lesq.) Boul. = *H. vaucheri* Lesq.*ericetorum* (B.S.G.) Loeske = *H. jutlandicum* Holmen & Warncke (213)*fastigiatum* Brid. = *H. recurvatum* (Lindb. & H. Arn.) Kindb. (212)**hamulosum** B.S.G.**imponens** Hedw.*jutlandicum* Holmen & Warncke (213)**lindbergii** Mitt.*mammillatum* (Brid.) Loeske = *H. cupressiforme* Hedw.**pallescens** (Hedw.) P. Beauv.var. *subjulaceum* (Schimp.) Hartm. f. = *H. pallescens* (Hedw.) P. Beauv. (134)**pratense** (Rabenh.) Hartm.*ravaudii* Boul. spp. *fastigiatum* (Hampe) Wijk & Marg. = *H. recurvatum* (Lindb. & H. Arn.) Kindb. (212)*recurvatum* (Lindb. & H. Arn.) Kindb. (212)**revolutum** (Mitt.) Lindb.**vaucheri** Lesq.

spp. = genera diversa: Brachytheciaceae

Isopterygium Mitt. (188)*alpicola* (Lindb. & H. Arn.) Nyh. (214)*borrerianum* (Spruce) Lindb. = *I. elegans* (Brid.) Lindb.*depressum* (Brid.) Mitt. = *Taxiphyllum wissgrillii* (Garov.) Wijk & Marg.**elegans** (Brid.) Lindb.**pulchellum** (Hedw.) Jaeg.var. *nitidulum* (Wahlenb.) G. Roth = *I. pulchellum* (Hedw.) Jaeg.*repens* (Brid.) Lindb. = *Herzogiella seligeri* (Brid.) Iwats.*seligeri* (Brid.) Dix. = *Herzogiella seligeri* (Brid.) Iwats.*turfaceum* (Lindb.) Lindb. = *Herzogiella turfacea* (Lindb.) Iwats.**Isothecium** Brid.**mysuroides** Brid. (300)**myurum** Brid.*viviparum* Lindb. = *I. myurum* Brid.**Kiaeria** I. Hag.**blyttii** (B.S.G.) Broth.[var. *riparia* (H. Lindb.) Broth. = *Dicranella riparia* (H. Lindb.) Mårt. & Nyh.] (126)**falcata** (Hedw.) I. Hag.**glacialis** (Berggr.) I. Hag.**starkei** (Web. & Mohr) I. Hag.*Leersia* Batsch = *Encalypta* Hedw.**Leptobryum** (B.S.G.) Wils.**pyriforme** (Hedw.) Wils.

- Leptodictyum** (Schimp.) Warnst.
kochii (B.S.G.) Warnst.
 var. *curvipes* (B.S.G.) Warnst. (133)
riparium (Hedw.) Warnst.
- Lescuraea** B.S.G. (215)
incurvata (Hedw.) Lawt. (216)
mutabilis (Brid.) I. Hag. var. *saxicola* (B.S.G.) I. Hag. = *L. saxicola* (B.S.G.)
 Milde
patens (Lindb.) H. Arn. & C. Jens.
plicata (Web. & Mohr) Broth.
radicosa (Mitt.) Mönk. (216)
 var. *denudata* (Kindb.) Lawt. (133)
saxicola (B.S.G.) Milde
- Leskea** Hedw.
polycarpa Hedw.
 [var. *paludosa* (Hedw.) Schimp.] (126, 133)
 spp. = *Leskeella* (Limpr.) Loeske, *Pseudoleskeella* Kindb.
- Leskeella** (Limpr.) Loeske (217)
nervosa (Brid.) Loeske
 var. *laxifolia* (Lindb.) I. Hag. (133)
tectorum (Brid.) I. Hag. = *Pseudoleskeella tectorum* (Brid.) Broth.
- Lesquereuxia** Lindb. = *Lescuraea* B.S.G.
- Leucobryum** Hampe
glaucum (Hedw.) Ångstr. (218)
- Leucodon** Schwaegr.
sciuroides (Hedw.) Schwaegr.
 var. *morensis* (Schwaegr.) De Not. (133)
- Limprichtia** Loeske = *Drepanocladus* (C. Müll.) G. Roth, p.p. (189)
- Loeskeobryum** Fleisch. = *Hylocomium* B.S.G., p.p.
- Loeskynum** Paul = *Drepanocladus* (C. Müll.) G. Roth, p.p. (189)
- Meesia** Hedw., nom. cons.
longiseta Hedw.
triquetra (Richter) Ångstr.
trichodes Spruce = *M. uliginosa* Hedw.
 var. *minor* (Brid.) Braithw. = *M. uliginosa* Hedw.
trifaria Crum et al. = *M. triquetra* (Richter) Ångstr.
uliginosa Hedw.
 var. *minor* (Brid.) Web. & Mohr (133)
- Microthuidium** (Limpr.) Warnst. = *Thuidium* B.S.G., p.p.
- Mniobryum** Limpr., nom. cons.
albicans (Wahlenb.) Limpr. = *M. wahlenbergii* (Web. & Mohr) Jenn.
 var. *glaciale* (Brid.) Limpr. = *M. wahlenbergii* (Web. & Mohr) Jenn.
atropurpureum (Wahlenb.) I. Hag. = *Pohlia atropurpurea* (Wahlenb.) H.
 Lindb.
carneum Limpr. = *M. delicatulum* (Hedw.) Dix.
delicatulum (Hedw.) Dix.
wahlenbergii (Web. & Mohr) Jenn.
 var. *glaciale* (Brid.) Wijk & Marg. (133)
- Mnium** Hedw., nom. cons. (170)
 affine Funck = *Plagiomnium affine* (Funck) T. Kop.
 var. *medium* (B.S.G.) Husn. = *Plagiomnium medium* (B.S.G.) T. Kop.
 (219)
 var. *ciliare* auct. = *Plagiomnium affine* (Funck) T. Kop.

[var. *ciliare* C. Müll.] (126, 220)

var. *integrifolium* (Lindb.) Milde = *Plagiomnium ellipticum* (Brid.) T. Kop. (220)

ambiguum H. Müll. (221)

andrewsianum Steere = *Rhizomnium andrewsianum* (Steere) T. Kop.

blyttii B.S.G.

cinclidioides Hüb. = *Pseudobryum cinclidioides* (Hüb.) T. Kop.

cuspidatum Hedw. = *Plagiomnium cuspidatum* (Hedw.) T. Kop.

drummondii Bruch & Schimp. = *Plagiomnium drummondii* (Bruch & Schimp.) T. Kop.

hornum Hedw.

hymenophylloides Hüb. = *Cyrtomnium hymenophylloides* (Hüb.) T. Kop.

hymenophyllum B.S.G. = *Cyrtomnium hymenophyllum* (B.S.G.) Holmen

inclinatum Lindb. = *M. ambiguum* H. Müll.

longirostre Brid. = *Plagiomnium rostratum* (Schrad.) T. Kop.

lycopodioides auct. = *M. ambiguum* H. Müll.

[*lycopodioides* Schwaegr.] (126, 221)

marginatum (With.) P. Beauv. (221)

medium B.S.G. = *Plagiomnium medium* (B.S.G.) T. Kop.

var. *curvatum* (Lindb.) G. Roth = *Plagiomnium medium* (B.S.G.) T.

Kop. ssp. *curvatum* (Lindb.) T. Kop. (220)

orthorrhynchum auct. = *M. thomsonii* Schimp. (222, 223)

orthorrhynchum Brid. = *Atrichum tenellum* (Röhl.) B.S.G. (222)

var. *inclinatum* (Lindb.) Möll. = *M. ambiguum* H. Müll.

pseudopunctatum Bruch & Schimp. = *Rhizomnium pseudopunctatum* (Bruch & Schimp.) T. Kop.

punctatum Hedw. = *Rhizomnium punctatum* (Hedw.) T. Kop.

var. *elatum* Schimp. = *Rhizomnium magnifolium* (Horik.) T. Kop.

riparium auct. = *M. ambiguum* H. Müll. (221)

riparium Mitt. = *M. marginatum* (With.) P. Beauv. (221)

rostratum Schrad. = *Plagiomnium rostratum* (Schrad.) T. Kop.

rugicum Laur. = *Plagiomnium ellipticum* (Brid.) T. Kop. (220)

seligeri Warnst. = *Plagiomnium elatum* (B.S.G.) T. Kop. (220)

serratum Brid. = *M. marginatum* (With.) P. Beauv.

spinatum (Voit.) Schwaegr. (223)

stellare Hedw.

thomsonii Schimp. (222, 223)

undulatum Hedw. = *Plagiomnium undulatum* (Hedw.) T. Kop.

Mnium Lindb. = *Aulacomnium* Schwaegr., p.p.

Mollia Lindb. = *Eucladium* B.S.G., *Tortella* (Lindb.) Lindb., *Weissia* Hedw.

Myrinia Schimp., nom. cons.

pulvinata (Wahlenb.) Schimp.

Myurella B.S.G.

apiculata (Sommerf.) B.S.G. = *M. tenerrima* (Brid.) Lindb.

julacea (Schwaegr.) B.S.G.

var. *scabrifolia* Limpr. (133)

tenerrima (Brid.) Lindb.

Neckera Hedw., nom. cons.

besseri (Lobar.) Jur. (224)

complanata (Hedw.) Hüb.

var. *tenella* Schimp. = *N. complanata* (Hedw.) Hüb. (134)

crispa Hedw.

oligocarpa Bruch

- pennata** Hedw.
Nyholmiella Holmen & Warncke (225)
 gymnostoma (Brid.) Holmen & Warncke = *Orthotrichum gymnostomum* Brid.
 obtusifolia (Brid.) Holmen & Warncke = *Orthotrichum obtusifolium* Brid.
- Octodicerus** Brid.
 fontanum (B. Pyl.) Lindb. (226)
- Oedipodium** Schwaegr.
 griffithianum (Dicks.) Schwaegr.
- Oligotrichum** Lam. & DC.
 glabratum Lindb. = *Psilopilum laevigatum* (Wahlenb.) Lindb.
 hercynicum (Hedw.) Lam. & DC.
 incurvum (Brid.) Lindb. = *O. hercynicum* (Hedw.) Lam. & DC.
- Oncophorus** (Brid.) Brid.
 virens (Hedw.) Brid.
 var. serratus (B.S.G.) Braithw. (133)
- wahlenbergii** Brid.
 [var. gracilis (Broth.) H. Arn. & C. Jens.] (126, 133)
 spp. = *Cnestrum* I. Hag., *Cynodontium* Schimp., *Rhabdoweisia* B.S.G.
- Orthodicranum** (B.S.G.) Loeske
 flagellare (Hedw.) Loeske
 montanum (Hedw.) Loeske
 strictum Broth. = *O. tauricum* (Sapěhin) Z. Smirn. (227)
 tauricum (Sapěhin) Z. Smirn. (227)
- Orthothecium** B.S.G., nom. cons.
 chryseum (Schwaegr.) B.S.G.
 intricatum (Hartm.) B.S.G.
 rufescens (Brid.) B.S.G.
 strictum Lor. (228)
- Orthotrichum** Hedw. (225, 231)
 affine Brid.
 alpestre B.S.G.
 anomalum Hedw.
 var. montanum Vent. = *O. anomalum* Hedw.
 var. saxatile Milde = *O. anomalum* Hedw. (229)
 arnellii Grönv. = *O. pallens* Brid. (230)
 blyttii Schimp. = *O. pylaesii* Brid. (229)
 var. arcticum (Schimp.) I. Hag. = *O. pylaesii* Brid. (229)
 var. groenlandicum (Berggr.) C. Jens. = *O. pylaesii* Brid. (229)
 var. microblephare (Schimp.) C. Jens. = *O. pylaesii* Brid. (229)
- cupulatum** Brid.
 var. riparium Hüb. (133, 231)
- diaphanum** Brid. (231)
 fallax Brid. = *O. pumilum* Sw.
- fastigiatum** Brid.
 gymnostomum Brid.
 lyellii Hook. & Tayl. (231)
 microblephare Schimp. = *O. pylaesii* Brid. (229)
 nudum Dicks. = *O. pumilum* Sw. (229)
- obtusifolium** Brid.
 octoblephare Brid. = *O. affine* Brid.
 var. fastigiatum (Brid.) C. Jens. = *O. fastigiatum* Brid.
- pallens** Brid.

- paradoxum** Grönv. (231)
patens Brid. (231)
pumilum Sw. (229)
 var. *schimperii* (Hammar) Hinneri (133, 231)
pylaesii Brid. (229, 300)
 var. *microblephare* (Schimp.) Hinneri (133, 229, 231)
rupestre Schwaegr.
 var. *franzonianum* (De Not.) Vent. (133, 231)
 var. *ovatum* Vent. = *O. rupestre* Schwaegr.
 var. *sturmii* (Hoppe & Hornsch.) Jur. = *O. rupestre* Schwaegr.
speciosum Nees
 ssp. *fuscum* Lindb. (133, 231)
 var. *elegans* (Hook. & Grev.) Warnst. (133)
stramineum Hornsch.
striatum Hedw.
urnigerum Myr.
Oxystegus (Limpr.) Hilp. (131)
 cylindricus (Brid.) Hilp. = *O. tenuirostris* (Hook. & Tayl.) A. J. E. Sm. (131)
 tenuirostris (Hook. & Tayl.) A. J. E. Sm. (131)
Paludella Brid.
 squarrosa (Hedw.) Brid.
Paraleucobryum (Limpr.) Loeske
 enerve (Thed.) Loeske
 longifolium (Hedw.) Loeske
 var. *strictiforme* (C. Jens.) Broth. (133)
Phascum Hedw.
 acaulon With. = *P. cuspidatum* Hedw.
 cuspidatum Hedw.
 ssp. *piliferum* (Hedw.) Amann (133)
 var. *piliferum* (Hedw.) Hook. & Tayl. (133)
 floerkeanum Web. & Mohr
 piliferum Hedw. = *P. cuspidatum* Hedw.
Philonotis Brid. (232)
 arnellii Husn.
 caespitosa Jur.
 calcarea (B.S.G.) Schimp. (233)
 capillaris Lindb. = *P. fontana* (Hedw.) Brid. (234)
 fontana (Hedw.) Brid.
 var. *capillaris* (Lindb.) Lindb. = *P. fontana* (Hedw.) Brid.
 var. *parvula* (Norrl.) Lindb. (133)
 seriata Mitt.
 var. *adpressa* (Ferg.) Bryhn (133)
 tomentella Mol.
Physcomitrella B.S.G.
 patens (Hedw.) B.S.G.
Physcomitrium (Brid.) Brid. (235)
 pyriforme (Hedw.) Brid. (235)
 sphaericum (Ludw.) Brid. (235)
Plagiobryum Lindb.
 demissum (Hook.) Lindb. (236)
 zieri (Hedw.) Lindb. (236)
Plagiomnium T. Kop. (170)
 affine (Funck) T. Kop. (219, 220, 237)

- cuspidatum* (Hedw.) T. Kop.
drummondii (Bruch & Schimp.) T. Kop. (238)
elatum (B.S.G.) T. Kop. (220, 237)
ellipticum (Brid.) T. Kop. (220, 237, 240)
medium (B.S.G.) T. Kop. (219, 220, 237)
 ssp. curvatulum (Lindb.) T. Kop. (220, 237, 241)
 ssp. medium
rostratum (Schrad.) T. Kop. (239)
rugicum (Laur.) T. Kop. = *P. ellipticum* (Brid.) T. Kop. (220, 240)
undulatum (Hedw.) T. Kop.
Plagiopus Brid.
 oederi (Brid.) Limpr. (300)
 var. alpinus (Schwaegr.) Dalla Torre & Sarnth. = *P. oederi* (Brid.) Limpr. (134)
 var. condensatus Limpr. (133)
Plagiotheciella Broth. = *Plagiothecium* B.S.G., p.p.
Plagiothecium B.S.G. (188, 300)
 cavifolium (Brid.) Iwats. (243)
 curvifolium Limpr.
 denticulatum (Hedw.) B.S.G.
 ssp. laetum (B.S.G.) Kindb. = *P. laetum* B.S.G.
 var. curvifolium (Limpr.) Meyl. = *P. curvifolium* Limpr.
 var. laetum (B.S.G.) Lindb. = *P. laetum* B.S.G.
 var. majus (Boul.) Delogne = *P. denticulatum* (Hedw.) B.S.G.
 var. undulatum Geh. = *P. ruthei* Limpr.
laetum B.S.G.
latebricola B.S.G.
neglectum Mönk. = *P. nemorale* (Mitt.) Jaeg. (242)
nemorale (Mitt.) Jaeg. (242, 243)
piliferum (Hartm.) B.S.G.
platyphyllum Mönk.
roeseanum B.S.G. = *P. cavifolium* (Brid.) Iwats. (243)
 var. gracile Breidl. = *P. cavifolium* (Brid.) Iwats.
ruthei Limpr.
striatellum (Brid.) Lindb. = *Herzogiella striatella* (Brid.) Iwats.
succulentum (Wils.) Lindb. (243)
sylvaticum auct. = *P. cavifolium* (Brid.) Iwats., p.p. (243)
sylvaticum (Brid.) B.S.G. = *P. denticulatum* (Hedw.) B.S.G. (243)
 var. roeseanum (B.S.G.) Walth. & Mol. = *P. cavifolium* (Brid.) Iwats.
undulatum (Hedw.) B.S.G. (244)
Platydictya Berk. (125)
 [*confervoides* (Brid.) Crum] (126)
 jungermannioides (Brid.) Crum (58, 245)
 subtilis (Hedw.) Crum
Platygyrium B.S.G., nom. cons.
 repens (Brid.) B.S.G.
Platyhypnidium Fleisch. = *Rhynchostegium* B.S.G., p.p.
Pleuridium Rabenh., nom. cons. (246)
 acuminatum Lindb.
 alternifolium auct. = *P. subulatum* (Hedw.) Rabenh.
 alternifolium (Hedw.) Brid. = *Archidium alternifolium* (Hedw.) Schimp.
 axillare (Sm.) Lindb. = *Pseudephemerum nitidum* (Hedw.) Reim.
 subulatum auct. = *P. acuminatum* Lindb.
 subulatum (Hedw.) Rabenh.

Pleurozium Mitt.**schreberi** (Brid.) Mitt. (247)**Pogonatum** P. Beauv.**alpinum** (Hedw.) Röhl. = *Polytrichastrum alpinum* (Hedw.) G. L. Sm. (248)**aloides** (Hedw.) P. Beauv.var. **minimum** (Crome) Mol. (133)**capillare** (Michx.) Brid. = *P. dentatum* (Brid.) Brid.**dentatum** (Brid.) Brid. (249)**nanum** (Hedw.) P. Beauv.var. **minimum** (Crome) Möll. = *P. aloides* (Hedw.) P. Beauv.**nanum** Lindb. = *P. aloides* (Hedw.) P. Beauv.**polytrichoides** (Balbis) P. Beauv. = *P. nanum* (Hedw.) P. Beauv.**urnigerum** (Hedw.) P. Beauv.var. **humile** (Wahlenb.) Brid. = *P. urnigerum* (Hedw.) P. Beauv.**Pohlia** Hedw.**acuminata** Hoppe & Hornsch. = *P. elongata* Hedw.**albicans** Lindb. = *Mniobryum wahlenbergii* (Web. & Mohr) Jenn.**annotina** (Hedw.) Loeske = *P. camptotrachela* (Ren. & Card.) Broth.**atropurpurea** (Wahlenb.) H. Lindb.**bulbifera** (Warnst.) Warnst.**camptotrachela** (Ren. & Card.) Broth.**commutata** (Schimp.) Lindb. = *P. drummondii* (C. Müll.) Andr.**crassidens** Lindb. = *P. crudoides* (Sull. & Lesq.) Broth.**cruda** (Hedw.) Lindb.[var. **minor** (B.S.G.) Broth. & Sael.] (126, 133)**crudoides** (Sull. & Lesq.) Broth.**cucullata** (Schwaegr.) Lindb. = *P. obtusifolia* (Brid.) L. Koch**defecta** (Sanio) Andr.**delicatula** (Hedw.) Grout = *Mniobryum delicatulum* (Hedw.) Dix.**drummondii** (C. Müll.) Andr. (298)**elongata** Hedw.var. **polymorpha** (Hoppe & Hornsch.) Nyh. (133)**erecta** Lindb. (250)**gracilis** (B.S.G.) Lindb. = *P. schleicheri* Crum (251)**grandiflora** H. Lindb. = *P. camptotrachela* (Ren. & Card.) Broth.**lescuriana** (Sull.) Ish. (252)**longicollis** (Hedw.) Lindb.**ludwigii** (Schwaegr.) Broth.**nutans** (Hedw.) Lindb.var. **bicolor** (Hoppe & Hornsch.) R. Hult = *P. nutans* (Hedw.) Lindb. (134)var. **longiseta** (Hüb.) Delogne (133)var. **sphagnetorum** (Schimp.) Delogne (133)var. **turbinata** (Bomanss.) Möll. = *P. nutans* (Hedw.) Lindb. (134)**obtusifolia** (Brid.) L. Koch**polymorpha** Hoppe & Hornsch. = *P. elongata* Hedw.**proliger**a (Kindb.) H. Arn.**pulchella** (Hedw.) Lindb. = *P. lescuriana* (Sull.) Ish. (252)[**ramannii** Warnst.] (126)**schleicheri** Crum (251)**sphagnicola** (B.S.G.) Broth. (253)**wahlenbergii** (Web. & Mohr) Andr. = *Mniobryum wahlenbergii* (Web. & Mohr) Jenn.

- Polytrichastrum** G. L. Sm. (248)
alpinum (Hedw.) G. L. Sm. (248)
 var. **alpinum**
 var. **septentrionale** (Brid.) G. L. Sm.
formosum (Hedw.) G. L. Sm.
longisetum (Brid.) G. L. Sm.
pallidisetum (Funck) G. L. Sm.
sexangulare (Brid.) G. L. Sm.
- Polytrichum** Hedw. (248)
 affine Funck = *P. strictum* Brid.
alpinum Hedw. = *Polytrichastrum alpinum* (Hedw.) G. L. Sm. (248)
 var. **arcticum** (Schrad.) Wahlenb. (133)
 var. **septentrionale** (Brid.) Lindb. = *Polytrichastrum alpinum* G. L. Sm.
 var. **septentrionale** (Brid.) G. L. Sm. (248)
 var. **silvaticum** (Menz.) Lindb. (133)
attenuatum Brid. = *Polytrichastrum formosum* (Hedw.) G. L. Sm.
aurantiacum Brid. = *Polytrichastrum longisetum* (Brid.) G. L. Sm.
commune Hedw. (254)
 var. **jensenii** (I. Hag.) Mönk. = *P. jensenii* I. Hag.
 var. **minus** De Not. = *P. commune* Hedw.
 var. **perigoniale** (Michx.) Hampe (133)
 var. **swartzii** (Hartm.) Nyh. = *P. swartzii* Hartm.
 var. **uliginosum** Wallr. = *P. commune* Hedw.
decipiens Limpr. = *Polytrichastrum pallidisetum* (Funck) G. L. Sm. (248)
formosum Hedw. = *Polytrichastrum formosum* (Hedw.) G. L. Sm. (248)
gracile Dicks. = *Polytrichastrum longisetum* (Brid.) G. L. Sm. (248)
hyperboreum R. Brown
jensenii I. Hag.
juniperinum Hedw.
 var. **gracilius** Wahlenb. = *P. strictum* Brid.
longisetum Brid. = *Polytrichastrum longisetum* (Brid.) G. L. Sm. (248)
norvegicum Hedw. = *Polytrichastrum alpinum* (Hedw.) G. L. Sm. var.
septentrionale (Brid.) G. L. Sm. (248)
piliferum Hedw.
 var. **fastigiatum** (Lindb.) Bomanss. & Broth. = *P. piliferum* Hedw. (134)
sexangulare Brid. = *Polytrichastrum sexangulare* (Brid.) G. L. Sm. (248)
strictum Brid.
swartzii Hartm.
 var. **nigrescens** (Warnst.) I. Hag. = *P. swartzii* Hartm. (255)
 spp. = *Pogonatum* P. Beauv.
- Porotrichum** (Brid.) Hampe, p.p. = *Thamnobryum* Nieuwl.
- Pottia** (Reichenb.) Fűrnr.
davalliana (Sm.) C. Jens.
heimii (Hedw.) Hampe
intermedia (Turn.) Fűrnr.
truncata (Hedw.) B.S.G.
truncatula (With.) Buse = *P. truncata* (Hedw.) B.S.G.
- Pseudephemerum** (Lindb.) I. Hag.
axillare (Sm.) I. Hag. = *P. nitidum* (Hedw.) Reim.
nitidum (Hedw.) Reim.
- Pseudobryum** (Kindb.) T. Kop. (170)
cinclidioides (Hüb.) T. Kop.

Pseudoleskea B.S.G. (215)

breidlerii Kindb. = *Lescuraea radicata* (Mitt.) Mönk. var. *denudata* (Kindb.) Lawt. (133)

filamentosa (With.) C. Jens. = *Lescuraea incurvata* (Hedw.) Lawt.

incurvata (Hedw.) Loeske = *Lescuraea incurvata* (Hedw.) Lawt.

patens (Lindb.) Kindb. = *Lescuraea patens* (Lindb.) H. Arn. & C. Jens.

plicata (Web. & Mohr) Kindb. = *Lescuraea plicata* (Web. & Mohr) Broth.

radicata (Mitt.) Mac. & Kindb. = *Lescuraea radicata* (Mitt.) Mönk.

Pseudoleskeella Kindb. (217)

[*catenulata* (Schrad.) Kindb.] (126, 256)

nervosa (Brid.) Nyh. = *Leskeella nervosa* (Brid.) Loeske (217)

var. *laxifolia* (Lindb.) Nyh., nom. inval. = *Leskeella nervosa* (Brid.) Loeske (133, 257)

papillosa (Lindb.) Kindb.

tectorum (Brid.) Broth. (217)

Pseudoscleropodium (Limpr.) Fleisch.

purum (Hedw.) Fleisch.

Pseudostereodon (Broth.) Fleisch. = *Hypnum* Hedw., p.p.

Psilopilum Brid.

cavifolium (Wils.) I. Hag.

laevigatum (Wahlenb.) Lindb.

var. *aloma* I. Hag. (133)

Pterigynandrum Hedw.

filiforme Hedw.

var. *decipiens* (Web. & Mohr) Limpr. = *P. filiforme* Hedw.

Ptilium De Not.

crista-castrensis (Hedw.) De Not. (258)

Ptychodium Schimp. (215)

plicatum (Web. & Mohr) Schimp. = *Lescuraea plicata* (Web. & Mohr) Broth.

Pylaisia Schimp. (300)

polyantha (Hedw.) Schimp. (300)

[*schimperii* Card. = *P. selwynii* Kindb.] (126)

[*selwynii* Kindb.] (126)

Pyramidula Brid.

tetragona (Brid.) Brid.

Racomitrium Brid. (259, 300)

aciculare (Hedw.) Brid.

affine (Web. & Mohr) Lindb. = *R. heterostichum* (Hedw.) Brid.

var. *obtusum* (Brid.) Limpr. = *R. heterostichum* (Hedw.) Brid.

aquaticum (Schrad.) Brid.

canescens (Hedw.) Brid. (260)

var. *ericoides* (Hedw.) Hampe = *R. ericoides* (Hedw.) Brid.

var. *strictum* Schlieph. (133)

ericoides (Hedw.) Brid. (260)

fasciculare (Hedw.) Brid.

heterostichum (Hedw.) Brid.

ssp. *sudeticum* (Funck) Dix. = *R. sudeticum* (Funck) B.S.G.

var. *affine* (Web. & Mohr) Lesq. (133)

var. *obtusum* (Brid.) Delogne (133)

var. *sudeticum* (Funck) Bauer = *R. sudeticum* (Funck) B.S.G.

hypnoides Lindb. = *R. lanuginosum* (Hedw.) Brid.

lanuginosum (Hedw.) Brid. (261)

- microcarpon** (Hedw.) Brid. (259)
 var. *brevicellulosum* (Roiv.) C. Jens. (133)
 var. *fastigiatum* (Loeske) C. Jens. (133)
protensum (A. Braun) Hüb. = *R. aquaticum* (Schrad.) Brid.
ramulosum Lindb. = *R. microcarpon* (Hedw.) Brid.
 var. *brevicellulosum* Roiv. = *R. microcarpon* (Hedw.) Brid.
 var. *fastigiatum* (Loeske) Med. = *R. microcarpon* (Hedw.) Brid.
sudeticum (Funck) B.S.G. (262)
- Rhabdoweisia** B.S.G.
crispata (With.) Lindb.
denticulata B.S.G. = *R. crispata* (With.) Lindb.
fugax (Hedw.) B.S.G.
striata (Schrad.) Lindb. = *R. fugax* (Hedw.) B.S.G.
- Rhacomitrium** Lor. = *Racomitrium* Brid. (259)
- Rhizomnium** (Broth.) T. Kop. (170)
andrewsianum (Steere) T. Kop. (263)
magnifolium (Horik.) T. Kop. (264, 265)
perssonii T. Kop. = *R. magnifolium* (Horik.) T. Kop. (265)
pseudopunctatum (Bruch & Schimp.) T. Kop. (264)
punctatum (Hedw.) T. Kop. (264)
- Rhodobryum** (Schimp.) Limpr. (266)
roseum (Hedw.) Limpr. (267)
- Rhynchostegiella** (B.S.G.) Limpr.
compacta (C. Müll.) Loeske (268)
- Rhynchostegium** B.S.G.
riparioides (Hedw.) Card.
ruscifforme B.S.G. = *R. riparioides* (Hedw.) Card.
- Rhytidiadelphus** (Limpr.) Warnst.
calvescens (Kindb.) Broth. = *R. subpinnatus* (Lindb.) T. Kop.
loreus (Hedw.) Warnst. (269)
squarrosus (Hedw.) Warnst. (270)
subpinnatus (Lindb.) T. Kop. (270)
triquetrus (Hedw.) Warnst. (271)
- Rhytidium** (Sull.) Kindb.
rugosum (Hedw.) Kindb. (272)
- Saelania** Lindb.
caesia (P. Beauv.) Lindb. = *S. glaucescens* (Hedw.) Broth.
glaucescens (Hedw.) Broth.
- Sanionia** Loeske = *Drepanocladus* (C. Müll.) G. Roth, p.p (189)
- Schistidium** Brid.
agassizii Sull. & Lesq. (273)
alpicola (Hedw.) Limpr.
 var. *alpicola* (274)
 var. *latifolium* (Zett.) Limpr. (133)
 var. *rivulare* (Brid.) Limpr. (274)
angustum I. Hag. = *S. agassizii* Sull. & Lesq.
anodon (B.S.G.) Loeske = *Grimmia anodon* B.S.G.
apocarpum (Hedw.) B.S.G.
 var. *confertum* (Funck) Möll. (133)
 var. *gracile* (Röhl.) B.S.G. = *S. strictum* (Turn.) Mårt.
boreale Poelt (275)
gracile (Röhl.) Limpr. = *S. strictum* (Turn.) Mårt.

- maritimum** (Turn.) B.S.G.
 [pulvinatum (Hedw.) Brid.] (126)
strictum (Turn.) Mårt. (275)
Schistophyllum Lindb. = *Fissidens* Hedw., *Octodiceras* Brid.
Schistostega Mohr
 osmundacea Mohr = *S. pennata* (Hedw.) Web. & Mohr
 pennata (Hedw.) Web. & Mohr
Scleropodium B.S.G.
 purum (Hedw.) Limpr. = *Pseudoscleropodium purum* (Hedw.) Fleisch.
Scorpidium (Schimp.) Limpr.
 scorpioides (Hedw.) Limpr.
 trifarium (Web. & Mohr) Paul = *Calliergon trifarium* (Web. & Mohr)
 Kindb.
 turgescens (T. Jens.) Loeske (276)
 vernicosum (Mitt.) Tuom. = *Drepanocladus vernicosus* (Mitt.) Warnst. (189)
Seligeria B.S.G.
 brevifolia (Lindb.) Lindb.
 campylopoda Kindb.
 diversifolia Lindb. (277)
 var. *brevifolia* (Lindb. & H. Arn.) I. Hag. (133, 277)
 donniana (Sm.) C. Müll.
 polaris Berggr.
 recurvata (Hedw.) B.S.G. (277)
 setacea Lindb. = *S. recurvata* (Hedw.) B.S.G.
 var. *pumila* Lindb. = *S. diversifolia* Lindb. (277)
 subimmersa Lindb. (278)
 tristichoides Kindb.
Sphaerocephalus Lindb. = *Aulacomnium* Schwaegr., p.p.
Sphagnum L. (279, 280)
 acutifolium Schrad. = *S. nemoreum* Scop. var. *nemoreum*
 amblyphyllum (Russow) Zick. = *S. flexuosum* Dozy & Molk.
 angustifolium (Russow) C. Jens.
 annulatum Warnst.
 var. *annulatum* (281)
 var. *porosum* (Schlieph. & Warnst.) Maass & Isov. (281)
 aongstroemii Hartm. f.
 apiculatum H. Lindb. = *S. fallax* (Klinggr.) Klinggr.
 auriculatum Schimp.
 var. *auriculatum*
 var. *inundatum* (Russow) M. O. Hill (282)
 balticum (Russow) C. Jens.
 capillaceum (Weiss) Schrank = *S. nemoreum* Scop. var. *nemoreum*
 var. *tenellum* (Schimp.) Andr. = *S. rubellum* Wils.
 centrale C. Jens.
 compactum DC.
 contortum K. F. Schultz
 cuspidatum Hoffm. (280)
 dusenii Russow & Warnst. = *S. majus* (Russow) C. Jens.
 fallax (Klinggr.) Klinggr.
 var. *angustifolium* (Russow) Nyh. = *S. angustifolium* (Russow) C. Jens.
 (283)
 var. *flexuosum* (Dozy & Molk.) Nyh. = *S. flexuosum* Dozy & Molk. (283)
 fimbriatum Wils.

- flexuosum** Dozy & Molk.
fuscum (Schimp.) Klinggr.
girgensohnii Russow
imbricatum Russow
inundatum Russow = *S. auriculatum* Schimp. var. *inundatum* (Russow) M. O. Hill
jensenii H. Lindb. = *S. annulatum* Warnst. var. *porosum* (Schlieph. & Warnst.) Maass & Isov.
lindbergii Lindb. (284)
magellanicum Brid.
majus (Russow) C. Jens.
medium Limpr. = *S. magellanicum* Brid.
molle Sull. (280)
mucronatum (Russow) Zick. = *S. fallax* (Klinggr.) Klinggr.
nemoreum Scop. (285)
 var. **nemoreum**
 var. **subtile** (Russow) Nyh. (286)
obtusum Warnst.
palustre L.
papillosum Lindb.
parvifolium (Warnst.) Warnst. = *S. angustifolium* (Russow) C. Jens.
platyphyllum (Braithw.) Warnst.
plumulosum Röhl = *S. subnitens* Russow & Warnst.
pulchrum (Braithw.) Warnst.
quinquefarium (Braithw.) Warnst.
recurvum auct. = *S. fallax* (Klinggr.) Klinggr., etc.
[*recurvum* P. Beauv.] (126)
 var. **amblyphyllum** (Russow) Warnst. = *S. flexuosum* Dozy & Molk.
 var. **tenuis** Klinggr. = *S. angustifolium* (Russow) C. Jens.
riparium Ångstr.
robustum (Warnst.) Card. = *S. russowii* Warnst.
rubellum Wils.
russowii Warnst.
squarrosum Crome
strictum Lindb. (non Sull.) = *S. girgensohnii* Russow
subfulvum Sjörs (287)
subnitens Russow & Warnst.
subsecundum Nees
 var. **auriculatum** (Schimp.) Norrl. = *S. auriculatum* Schimp. var. *auriculatum*
 var. **contortum** (K. F. Schultz) Hüb. = *S. contortum* K. F. Schultz
 var. **inundatum** (Russow) C. Jens. = *S. auriculatum* Schimp. var. *inundatum* (Russow) M. O. Hill
 var. **rufescens** (Nees & Hornsch.) Hüb. = *S. auriculatum* Schimp. var. *auriculatum*
subtile (Russow) Warnst. = *S. nemoreum* Scop. var. *subtile* (Russow) Nyh.
tenellum (Brid.) Brid.
teres (Schimp.) Ångstr.
 var. **squarrosulum** (Schimp.) Warnst. (133)
warnstorffianum Du Rietz = *S. warnstorffii* Russow
warnstorffii Russow
wulfianum Girg.

Splachnum Hedw.**ampullaceum** Hedw.**luteum** Hedw.**melanocaulon** (Wahlenb.) Schwaegr. (288)ovatum Hedw. = *S. sphaericum* Hedw.pedunculatum Lindb. = *S. sphaericum* Hedw.**rubrum** Hedw.**sphaericum** Hedw.**vasculosum** Hedw.**Stegonia** Vent.**latifolia** (Schwaegr.) Broth.Stereodon Mitt. = *Callicladium* Crum, *Homomallium* (Schimp.) Loeske, *Hypnum* Hedw., *Orthothecium* B.S.G., *Platydictya* Berk., *Pylaisia* Schimp.**Streblotrichum** P. Beauv. (131)convolutum (Hedw.) P. Beauv. = *Barbula convoluta* Hedw.**Stroemia** I. Hag. (225)**gymnostoma** (Brid.) I. Hag. = *Orthotrichum gymnostomum* Brid.**obtusifolia** (Brid.) I. Hag. = *Orthotrichum obtusifolium* Brid.**Swartzia** Brid. = *Distichium* B.S.G.**Syntrichia** Brid. = *Tortula* Hedw., p.p.**Taxiphyllum** Fleisch. (188)**wissgrillii** (Garov.) Wijk & Marg. (289)**Tayloria** Hook.[*froelichiana* (Hedw.) Mitt.] (126, 290)**lingulata** (Dicks.) Lindb.**serrata** (Hedw.) B.S.G. var. **tenuis** (With.) B.S.G. = *T. tenuis* (With.) Schimp.[*splachnoides* (Schwaegr.) Hook.] (126)**tenuis** (With.) Schimp.**Tetraphis** Hedw.**pellucida** Hedw.**Tetraplodon** B.S.G.**angustatus** (Hedw.) B.S.G.**bryoides** Lindb. = *T. mnioides* (Hedw.) B.S.G.var. **cavifolius** (Schimp.) Möll. = *T. mnioides* (Hedw.) B.S.G.**mnioides** (Hedw.) B.S.G.var. **cavifolius** Schimp. (133)var. **paradoxus** (R. Brown) C. Jens. = *T. paradoxus* (R. Brown) I. Hag.**paradoxus** (R. Brown) I. Hag.**wormskioldii** (Hornem.) Lindb. = *Aplodon wormskioldii* (Hornem.) R. Brown**Tetrodontium** Schwaegr.**brownianum** (Dicks.) Schwaegr.var. **ovatum** (Funck) Wijk & Marg. (133)var. **repandum** (Funck) Limpr. (133)ovatum (Funck) Schwaegr. = *T. brownianum* (Dicks.) Schwaegr.repandum (Funck) Schwaegr. = *T. brownianum* (Dicks.) Schwaegr.**Thamnium** B.S.G. (291)**alopecurum** (Hedw.) B.S.G. = *Thamnobryum alopecurum* (Hedw.) Nieuwl.**Thamnobryum** Nieuwl. (291)**alopecurum** (Hedw.) Nieuwl.**Thuidium** B.S.G.**abietinum** (Hedw.) B.S.G. = *Abietinella abietina* (Hedw.) Fleisch.

- blandowii (Web. & Mohr) B.S.G. = *Helodium blandowii* (Web. & Mohr) Warnst.
- delicatulum** (Hedw.) Mitt., homon. illeg. (292)
[minutulium (Hedw.) B.S.G.] (126)
- philibertii** Limpr.
- recognitum** (Hedw.) Lindb. (293)
- tamariscifolium* Lindb. = *T. tamariscinum* (Hedw.) B.S.G.
- tamariscinum** (Hedw.) B.S.G.
- Timmia** Hedw., nom. cons.
- austriaca* Hedw.
- bavarica* Hessel.
- comata* Lindb. & H. Arn. (294)
- megapolitana* Hedw. (295)
- norvegica* Zett.
- Tomentypnum** Loeske (296, 300)
- nitens* (Hedw.) Loeske
- Tortella** (Lindb.) Limpr., nom. cons.
- fragilis* (Hook. & Wils.) Limpr.
- inclinata* (Hedw. f.) Limpr.
- tortuosa* (Hedw.) Limpr.
- Tortula** Hedw., nom. cons.
- mucronifolia* Schwaegr.
- muralis* Hedw.
- norvegica* (Web.) Lindb.
- ruralis* (Hedw.) Gaertn. et al.
- subulata* Hedw.
- spp. = *Desmatodon* Brid., *Pottia* (Reichenb.) Fürnr.
- Trematodon** Michx.
- ambiguus* (Hedw.) Hornsch.
- brevicollis* Hornsch.
- elongatus* I. Hag. = *T. ambiguus* (Hedw.) Hornsch.
- Trichostomum** Bruch, nom. cons. (131)
- cylindricum* (Brid.) C. Müll. = *Oxystegus tenuirostris* (Hook. & Tayl.) A. J. E. Sm.
- tenuirostre* (Hook. & Tayl.) Lindb. = *Oxystegus tenuirostris* (Hook. & Tayl.) A. J. E. Sm.
- Uloa** Mohr
- americana* (P. Beauv.) Limpr. = *U. hutchinsiae* (Sm.) Hammar
- bruchii* Hornsch. = *U. crispa* (Hedw.) Brid. var. *norvegica* (Grönv.) A. J. E. Sm. & M. O. Hill (133, 297)
- crispa** (Hedw.) Brid.
- var. *crispula* (Bruch) Hammar = *U. crispa* (Hedw.) Brid. (297)
- var. *norvegica* (Grönv.) A. J. E. Sm. & M. O. Hill (133)
- crispula* Bruch = *U. crispa* (Hedw.) Brid. (297)
- curvifolia** (Wahlenb.) Lilj.
- drummondii** (Hook. & Grev.) Brid.
- hutchinsiae** (Sm.) Hammar
- intermedia** Schimp.
- phyllantha** Brid.
- ulophylla* Broth. = *U. crispa* (Hedw.) Brid.
- Warnstorfia** Loeske = *Drepanocladus* (C. Müll.) G. Roth, p.p. (189)
- Webera** Hedw.
- albicans* Schimp. = *Mniobryum wahlenbergii* (Web. & Mohr) Jenn.

- var. *glacialis* (Brid.) Schimp. = *Mniobryum wahlenbergii* (Web. & Mohr) Jenn.
annotina (Hedw.) Bruch = *Pohlia camptotrachela* (Ren. & Card.) Broth.
atropurpurea (Wahlenb.) Warnst. = *Pohlia atropurpurea* (Wahlenb.) H. Lindb.
bulbifera Warnst. = *Pohlia bulbifera* (Warnst.) Warnst.
commutata Schimp. = *Pohlia drummondii* (C. Müll.) Andr.
crassidens (Lindb.) Kindb. = *Pohlia crudoides* (Sull. & Lesq.) Broth.
cruda (Hedw.) Fűrnr. = *Pohlia cruda* (Hedw.) Lindb.
cucullata (Schwaegr.) Schimp. = *Pohlia obtusifolia* (Brid.) L. Koch
delicatula (Hedw.) C. Jens. = *Mniobryum delicatulum* (Hedw.) Dix.
elongata (Hedw.) Schwaegr. = *Pohlia elongata* Hedw.
erecta (Lindb.) Limpr. = *Pohlia erecta* Lindb.
gracilis (B.S.G.) De Not. = *Pohlia schleicheri* Crum
 var. *carinata* (Boul.) C. Jens. = *Pohlia drummondii* (C. Müll.) Andr. (186, 298)
grandiflora (H. Lindb.) C. Jens. = *Pohlia camptotrachela* (Ren. & Card.) Broth.
longicollis Hedw. = *Pohlia longicollis* (Hedw.) Lindb.
ludwigii (Schwaegr.) Fűrnr. = *Pohlia ludwigii* (Schwaegr.) Broth.
nutans Hedw. = *Pohlia nutans* (Hedw.) Lindb.
 var. *bicolor* (Hoppe & Hornsch.) Fűrnr. = *Pohlia nutans* (Hedw.) Lindb. (134)
 var. *turbinata* Bomanss. = *Pohlia nutans* (Hedw.) Lindb. (134)
polymorpha (Hoppe & Hornsch.) Schimp. = *Pohlia elongata* Hedw.
 var. *acuminata* (Hoppe & Hornsch.) C. Jens. = *Pohlia elongata* Hedw. (186)
*proliger*a Kindb. = *Pohlia proliger*a (Kindb.) H. Arn.
pulchella (Hedw.) Fűrnr. = *Pohlia lescuriana* (Sull.) Ish. (252)
ramannii (Warnst.) C. Jens. = *Pohlia ramannii* Warnst.] (126)
sphagnicola (B.S.G.) Schimp. = *Pohlia sphagnicola* (B.S.G.) Broth. (253)
Webera Lindb. = *Diphyscium* Mohr
Weissia Hedw. (211)
 brachycarpa (Nees & Hornsch.) Jur. (211)
 controversa Hedw.
 var. *crispata* (Nees & Hornsch.) Nyh. (133)
 crispa (Hedw.) Mitt. = *Astomum crispum* (Hedw.) Hampe
 crispata (Nees & Hornsch.) C. Müll. = *W. controversa* Hedw.
 microstoma (Hedw.) C. Müll. = *W. brachycarpa* (Nees & Hornsch.) Jur. (211)
 squarrosa (Nees & Hornsch.) C. Müll.
 viridula Brid. = *W. controversa* Hedw.
Weissia Lindb. = *Ulota* Mohr
Zieria Schimp. = *Plagiobryum* Lindb.
Zygodon Hook. & Tayl.
 conoideus (Dicks.) Hook. & Tayl.
 rupestris (Hartm.) Milde (299)
 viridissimus (Dicks.) Brid.
 var. *occidentalis* Malta = *Z. viridissimus* (Dicks.) Brid.
 var. *rupestris* Hartm. = *Z. rupestris* (Hartm.) Milde (299)
 var. *stirtonii* (Schimp.) I. Hag. = *Z. viridissimus* (Dicks.) Brid.
 vulgaris Nyh. = *Z. rupestris* (Hartm.) Milde (299)

III. ANNOTATIONS

When using various checklists, we found that the most useful ones are those that are not mere lists of names, but contain other information as well. This is one of the reasons why we decided that the present list would be supplied with annotations. They explain nomenclatural changes, give the authors whom we have followed in taxonomic and other decisions, or provide further references to the taxonomic literature or to published distribution maps. In the case of hepatic taxonomy, the references are usually restricted to the literature of the last two decades, since earlier papers, e.g. those by H. Buch, have been utilized in the floras of BUCH (1936) and ARNELL (1956). In the case of

mosses, the citations often go back to the 1930s and 1940s.

It was considered useful to give full author citations in the annotations dealing with hepatics, because a Fennoscandian flora with good nomenclatural treatment is lacking, and the recent nomenclatural revisions and corrections are either scattered in innumerable publications or are published for the first time in this paper. Similarly, full author citations are often given in the nomenclatural annotations of mosses. Accordingly, these citations differ from those used in the checklist, where the so-called *ex* and *in* authors have been omitted (see p. 5). For the abbreviations of the authors' names, see p. 5.

1—122. Hepaticophytina

1. In the delimitation of the genus *Anastrophyllum* (Spruce) Steph. (incl. *Crossocalyx* Meyl. and *Sphenolobus* (Lindb.) Berggr.), we follow SCHUSTER (1969); however, in accordance with most other authors, *Eremonotus* Lindb. & Kaal. ex Pears. is regarded as a distinct genus. Most of the necessary specific combinations were published by SCHUSTER (1949, 1951), but *Orthocaulis cavifolius* Buch & S. Arn. in Buch (*Sphenolobus cavifolius* (Buch & S. Arn.) K. Müll.) was transferred to *Anastrophyllum* by LAMMES (1977b). For the taxonomy of this species, see also SCHUSTER (1969), SCHLJAKOV (1971) and SCHUSTER & DAMSHOLT (1974).
2. The following species were reported as new for Eastern Fennoscandia or Finland by LAMMES (1977a), who also mapped their Finnish distribution: *Anastrophyllum cavifolium* (Buch & S. Arn. in Buch) Lammes, *Cephaloziaella elegans* (Heeg) Schiffn., *Eremonotus myriocarpus* (Carringt. in Carringt. & Pears.) Lindb. & Kaal. ex Pears., *Lophozia elongata* Steph., *L. longiflora* (Nees) Schiffn. (see also KOPONEN & ULVINEN 1977), *Moerckia blyttii* (Mörch in Hornem.) Brockm., *Scapania obcordata* (Berggr.) S. Arn., and *S. praetervisia* Meyl.
3. Owing to our strict interpretation of Rec. 46C and Rec. 46D of the I.C.B.N. (see ISOVITTA 1966:217—220), the author citations of the following names differ slightly from those given by, e.g., GROLLE (1976): *Anastrophyllum helleranum* (Nees ex Lindenb.) Schust., *Asterella lindenbergiana* (Corda ex Nees) H. Arn., *Cephalozia lacinulata* "Jack ex" Spruce, *Cephalozia elachista* (Jack ex Gottsche & Rabenh.) Schiffn., *Cladopodiella francisci* (Hook.) Buch ex Jørg., *Conocephalum conicum* (L.) Dum. ex Lindb., *Eremonotus* Lindb. & Kaal. ex Pears., *E. myriocarpus* (Carringt. in Carringt. & Pears.) Lindb. & Kaal. ex Pears., *Leiocolea badensis* (Gottsche in Rabenh.) Jørg., *L. heterocolpos* (Thed. ex Hartm.) Buch, *Lophozia grandiretis* (Lindb. ex Kaal.) Schiffn., *Lophozia guttulata* (Lindb. in Lindb. & H. Arn.) Evans, *L. opacifolia* Culm. ex Meyl., *L. sudetica* (Nees ex Hüb.) Grolle, *Marsupella boeckii* (Aust.) Lindb. ex Kaal., *M. condensata* (Angstr. ex Hartm. f.) Lindb. ex Kaal. (vel Lindb. ex Schiffn.), *M. sphacelata* (Gieseke ex Lindenb.) Dum., *Odontoschisma denudatum* (Mart.) Dum., *Scapania irrigua* (Nees) Nees in Gottsche et al., *S. subalpina* (Nees ex Lindenb.) Dum., *S. uliginosa*

("Sw. ex" Lindenb.) Dum., and *Tritomaria exsectiformis* (Breidl.) Schiffn. ex Loeske.

The quotation marks are used above in cases where the taxonomic position given by the publishing author differed from that employed by the first author; e.g., *Jungermannia lacunculata* Jack, nom. inval., was published as *Cephalozia lacunculata* by R. Spruce, and should be ascribed to him only. Another useful way to cite this kind of name might be that used by, e.g., BOEREMA & VERHOEVEN (1972): *C. lacunculata* (Jack) ex Spruce.

4. Many names and epithets are often written in different ways. Examples of names whose original spelling or termination should not be altered (see e.g. GROLLE 1976): *Anastrophyllum saxicola* (Schrad.) Schust., *Chiloscyphus polyanthos* (L.) Corda in Opiz, *Cladopodiella francisci* (Hook.) Buch ex Jørg., *Harpanthus flotovianus* (Nees) Nees, *Leiocolea heterocolpos* (Thed. ex Hartm.) Buch, *Moerckia* Gottsche in Rabenh., *Ricciocarpos* Corda in Opiz, *Scapania massalongi* (K. Müll.) K. Müll., *S. spitsbergenensis* (Lindb. in Lindb. & H. Arn.) K. Müll., and the conserved generic name *Gymnomitrium* Corda in Opiz.

On the other hand, *Jungermannia caespiticia* Lindenb. should be corrected to *J. caespiticia* (cf. e.g. SCHUSTER 1969) and *J. chamedryfolia* With. perhaps to *Riccardia chamaedryfolia* (With.) Grolle — not to mention all such names whose orthography or termination is directly determined by the nomenclatural code, e.g., *Cephalozia lunulifolia* (Dum.) Dum. and *Pellia endiviifolia* (Dicks.) Dum. and epithets terminating in -anus, -ianus: *Anastrophyllum belleranum* (Nees ex Lindenb.) Schust. and *Calypogeia muellerana* (Schiffn.) K. Müll. but *C. neesiana* (Mass. & Carest.) K. Müll. and *Riccia lescuriana* Aust.

5. The correct citation appears to be *Anastrophyllum michauxii* (Web.) Buch, *Memoranda Soc. Fauna Fl. Fennica* 8:284, 289 (1933).
6. For the nomenclature of *Anastrophyllum minutum* (Schreb. in Cranz) Schust. (*Sphenolobus minutus* (Schreb. in Cranz) Berggr.), see also GROLLE (1963a). Two varieties occur in Finland. The epithet *minutum* belongs to the large-celled arctic-alpine variety, so far called *A. m.* var. *grande* ("Gottsche ex" Lindb.) Schust. (*Sphenolobus minutus* var. *grandis* (Lindb.) Jørg. 1934) (GROLLE 1976). The correct epithet

of the more widely distributed circumboreal variety is not known.

7. The taxa marked with this annotation number were not mentioned from Finland by ARNELL (1956) but have been recorded from this country in other sources (LINDBERG 1897, BOMANSSON & BROTHERUS 1894, BUCH 1936, WEIMARCK 1937a, HENSSEN 1959). With the exception of *Sphenolobus minutus* var. *grandis* (i.e. *Anastrophyllum minutum* var. *minutum*) and *Jungermannia pumila* With. var. *alpestris* Lindb. ex Gottsche & Rabenh., we consider them taxonomically doubtful (the epithet printed in ordinary type) or valueless (correct equivalent also given).
8. *Anastrophyllum sphenoloboides* Schust. was described from NW Greenland by SCHUSTER (1969), and was recorded from Alaska by him, from NW Canada and W Greenland by SCHUSTER & DAMSHOLT (1974), and from the Chukchi Peninsula by SCHLJAKOV (1975b). Reported from the Kola Peninsula by SCHLJAKOV (1973a) and recently discovered in Finland (Kr: Kuusamo) by K. Damsholt (H; KOPONEN & ULVINEN 1977).
9. In accordance with most recent authors (e.g. DUDA & VÁŇA 1967, 1974, MIZUTANI & HATTORI 1969, SCHLJAKOV 1973b, SCHUSTER & DAMSHOLT 1974, GROLLE 1976), *Aneura pinguis* (L.) Dum. (*Riccardia p.* (L.) S. Gray) is here considered generically distinct from *Riccardia* S. Gray.
10. As is usual, *Anthelia juratzkana* (Limpr. in Cohn) Trev. is treated here as a species distinct from *A. julacea* (L.) Dum., but Lammes' observations on N Finnish material support the doubts expressed by GROLLE (1976) and some previous authors concerning their separation.
11. For the taxonomy and nomenclature of *Anthoceros* L. and *Phaeoceros* Prosk. and their species, and of the varieties of *Anthoceros punctatus* L., see PROSKAUER (e.g. 1951, 1958b). *A. p.* var. *cavernosus* Prosk. (homon. illeg.) is the only *Anthoceros* taxon found in Finland. Unfortunately, *A. p.* var. *cavernosus* Gottsche et al. is an illegitimate substitute of the Mediterranean-Atlantic var. *punctatus* and no legitimate name is known for our variety (GROLLE 1976).
12. The distribution in Eastern Fennoscandia was mapped by AUER (1944) for: *Arnellia fennica*

- (Gottsche in Gottsche & Rabenh.) Lindb. in Lindb. & H. Arn., *Diplophyllum albicans* (L.) Dum., *Leiocolea gillmanii* (Aust.) Evans, *Odontoschisma macounii* (Aust.) Underw., and *Scapania gymnostomophila* Kaal.
13. The correct name for *Asterella ludwigii* auct., non (Schwaegr.) Underw. ex Evans, is *A. gracilis* (Web.) Underw. (DUDA & VÁŇA 1974, GROLLE 1975a).
 14. *Asterella lindenbergi* Lindb. 1879 (nom. illeg.) does not constitute valid publication of *A. lindenbergiana*, whose basionym is *Fimbriaria lindenbergiana*; the correct citation may be *Asterella lindenbergiana* (Corda ex Nees) H. Arn., Lebermoosstud. Nördl. Norwegen: 2 (1892).
 15. For the taxonomy and nomenclature of *Athalamia* Falc. (incl. *Clevea* Lindb.) and of *A. hyalina* (Sommerf.) Hatt. in Shim. & Hatt., see SHIMIZU & HATTORI (1954).
 16. The genus *Barbilophozia* Loeske (incl. *Orthocaulis* Buch) is here delimited in accordance with MÜLLER (1954), KITAGAWA (1965), MIZUTANI & HATTORI (1969) and recent Central European authors (e.g. DUDA & VÁŇA 1974, GROLLE 1976). Cf. also Note 59.
 17. For the taxonomic status of *Barbilophozia hatcheri* (Evans) Loeske, see, e.g., SCHUSTER & DAMSHOLT (1974) and GROLLE (1976).
B. h. var. *grandiretis* Buch ex Lammes was described and recorded from Finland by LAMMES (1977c).
 18. *Barbilophozia kunzeana* (Hüb.) K. Müll., Mitteil. Badischen Landesver. Naturk. Naturschutz, N. F. 4:431 (1944) probably represents the first valid publication of this combination.
 19. *Barbilophozia lycopodioides* (Wallr.) Loeske was mapped for Finland by KUJALA (1964).
 20. *Barbilophozia quadriloba* (Lindb. in Lindb. & H. Arn.) Loeske var. *glareosa* (Jørg.) Lammes, comb. nova. Basionym: *Jungermannia quadriloba* Lindb. var. *glareosa* Jørg., Forhandl. Vidensk.-Selsk. Christiania 1894:59 (1894). (*Lophozia quadriloba* (Lindb.) Evans var. *glareosa* (Jørg.) Jørg. 1934, *Orthocaulis quadrilobus* (Lindb.) Buch var. *glareosus* (Jørg.) S. Arn. 1947.)
 21. The inclusion of the following varieties is based on N Finnish specimens (e.g. in H) seen by Lammes: *Barbilophozia quadriloba* var. *glareosa*, *Blepharostoma trichophyllum* (L.) Dum. var. *brevirete* Bryhn & Kaal. in Bryhn, *Cephalozia divaricata* (Sm. in Sowerby) Schiffn. in Engl. & Prantl var. *scabra* (M. A. Howe) S. Arn., *Leiocolea heterocolpos* (Thed. ex Hartm.) Buch var. *arctica* (S. Arn.) S. Arn., *Lophozia sudetica* (Nees ex Hüb.) Grolle var. (see Note 75), *L. ventricosa* (Dicks.) Dum. var. *grandiretis* (Buch & S. Arn. in S. Arn.) Schust. & Damsh., *Tritomaria quinquedenata* (Huds.) Buch var. *grandiretis* Buch & S. Arn. in S. Arn., and *T. q.* var. *turgida* (Lindb. in Lindb. & H. Arn.) Weim.
 22. The correct citation, *Bazzania tricrenata* (Wahlenb.) Lindb. in Broth., is given in GROLLE's (1972b) monographic study of the European *Bazzania* species.
 23. Excluded hepatic species (names presented in square brackets in the checklist).
A. Species whose inclusion in the Finnish flora in the literature seems to be founded on incorrect interpretations or determinations: *Calyptogeia fissa* (L.) Raddi (e.g. BUCH 1936; excluded by MÜLLER, 1947, 1956; cf., however, BUCH 1948), *C. trichomanis* (L.) Corda in Opiz (e.g. BUCH 1936; excluded by BUCH, 1948, MÜLLER, 1956, and ARNELL, 1956; refers mainly to *C. muellerana* (Schiffn.) K. Müll.; cf. also Note 26), *Gymnomitrium crenulatum* Gottsche ex Carringt. (ROIIVAINEN 1959; corrected by HAAPASAARI, 1966, as being *G. concinnatum* (Lightf.) Corda in Opiz var. *intermedium* Limpr.), and *Jungermannia karl-muelleri* Grolle (HENSENS 1959, as *Solenostoma oblongifolium* (K. Müll.) K. Müll., VÁŇA 1969, 1973b; later, in litt., J. Váňa accepted Lammes' opinion that the specimens belong to *Jungermannia pumila* With. var. *alpestris* Lindb. ex Gottsche & Rabenh.). For *Phaeoceros laevis* (L.) Prosk. (*Anthoceros l. l.*) and *Riccia crystallina* L., see Notes 94 and 104.
In addition, the following species were erroneously reported from Finland by MÜLLER (1954, 1956), probably owing to a misunderstanding of BUCH's (1936) statement that they might be found in Finland: *J. subelliptica* (Lindb. ex Kaal.) Lev. (*Plectocolea subelliptica* (Lindb. ex Kaal.) Evans, *Eucalyx subellipticus* (Lindb. ex Kaal.) Breidl.), *Marsupella revoluta* (Nees) Dum. (*Gymnomitrium revolutum* (Nees) Philib.), and *Tritomaria exsecta* (Schrad.) Schiffn. ex Loeske; these names have not been

- included in the checklist at all. Cf. also Notes 57 and 84.
- B. Species not known within the present boundary of Finland, their earlier Finnish localities now lying in Soviet territory: *Jungermannia atrovirens* Dum. (*J. tristis* Nees), *Scapania simonsii* Bryhn & Kaal. in Bryhn, and *S. sphaerifera* Buch & Tuom.
- Furthermore, *Lophozia murmanica* Kaal. in Bryhn, *Scapania degenii* Schiffn. ex K. Müll. and *S. glaucocephala* (Tayl.) Aust. (*Scapaniella* g. (Tayl.) Buch) were discovered from the easternmost Soviet Fennoscandia by Finnish botanists (see e.g. ARNELL 1956), and many other hepatic species and varieties have been reported or described from the Kola Peninsula in SCHLJAKOV's recent papers (e.g. 1973a: *Lophozia decolorans* (Limpr.) Steph., *L. savicziae* Schljak., *Plagiobhila arctica* Bryhn & Kaal. in Bryhn). These taxa have been omitted from the checklist.
24. For the nomenclature of *Calypogeia integrispula* Steph. (*C. meylanii* Buch, *C. neesiana* (Mass. & Carest.) K. Müll. var. *meylanii* (Buch) Schust.), see SCHUSTER (1969) and GROLLE (1976) and in DÜLL (1972). Accepted as a distinct species by most recent authors, but often with many reservations (e.g. SCHUSTER 1969, SCHUSTER & DAMSHOLT 1974). At varietal level the correct name may be *C. neesiana* var. *laxa* Meyl. ex K. Müll. 1913 (see BUCH 1948; cf., however, MÜLLER 1947).
 25. The correct citation may be *Calypogeia neesiana* (Mass. & Carest.) K. Müll. in Loeske, Hedwigia 47:165 (3 Jan. 1908), since L. Loeske's "*C. Neesiana* C. Müller" contains an evidently adequate reference to the combination *C. neesiana* (Mass. & Carest.) K. Müll. in Loeske, Verh. Bot. Ver. Prov. Brandenb. 47:320 (1906, which is invalid since Loeske did not accept its specific status).
 26. For the typification of *Calypogeia trichomanis* (L.) Corda in Opiz, see ISOVIITA (1970b:7, 15) and GROLLE (1976). Since the existing type material scarcely contains any *C. trichomanis* sensu K. Müll., this name probably cannot be preserved — a fact already pointed out by ARNELL (1956). Reported erroneously from Finland (Note 23A).
 27. *Cephalozia affinis* Lindb. ex Steph. was accepted as a distinct species by, e.g., BUCH (1936), MÜLLER (1956), ARNELL (1956), and SCHUSTER (1974), whom we follow, but regarded as a synonym of *C. lunulifolia* (Dum.) Dum. (*C. media* Lindb.) by GROLLE (1955, 1967, 1976); cf. also SCHUSTER (1953).
 28. The combination *Cephalozia bicuspidata* (L.) Dum. ssp. *ambigua* (Mass.) Schust. was published by SCHUSTER (1974). Regarded as a distinct species (*C. ambigua* Mass.) by most authors (e.g. GROLLE 1976), but may be merely a variety.
 29. Since the name *Jungermannia lacinulata* Jack in Gottsche & Rabenh. 1877 is invalid, the correct citation is *Cephalozia lacinulata* Spruce 1882 (cf. DUDA & VÁŇA 1974, GROLLE 1976; see also Note 3).
 30. For the nomenclature of *Cephalozia lunulifolia* (Dum.) Dum. (*C. media* Lindb.), see GROLLE (1967) and SCHUSTER (1974).
 31. The name should be cited as follows: *Cephalozia pleniceps* (Aust.) Lindb., Helsingfors Dagblad 1882(338):2 (12 Dec. 1882).
 32. *Cephaloziella* (Spruce) Steph. has been conserved in this form but should be cited as *Cephaloziella* (Spruce) Schiffn. in Engl. & Prantl (GROLLE 1976).
 33. For the nomenclature of *Cephaloziella divaricata* (Sm. in Sowerby) Schiffn. in Engl. & Prantl (*C. starkei* (Spruce) Schiffn. — non *Jungermannia starkei* Funck ex Nees, nom. illeg. —, *C. byssacea* auct., non (A. Roth) Warnst.), see GROLLE (1970a, 1971b); cf. Note 35.
 34. The correct citation, *Cephaloziella elegans* (Heeg) Schiffn., was accepted by DUDA & VÁŇA (1967, 1974) and GROLLE (1976).
 35. *Cephaloziella byssacea* (A. Roth) Warnst. is probably conspecific with *C. hampeana* (Nees) Schiffn. in Loeske (cf., however, SCHUSTER 1972:194—195) and has priority over it, but should be regarded as a nomen ambiguum (cf. GROLLE 1970a and Note 33) and should thus apparently be included in the list of nomina specifica rejicienda, together with *Jungermannia lanceolata* L. and *Lophozia alpestris* (Schleich. ex Web.) Evans in Kenn. & Collins (see Notes 51 and 60).
 36. The basionym of *Cephaloziella integerrima* Lindb.) Warnst. (*Dichiton integerrimum*

- (Lindb.) Buch) should be cited as follows: *Cephalozia integerima* Lindb., Helsingfors Dagblad 1875(46):2 (17 Febr. 1875).
37. When publishing the generic name *Cladopodiella* in 1927, H. Buch failed to make the necessary specific combinations. These seem to have been validated as follows: *C. francisci* (Hook.) Buch ex Jørg. 1934 (cf. SCHUSTER 1974 and GROLLE 1976; see also Note 3) and *C. fluitans* (Nees in Funck) Buch in Kalliola, Ann. Bot. Soc. Zool.-Bot. Fennicae Vanamo 2(2):109 (1932).
 38. For the author citation of *Conocephalum conicum* (L.) Dum. ex Lindb. 1872 (vel Dum. ex Cogn. 1872), cf. GROLLE (1976); see also Note 3.
 39. The distribution of *Cryptothallus mirabilis* Malmb. in Eastern Fennoscandia was mapped by DICKSON et al. (1975).
 40. BUCH (1928:166) in his monograph mapped the Fennoscandian distribution of *Douinia ovata* (Dicks.) Buch and *Scapania compacta* (A. Roth) Dum., and sketched the Fennoscandian area of *S. nemorea* (L.) Grolle (*S. nemorosa* Dum.) and *S. uliginosa* (Lindenb.) Dum.
 41. The nomenclature of *Fossombronina foveolata* Lindb. (*F. dumortieri* "Hüb. & Genth ex" Lindb., nom. illeg.) was treated by GROLLE (1969).
 42. The correct citation is *Fossombronina incurva* Lindb., Helsingfors Dagblad 1873(273):2 (7 Oct. 1873).
 43. The name should be cited as *Fossombronina wondraczekii* (Corda in Sturm) Dum. ex Lindb., Helsingfors Dagblad 1873(273):2 (7 Oct. 1873). Represented in Finland only by the var. *cristata* H. Arn. (*F. cristata* Lindb., nom. illeg.); this variety is taxonomically doubtful.
 44. For the taxonomy of the European *Frullania* species and the correct author citation of *F. fragilifolia* (Tayl.) Gottsche et al., see GROLLE (1970b).
 45. The distribution in Eastern Fennoscandia was mapped by JÄRVINEN (1975b, 1976) for: *Geocalyx graveolens* (Schrad.) Nees, *Harpanthus flotovianus* (Nees) Nees, *H. scutatus* (Web. & Mohr) Spruce, *Lophocolea bidentata* (L.) Dum., *L. cuspidata* (Nees) Limpr. in Cohn, *L. heterophylla* (Schrad.) Dum., and *L. minor* Nees.
 46. Lammes' studies on N Finnish *Gymnocolea* lead us to agree with, e.g., ARNELL (1956) and GROLLE (1976) that *G. acutiloba* (Schiffn.) K. Müll. (*G. inflata* (Huds.) Dum. var. *acutiloba* (Schiffn.) H. Arn.) can hardly be distinguished from *G. inflata*; it seems that it is merely a modification of *G. inflata*.
 47. The taxonomy, distribution and habitat ecology of the Finnish *Gymnomittrion* species were discussed by HAAPASAARI (1966), who also mapped *G. concinatum* (Lightf.) Corda in Opiz, *G. corallioides* Nees and *G. obtusum* (Lindb.) Pears. in Eastern Fennoscandia and reported *G. concinatum* var. *intermedium* Limpr. from Finland (cf. also Note 23A).
 48. The basionym of *Gymnomittrion obtusum* (Lindb.) Pears. should be cited as follows: *Cesia obtusa* Lindb., Helsingfors Dagblad 1877 (43):2 (14 Febr. 1877).
 49. For the taxonomy and nomenclature of *Jamesoniella* (Spruce) Carringt. in Lees and its species, see GROLLE (1971a, 1972a).
 50. As to the delimitation of the genus *Jungermannia* L. (type: *J. lanceolata* L. = *J. atrovirens* Dum.; see Note 51) (incl. *Lioclaena* Nees in Gottsche et al., *Solenostoma* Mitt., and *Eucalyx* (Lindb.) Carringt. in Lees = *Plectocolea* (Mitt.) Mitt. in Seem.), we share the concepts of most recent authors, e.g., AMAKAWA (1959, 1960), GROLLE (1966b, 1976), DUDA & VÁÑA (1967, 1974), MIZUTANI & HATTORI (1969), and VÁÑA (1973a, 1973b, 1975).
 51. For the nomenclature and taxonomy of *Jungermannia atrovirens* Dum., incl. *J. tristis* Nees (*J. lanceolata* L., nom. ambig. — cf. Notes 56 and 35 —, *J. riparia* Tayl.), see VÁÑA (1973b) and GROLLE (1966b). The species has not been found in Finland (Note 23B).
 52. The nomenclature and taxonomy of *Jungermannia exsertifolia* Steph. ssp. *cordifolia* (Dum.) Váňa (*J. cordifolia* Hook., homon. illeg.) were treated by VÁÑA (1973b); its East Fennoscandian distribution was described and mapped by ULVINEN (1959). *J. e.* ssp. *exsertifolia* is a NE Asiatic taxon.
 53. The nomenclature of *Jungermannia gracillima* Sm. in Sowerby (*J. crenulata* Sm. in Sowerby, homon. illeg.) was clarified by GROLLE (1966a).
 54. For the nomenclature of *Jungermannia jensenia*

- na* Grolle (*J. pusilla* (C. Jens.) Buch, homon. illeg.), see GROLLE (1964).
55. For the nomenclature of *Jungermannia karlmuelleri* Grolle (*J. oblongifolia* (K. Müll.) Buch et al., homon. illeg.), see GROLLE (1964) and VÁŇA (1969). Reported erroneously from Finland (Note 23A).
56. *Jungermannia leiantha* Grolle is the correct name for *J. lanceolata* auct., non L. (*Liocblaena lanceolata* Nees in Gottsche et al.) (GROLLE 1966b, 1968; cf. Note 51). "*Jungermannia lanceolata* L. emend. Schrad. 1797", suggested by SCHUSTER (1969), and the corresponding generic or subgeneric concept do not seem to have any nomenclatural standing. The dioecious counterpart of *J. leiantha*, *J. subulata* Evans (*J. amakawana* Grolle), has been identified in Sweden (Dalarna) and the Estonian S.S.R. by GROLLE & VÁŇA (1970) and may exist in S Finland also.
57. For the taxonomy and nomenclature of *Jungermannia polaris* Lindb. (incl. *J. schiffneri* (Loitl.) Evans), see VÁŇA (1973b), who reported it as new for Eastern Fennoscandia (see also LAMMES 1977a); the earlier record of MÜLLER (1956) is erroneous. SCHUSTER (1969) and SCHUSTER & DAMSHOLT (1974) consider this taxon a subspecies of *J. pumila* With. (*Solenostoma pumilum* (With.) K. Müll.), but we find it difficult to accept this opinion.
58. For the nomenclature of *Kurzia* Martens (*Microlepidozia* (Spruce) Jørg., *Telaranea* sensu K. Müll.) and of *Kurzia pauciflora* (Dicks.) Grolle (*Jungermannia setacea* auct., non Hook., *Lepidozia setacea* Mitt., *Microlepidozia setacea* Jørg., *Telaranea setacea* K. Müll.), see GROLLE (1963b, 1965b, 1969, 1976:269). Those who are still dissatisfied with GROLLE's decisions (e.g. SCHUSTER 1969) should note that *Jungermannia setacea* G. Web. 1778, the "basionym" of the above-mentioned illegitimate synonyms, is a moss, now known as *Platydictya jungermannioides* (Brid.) Crum; both names have the same type (cf., e.g., the protologue of *Hypnum jungermannioides* Brid., Spec. Musc. II:255. 1812). Hence the name *Jungermannia setacea* G. Web. has no status whatsoever in hepatic nomenclature. On the other hand, a proposal for the conservation of *Microlepidozia* against *Kurzia* has been rejected (e.g. SAYRE 1968).
59. In accordance with Fennoscandian tradition and MÜLLER (1954), *Lophozia* (Dum.) Dum. is here understood in a narrower sense than by most recent authors (e.g. KITAGAWA 1965, 1966, SCHUSTER 1969, who still includes even *Barbilophozia* Loeske and *Orthocaulis* Buch, MIZUTANI & HATTORI 1969, DUDA & VÁŇA 1974, GROLLE 1976); *Leiocolea* (K. Müll.) Buch is thus regarded as a well-founded genus. However, *Isopachos* Buch, *Massula* Schljak., nom. inval., and *Obtusifolium* S. Arn. are included in *Lophozia* by us also.
60. The combination used here, *Leiocolea collaris* (Nees in Mart.) Schljak., was published by SCHLJAKOV (1976). The nomenclature of this species — *Lophozia collaris* (Nees in Mart. 1817) Dum. (*L. alpestris* (Schleich. ex Web. 1815) Evans in Kenn. & Collins, nom. ambig., cf. Notes 74 and 35, *Leiocolea muelleri* (Nees ex Lindenb.) Jørg.) — was treated by SCHUSTER (1969) and discussed in detail by GROLLE (1971b). According to MÜLLER (1954) and GROLLE (1971b), this taxon may be merely a form of *L. bantriensis* (Hook.) Jørg.
61. For the nomenclature of *Leiocolea heterocolpos* (Thed. ex Hartm.) Buch (*Lophozia heterocolpos* (Thed. ex Hartm.) M. A. Howe), cf. GROLLE (1976); see also Note 3.
62. *Leiocolea heterocolpos* var. *arctica* (S. Arn.) Mårt. ex S. Arn. (1956:309; invalidly published by O. Mårtensson in 1955 and 1956) is the correct varietal name for *Lophozia heterocolpos* var. *harpanthoides* (Bryhn & Kaal. in Bryhn) Schust. in Schust. et al. 1959 (*Leiocolea heterocolpos* var. *harpanthoides* (Bryhn & Kaal.) S. Arn., nom. inval.) (cf. ARNELL 1956:112, 309) — or for *L. b.* var. *harpanthoides* auct. scand. (cf. SCHUSTER & DAMSHOLT 1974).
63. For the correct citation, *Leiocolea rutheana* (Limpr.) K. Müll. in Gams, cf. SCHUSTER (1969). The Finnish distribution of this species (*L. schultzii* Jørg., nom. illeg., *Jungermannia schultzii* Nees, homon. illeg.) was discussed by ULVINEN (1960).
64. *Lophocolea incisa* Lindb. was synonymized with *L. heterophylla* (Schrad.) Dum. by JÄRVINEN (1975a).
65. For the correct citation, *Lophozia bicrenata* (Schmid. ex Hoffm.) Dum., see, e.g., GROLLE (1975b).
66. The correct author citation, *Lophozia capitata*

- (Hook.) Mac., was given by DÜLL (1972), DUDA & VÁŇA (1974) and GROLLE (1976).
67. For the nomenclature of *Lophozia elongata* Steph. (*Orthocaulis elongatus* (Steph.) Evans in Buch et al., *Jungermannia elongata* Lindb. ex Kaal., homon. illeg.), see GROLLE (1975a); for its taxonomy, see SCHUSTER (1969) and SCHUSTER & DAMSHOLT (1974).
 68. The correct citation is *Lophozia grandiretis* (Lindb. ex Kaal.) Schiffn. (cf. SCHUSTER 1969, GROLLE 1976; see also Note 3).
 69. The correct name for *Lophozia porphyroleuca* Schiffn. 1903 (vel Loeske 1903) (non *Jungermannia porphyroleuca* Nees, nom. illeg.) is *Lophozia guttulata* (Lindb. in Lindb. & H. Arn.) Evans (cf. GROLLE 1968; see also Note 3).
 70. *Lophozia laxa* (Lindb.) Grolle is the correct name for *L. marchica* (Nees ex Limpr.) Steph. (GROLLE 1968).
 71. The basionym of *Lophozia longidens* (Lindb.) Mac. should be cited as *Jungermannia longidens* Lindb., Helsingfors Dagblad 1876(323):2 (26 Nov. 1876, "longideris"); corr. Lindb., Bot. Notiser 1877:27 (15 Febr. 1877).
 72. In accordance with most authors (e.g. GROLLE 1976), *Lophozia longiflora* (Nees) Schiffn. is treated here as a species; SCHUSTER (1969) and SCHUSTER & DAMSHOLT (1974) consider it a variety of *L. ventricosa* (Dicks.) Dum., probably with good reason.
 73. For the author citation of *Lophozia opacifolia* Culm. ex Meyl., see DÜLL (1972), GROLLE (1976), and Note 3. Its taxonomy, distribution and habitat ecology were dealt with by LAMMES (1974), who recorded this species from Finland and mapped its Fennoscandian distribution.
 74. For the nomenclature of *Lophozia sudetica* (Nees ex Hüb. 1834) Grolle (*L. alpestris* auct., non (Schleich. ex Web.) Evans in Kenn. & Collins), cf. GROLLE (1971b) and Notes 3 and 60. However, it is possible that *Jungermannia ebrhartiana* Web. 1815 should be considered conspecific (cf. GROLLE 1968, SCHUSTER & DAMSHOLT 1974).
 75. *Lophozia sudetica* var. (*L. alpestris* var. *major* auct. scand., non (C. Jens.) K. Müll., *L. a.* var. *grandiretis* S. Arn. 1947 in sched.) is possibly an undescribed large-celled oroarctic variety, which has been found in Sweden (Torne Lapp-
 - mark, MÅRTENSSON 1955, ARNELL 1956) and Finland (Enontekiö Lapland, Lammes). *L. a.* var. *major* (C. Jens.) K. Müll. (*L. major* (C. Jens.) Schljak.) is synonymous with *L. excisa* (Dicks.) Dum. (SCHUSTER 1969; lectotype in C, seen by Lammes); for SCHLJAKOV's (1973b) erroneous interpretation, see SCHUSTER & DAMSHOLT (1974). The present variety does not seem to be identical with SCHUSTER's (1969: 614—619) nearctic *L. alpestris* ssp. *polaris* (= *L. polaris* (Schust.) Schust. & Damsh.) either, but may be *L. a.* var. *anomala* Schljak., described from the Kola Peninsula by SCHLJAKOV (1974).
 76. The varietal combinations were published as follows: *Lophozia ventricosa* (Dicks.) Dum. var. *grandiretis* (Buch & S. Arn.) Schust. & Damsh. (*L. silvicola* Buch var. *grandiretis* Buch & S. Arn. in S. Arn.) by SCHUSTER & DAMSHOLT (1974) and *L. ventricosa* var. *silvicola* (Buch) E. Jones ex Schust. (*L. silvicola* Buch) by SCHUSTER (1969; invalid as published by E. Jones in 1958). For the taxonomic status of the latter taxon, cf. also GROLLE (1976).
 77. The correct citation seems to be *Lunularia cruciata* (L.) Dum. ex Lindb., Notiser Sällsk. Fauna Fl. Fennica Förhandl. 9:298 (1868). The species has been found in Finland as a rare weed in greenhouses; probably extinct.
 78. WARNCKE (1968) described the distinguishing characters of *Marchantia alpestris* (Nees) Burgeff and mapped its distribution in Fennoscandia.
 79. For the taxonomy of *Marchantia polymorpha* L. (incl. *M. aquatica* (Nees) Burgeff), see, e.g., GROLLE (1976). It is probable that the taxon now called *M. polymorpha* var. *aquatica* Nees should actually be regarded as var. *polymorpha* and that the present type variety should be named var. *stellata* O. Müll. (ISOVITA 1970b: 23).
 80. The correct citation, *Marsupella aquatica* (Lindb.) Schiffn., was given by DÜLL (1972), DUDA & VÁŇA (1974) and GROLLE (1976). SCHUSTER (1974) regards this taxon as a variety of *M. emarginata* (Ehrh.) Dum.
 81. The correct author citation, *Marsupella boeckii* (Aust.) Lindb. ex Kaal., was given in DUDA & VÁŇA (1974).
 82. For the nomenclature of *Marsupella brevissima*

- (Dum.) Grolle (*M. varians* (Lindb.) K. Müll.), see GROLLE (1965a). Reported as new within the present boundary of Finland by HENSSEN (1959).
83. The correct citation seems to be *Marsupella condensata* (Ångstr. ex Hartm. f.) Lindb. ex Kaal., *Nyt Mag. Naturvidensk.* 33:420. It is evident from N. Bryhn's (Kongl. Norske Vidensk. Selsk. Skrifter 1892:223—224. 1893) citations that this part of B. Kaalaas' paper was also available before 18 Sept. 1893. Accordingly, it may well antedate the publication of the same combination by V. Schiffner (in Engl. & Prantl, *Natürl. Pflanzenfam.* I(3):78, reprints issued in Sept. 1893). See also Note 3.
84. For the taxonomy and nomenclature of *Marsupella sprucei* (Limpr.) H. Bern. (incl. *M. ustulata* Spruce, non *M. ustulata* (Hüb.) Pears., homon. illeg.), see GROLLE (1975b). (SCHUSTER, 1974, without seeing the type of *Jungermannia ustulata* Hüb., gives priority to *Marsupella ustulata* and regards *M. sprucei* as its variety.) Both *M. sprucei* and *M. ustulata* were erroneously recorded from Finland by MÜLLER (1956). However, there are specimens from Finland (*Ta*: Janakkala, *Ok*: Kajaani, *Lk*: Muonio; *H*) identified as *M. sprucei* by R. Grolle in 1966 and the species has recently been reported from *Ks*: Kuusamo also (K. Damsholt, *H*; KOPONEN & ULVINEN 1977).
85. *Moerckia hibernica* (Hook.) Gottsche in Rabenh. (incl. *M. flotoviana* (Nees) Schiffn.) is here delimited in accordance with DE SLOOVER (1959) and most subsequent authors.
86. The name should be cited as *Nardia breidlerii* (Limpr.) Lindb., *Helsingfors Dagblad* 1880 (311):2 (15 Nov. 1880). The date "1880" given by VÁÑA (1976) for the publication of the same combination in *Meddel. Soc. Fauna Fl. Fennica* 6:252 (29 Oct. — 3 Dec. 1881) is erroneous.
87. The correct citation is *Nardia insecta* Lindb., *Helsingfors Dagblad* 1878(315):2 (18 Nov. 1878). The species was not mentioned by BUCH (1936) or recorded from Finland by ARNELL (1956), although it was described mainly from Finnish material (*Ab*: Lojo, lectotype). For its specific status, see MÜLLER (1956), SCHUSTER (1969) and VÁÑA (1976).
88. The nomenclature of *Nardia scalaris* S. Gray (*Jungermannia scalaris* Hook., homon. illeg.) has been treated in detail by GROLLE (1975b).
89. For the nomenclature of *Odontoschima elongatum* (Lindb.) Evans, see GROLLE (1971b). Its basionym should be cited as *O. denudatum* (Mart.) Dum. f. *elongatum* Lindb., *Helsingfors Dagblad* 1874(45):2 (16 Febr. 1874).
90. *Pellia borealis* Lorb., probably first recorded from Finland by K. Müller in 1947, is here included in *P. epiphylla* (L.) Corda in Opiz (see PROSKAUER 1962, PATON & NEWTON 1967, and most subsequent works).
91. For the nomenclature of *Pellia endiviifolia* (Dicks.) Dum. (*P. jabbroniana* auct., non *P. jabroniana* Raddi, nom. illeg.), see PROSKAUER (1962).
92. The correct citation is *Peltolepis* Lindb., *Helsingfors Dagblad* 1876(139):2 (23 May 1876).
93. *Peltolepis quadrata* (Saut.) K. Müll. and *Scapania spitsbergensis* (Lindb. in Lindb. & H. Arn.) K. Müll. were mapped for Fennoscandia by WEIMARCK (1937b).
94. For the taxonomy, nomenclature and distribution of the species of *Phaeoceros* Prosk., see PROSKAUER (e.g. 1951, 1958a, 1958b) and GROLLE (1976); the Finnish one (*Anthoceros laevis* auct. fenn., non L.) should be named *P. carolinianus* (Michx.) Prosk. (or *P. laevis* (L.) Prosk. ssp. *carolinianus* (Michx.) Prosk.). *P. laevis* sensu str. is a Mediterranean - Atlantic taxon.
95. The nomenclature of *Plagiochila asplenioides* (L.) Dum. (*P. major* S. Arn., nom. illeg.) and *P. porelloides* (Torrey ex Nees) Lindenb. (incl. *P. asplenioides* sensu S. Arn. and Schust.) was discussed in detail by GROLLE (1967). Their taxonomy and distribution in Finland have been treated by JÄRVINEN (1974; maps for Eastern Fennoscandia included).
96. *Plagiochila porelloides* (Torrey ex Nees) Lindenb. var. *subarctica* (Jørg.) Lammes, comb. nova. Basionym: *P. asplenioides* (L.) Dum. var. *subarctica* Jørg., *Bergens Mus. Skrifter* 16:173 (1934). (*P. arctica* Bryhn & Kaal. in Bryhn var. *subarctica* (Jørg.) H. Inoue 1964.) The taxon was reported as new for Eastern Fennoscandia by JÄRVINEN (1974). For its taxonomic position, see GROLLE (1967) and SCHUSTER & DAMSHOLT (1974); cf., however, INOUE (1964) and GROLLE (1976).
97. Lammes' studies on N Finnish material of *Pleuroclada albescens* (Hook.) Spruce support the

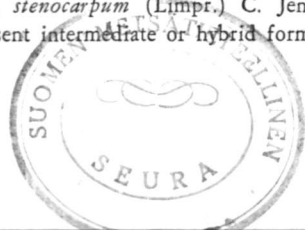
- opinion of, e.g., SCHUSTER (1974) and SCHUSTER & DAMSHOLT (1974) that *P. islandica* (Nees) Pears. (*P. albescens* var. *islandica* (Nees) Spruce) cannot be distinguished at specific or varietal level; cf. also GROLLE (1976).
98. The correct citations, *Porella cordaeana* (Hüb.) Moore and *P. platyphylla* (L.) Pfeiff., were given by GROLLE (1969 and 1967, respectively).
99. For the nomenclature of *Ptilidium pulcherrimum* (G. Web.) Vain., see ISOVIITA (1970b: 16—17) and GROLLE (1976).
100. For the nomenclature of *Radula lindenbergiana* Gottsche ex Hartm. f. 1864 (*R. lindbergiana* Gottsche in Jack 1881, nom. illeg.), see ISOVIITA (1977a).
101. The nomenclature of *Riccardia chamedryfolia* (With.) Grolle (*R. sinuata* (Hook.) Trev., *Jungermannia sinuata* Dicks., nom. illeg.) was treated by GROLLE (1969).
102. The correct citation is *Riccardia incurvata* Lindb., Helsingfors Dagblad 1878(315):2 (18 Nov. 1878).
103. The basionym of *Riccardia latifrons* (Lindb.) Lindb. should be cited as follows: *Aneura latifrons* Lindb., Helsingfors Dagblad 1873(67): 2 (10 March 1873).
104. For the taxonomy and nomenclature of *Riccia crystallina* L. sensu lato, see JOVET-AST (1965). Because of early emendations, the name *R. crystallina* L. belongs to the Mediterranean taxon, while the more widely distributed one (*R. crystallina* auct. fenn., non L. emend. Raddi) should be called *R. cavernosa* Hoffm. Thus the concept of *R. crystallina* sensu str. given by, e.g., ISOVIITA (1970b:23) is erroneous.
105. The Finnish distribution of *Riccia fluitans* L. sensu lato (incl. *R. rhenana* Lorb. in K. Müll.) and *Riccioarpos natans* (L.) Corda in Opiz was mapped by ERKAMO (1956:176, 178). *Riccia rhenana* was not mentioned by ARNELL (1956) within the present boundary of Finland though BUCH (1954) had reported it from N: Helsinki and Porvoo, and Ka: Kymi (H, det. S. Arnell 1952—53).
106. The correct citation of the basionym of *Riccia glauca* L. var. *subinermis* (Lindb.) Warnst. is *R. subinermis* Lindb., Helsingfors Dagblad 1881(96):2 (9 Apr. 1881).
107. The species now named *Riccia sorocarpa* Bisch. should probably be called *R. minima* L. (see ISOVIITA 1970b:23, GROLLE 1976:176, 229).
108. The correct citation is *Sauteria alpina* (Nees in Nees & Bisch.) Nees (e.g. GROLLE 1976).
109. In accordance with most authors (e.g. MÜLLER 1956, SCHUSTER 1974, GROLLE 1976), we include *Scapaniella* Buch in *Scapania* (Dum.) Dum.
110. *Scapania aequiloba* (Schwaegr.) Dum. is known from two localities in Finland — Kb: Kontiolahti, Kolvananuuro, 1970 T. Laine; Le: Enontekiö, Mt. Iso-Malla, S slope, one km from the border of Norway, alt. 700 m, 1968 T. Laine 1991 (herb. Lammes). The earlier record from Ks: Kuusamo, Korvasvaara, Koukkulampi (AUER 1944, ARNELL 1956) is from the Soviet side (ca. one km E of the border).
111. The correct citation appears to be *Scapania irrigua* (Nees) Nees in Gottsche et al. (cf. GROLLE 1976; see also Note 3).
112. The morphological and distributional characters of *Scapania kaurinii* Ryan have been treated by LAINE (1972), who recorded it as new for Eastern Fennoscandia and mapped its distribution in Fennoscandia.
113. Contrary to the opinion of MÜLLER (e.g. 1956), *Scapania lingulata* Buch is the correct name for *S. microphylla* Warnst. (*S. buchii* K. Müll. 1944, nom. illeg.) (MÅRTENSSON 1955, DÜLL 1972, GROLLE 1973, SCHUSTER 1974).
114. For the nomenclature of *Scapania nemorea* (L.) Grolle (*S. nemorosa* Dum., nom. illeg., *Jungermannia nemorosa* L., nom. illeg.), see GROLLE (1963a, 1976); the defence of *Scapania nemorosa* by SCHUSTER (1974) has no nomenclatural justification.
115. According to SCHUSTER (1974), SCHUSTER & DAMSHOLT (1974) and GROLLE (1976), *Scapania lapponica* (H. Arn. & C. Jens.) Steph. should be regarded as a synonym of *S. obcordata* (Berggr.) S. Arn. in S. Arn. & Mårt.
116. *Scapania obscura* (H. Arn. & C. Jens.) Schiffn. was reported as new for Eastern Fennoscandia by HENSSEN (1959).
117. The Finnish distribution of *Scapania paludosa* (K. Müll.) K. Müll. was dealt with by ULVINEN (1960).
118. For the taxonomic status of *Scapania praetervisa* Meyl., see SCHLJAKOV (1972b) and GROLLE

- (1976). The taxon was treated as a subspecies of *S. mucronata* Buch by SCHUSTER (1974) and SCHUSTER & DAMSHOLT (1974). At varietal level *S. m.* var. *arvernica* (Culm. 1923) K. Müll. (1944) has priority over *S. m.* var. *praetervisa* (Meyl.) Buch 1928.
119. *Solenostoma* Mitt. is a conserved name (against *Gymnoscyphus* Corda in Sturm). However, with the present wide circumscription of *Jungermannia* L. (see Note 50), this conservation is of no importance.
120. In accordance with, e.g., SCHUSTER (1969) and GROLLE (1976), *Saccobasis* Buch is here included in *Tritomaria* Schiffn. ex Loeske. For the author citation of *Tritomaria*, see GROLLE (1976).
121. The correct author citations are: *Tritomaria exsectiformis* (Breidl.) Schiffn. ex Loeske (cf. DÜLL 1972 and GROLLE 1973; see also Note 3) and *T. polita* (Nees) Jørg. (*Saccobasis polita* (Nees) Buch) (GROLLE 1976).
122. For the questionable nomenclatural affinity of the name *Tritomaria quinqueidentata* (Huds.) Buch, see ISOVIITA (1970b:19) and GROLLE (1976:176, 239).

123—300. Bryophytina

123. PETERSSON (1940) germinated spores of *Aloina brevirostris* obtained from rain-water in South Finland in 1936. The first specimens from natural population were collected 30 years later (KOPONEN & OITTINEN 1967).
124. The occurrence of *Amblyodon dealbatus* in Finland was discussed by ULVINEN (1967).
125. *Amblystegiella* Loeske (1903) is antedated by *Platydictya* Berk. (1863). The necessary combinations *Platydictya confervoides* (Brid.) Crum, *P. jungermannioides* (Brid.) Crum and *P. subtilis* (Hedw.) Crum were made by CRUM (1964).
126. Moss taxa excluded from the Finnish flora (names presented in square brackets in the checklist).
- A. Taxa whose inclusion in the Finnish flora in the literature has been based on incorrect interpretations or identifications:
- Bryum erythrocarpum* Schwaegr. (cf. Note 141)
Campylium hispidulum (Brid.) Mitt. (cf. Note 162)
Grimmia trichophylla Grev.
Mnium affine Funck var. *ciliare* C. Müll. (cf. Note 220)
Mnium lycopodioides Schwaegr. (cf. Note 221)
Pseudoleskeella caenulata (Schr.) Kindb. (cf. Note 256)
Sphagnum recurvum P. Beauv. (cf. ISOVIITA 1966).
Tayloria froelichiana (Hedw.) Mitt. (cf. Note 290)
- B. Taxa which were indicated by BROTHERUS (1923) by "F" (= Finland) but which were actually recorded in areas east of the Finnish boundary:
- Bartramia ithyphylla* Brid. var. *breviseta* (Lindb.) Kindb. (133)
Bryum acutiforme Limpr. (B. *acutum* Lindb.)
B. murmanicum Broth.
Campylopus subulatus Schimp. (C. *schimperii* Milde)
Dichodontium flavescens (With.) Lindb. (D. *pellucidum* (Hedw.) Schimp. var. *flavescens* (With.) Moore) (133)
Dicranum scoparium Hedw. var. *integrifolium* Lindb. (133)
Drepanocladus exannulatus (B.S.G.) Warnst. var. *brachydictyon* (Ren.) G. Roth (133)
Encalypta rhaptocarpa Schwaegr. var. *arctica* I. Hag. (133)
Fontinalis antipyretica Hedw. var. *montana* H. Müll. (134)
Hygrohypnum molle (Hedw.) Loeske var. *schimperianum* (Lor.) Loeske (133)
Hygrohypnum polare (Lindb.) Loeske
Oncophorus wahlenbergii Brid. var. *gracilis* (Broth.) H. Arn. & C. Jens. (133)
Pylaisia selwynii Kindb. (P. *schimperii* Card.)
Thuidium minutulum (Hedw.) B.S.G.
- C. Taxa not known within the present boundary of Finland, their earlier Finnish localities lying in the areas annexed to the U.S.S.R. in the 1940s:
- Atrichum haussknechtii* Jur. & Milde (Catharinae *haussknechtii* (Jur. & Milde) Broth.)
Dichodontium pellucidum (Hedw.) Schimp. var. *mildei* Limpr. (133)
Dicranella riparia (H. Lindb.) Mårt. & Nyh.
Encalypta spatulata C. Müll.
Fissidens cristatus Mitt. var. *mucronatus* (Limpr.) Waldh. (133)
Grimmia laevigata (Brid.) Brid. (G. *campestris* Hook.)
Hygrohypnum luridum (Hedw.) Jenn. var. *sub-sphaericarpon* (Brid.) C. Jens. (133)
Leskea polycarpa Hedw. var. *paludosa* (Hedw.) Schimp. (133)

- Platydictya confervoides* (Brid.) Crum (*Amblystegiella confervoides* (Brid.) Loeske)
Pohlia cruda (Hedw.) Lindb. var. *minor* (B. S. G.) Broth. & Sael. (133)
Pohlia ramannii Warnst. (*Webera ramannii* (Warnst.) C. Jens.)
Schistidium pulvinatum (Hedw.) Brid.
127. For the taxonomy and nomenclature of *Amblystegium saxatile* Schimp., see CRUNDWELL & NYHOLM (1964).
 The correct citation is *Amblystegium varium* (Hedw.) Lindb., Helsingfors Dagblad 1877 (304):3 (7 Nov. 1877).
128. The adoption of the *Aplodon* instead of *Haplodon* has been discussed by MÅRTENSSON (1956: 133) and STEERE (1973).
129. The distribution and ecology of *Archidium alternifolium* in Finland was discussed by BUCH (1935). According to SNIDER (1975), the correct citation is *A. alternifolium* (Hedw.) Schimp.
130. The distribution of *Aulacomnium androgynum* and *A. turgidum* in NW Europe was mapped by JUNNILAINEN (1977).
131. In the delimitation of the genera *Barbula*, *Bryoerythrophyllum*, *Didymodon*, *Gymnostomum*, *Hymenostylium*, *Oxystegus*, *Streblotrichum* and *Trichostomum*, we mainly follow SAITO (1975).
 For the nomenclature of *Oxystegus tenuirostris* (Hook. & Tayl.) A. J. E. Sm. (*O. cylindricus* (Brid.) Hilp.), see A. J. E. SMITH (1977).
132. The distribution of *Barbula reflexa* in Eastern Fennoscandia was mapped by TUOMIKOSKI (1939:105).
133. The taxa marked by this annotation number are those which were treated as subspecies or varieties by BROTHERUS (1923) and JENSEN (1939) or some later authors. We do not wish to use infraspecific categories for the reasons discussed on p. 4. Moreover, the taxonomic status of the taxa in question should be ascertained by studying the type specimens, and this is best done in connection with monographic research.
134. The taxa marked by this annotation number are those which JENSEN (1939), NYHOLM (1953—1969), PODPERA (1954) or MÖNKEMEYER (1914, 1927) treated as forms and which obviously do not deserve taxonomic recognition.
135. *Brachythecium curtum* (Lindb.) C. Jens.: the basionym should be cited as *Hypnum curtum* Lindb., Helsingfors Dagblad 1878(342):2 (15 Dec. 1878).
136. In listing *Bryum* we follow NYHOLM (1958) as far as possible.
137. According to PODPERA (1954:376), *Bryum affine* var. *cylindricum* H. Arn. is a form of *B. cirrhatum* Hoppe & Hornsch. According to NYHOLM (1958:247), *B. cirrhatum* may be a form of the variable *B. pallescens* Schwaegr. (cf. also WIJK et al. 1969:387).
138. NYHOLM (1958:233) suggested that *Bryum alandense* may be a hybrid of *B. pendulum* (*B. angustirete*, *B. algovicum*) and *B. salinum*.
139. For the taxonomic status of *Bryum angustirete* Kindb., accepted by WIJK et al. (1959), cf. CRUM (1969) and CRUNDWELL (1970), who proposed that *B. algovicum* C. Müll. should be used. According to CRUNDWELL, *Bryum pendulum* (Hornsch.) Schimp. var. *compactum* (Hornsch.) Hartm. = *Bryum algovicum* var. *algovicum*.
140. NYHOLM (1958:234) listed *Bryum bergoeense* Bomanss., *B. fissum* Ruthe, *B. haematostomum* Jørg., *B. insularum* Bomanss. (*B. inclinatum* (Brid.) Bland. var. *insularum* (Bomanss.) C. Jens.), *B. ovarium* Bomanss., and *B. tumidulum* Bomanss. as synonyms of *B. salinum* I. Hag. ex Limpr.
141. According to CRUNDWELL & NYHOLM (1964) and WIJK et al. (1959), *Bryum erythrocarpum* Schwaegr. is a superfluous name for *B. atrovirens* Brid. However, the type specimen located for *B. atrovirens* did not represent any of the taxa in the *Bryum erythrocarpum* complex. CRUNDWELL & NYHOLM (1964) recognized nine species of the *B. erythrocarpum* complex in Europe, reporting two species, *B. rubens* Mitt. (*B. bomanssonii* Lindb.) and *B. tenuisetum* Limpr. (*B. pachydermum* Bomanss.), from Finland and later (1968) a third one, *B. violaceum* Crundw. & Nyh.
142. NYHOLM (1958:225), with some hesitation, gave *Bryum brownii* B.S.G. as a synonym of *B. arcticum* (R. Brown) B.S.G.
143. *Bryum oelandicum* Philib. (*B. warneum* (Röhl.) Brid. ssp. *oelandicum* (Philib.) G. Roth) and *B. stenocarpum* Limpr. (*B. brownii* B.S.G. var. *stenocarpum* (Limpr.) C. Jens.) may represent intermediate or hybrid form(s) between



- B. arcticum* and *B. warneum* (NYHOLM 1958: 220).
144. NYHOLM (1958:244, 245) reduced *Bryum bulbifolium* Lindb. (as *B. bulbiferum*), *B. flexisetum* Lindb. & H. Arn., *B. quarnboënsse* Bomanss. (*B. pseudotriquetrum* (Hedw.) Gaertn. et al. var. *quarnboënsse* (Bomanss.) C. Jens.) and *B. subcirratum* Bomanss. to synonyms of *B. pallescens* Schwaegr.
145. "Some of the Scandinavian specimens of *B. comense* Schimp. [*B. caespiticium* Hedw. ssp. *comense* (Schimp.) Amann, *B. caespiticium* var. *comense* (Schimp.) Husn.] I estimate as starvation forms of *B. capillare*" (NYHOLM 1958: 243).
146. In the case of *Bryum capillare* and *B. elegans*, we follow SYED (1973).
147. "Scandinavian specimens of *B. clatratum* Amann I think are more or less well developed forms of *B. pallescens*" (NYHOLM 1958:245).
148. NYHOLM (1958:245) thinks that *Bryum crispulum* Hampe, *homon. illeg.* (*B. pseudotriquetrum* Gaertn. et al. ssp. *crispulum* (G. Roth) C. Jens.) belongs to *B. pallescens*.
149. According to PODPERA (1954:372), *Bryum finmarkicum* Kaur. var. *lutescens* Broth. (*B. pallens* Sw. var. *lutescens* (Broth.) C. Jens.) is a form of *B. pallens* var. *brevisetum* Lindb. & H. Arn.
150. For the taxonomy and nomenclature of *Bryum stirtonii* and *B. flaccidum*, see SYED (1973).
151. NYHOLM (1958:239) gave *Bryum brotheri* Bomanss. (*B. inclinatum* (Brid.) Bland. var. *brotheri* (Bomanss.) C. Jens.), *B. contractum* Bomanss. (*B. inclinatum* (Brid.) Bland. var. *contractum* (Bomanss.) C. Jens.), *B. flavidum* Bomanss., *B. hagenii* Limpr., *B. stenotheca* Bomanss. (*B. inclinatum* var. *stenotheca* (Bomanss.) Broth.) and *B. tumidum* Bomanss. as synonyms of *B. inclinatum* (Brid.) Bland. *Bryum inclinatum* (Brid.) Bland. is a later homonym of *B. inclinatum* (Hedw.) With. (= *Distichium inclinatum* (Hedw.) B.S.G.). OCHI (1972) suggested that the valid name is *B. stenotrichum* C. Müll. (1887), which was listed as a synonym of *B. inclinatum* by ANDREWS (1940). If a wide specific concept is accepted (cf. PODPERA 1954), the oldest available name seems to be *B. longisetum* Schwaegr. (1816).
152. According to PODPERA (1954:396), *Bryum haematostomum* Jørg. var. *fennicum* Broth. is a form of *B. inclinatum* (Brid.) Bland. (= *B. stenotrichum* C. Müll.). NYHOLM (1958:234) regarded *B. haematostomum* Jørg. as a synonym of *B. salinum* I. Hag. ex Limpr.
153. "Most specimens identified as *B. lapponum* [!] Kaur. belong to *B. salinum*" (NYHOLM 1958: 234).
154. According to NYHOLM (1958:235), *Bryum maritimum* Bomanss. = *B. lacustre* (Web. & Mohr) Bland. = *B. knowltonii* Barnes.
155. The correct citation appears to be *Bryum oblongum* Lindb., Helsingfors Dagblad 1881(338):2 (12 Dec. 1881).
156. According to NYHOLM (1958:241), *Bryum venustum* does not differ from *B. intermedium* (Brid.) Bland.
157. PODPERA (1954:372) reduced *Bryum versisporum* Bomanss. to a form of *B. pallens* Sw. See also the discussion in NYHOLM (1958:226).
158. The distribution of *Buxbaumia aphylla* and *B. viridis* in Eastern Fennoscandia was mapped by OITTINEN (1967). The autecology of *B. aphylla* was studied by HÄYRÉN (1944, 1945).
159. *Buxbaumia foliosa* Hedw. is a synonym of *Diphyscium foliosum* (Hedw.) Mohr. JENSEN (1939), however, used *B. foliosa* as the name for *B. viridis*.
160. The genus *Callicladium* was established by CRUM (1971) for *Heterophyllum baldanianum* (Grev.) Kindb. (cf. also ROBINSON & REED 1966).
161. KARCZMARZ (1971) listed numerous forms and varieties of *Calliargon* species for Finland. Since they clearly represent modifications due to ecological factors and are not worthy of nomenclatural recognition, we omit them here and follow BROTHERUS' (1923) and NYHOLM'S (1965) treatment of the genus. TUOMIKOSKI (1940) revised the taxonomy of *Calliargon megalophyllum* and listed its distribution for Eastern Fennoscandia.
162. The taxonomy and nomenclature of *Campyllum calcareum* Crundw. & Nyh. (*C. sommerfeltii* auct.) and *C. sommerfeltii* (Myr.) J. Lange (*C. hispidulum* auct.) were discussed by CRUNDWELL & NYHOLM (1962). We follow their treatment. *C. hispidulum* (Brid.) Mitt. sensu str. occurs in North America only.
163. The distribution of *Campyllum halleri* in East-

- ern Fennoscandia was mapped by KOTILAINEN (1929).
164. KOPONEN (1969) mapped the distribution of *Cinclidium stygium* and *C. subrotundum* in Eastern Fennoscandia, and discussed their taxonomy.
165. The Finnish distribution of *Climacium dendroides* was mapped by KUJALA (1964).
166. According to NYHOLM (1953, 1954), *Cynodontium alpestre* should preferably be referred to the genus *Cnestrum*. However, the necessary combination has not yet been validated. In addition, its basionym (*Dicranum alpestre* Wahlenb.) is illegitimate (cf. CRUNDWELL 1971). Under *Cynodontium* the correct citation may be *C. alpestre* (Hüb. 1833) Milde 1869. Its distribution in Eastern Fennoscandia was mapped by KOTILAINEN (1929).
167. According to NYHOLM (1965), *Cratoneuron commutatum* var. *irrigatum* represents a form of fast-running water, especially mountain streams. The correct varietal name is *C. c.* var. *fluctuans* (B.S.G.) Wijk & Marg.
168. The distribution of *Cratoneuron falcatum* in Eastern Fennoscandia was mapped by KOTILAINEN (1929).
169. For the spelling of *Cynodontium polycarpon*, see CRUNDWELL (1971).
170. KOPONEN (1968a) divided the traditional genus *Mnium* into four genera, *Mnium* Hedw., *Plagiomnium* T. Kop., *Pseudobryum* (Kindb.) T. Kop. and *Rhizomnium* (Broth.) T. Kop. In addition, two other genera of Mniaceae, *Cinclidium* Sw. (1803) and *Cyrtomnium* Holmen (1957), occur in Finland. Most of the necessary new combinations were published by KOPONEN (1968a).
171. The combination *Cyrtomnium hymenophylloides* (Hüb.) T. Kop. (1968a) is valid for this taxon. NYHOLM's (1958) combination, which is commonly cited, is invalid. Its distribution in Eastern Fennoscandia (as *Mnium hymenophylloides*) was mapped by KOTILAINEN (1929).
172. *Desmatodon cernuus* was first recorded from Finland by AHTI & ROIVAINEN (1968).
173. VAARAMA (1939) mapped the distribution of *Desmatodon latifolius* in Eastern Fennoscandia, and discussed its autecology.
174. The distribution of *Dichelyma capillaceum* in NW Europe was mapped by TOIVONEN (1972).
175. The distribution of *Dichodontium pellucidum* in Finland and adjacent territories was mapped by KOTILAINEN (1929).
176. The status and nomenclature of *Dicranum sendneri* Limpr. (1886) have been disputed (TUOMIKOSKI 1939, PERSSON 1954, TUOMIKOSKI et al. 1973:225). We follow HAGEN (1915), who studied the type of *D. sendneri* and found it to be identical with *D. bergeri* var. *acutifolium* Lindb. & H. Arn. (1890). The oldest name may actually be *D. neglectum* Jur. ex De Not. (1869), cf. HAGEN (1915). The combination *D. muehlenbeckii* B.S.G. var. *acutifolium* (Lindb. & H. Arn.) has not yet been made validly (cf. NYHOLM 1953, 1954).
177. For the nomenclature of *Dicranum drummondii* C. Müll. (*D. robustum* Blytt ex B.S.G., homon. illeg., *D. elatum* Lindb., nom. illeg.), see e.g. ISOVIITA (1977b). The nomenclature of *D. polysetum* Sw. 1801 (nom. illeg.?, *D. rugosum* (Hoffm. ex Funck 1803) Brid. 1806, *D. undulatum* Ehrh. ex Web. & Mohr 1803, homon. illeg.) and *D. undulatum* Schrad. ex Brid. 1801 emend. Brid. 1806 (*D. affine* Funck 1806, *D. bergeri* Bland. in Sturm 1809, nom. illeg.) cannot be finally settled before the typification of *D. undulatum* Schrad. ex Brid., but we follow WIJK et al. (1962). Because of the common use of the pre-Hedwigan name *D. undulatum* Ehrh. for *D. polysetum*, the name *D. undulatum* Schrad. ex Brid. is ambiguous and should therefore never be used without citing the author(s). The best solution might have been to reject this name altogether (cf. MÅRTENSSON 1956) and to use the name *D. affine* for this species (as is done by SCHLJAKOV, 1968).
178. The correct citation is *Dicranum angustum* Lindb., Helsingfors Dagblad 1880(311):2 (15 Nov. 1880).
179. The Finnish distribution of *Dicranum fuscescens*, *D. majus*, *D. polysetum*, and *D. spurium* was mapped by KUJALA (1964). The correct author citations should probably be *D. fuscescens* Sm. and *D. majus* Sm. (see CRUNDWELL 1970).
180. In Finland, two taxa are easily recognized within *Dicranum fuscescens* sensu lato. *D. fus-*

- cescens* var. *congestum* grows mainly on rotten wood and the bases of old trees. It is most abundant in old primeval woodlands in southern Finland. *D. fuscescens* var. *flexicaule* is common in the north, where it grows on forest floors, whereas in S Finland it occurs on shady and moist rock faces (cf. also KUJALA 1926). The two taxa also differ morphologically (cf. BROTHERUS 1923). However, the *D. fuscescens* complex needs a taxonomic and nomenclatural revision and, accordingly, we here accept the varietal level for var. *congestum* and var. *flexicaule*. One of the main problems is that we do not know whether the name *D. fuscescens* var. *fuscescens* should be used for var. *flexicaule*, var. *congestum* or some other taxon (cf. also KELLOMÄKI et al. 1977).
181. *Dicranum groenlandicum* was first recorded from Finland by HEGEWALD (1972).
182. AHTI & ISOVIITA (1962) treated the taxonomic status of *Dicranum leioneuron* and mapped its distribution in NW Europe (see also AHTI et al. 1965).
183. The correct name is *Didymodon icmadophila* (C. Müll.) K. Saito, not *D. "icmadophyllus"*, as given by SAITO (1975); basionym: *Barbula icmadophila* Schimp. ex C. Müll., Syn. Musc. Frond. I:614. 1849. — T. Kop. & Isov.
184. The distribution of *Diphyscium foliosum* in Finland was discussed by KÄRENLAMP (1968).
185. *Distichium hagenii* Ryan ex Philib. was first recorded from Finland by VAARAMA (1958).
186. The following combinations were omitted by WIJK et al. (1962, 1969): *Distichium montanum* I. Hag. var. *brevifolium* (B.S.G.) Roiv. (ROIVAINEN 1934:38); *Webera gracilis* (B.S.G.) De Not. var. *carinata* (Boul.) C. Jens., *Webera polymorpha* (Hoppe & Hornsch.) Schimp. var. *acuminata* (Hoppe & Hornsch.) C. Jens. (JENSEN 1939:158, 166).
187. *Dirichium giganteum* Williams, whose specific status has been doubted, seems to deserve recognition. There are many herbarium specimens (in H) from various parts of Finland determined by R. Tuomikoski. The taxonomy was discussed by TUOMIKOSKI et al. (1973, cf. also BIRD 1962).
188. The generic concept and nomenclature of the family Plagiotheciaceae are according to IRELAND (1969) and IWATZUKI (1970). The following genera are presented in Finland: *Herzogella* Broth. (*Dolichotheca* Lindb., *Sharpiella* Iwats.), *Isopterygium* Mitt., *Plagiothecium* B.S.G. and *Taxiphyllum* Fleisch. (*Isopterygium* p. p.).
189. The generic system of Amblystegiaceae proposed by LOESKE (1907, 1910) and subsequently adopted by TUOMIKOSKI et al. (1973) has not been generally accepted and has been criticized, e.g. by STEERE (1947). LOESKE's ideas were re-examined by TUOMIKOSKI, who prepared a manuscript on the subject. However, recently developed methods of study can be expected to throw more light on this question, and we have not used Loeske's genera, e.g. *Limprichtia* Loeske, *Loeskypnum* Paul, *Sanionia* Loeske and *Warnstorfia* Loeske. TUOMIKOSKI (1973) made the combinations *Scorpidium vernicosum* (Mitt.) Tuom. and *Warnstorfia procerus* (Ren. & H. Arn.) Tuom.
190. The taxonomy of *Drepanocladus capillifolius* and its distribution in Finland were treated by TUOMIKOSKI (1940).
191. We follow TUOMIKOSKI's (1949) treatment of *Drepanocladus exannulatus* and its relatives (cf. also SONESSON 1966). The distributions of *D. procerus*, *D. trichophyllus* and *D. tundrae* in Fennoscandia were mapped by TUOMIKOSKI (1949).
192. RUUHIJÄRVI (1962) discussed the taxonomy of *Drepanocladus lapponicus* and mapped its distribution in Eastern Fennoscandia.
193. The distribution of *Drepanocladus lycopodioides* in Eastern Fennoscandia was mapped by TUOMIKOSKI (1939:105).
194. NYHOLM's (1965) treatment of *Drepanocladus* subgen. *Drepanocladus* ("sect. *Adunca*") is changed considerably here. She included in it *D. badius* (Hartm.) G. Roth, which probably belongs to a different genus, *Loeskypnum* Paul (cf. Note 189), or at least to a different subgenus. When *D. capillifolius* (Warnst.) Warnst. (cf. TUOMIKOSKI 1940) and *D. simplicissimus* Warnst. are removed from *D. polycarpus* sensu Nyholm, the only forms remaining can be included in *D. aduncus*. Moreover, a common Fennoscandian taxon recently described as *D. tenuinervis* T. Kop. was evidently included in *D. sendtneri* by NYHOLM. The presence of *D. simplicissimus* in Finland still needs confirmation.

195. NYHOLM (1965, 1969) proposed the combination *Drepanocladus polycarpus* (Voit) Warnst. var. *capillifolius* (Warnst.) Nyh., which is a later homonym of *D. polycarpus* (Voit) Warnst. var. *capillifolius* Loeske (1910).
196. NYHOLM (1965) recorded *Drepanocladus pseudostramineus* from Finland with some hesitation. Needs confirmation.
197. LODGE (1960a, 1960b) showed that *Drepanocladus fluitans* can be divided into two taxa, for which he accepted varietal status, var. *fluitans* and var. *falcatus* (C. Jens.) G. Roth. NYHOLM (1965) accepted var. *falcatus* at specific level, as *D. schulzei* G. Roth. Its presence in Finland needs confirmation.
198. The correct citation is *Drepanocladus sendtneri* (Schimp. ex H. Müll.) Warnst. *D. sendtneri* is rare in Finland and the specimens referred to it mostly belong to *D. tenuinervis* T. Kop. (KOPONEN 1977a).
199. The distribution of *Encalypta affinis* in Finland and adjacent territories has been mapped by KOTILAINEN (1929). The taxonomy and distribution of *Encalypta mutica* in Fennoscandia were treated by TUOMIKOSKI (1935, 1939).
200. The original spelling is *Encalypta rhabdocarpa* Schwaegr., not *E. rhabdocarpa*, which has been commonly used in Europe (cf. CRUM et al. 1973).
201. The taxonomy and nomenclature of *Eurhynchium angustirete* (Broth.) T. Kop. (*E. zetterstedtii* Størm.) and *E. striatum* (Hedw.) Schimp. were discussed by KOPONEN (1964, 1967b), who mapped their distribution in NW Europe.
202. The material deposited in Finnish herbaria under the names *Eurhynchium distans*, *E. bians*, *E. praelongum*, *E. stokesii* and *E. swartzii* is badly in need of revision. We use here the name *E. praelongum* (Hedw.) B.S.G. var. *distans* (Bryhn) Nyh. (*Hypnum distans* Lindb., homon. illeg.) for a common and easily distinguished plant.
203. A note on the habitats of *Fontinalis dichelymoides* was given by KOTILAINEN (1927).
204. WELCH (1960) reduced *Fontinalis gothica* to a synonym of *F. antipyretica* var. *gracilis* (cf. also NYHOLM 1960:356).
205. *Grimmia anomala* was first recorded from Finland by VITIKAINEN (1969), who dealt with its taxonomy and mapped it for Fennoscandia. He also mapped the E Fennoscandian distribution of *G. bartmanii*.
206. According to DE SLOOVER (1967), the correct name for *Grimmia patens* (Hedw.) B.S.G., which is a later homonym of *G. patens* Hornsch., is *G. curvata* (Brid.) De Sloover. Cf. also CRUNDWELL (1971).
207. The correct name of *Grimmia ovalis* in the sense of Nordic authors, e.g. BROTHERUS (1923) and JENSEN (1939), is *G. affinis* Hornsch. In the works mentioned, *G. ovalis* (Hedw.) Lindb. was dealt with as *G. commutata*.
208. The taxonomy of *Grimmia torquata* and its var. *flettii* was dealt with by VAARAMA (1961), who recorded the latter taxon as new for Finland.
209. A map of the distribution of *Hylocomium pyrenaicum* in Eastern Fennoscandia was published by HÄMET-AHTI et al. (1974).
210. A map showing the density of the cover of *Hylocomium splendens* in Finnish woodlands was published by KUJALA (1962). The distribution of *Hylocomium umbratum* in Eastern Fennoscandia was mapped by KOPONEN (1975).
211. In *Hymenostomum* and *Weissia* we follow NYHOLM (1956). *Weissia microstoma* (Hedw.) C. Müll. is a later homonym of *W. microstoma* Nees & Hornsch.; therefore we use the name *W. brachycarpa* (Nees & Hornsch.) Jur. The correct spelling is *Weissia*, not *Weisia* as in WIJCK et al. (1969).
212. According to ANDO (1973), *Hypnum recurvatum* (Lindb. & H. Arn.) Kindb. is the correct name for the species known as *H. fastigiatum* Brid. in Europe and as *H. bridelianum* Crum et al. in North America (cf. also ANDO 1972:69). Its distribution in Eastern Fennoscandia (as *H. fastigiatum*) was mapped by KOTILAINEN (1929).
213. HOLMEN & WARNCKE (in DAMSHOLT et al. 1969) introduced the name *Hypnum julandicum* Holmen & Warncke to replace *H. ericetorum* (B.S.G.) Loeske, which is a later homonym of *H. ericetorum* Brid. Its presence in Finland needs confirmation.
214. The taxonomy of *Isopterygium alpicola* was discussed by TUOMIKOSKI (1939).

215. The treatment of *Lescuraea* follows LAWTON's (1957) revision of the genus. She included *Pseudoleskea* and *Ptychodium* in *Lescuraea*.
216. TUOMIKOSKI (1939) discussed the taxonomy of *Lescuraea incurvata* (*Pseudoleskea filamentosa*) and *L. radicata* (*Pseudoleskea radicata*), and mapped their distribution in Eastern Fennoscandia.
217. For the generic taxonomy of *Leskeella* and *Pseudoleskeella*, see LEWINSKY (1974). For the author citation of *P. tectorum* (Brid.) Kindb. ex Broth., see CROSBY (1977).
218. The distribution of *Leucobryum glaucum* in Finland was mapped by KUJALA (1966).
219. The relationship of *Plagiomnium affine* (*Mnium a.*) and *P. medium* (*Mnium m.*) was discussed by KOPONEN (1967a).
220. *Plagiomnium ciliare* (C. Müll.) T. Kop. (*Mnium c.*) is an exclusively North American species (KOPONEN 1971b). Nomenclatural notes on *Plagiomnium affine* (*Mnium a.*) and related species were given by KOPONEN (1971b).
221. *Mnium lycopodioides* Schwaegr. is an East Asiatic species ranging from Himalaya to Taiwan and possibly Japan (KOPONEN 1973a, 1974). The oldest name for the related species present in Finland seems to be *Mnium ambiguum* H. Müll. (1866). *M. ambiguum* has a wide circumpolar distribution, and has been described under different names from different parts of its range (KOPONEN 1977b). The name *M. riparium* Mitt. (1865) has also been used for *M. ambiguum*, but should perhaps be considered a nomen ambiguum. If CRUNDWELL's (1962) treatment is followed, *M. riparium* is a synonym of *M. marginatum* (With.) P. Beauv. used for populations in which male plants are found in addition to synoecious ones. The distribution of *M. ambiguum* (as *M. lycopodioides*) in Finland was discussed by ULVINEN (1967).
222. The nomenclature and taxonomic status of *Mnium thomsonii* Schimp. (*M. orthorrhynchum* auct.) and *M. orthorrhynchum* Brid. were treated by KOPONEN (1972b).
223. The distribution of *Mnium spinosum* and *M. thomsonii* (*M. orthorrhynchum* auct.) in E. Fennoscandia was mapped by KOTILAINEN (1929), who discussed their distribution and ecology.
224. FAGERSTÉN & HAAPASAARI (1966) discussed the taxonomy of *Neckera besseri*, and mapped its distribution in Eastern Fennoscandia.
225. *Nybolmiella* Holmen & Warncke was proposed by DAMSHOLT et al. (1969) to replace *Stroemia* I. Hag., which is a later homonym of *Stroemia* Vahl. We follow VITT's (1973) and HINNERI's (1976) treatment and include *Nybolmiella* in *Orthotrichum*.
226. The distribution of *Octodicerus fontanum* (*Fissidens julianus*) in NW Europe was mapped by LOHAMMAR (1954) and KOTILAINEN & SALONEN (1954).
227. Since *Dicranum strictum* Mohr (1806) is a later homonym of *D. strictum* (Dicks.) Sm. (1804) and *D. tauricum* Sapěhin (1911) antedates *Orthodicranum strictum* Broth. (1923), the name *Orthodicranum tauricum* (Sapěhin) Z. Smirn. must be used (SMIRNOVA 1969).
228. The distribution of *Orthothecium strictum* in Eastern Fennoscandia was mapped by KOTILAINEN (1929).
229. According to VITT (1973), *Orthotrichum anomalum* var. *saxatile* is not worth taxonomic recognition, *Orthotrichum blyttii*, *O. arcticum*, *O. groenlandicum* and *O. microblephare* are conspecific with *O. pylaessii*, and *Orthotrichum nudum* is probably only an environmental modification of *O. pumilum*.
230. According to NYHOLM (1960:344), *Orthotrichum arnellii* is not distinguishable from *O. pallens*.
231. HINNERI (1976) recorded *Orthotrichum lyellii* Hook. & Tayl., *O. patens* Brid., *O. paradoxum* Grönv. and *O. diaphanum* Brid. from Finland and mapped the distribution of most of the Finnish species. He also accepted the following infraspecific taxa: *O. cupulatum* Brid. var. *riparium* Hüb., *O. pumilum* Sw. var. *schimperii* (Hammar) Hinneri, *O. pylaessii* Brid. var. *microblephare* (Schimp.) Hinneri, *O. rupestre* Schwaegr. var. *franzoneianum* (De Not.) Vent., *O. speciosum* Nees ssp. *fuscum* Lindb. (*O. speciosum* Nees var. *elegans* (Hook. & Grev.) Warnst.).
232. *Philonotis* in Finland was treated by RANCKEN (1914). FIELD (1977) listed numerous varieties of *Philonotis* species for Finland. We follow BROTHERUS' (1923) and NYHOLM's (1960) treatment of the genus (cf. Notes 133, 161).
233. The distribution of *Philonotis calcarea* in Eastern Fennoscandia was mapped by TUOMIKOSKI (1939:105).

234. According to NYHOLM (1960:295), some of the Scandinavian specimens of *Philonotis capillaris* seen by her belong to *P. arnellii*.
235. The names *Physcomitrium* (Brid.) Brid., *P. pyriforme* (Hedw.) Brid. and *P. sphaericum* (Ludw.) Brid. were first validly published in Bridel's Bryol. Univ. II:815 (1827) (W. D. Margadant, in litt.).
236. The specimens of *Plagiobryum demissum* listed by BROTHERUS (1923) were collected on the Kola Peninsula, but the species has recently been found in Finland: Le: Enontekiö, Saana, humous substrate, alpine slope, alt. 650 m, sparse, 1975 H. Roivainen (H). The correct spelling is *P. zieri*.
237. Distribution maps of *Plagiomnium affine*, *P. elatum* and *P. ellipticum* for NW Europe were published by KOPONEN (1968c) and for Eastern Fennoscandia by TUOMIKOSKI (1936, as *Mnium*), and the distribution of *P. medium* ssp. *medium* and *P. medium* ssp. *curvatulum* in NW Europe was mapped by KOPONEN (1968c).
238. The distribution of *Plagiomnium drummondii* (*Mnium d.*) in Eastern Fennoscandia was mapped by FAGERSTRÖM (1939).
239. The distribution of *Plagiomnium rostratum* (*Mnium r.*) in Eastern Fennoscandia was mapped by TUOMIKOSKI (1939:105).
240. The combination *Plagiomnium ellipticum* (Brid.) T. Kop. was published by KOPONEN (1971b:367; see also KOPONEN 1973b:25).
241. *Plagiomnium medium* ssp. *curvatulum* (Lindb.) T. Kop.: the correct citation of the basionym is *Astrophyllum curvatulum* Lindb., Helsingfors Dagblad 1881(96):3 (9 Apr. 1881).
242. *Plagiothecium neglectum* Mönk. was first reported from Finland by TUOMIKOSKI (1937) and AUER (1938). According to IWATSUKI (1970), it is a synonym of *P. nemorale* (Mitt.) Jaeg.
243. For the nomenclature of *Plagiothecium roeseanum* and *P. sylvaticum*, see IWATSUKI (1970). The Finnish material referred to *P. sylvaticum* by BROTHERUS (1923), JENSEN (1939) and NYHOLM (1965) is, at least partly, referable to *P. nemorale*, *P. cavifolium* and *P. succulentum* (cf. also TUOMIKOSKI 1937).
244. The distribution of *Plagiothecium undulatum* in Sweden and Finland was mapped by PERSSON (1936).
245. The distribution of *Platydictya jungermannioides* (*Amblystegiella sprucei*) in Finland and adjacent territories was mapped by KOTILAINEN (1929).
246. For the nomenclature of *Pleuridium* Rabenh., see SNIDER & MARGADANT (1973), whose proposal led to the conservation of this generic name at the Leningrad Congress in 1975.
247. The density of the cover of *Pleurozium schreberi* in Finnish woodlands was mapped by KUJALA (1962).
248. G. L. SMITH (1971) separated *Polytrichastrum* from the traditional *Polytrichum*. His treatment, which we follow, also solves the problem of the position of *Pogonatum alpinum* (*Polytrichum a.*).
249. The distribution of *Pogonatum dentatum* (*P. copillare*) in Eastern Fennoscandia was mapped by VAARAMA (1967) and FAGERSTÉN (1977).
250. The name should be cited as *Poblia erecta* Lindb., Helsingfors Dagblad 1882(310):2 (14 Nov. 1882).
251. CRUM (1969) proposed a new name, *Poblia schleicheri* Crum, for *P. gracilis* (B.S.G.) Lindb., which is a later homonym of *P. gracilis* Hoppe.
252. The correct name for *Poblia pulchella* (Hedw.) Lindb., which is a later homonym of *P. pulchella* Hoppe & Hornsch., is *P. lescuriana* (Sull.) Iish. (cf. WIJK et al. 1969, CRUM 1973, CRUNDWELL & NYHOLM 1976).
253. JENSEN (1939) and NYHOLM (1958) listed *Poblia sphagnicola* (*Webera s.*), with some hesitation, for Finland. Needs confirmation.
254. The Finnish distribution of *Polytrichum commune* was mapped by KUJALA (1964).
255. According to KORCZAGIN (1928), *Polytrichum swartzii* var. *nigrescens* does not deserve varietal status.
256. TUOMIKOSKI (1939) redetermined the Finnish collections named *Pseudoleskeella catenulata* and found that the species is not present in Finland.
257. NYHOLM (1960) introduced the combination *Pseudoleskeella nervosa* (Brid.) Nyh. var. *laxi-*

- folia* (Lindb.) invalidly, without citing the basionym.
258. The distribution of *Ptilium crista-castrensis* in Finland was mapped by KUJALA (1964).
259. As regards the use of *Racomitrium* instead of *Rhacomitrium*, see, e.g., CRUNDWELL (1970). For the spelling of *Racomitrium microcarpon*, see CRUNDWELL (1971).
260. HEINONEN (1971) studied the taxonomy of *Racomitrium canescens* and *R. ericoides* and mapped their distributions in NW Europe.
261. The East Fennoscandian distribution of *Racomitrium lanuginosum* was discussed and mapped by JALAS (1955).
262. A note on the characters of *Racomitrium sudeiticum* is given by TUOMIKOSKI et al. (1973).
263. *Rhizomnium andrewsianum* was first reported from Finland by BOWERS & KOPONEN (1969).
264. The taxonomy and distribution in Finland of *Rhizomnium magnifolium* (*Mnium m.*, *R. perssonii*, cf. Note 265), *R. pseudopunctatum* (*Mnium p.*), and *R. punctatum* (*Mnium p.*) were discussed by KOPONEN (1968b).
265. *Rhizomnium perssonii* T. Kop. (*Mnium punctatum* Hedw. var. *elatum* Schimp.) was described from Finnish material (KOPONEN 1968b). Later it appeared that the taxon had been described earlier at species level from Japan, as *Mnium magnifolium* Horik. (1936) (see KOPONEN 1971a, 1973a, 1973b). The introduction of *Rhizomnium perssonii* was originally due to the information in WIJK et al. (1964), who erroneously gave *Mnium magnifolium* Horik. as a synonym of *Mnium succulentum* Mitt. (= *Plagiomnium succulentum* (Mitt.) T. Kop.).
266. The taxonomy and nomenclature of *Rhodobryum* were discussed by IWATSUKI & KOPONEN (1972).
267. The distribution of *Rhodobryum roseum* in Finland was mapped by KUJALA (1964) and that in Eastern Fennoscandia by KOPONEN (1966).
268. *Rhynchostegiella compacta* was recorded from Finland by CRUNDWELL & NYHOLM (1968).
269. The distribution of *Rhytidiadelphus loreus* in Eastern Fennoscandia was mapped by KOPONEN (1975).
270. For the taxonomy and nomenclature of *Rhytidiadelphus squarrosus* and *R. subpinnatus*, see KOPONEN (1972a). The distributions in Eastern Fennoscandia were mapped by KOPONEN (1975).
271. The distribution of *Rhytidiadelphus triquetrus* in Finland was mapped by KUJALA (1964).
272. The distribution of *Rhytidium rugosum* in Eastern Fennoscandia was mapped by KOTILAINEN (1929).
273. The records of the Finnish distribution of *Schistidium agassizii* (as *Grimmia angusta*) were revised by TUOMIKOSKI (1939).
274. A species of *Schistidium* that is definitely distinct from *S. apocarpum* and *S. agassizii* grows on boulders in creeks and brooks in central and north Finland. Until the status of *S. alpicola* (Hedw.) Limpr. var. *alpicola* is clarified the name *S. alpicola* var. *rivularis* (Brid.) Limpr. may be used for this taxon.
275. When describing *Schistidium boreale*, POELT (1953) listed Finnish specimens. *Schistidium strictum* (Turn.) Loeske ex Mårt. (1956:110, nom. inval.); basionym: *Grimmia stricta* Turn., Musc. Hib.: 20, T. 2 f. 1. 1804. — T. Kop. & Isov.
276. *Scorpidium turgescens* was first recorded from Finland by AHTI & ROIVAINEN (1968).
277. TUOMIKOSKI (1939) discussed the taxonomy of *Seligeria diversifolia* and *S. recurvata* and mapped their distribution in Eastern Fennoscandia. He also studied the type specimens of *S. setacea* Lindb. var. *pumila* Lindb., which proved to be *S. diversifolia* Lindb. var. *brevifolia* (Lindb. & H. Arn.) I. Hag. ULVINEN (1967) discussed the distribution of *S. diversifolia* in Finland.
278. Notes on the habitats, taxonomy and distribution of *Seligeria subimmersa* were given by KOTILAINEN (in TUOMIKOSKI 1939).
279. For the taxonomy and nomenclature of the *Sphagnum* species, the revision of ISOVIITA (1966) is followed, with the exceptions specified in Notes 281, 282, 284 and 286.
280. No good maps have been published of the Finnish distribution of *Sphagnum* species (that of *S. molle* given by KOTILAINEN, 1933, is the only one worth mentioning). However, a synoptical treatment of their East Fennoscandian distribution can be found in ISOVIITA (1970a). Reference may also be made to the maps representing the occurrence of some dominant *Sphagnum* species in Finnish fen and bog associations, published by RUUHJÄRVI (1960) and

- EUROLA (1962) (e.g., *S. cuspidatum*, EUROLA 1962:134).
281. For the taxonomy and nomenclature of *Sphagnum annulatum* (H. Lindb. ex Warnst.) var. *porosum* (Schlieph. & Warnst.) Maass & Isov. (*S. jensenii* H. Lindb.) and *S. a.* var. *annulatum*, see MAASS (1967).
282. Considerable difficulties are often encountered in separating *Sphagnum auriculatum* Schimp. and *S. inundatum* Russow, and the study of RAHMAN (1972) speaks in favour of varietal rank in this case. Hence the name *S. auriculatum* var. *inundatum* (Russow) M. O. Hill (HILL 1975) is used here for the latter taxon (although this is unlikely to be the earliest varietal epithet for it).
283. The varietal names *Sphagnum fallax* (Klinggr.) Klinggr. [var. *fallax*], var. *angustifolium* (C. Jens. ex Russow) Nyh. and var. *flexuosum* (Dozy & Molk.) Nyh. published by NYHOLM (1969) are incorrect. If they are regarded as varieties of the same species, the specific name *S. flexuosum* Dozy & Molk. (or *S. recurvum* P. Beauv.?) should be used (cf. ISOVIITA 1966, CRUNDWELL 1971, A. J. E. SMITH 1977).
284. The correct citation is *Sphagnum lindbergii* Schimp. ex Lindb. 1857 (cf. WIJK et al. 1967) or, when abbreviated, *S. lindbergii* Lindb.
285. The species now called *Sphagnum nemoreum* Scop. should possibly be named *S. capillifolium* (Ehrh.) Hedw. (ISOVIITA 1966). CRUM (1975) suggested that the latter name should be used.
286. The combination *Sphagnum nemoreum* var. *subtile* (Russow) Nyh. (*S. subtile* (Russow) Warnst.), published by NYHOLM (1969), is used here, since this taxon hardly deserves the rank of species.
287. The correct name of *Sphagnum subfulvum* Sjörs should probably be *S. nitidum* Warnst. (ISOVIITA 1966).
288. The distribution and taxonomy of *Splachnum melanocaulon* were discussed by ULVINEN (1967) and RYVARDEN (1969), who also published a map representing the NW European distribution of it and *Bryum wrightii*.
289. The distribution of *Taxiphyllum wissgrillii* (as *Isopterygium depressum*) in Eastern Fennoscandia was mapped by TUOMIKOSKI (1939).
290. A revision of *Tayloria* in Finland and adjacent areas (A. Koponen, unpublished) indicates that all the Finnish specimens of *Tayloria froelichiana* are *T. lingulata*.
291. Concerning the change of *Thamnium* to *Thamnobryum*, see CRUNDWELL (1971).
292. The name *Thuidium delicatulum* (Hedw.) Mitt. is used here, although it is a later homonym of *T. delicatulum* B.S.G., which is an illegitimate substitute for *T. recognitum* (Hedw.) Lindb. The correct name is not known.
293. The correct citation is *Thuidium recognitum* (Hedw.) Lindb., Helsingfors Dagblad 1873 (353):2 (28 Dec. 1873, "*Thuyidium r.*").
294. The distribution of *Timmia comata* in Eastern Fennoscandia was mapped and its autecology discussed by KOTILAINEN (1929).
295. *Timmia megapolitana* has been known from two localities in Finland (ROIVAINEN 1929; AUER 1936; BUCH 1947). It could still be found in 1975 in a lawn of the Botanical Garden, University of Helsinki. In Turku it was last seen in 1946 (H. Roivainen, verbal communication). In both localities it was growing in lawns.
296. The correct spelling is *Tomentypnum* (not *Tomenthypnum*), which is clearly indicated by the author (LOESKE 1911): "*Tomentypnum* n. g. (aus *Tomentohypnum* zusammengesetzte Bildung)". The same view was held by MÅRTENSSON (1956).
297. According to SMITH & HILL (1975), *Uloa crispula* is conspecific with *U. crispula*, and *U. bruchii* can at most be accepted as a variety of *U. crispula* var. *norvegica* (Grönv.) A. J. E. Sm. & M. O. Hill.
298. According to NYHOLM (1958), "the Scandinavian specimens of *Bryum carinatum* Boul. are a form of *P.* [= *Poblia*] *drummondii*".
299. For this most common species of *Zygodon* BROTHERUS (1923) used the name *Z. viridissimus* var. *rupestris*; JENSEN (1939) knew it by the name *Z. viridissimus*, and NYHOLM (1960, 1969) called it *Z. vulgaris*. She (1960) reduced var. *rupestris* to a form, *Z. vulgaris* f. *rupestris* (Lindb.), without making the combination validly. For the untenable nomenclatural status of *Z. vulgaris* Nyh. (*Z. viridissimus* var. *vulgaris* Malta, nom. illeg.), see AHTI & FAGERSTÉN (1967), who called this taxon *Z. rupestris* (Hartm.) Milde (1869).

300. Below we list the most significant orthographic and other differences between the present list (left column) and the list of CRUM et al. (1973, right column). The names in the left column are in accordance with the Code, Art. 73, (STAFLEU et al. 1972).

Present list	CRUM et al. (1973)
<i>Bartramia hallerana</i>	<i>B. halleriana</i>
<i>Fissidens adiantoides</i>	<i>F. adiantoides</i>
<i>Isoetecium myosuroides</i>	<i>I. eumyosuroides</i>
<i>Orthotrichum pylaesii</i>	<i>O. pylaisii</i>
<i>Plagiopus oederi</i>	<i>P. oederiana</i>
<i>Pylaisia</i>	<i>Pylaisiella</i>
<i>Racomitrium</i>	<i>Rhacomitrium</i>
<i>Tomentypnum</i>	<i>Tomenthyppnum</i>

Bartramia hallerana is in accordance with the present Code and the decision made at the Leningrad Congress in 1975. The names *Fissidens adiantoides*, *Orthotrichum pylaesii*, *Plagiopus oederi*, *Racomitrium* (cf. Note 259) and *Tomentypnum* (cf. Note 296) are the original spelling. *Isoetecium myosuroides* Brid. (1827) is legitimate and antedates *I. eumyosuroides* Dix. (1934).

According to WIJK et al. (1967), *Pylaisiella* Kindb. ex Grout (1896) is a later homonym of *Pylaiella* Bory (1825), but we are doubtful about this point. According to the same authors, *Pylaisaea* B.S.G. (1851) is a later homonym of *Pylaisaea* Desv. (1814), which is possibly an illegitimate orthographic variant of *Pilaisaea* Desv. (= *Plagiothecium* B.S.G.). However, there is some confusion in the citations of these protologues by WIJK et al. (1967, 1969), and we have not seen either of them. Schimper intentionally corrected *Pylaisaea* to *Pylaisia* and, accordingly we consider that *Pylaisia* Schimp. (1860) is a new independent name (and *P. polyantha* (Hedw.) Schimp. a new combination). If this treatment is accepted, the name *Pylaisia* need not be conserved, which would otherwise be unavoidable. Instead, *Plagiothecium* B.S.G. should be conserved against *Pylaisaea* Desv. (or *Pilaisaea* Desv.).

The excessive use of *ex* citations instead of *in* by CRUM et al. (1973) is a remnant of the old AMERICAN CODE but is not in accordance with the International Code (STAFLEU et al. 1972).

IV. SYSTEMATIC SYNOPSIS OF GENERA AND HIGHER TAXA

In the case of hepatics, this synopsis follows the treatment of GROLLE (1976; see also GROLLE 1972c), with a couple of minor exceptions. For alternative modern classifications, see e.g. SCHUSTER (1969) and SCHLJAKOV (1972a, 1973a, 1975a). In the case of mosses, the treatment does not follow any standard catalogue. The subclasses, orders and the arrangement of families are in most cases according to ROBINSON (1971). The order of genera inside the families is mostly according to BROTHERUS (1923).

Amphidium is placed in Orthotrichaceae (cf. LEWINSKY 1976) although the karyological data (FRITSCH 1972) and spore morphology (BOROS & JÁRAI-KOMLÓDI 1975) do not indicate close relationship with *Orthotrichum*. Timmiaceae is placed near Mniaceae on account of the

similar spore morphology (SORSA 1976, cf. also ROBINSON 1971). Pseudoleskeaceae is united with Leskeaceae and Thuidiaceae is retained (cf. ROBINSON 1971, WATANABE 1972, CRUM 1973:224). The genera *Isopterygium*, *Herzogiella* and *Taxiphylum* are included in Plagiotheciaceae, in accordance with the Nordic tradition (BROTHERUS 1923, NYHOLM 1965, cf. also IWATSUKI & MIZUTANI 1972), instead of in Hypnaceae. The family Rhytidiaceae is retained, although NOGUCHI's (1972) studies seem to support its union with Hypnaceae. *Pleurozium* is placed in Hylocomiaceae, as was done by BROTHERUS (1923). According to STEERE (1972), its chromosome number does not justify its inclusion in either Entodontaceae or Amblystegiaceae.

A. Subdivision Hepaticophytina (Hepaticae)

1. Class Anthocerotopsida

a. Order Anthocerotales

Anthocerotaceae

Anthoceros L.*Phaeoceros* Prosk.

2. Class Hepaticopsida

a. Order Marchantiales

Aytoniaceae

Reboulia Raddi*Mannia* Opiz*Asterella* P. Beauv.

Conocephalaceae

Conocephalum Wigg.

Lunulariaceae

Lunularia Adans.

Cleveaceae

Peltolepis Lindb.*Sauteria* Nees*Athalamia* Falc.

Marchantiaceae

Preissia Corda*Marchantia* L.

Ricciaceae

Ricciocarpus Corda*Riccia* L.

b. Order Metzgeriales

Metzgeriaceae

Metzgeria Raddi

Aneuraceae

Aneura Dum.*Riccardia* S. Gray*Cryptothallus* Malmb.

Pelliaceae

Pellia Raddi

Pallaviciniaceae

Moerckia Gottsche

Blasiaceae

Blasia L.

Codoniaceae

Fossombronia Raddi

c. Order Calobryales

Haplomitriaceae

Haplomitrium Nees

d. Order Jungermanniales

Jungermanniaceae

Cbandonanthus Mitt.*Barbilophozia* Loeske*Lophozia* (Dum.) Dum.*Leiocolea* (K. Müll.) Buch*Gymnocolea* (Dum.) Dum.*Anastrophyllum* (Spruce) Steph.*Eremonotus* Pears.*Tritomaria* Loeske*Jamesoniella* (Spruce) Carringt.*Mylia* S. Gray*Jungermannia* L.*Nardia* S. Gray

Gymnomitriaceae

Marsupella Dum.*Gymnomitrium* Corda*Prasanthus* Lindb.

Arnelliaceae

Arnellia Lindb.

Plagiochilaceae

Plagiochila (Dum.) Dum.

Lophocoleaceae

Lophocolea (Dum.) Dum.*Chiloscyphus* Corda

Geocalycaceae

Geocalyx Nees*Harpanthus* Nees

Scapaniaceae

Douinia (C. Jens.) Buch*Diplophyllum* (Dum.) Dum.*Scapania* (Dum.) Dum.

Adelanthaceae

Odontoschisma (Dum.) Dum.

Cephaloziellaceae

Cephaloziella (Spruce) Schiffn.

Cephaloziaceae

Cephalozia (Dum.) Dum.*Nowellia* Mitt.*Cladopodiella* Buch*Pleuroclada* Spruce*Hygrobrella* Spruce

Antheliaceae

Anthelia (Dum.) Dum.

Lepidoziaceae

Kurzia Martens*Lepidozia* (Dum.) Dum.*Bazzania* S. Gray

Calypogeiaceae

Calypogeia Raddi

Pseudolepicoleaceae

Blepharostoma (Dum.) Dum.

Trichocoleaceae

Trichocolea Dum.

Ptilidiaceae

Ptilidium Nees

Radulaceae

Radula Dum.

Porellaceae

Porella L.

Jubulaceae

Frullania Raddi

Lejeuneaceae

Lejeunea Lib.

B. Subdivision Bryophytina (Musci)

Class Bryopsida

d. Order Dicranales

1. Subclass Sphagnidae

a. Order Sphagnales

Sphagnaceae

Sphagnum L.

2. Subclass Bryidae

a. Order Andreaeales

Andreaeaceae

Andreaea Hedw.

b. Order Tetraphidales

Tetraphidaceae

Tetraphis Hedw.*Tetradontium* Schwaegr.

c. Order Polytrichales

Polytrichaceae

Atrichum P. Beauv.*Oligotrichum* Lam. & DC.*Psilopilum* Brid.*Pogonatum* P. Beauv.*Polytrichastrum* G. L. Sm.*Polytrichum* Hedw.

Archidiaceae

Archidium Brid.

Ditrichaceae

Pleuridium Rabenh.*Ditrichum* Hampe*Saelania* Lindb.*Ceratodon* Brid.*Distichium* B.S.G.

Seligeriaceae

Seligeria B.S.G.*Blindia* B.S.G.

Grimmiaceae

Grimmia Hedw.*Schistidium* Brid.*Hydrogrimmia* (I. Hag.) Loeske*Coscinodon* Spreng.*Racomitrium* Brid.

Fissidentaceae

Fissidens Hedw.*Octodiceras* Brid.

Dicranaceae

Trematodon Michx.*Pseudephemerum* (Lindb.) I. Hag.*Anisothecium* Mitt.*Aongstroemia* B.S.G.*Dicranella* (C. Müll.) Schimp.*Dicranodontium* B.S.G.*Rhabdoweisia* B.S.G.*Cnestrum* I. Hag.*Cynodontium* Schimp.*Dichodontium* Schimp.*Dicranoweisia* Milde*Oncophorus* (Brid.) Brid.*Arctoa* B.S.G.

Kiaeria I. Hag.
Orthodicranum (B.S.G.) Loeske
Dicranum Hedw.
Paraleucobryum (Limpr.) Loeske
Leucobryaceae
Leucobryum Hampe
Pottiaceae
Anoetangium Schwaegr.
Astomum Hampe
Weissia Hedw.
Gymnostomum Nees & Hornsch.
Oxystegus (Limpr.) Hilp.
Tortella (Lindb.) Limpr.
Bryoerythrophyllum Chen
Didymodon Hedw.
Barbula Hedw.
Acaulon C. Müll.
Phascum Hedw.
Pottia (Reichenb.) Fürnr.
Stegonia Vent.
Desmatodon Brid.
Aloina Kindb.
Tortula Hedw.
Encalyptaceae
Encalypta Hedw.
Buxbaumiaceae
Buxbaumia Hedw.
Diphysciaceae
Diphyscium Mohr

e. Order Bryales

Orthotrichaceae
Amphidium Schimp.
Zygodon Hook. & Tayl.
Ulota Mohr
Orthotrichum Hedw.
Disceliaceae
Discelium Brid.
Ephemeraceae
Ephemerum Hampe
Funariaceae
Physcomitrella B.S.G.
Physcomitrium (Brid.) Brid.
Pyramidula Brid.
Funaria Hedw.
Oedipodiaceae
Oedipodium Schwaegr.
Splachnaceae
Tayloria Hook.
Tetraplodon B.S.G.
Aplodon R. Brown

Splachnum Hedw.
Schistostegaceae
Schistostega Mohr
Bryaceae
Leptobryum (B.S.G.) Wils.
Plagiobryum Lindb.
Anomobryum Schimp.
Poblia Hedw.
Mniobryum Limpr.
Bryum Hedw.
Rhodobryum (Schimp.) Limpr.
Mniaceae
Mnium Hedw.
Cinclidium Sw.
Rhizomnium (Broth.) T. Kop.
Cyrtomnium Holmen
Plagiomnium T. Kop.
Pseudobryum (Kindb.) T. Kop.
Timmiaceae
Timmia Hedw.
Aulacomniaceae
Aulacomnium Schwaegr.
Meesiaceae
Amblyodon B.S.G.
Meesia Hedw.
Paludella Brid.
Catoscopiaceae
Catoscopium Brid.
Bartramiaceae
Bartramia Hedw.
Conostomum Sw.
Plagiopus Brid.
Philonotis Brid.
Fontinalaceae
Fontinalis Hedw.
Dichelyma Myr.
Hedwigiaceae
Hedwigia P. Beauv.
Leucodontaceae
Antitrichia Brid.
Leucodon Schwaegr.
Neckeraceae
Neckera Hedw.
Homalia (Brid.) B.S.G.
Thamnobryum Nieuwl.
Lembophyllaceae
Isothecium Brid.
Climaciaceae
Climacium Web. & Mohr
Fabroniaceae
Myrinia Schimp.
Theliaceae
Myurella B.S.G.

Leskeaceae

- Pseudoleskeella* Kindb.
Leskeella (Limpr.) Loeske
Leskea Hedw.
Lescuraea B.S.G.
Anomodon Hook. & Tayl.

Thuidiaceae

- Heterocladium* B.S.G.
Abietinella C. Müll.
Thuidium B.S.G.
Helodium Warnst.

Amblystegiaceae

- Platydictya* Berk.
Amblystegium B.S.G.
Leptodictyum (Schimp.) Warnst.
Campylium (Sull.) Mitt.
Hygroamblystegium Loeske
Cratoneuron (Sull.) Spruce
Drepanocladus (C. Müll.) G. Roth
Scorpidium (Schimp.) Limpr.
Calliergon (Sull.) Kindb.
Calliergonella Loeske
Hygrohypnum Lindb.

Brachytheciaceae

- Homalothecium* B.S.G.
Tomentypnum Loeske
Campothecium B.S.G.
Brachythecium B.S.G.

- Pseudoscleropodium* (Limpr.) Fleisch.
Cirriphyllum Grout
Eurhynchium B.S.G.
Rhynchostegiella (B.S.G.) Limpr.
Rhynchostegium B.S.G.

Entodontaceae

- Orthothecium* B.S.G.
Pterigynandrum Hedw.

Plagiotheciaceae

- Isoterygium* Mitt.
Herzogiella Broth.
Taxiphyllum Fleisch.
Plagiothecium B.S.G.

Hypnaceae

- Platygyrium* B.S.G.
Pylaisia Schimp.
Homomallium (Schimp.) Loeske
Hypnum Hedw.
Callicladium Crum
Ptilium De Not.
Ctenidium (Schimp.) Mitt.

Rhytidiaceae

- Rhytidium* (Sull.) Kindb.
Rhytidiadelphus (Limpr.) Warnst.

Hylacomiaceae

- Pleurozium* Mitt.
Hylacomium B.S.G.

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