

ANNOTATED CATALOGUE OF PORTUGUESE BRYOPHYTES

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724 bryophyte taxa are listed for Portugal, based on a critical assessment of literature data. Each distribution record, supported by the correspondent geographic unit (provinces) is presented. For different provinces literature references are listed in chronological order. In addition, two lists (mosses and liverworts-hornworts) of known synonyms are provided. This annotated catalogue can be used as a checklist of the known bryophyte taxa in Portugal. The present version includes only records published until December 2002. As a final result for Portugal 665 bryophyte taxa (484 mosses and 181 liverworts-hornworts) are considered to be present and 59 elements (46 mosses and 13 liverworts) are to be excluded or considered of very improbable occurrence. The regional spectrum of the mosses and liverworts-hornworts is established for each province and the results commented.

Key words: Bryophytes, Portugal.

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Briófitos portugueses. *Portugaliae Acta Biol.* **21**: 5-230.

Tendo como base dados bibliográficos, são inventariados 724 taxa de briófitos em Portugal. Para cada taxon são apresentadas as diferentes referências para cada unidade geográfica (provincias) organizadas por ordem cronológica. São ainda listados, em dois anexos, os diferentes sinónimos referidos para Portugal, para cada briófito (musgos e hepáticas/antocerotas). O presente catálogo pode ser usado como uma check-list de todos os taxa de briófitos presentes ou referidos em Portugal e inclui dados publicados até Dezembro de 2002.

Como resultado final podemos referir a presença de 665 taxa (484 musgos and 181 hepáticas e antocerotas) em Portugal,

embora incluindo 59 elementos (46 musgos e 13 hepáticas) cuja existência é bastante crítica e são para excluir ou foram recentemente retirados da brioflora portuguesa.

Palavras chave: Briófitos, Portugal.

INTRODUCTION

The importance for checklists has been established, as they are one of the most vital tools to progress in biodiversity knowledge, conservation actions and phytogeographic approaches.

This catalogue of Portuguese bryophytes has been compiled as a contribution to the Iberian Bryophyte Flora project and may be integrated in the general checklist of Mediterranean countries, which is being prepared. Therefore, the primary aim of this catalogue is to update the known distribution of all species occurring in the Portuguese territory.

All European countries were included in a recent liverwort checklist (Söderström *et al.*, 2002), but the only one available for mosses is that by Corley *et al.* (1981) and Corley & Crundwell (1991).

The present paper is the first revised version of the Portuguese mosses checklist. In the case of hornworts and liverworts, a previous catalogue was published by Sim-Sim (1989). The present list is an essential step for the chorological approach to the Portuguese species, which are also important at the Iberian level.

Sérgio *et al.* (2000) reviewed the history of bryophyte studies in Portugal in some detail, however the total taxa distribution has never been treated as a whole before.

The geographic unit (provinces) is the support to taxa distribution and frequently do not correspond to the number of localities or areas, and do not reflect the rarity of the species. The objective of this work is to provide an updated distribution of Portuguese bryophytes, even if within a few years the distribution of several taxa will change again. Data gathering and input into the database are currently undergoing, and this paper/version includes only records published until December 2002.

METHODOLOGY AND CATALOGUE ORGANISATION

The list is presented by alphabetic order of all the accepted taxon names; all the literature on bryophytes in Portugal was surveyed. In this catalogue an alphabetic list of current family and generic affiliations is provided, first for mosses, and then for liverworts and hornworts, both with a synonym list.

The incorrect or dubious species to Portugal are also listed, printed in plain instead of bold format. The Iberian endemic taxa are indicated with the symbol (*).

The delimitation and nomenclature of classes, families and genera follows Grolle & Long (2000) for liverworts and hornworts, and Buck & Goffinet (2000) for mosses.

The taxa nomenclature generally follows Corley *et al.* (1981) and Corley & Crundwell (1991) for mosses and Grolle & Long (2000) for hornworts and liverworts. Some modifications were based on recent works such as the ones by Frisvoll (1983, 1988) for some *Racomitrium* groups; Hedenäs (1992, 1997) for Pleurocarpous mosses; Rao (2001) for *Cryphaeaceae*; Zander (1993) for some *Pottiaceae* genus; and Blom (1996) for *Schistidium apocarpum* complex. Some other recent criteria, new names and new combinations are cited in the notes. Only the relevant synonyms were considered, particularly those most used by Portuguese authors. In wide-ranging some criteria are according to the Index Muscorum (Wijk *et al.* 1959-1969).

The authors of species names are cited as proposed by Brummitt & Powell (1992). We excluded the abbreviation of António Machado Guimarães "Guim." and replaced it by "A. Mach.", as well as Sergio by "Sérgio".

The names of the provinces in which the taxa were recorded are abbreviated (see the abbreviations list and the figure 1). These shortened forms are according to the criteria followed by the Iberian Moss Flora.

Province abbreviations are listed for each taxon in alphabetic order and all literature references are listed in chronological order. Reports without a precise indication of locality but included in a particular geographic unity such as Serra da Estrela, were indicated as (BA/BB), because this mountain corresponds to two different provinces (BA and BB). Another example are the reports of Alentejo, cited without specification of whether it is Alto Alentejo (AAI) or Baixo Alentejo (BAL), and thus referred as (AAI/BAL).

When the source does not provide sufficient detail or any information concerning locality or area, the report is indicated with the following abbreviation - Pt, in the final part of each taxon list distribution.

Whenever the source information included distribution maps for a species, we added, before the provinces distribution: Wmap- World's distribution map; Eurmap- distribution map for Europe; Medmap- distribution map for the Mediterranean area (total or only Morocco, etc.); IPmap- distribution map for the Iberian Peninsula; Ptmap- distribution map for Portugal.

It should be noted that all the available studies including regional data have been consulted for this paper. They are cited with the name of the author who indicated the location of the taxon. However, many records correspond to the same locality or herbarium specimen, published by different authors in successive dates.

The studied bibliography contains approximately 580 entries that support the acceptance of the species listed in this catalogue (see also Casas *et al.*, 2000). The resulting list contains 724 taxa based on 30 597 records (21376 for mosses and 9222 for liverworts and hornworts). However about 59 are to be excluded from Portuguese bryoflora.

Data from existing checklists, as in the cases of liverworts or hornworts (Sim-Sim, 1989), general distribution publications (Düll, 1983, 1984, 1985, 1992) or

the Red List of the Iberian Peninsula (Sérgio *et al.*, 1994), were not included, except to indicate a locality, a map or a particular note. Also, we did not include information from general floras or textbooks, except for some particular taxa (e.g. original description), site information, or revised specimens (e.g. Casares 1925, Müller, 1951-1958). We did not include also some Portuguese works that correspond majority to keys (e.g. Ervideira 1919).

We have also considered, and incorporated in the whole data for the taxon, information from some regional reports prepared in the Botanical Garden of Lisbon (e.g. Catarino *et al.*, 1987) as well as unpublished doctoral dissertations (e.g. Séneca, 1998), which are available at the Lisbon's Botanical Garden library.

Most taxa recorded by Henriques as present in Portugal and gathered by Estácio da Veiga have been considered of dubious occurrence. In this last case the reason was because the great part of Estácio da Veiga collection that was recorded as gathered in Mafra, this locality corresponds in fact to the place where the collection was initially stored.

One of the difficulties found during the elaboration of this catalogue was that the taxonomic criteria of taxa delimitation presented in different literature reports were not always described. Generally, most of the older works do not consider the variety or subspecies, which makes it impossible to include some taxa according to more recent criteria. So, in several cases, it is difficult to give the present provinces distribution of taxa for which no taxonomic revision of all the collection material was possible. Examples of these are *Plagiochila spinulosa*, *P. punctata* and *P. bifaria*, *Radula complanata* and *R. lindbergiana*, *Andreaea rothii* s. l. or *Atrichum angustatum* s. l., etc. In these cases, we added a note or, when corresponding to a very improbable occurrence, cited the references within square brackets [].

In some taxa, when the infra-specific taxon is not specified, we interpreted the record as the taxon generally occurring in the region. This document is not a taxonomic work, however we incorporated two lists of synonyms in alphabetic order. Cases for which the herbarium specimens were confirmed are marked as (!). The herbarium abbreviations are according to Vitt *et al.* (1985).

Additional criteria for the information presented in this catalogue are as follows:

- When there is more than one reference for the same occurrence of a taxon in a province, reports were included, even if they correspond to the same herbarium specimen.
- It has been assumed that if one plant is synonymised with another, then its distribution data can also be transferred.
- We have made no judgement on the quality of records. All records have been accepted as a rule, excluding the ones indicated in different notes.
- We included some exsiccata data as bibliographic references.

- Synonyms are listed in alphabetic sequence and the valid taxa to which they apply are also indicated.
- The present version includes only records published until December 2002.

Abbreviations

The following abbreviations are used:

Regions “provinces” (Fig. 1):

AAI: Alto Alentejo
Ag: Algarve
BA: Beira Alta
BAI: Alto Alentejo
BB: Beira Baixa
BL: Beira Litoral
DL: Douro Litoral
E: Estremadura
Mi: Minho
R: Ribatejo
TM: Trás-os-Montes e Alto Douro

Other abbreviations:

Orig. descrip.: Original description
s. l.: *sensu lato*
s. st.: *sensu stricto*
[]: Report with a very improbable occurrence
(!): Herbarium specimens revised
*: Endemic Iberian endemic taxon.

Distribution maps:

Wmap: World's distribution map
Eurmap: distribution map for Europe
Medmap: distribution map for the Mediterranean area (total, or only Morocco etc.)
IPmap: distribution map for the Iberian Peninsula
Ptmap: distribution map for Portugal.

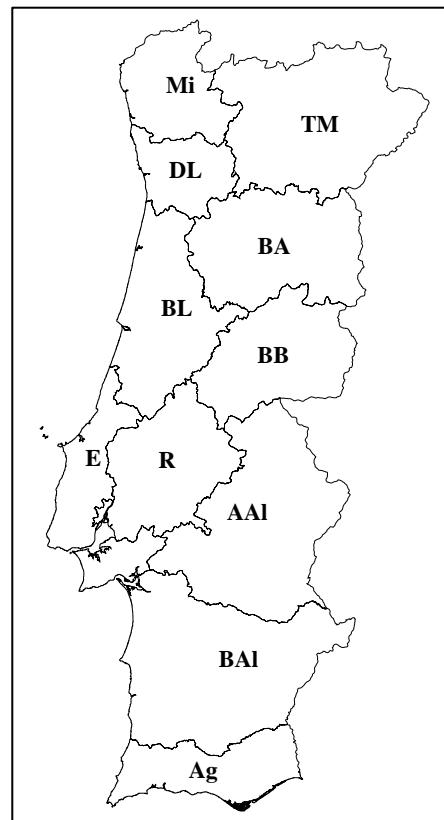


Figure 1. Portuguese geographic units (Provinces).

BIODIVERSITY ANALYSIS AND RESULTS

A review of the state-of-the-art in bryological research in Portugal was outlined by Sérgio *et al.* (2000) as well as the first stage analysis and a full representation of all the bryophytes in Portugal, recorded in each square of the UTM grid. The aim of the analysis in this paper was to provide basic guidelines for the definition of sites with special interest for bryophytes conservation and

research. Nevertheless, the primary aim of this catalogue is to update the knowledge of the species chorological distribution over the different provinces.

In spite of the small area ($92\,000\text{ km}^2$) and relatively low altitude (below 2000 m a.s.l.) of the country, the bryophyte flora of Portugal is a very rich one, comprising about 65% of the total number of Iberian taxa (Sérgio *et al.*, 1994).

The expansion of the knowledge of the Portuguese bryoflora started around 1920 with Machado's fieldwork, mainly in the Northern part of the territory. Most bryological studies from these earlier years followed no regular survey and no particular criteria, thus providing a poor or even misleading representation of areas with high biodiversity. So, the first result of our approach is the detection of areas with high biodiversity because of such historical reasons. This fact was recently demonstrated using adequate methodology to predict bryophyte diversity (Sérgio & Draper, 2002a and 2002b).

The number of total taxa recorded (mosses and liverworts-hornworts) in different areas (provinces) can be summarised as follows (Fig. 2). The greatest diversity of taxa is achieved in Atlantic provinces (Mi, BL and E), or in mountain areas, especially in the Northwest and Central mountain ridges (Mi, BA). However, the less diverse areas (TM, BB, AAI and BAI) are also important because of the floristic composition of the communities they integrate, and the endemic species or taxa that can represent some value as climatic indicators.

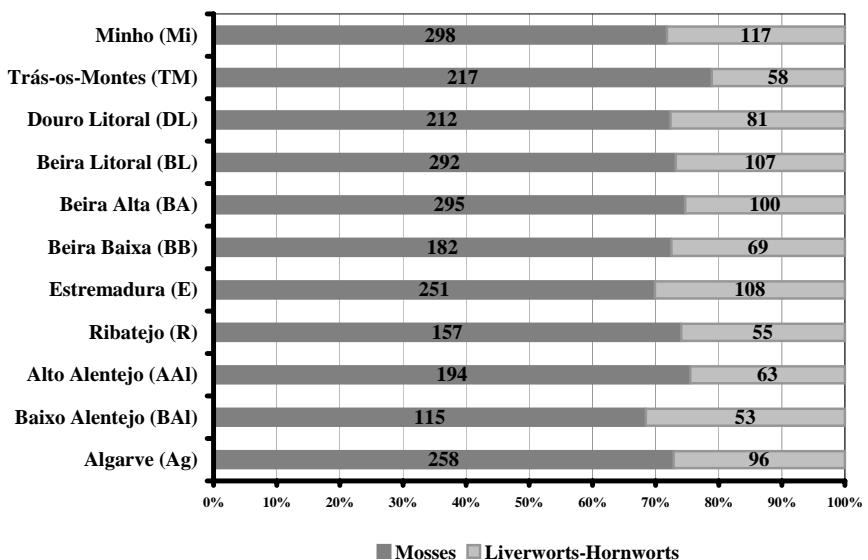


Figure 2. The total number of taxa recorded (mosses and liverworts-hornworts) in different provinces, as well as percentage of the two groups in each region. (The reports without a precise indication of locality as Serra da Estrela and indicated as (BA/BB), are not included).

These taxa may characterise areas with Eurosiberian influences or draw up the boundaries of the Mediterranean region (Sérgio & Draper, 2001).

Figure 2 shows that the percentage of the two groups (mosses and liverworts-hornworts) is, in general, quite similar in the different provinces (70%-80% and 30%-20%, respectively), except in Baixo Alentejo (BAI) where the liverworts percentage is higher than 30%. This seems to be correlated with the results of the expedition to the Iberian Peninsula made by Jovet-Ast and Bischler (1976), in a major project to study the whole Mediterranean liverwort flora.

As a final result 665 bryophyte taxa (484 mosses and 181 for liverworts and hornworts) for Portugal are considered to be present (with 33 varieties and 10 subspecies of mosses and 3 varieties and 1 subspecies to liverworts and hornworts), based on a recent critical assessment of literature data. The bryophytes to be excluded or considered of very improbable occurrence correspond to 59 elements (46 mosses and 13 liverworts). The Iberian endemic taxa comprise only mosses (8 taxa), about 1,1 % of the total Portuguese bryoflora, the majority being important phytogeographic elements (Sérgio & Draper, 2002a).

The present catalogue is considered a new base-line, essential for the knowledge of Portuguese bryophyte species, since it provides information concerning the chorological distribution and the different provinces of occurrence, along with recent bibliographic references. It is also of great importance at the Iberian level, and as an useful tool for the compilation of Mediterranean or European checklists.

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PHYLUM: Bryophyta**Sphagnopsida****Sphagnaceae Dumort.***Sphagnum* L.**Adreaeopsida****Andreaeaceae Dumort.***Andreaea* Hedw.**Polytrichopsida****Tetraphidaceae Schimp.***Tetraphis* Hedw.**Polytrichaceae Schwaegr.***Atrichum* P. Beauv.*Pogonatum* P. Beauv.*Polytrichum* Hedw.**Bryopsida****Diphysciaceae M. Fleisch***Diphyscium* Morh**Encalyptaceae Schimp.***Encalypta* Hedw.**Funariaceae Schwaegr.***Entosthodon* Schwaegr.*Funaria* Hedw.*Funariella* Sérgio*Physcomitrium* (Brid.) Brid.**Grimmiaceae Arn.***Coscinodon* Spreng.*Grimmia* Hedw.*Racomitrium* Brid.*Schistidium* Bruch & Schimp.**Ptychomitriaceae Schimp.***Campylostelium* Bruch & Schimp.*Ptychomitrium* Fürnr.**Archidiaceae Schimp.***Archidium* Brid.**Seligeriaceae Schimp.***Brachydontium* Fürn.*Seligeria* Bruch & Schimp.**Fissidentaceae Schimp.***Fissidens* Hedw.*Octodiceras* Brid.**Dicranaceae Schimp.***Campylopus* Brid.*Dicranella* (Müll. Hal.) Schimp.*Dicranum* Hedw.*Kiaeria* I. Hagen*Pseudephemerum* (Lindb.) I. Hagen**Bruchiaceae Schwaegr.***Bruchia* Schwaegr.**Leucobryaceae Schimp.***Leucobryum* Hampe**Ditrichaceae Limpr.***Ceratodon* Brid.*Cheilothela* Lindb.*Ditrichum* Hampe*Pleuridium* Rabenh.*Rhamphidium* Mitt.**Rhabdoweisiaceae Limpr.***Amphidium* Schimp.*Cynodontium* Schimp.*Dichodontium* Schimp.*Dicranoweisia* Lindb. ex Milde*Rhabdoweisia* Bruch & Schimp.**Schistostegaceae Schimp.***Schistostega* Morh**Pottiaceae Schimp.***Acaulon* Müll. Hal.*Aloina* Kindb.*Aschisma* Linbd.*Barbula* Hedw.*Bryoerythrophyllum* P. C. Chen*Crossidium* Jur.*Desmatodon* Brid.*Dalytrichia* (Schimp.) Limpr.*Didymodon* Hedw.*Eucladium* Bruch & Schimp.*Gymnostomum* Nees & Hornsch*Gyroweisia* Schimp.*Hymenostylium* Brid.*Leptobarbula* Schimp.*Leptodontium* (Müll. Hal.) Lindb.*Leptophascum* J. Guerra & M. J. Cano*Phascum* Hedw.*Pleurochaete* Lindb.*Pottia* (Reichenb.) Fürnr.*Pottiopsis* Blockeel & A. J. E. Sm.*Protobryum* J. Guerra & M. J. Cano*Pseudocrossidium* Williams*Pterygoneurum* Jur.*Rhamphidium* Mitt.*Timmiella* (De Not.) Limpr.*Tortella* (Lindb.) Limpr.

- Tortula* Hedw.
Trichostomum Bruch
Triquetrella Müll. Hal.
Weissia Hedw.
- Ephemeraceae Schimp.**
Ephemerum Hampe
- Cinclidotaceae K. Saito**
Cinclidotus P. Beauv.
- Meesiaceae Schimp.**
Leptobryum Wilson
- Orthotrichaceae Arn.**
Orthotrichum Hedw.
Ulota Morh.
Zygodon Hook. & Taylor
- Hedwigiaeae Schimp.**
Hedwigia P. Beauv.
- Aulacomniaceae Schwaegr.**
Aulacomnium Schwaegr.
- Bartramiaceae Schwaegr.**
Anacolia Schimp.
Bartramia Hedw.
Philonotis Brid.
- Bryaceae Schwaegr.**
Anomobryum Schimp.
Bryum Hedw.
- Mniaceae Schwaegr.**
Epipterygium Lindb.
Mielichhoferia Hornsch.
Mnium Hedw.
Plagiomnium T. J. Kop.
Pohlia Hedw.
Rhizomnium T. J. Kop.
Schizymenium Harv.
- Hookeriaceae Schimp.**
Hookeria A. J. E. Sm.
- Pilotrichaceae Kindb.**
Cyclodictyon Mitt.
- Hypopterygiaceae Mitt.**
Hypopterygium Brid.
- Amblystegiaceae G. Roth.**
Amblystegium Schimp.
Hygroamblystegium Loeske
- Cratoneuraceae Mönk.**
Cratoneuron (Sull.) Spruce
- Helodiaceae**
Palustriella Ochyra
- Hylocomiaceae (Broth.) M. Fleisch.**
Hylocomium Bruch & Schimp.
- Pleurozium* Mitt.
Rhytidadelphus (Limpr.) Warnst.
- Leskeaceae Schimp.**
Cladopodium (Lesq. & James) Ren. &
 Cardot
Leskea Hedw.
Pseudoleskea Bruch & Schimp.
- Pterigynandraceae Schimp.**
Habrodon Schimp.
Heterocladium Bruch & Schimp.
Pterigynandrum Hedw.
- Thuidiaceae Schimp.**
Thuidium Bruch & Schimp.
- Campyliaceae (Kanda) W. R. Buck**
Campyliadelphus (Kindb.) R. S.
Chopra
Campylium (Sull.) Mitt.
Drepanocladus (Müll. Hal.) G. Roth
Hygrohypnum Lindb.
Sanionia Loeske
Straminergon Hedenäs
Warnstorffia Loeske
- Brachytheciaceae G. Roth.**
Brachythecium Schimp.
Cirriphyllum Grout
Eurhynchium Bruch & Schimp.
Homalothecium Bruch & Schimp.
Isothecium Brid.
Platyhypnidium (Limpr.) M. Fleich.
Rhynchostegiella (Bruch & Schimp.)
 Limpr.
Rhynchostegium Bruch & Schimp.
Scleropodium Bruch & Schimp.
Scorpiurium Schimp.
Tomentypnum Loeske
- Fabroniaceae Schimp.**
Fabronia Raddi
- Plagiotheciaceae (Broth.) Fleisch.**
Plagiothecium Bruch & Schimp.
- Fontinalaceae Schimp.**
Fontinalis Hedw.
- Entodontaceae Kindb.**
Entodon Müll. Hal.
- Climaciaceae Kindb.**
Climacium F. Web. & D. Mohr
- Hypnaceae Schimp.**
Buckiella Ireland
Calliergonella Loeske

<i>Ctenidium</i> (Schimp.) Mitt.	Leucodontaceae Schimp.
<i>Homomallium</i> (Schimp.) Loeske	<i>Antitrichia</i> Brid.
<i>Hyocomium</i> Bruch & Schimp.	<i>Leucodon</i> Schwaegr.
<i>Hypnum</i> Hedw.	<i>Pterogonium</i> Sw.
<i>Isopterygiopsis</i> Z. Iwats.	Neckeraceae Schimp.
<i>Pseudotaxiphyllum</i> Z. Iwats.	<i>Homalia</i> (Brid.) Bruch & Schimp.
<i>Pylaisia</i> Schimp.	<i>Metaneckera</i> Steere
Sematophyllaceae Broth.	<i>Neckera</i> Hedw.
<i>Sematophyllum</i> Mitt.	<i>Thamnobryum</i> Nieuwl.
Cryphaeaceae D. Mohr	Leptodontaceae Schimp.
<i>Cryphaea</i> D. Mohr	<i>Leptodon</i> Morh.
<i>Dendrocryphaea</i> Paris & Schimp.	Anomodontaceae Kindb.
	<i>Anomodon</i> Hook. & Taylor

***Acaulon fontquierianum* Casas & Sérgio**

Medmap: Cogoni & Scrugli, 2000.

IPmap: Casas *et al.*, 1989.

E: Casas *et al.*, 1989; Sérgio *et al.*, 1993a.

Acaulon muticum* (Hedw.) Müll. Hal. var. *muticum

Ag: Solms-Laubach, 1868; Henriques, 1889; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BL: Sérgio *et al.*, 1988.

E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932.

Pt: Sérgio *et al.*, 1987a.

***Acaulon muticum* (Hedw.) Müll. Hal. var. *mediterraneum* (Limpr.) Sérgio**

Ptmap: Sérgio, 1972c.

Ag: Sérgio, 1972c; Casas *et al.*, 1990.

BAL: Sérgio, 1972c.

BB: Sérgio *et al.*, 1994d; Sérgio *et al.*, 2002c.

E: Sérgio, 1972c.

R: Sérgio *et al.*, 1994d.

***Acaulon triquetrum* (Spruce) Müll. Hal.**

IPmap: Casas *et al.*, 1989.

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1989.

***Aloina aloides* (Schultz) Kindb.**

AAI: Sérgio *et al.*, 1997b.

Ag: Crundwell, 1956; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA/BB: Greven & Melick, 1994.

BL: Henriques, 1889; Machado, 1928; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928.

E: Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Delgadillo, 1975; Sérgio & Sim-Sim, 1985a; Galego *et al.*, 1999; Galego *et al.*, 2000.

Mi: Machado, 1920a; Machado, 1928; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988.

TM: Machado, 1915b.

Pt: Sérgio *et al.*, 1987a.

***Aloina ambigua* (Bruch & Schimp.) Limpr.**

AAI: Luisier, 1910c; Luisier, 1916b; Machado, 1928; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Henriques, 1889; Pereira-Coutinho, 1917b; Delgadillo, 1975; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Galego *et al.*, 1999; Galego *et al.*, 2000.

BL: Brotero, 1804; Henriques, 1889; Anónimo, 1893; Machado, 1928; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Machado, 1928.

E: Brotero, 1804; Mitten, 1853; Henriques, 1889; Luisier, 1907a; Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Ade & Koppe, 1942; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.

Mi: Machado, 1913; Machado, 1916; Machado, 1920a; Machado, 1928; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

R: Pereira-Coutinho, 1917b; Machado, 1928; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

***Aloina rigida* (Hedw.) Limpr.**

Ag: Galego *et al.*, 2000.

***Amblystegium humile* (P. Beauv.) Crundw.**

Ag: Sérgio *et al.*, 1984.

***Amblystegium riparium* (Hedw.) Schimp.**

AAI: Sérgio *et al.*, 1997b.

Ag: Dixon, 1912; Machado, 1933; Allorge, 1935; Allorge, 1974; Sérgio *et al.*, 1984.

BA: Pierrot, 1972.

BAL: Sérgio, 1970-1971; Allorge, 1974.

BB: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 2002c.

BL: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1988; Leitão *et al.*, 1996; Werner, 1997.

DL: Anónimo, 1883a; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Werner, 1997.

E: Luisier, 1916b; Pereira-Coutinho, 1917b; Luisier, 1924; Machado, 1933; Allorge, 1974; Sérgio & Sim-Sim, 1985a.

Mi: Brotero, 1804; Henriques, 1889; Machado, 1913; Luisier, 1924; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988; Ferreira, 1992.

TM: Allorge, 1974.

Pt: Luisier, 1924.

***Amblystegium serpens* (Hedw.) Schimp.**

Ag: Dixon, 1912; Machado, 1933; Sérgio, 1970-1971.

[BA/BB: Greven & Melick, 1994].

BL: Brotero, 1804; Machado, 1933; Sérgio, 2001b.

The more recent report is to Serra da Estrela (BA/BB), however this species, not being confirmed by any herbarium specimens, is to be considered as uncertain.

***Amblystegium varium* (Hedw.) Lindb.**

BA: Sérgio *et al.*, 2001a.

***Amphidium lapponicum* (Hedw.) Schimp.**

[Mi: Luisier, 1948].

This sub-arctic species was only reported from one locality from Minho by Luisier. However, the report was based on the specimen recently named as *Bryoerythrophyllum campylocarpum* by Sérgio (1992).

***Amphidium mougeotii* (Bruch & Schimp.) Schimp.**

IPmap: Casas *et al.*, 1989.

BA: Casas *et al.*, 1989; Sérgio, 1994a; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BL: Casas *et al.*, 1989.

Mi: Machado, 1917a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

TM: Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

***Anacolia webbii* (Mont.) Schimp.**

Medmap: Cogoni *et al.*, 1999.

IPmap: Casas *et al.*, 1985.

BA: Casas *et al.*, 1985.

TM: Machado, 1930; Allorge, 1931a; Machado, 1933; Allorge & Allorge, 1949; Flowers, 1952; Casas *et al.*, 1985.

***Andreaea crassinervia* Bruch**

[BA: Henriques, 1883; Henriques, 1889; Machado, 1917b; Pereira-Coutinho, 1917; Machado, 1933; Sérgio, 1994a; Sérgio & Séneca, 1994.

BA/BB: Levier, 1880; Greven & Melick, 1994.

BB: Machado, 1933; Sérgio & Séneca, 1994].

The revision of the specimens named as *Andreaea crassinervia* revealed that most of the material corresponds to *A. rothii* or *A. heinemannii* subsp. *heinemannii* (Sérgio, *in press*). So, in Portugal and perhaps even in the Iberian area, the species *A. crassinervia* is certainly not present (Murray *comm.*).

***Andreaea frigida* Huebener**

IPmap: Sérgio *et al.*, 1994c; Casas *et al.*, 1996 ; Sérgio & Draper, 2002b.

BA: Casas *et al.*, 1996; Sérgio *et al.*, 2001e; Sérgio *et al.*, 2002a.

BA/BB: Casas *et al.*, 1996.

Pt: Murray, 1988.

Recorded only in Serra da Estrela it is considered extinct (Sérgio *et al.*, 1994). However, was recently discovered in different localities in the same mountain range (Sérgio *et al.*, 2002a).

Andreaea heinemannii* Hampe & Müll. Hal. subsp. *heinemannii

Wmap: Schultze-Motel, 1970b.

See note of *A. crassinervia*.

****Andreaea heinemannii* Hampe & Müll. Hal. subsp. *crassifolia* (Luisier) Sérgio**

IPmap: Casas *et al.*, 1996.

BA: Pereira-Coutinho, 1917b; Sérgio & Séneca, 1994; Casas *et al.*, 1996.

BA/BB: Schultze-Motel, 1970a.

BB: Luisier, 1916a; Luisier, 1916b; Casares, 1932; Machado, 1933; Schultze-Motel, 1970b; Sérgio & Séneca, 1994; Casas *et al.*, 1996.

DL: Sérgio, 2003 (Not Published).

Mi: Sérgio & Séneca, 1994; Casas *et al.*, 1996.

TM: Casas *et al.*, 1996.

Pt: Luisier, 1934.

Records from Portugal originally thought to be of *Andreaea crassifolia* Luisier have been redetermined as *A. heinemannii* subsp. *crassifolia* (Luisier) Sérgio (Sérgio, *in press*). With a South Atlantic/Macaronesian distribution, all the reports of *A. heinemannii* (Casas *et al.*, 1996) correspond to this subspecies.

***Andreaea megistospora* B. M. Murray**

IPmap: Casas *et al.*, 1996.

DL: Sérgio & Séneca, 1994; Casas *et al.*, 1996.

Mi: Sérgio & Schumacker, 1992; Sérgio & Séneca, 1994; Casas *et al.*, 1996.

TM: Sérgio & Schumacker, 1992; Casas *et al.*, 1996.

***Andreaea rothii* F. Weber & D. Mohr s. l.**

Eurmap: Schultze-Motel, 1970a.

IPmap: Casas *et al.*, 1996.

AAI: Casas *et al.*, 1996.

BA: Machado, 1933; Sérgio, 1994a; Casas *et al.*, 1996.

BA/BB: Greven & Melick, 1994; Casas *et al.*, 1996.

BB: Casas *et al.*, 1996.

BL: Casas *et al.*, 1996.

DL: Casas *et al.*, 1996; Werner, 1997.

Mi: Reinoso *et al.*, 1990; Sérgio & Schumacker, 1992; Casas *et al.*, 1996.

TM: Casas *et al.*, 1996.

The identification of the subspecies of the lastest reports still needs to be recognized.

Andreaea rothii* F. Weber & D. Mohr subsp. *rothii

AAI: Sérgio *et al.*, 1997b.

BA: Luisier, 1916b; Pereira-Coutinho, 1917b.

BA/BB: Machado, 1917b; Pereira-Coutinho, 1917b.

BB: Luisier, 1916b; Machado, 1933.

Mi: Mitten, 1853; Henriques, 1889; Luisier, 1907; Machado, 1915a; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

TM: Ervideira, 1926.

Pt: Schultze-Motel, 1970a; Machado, 1933.

***Andreaea rothii* F. Weber & D. Mohr subsp. *falcata* (Schimp.) Lindb.**

BA: Henriques, 1883; Henriques, 1889; Schultze-Motel, 1970a.

BA/BB: Casares, 1932.

BB: Casares, 1932.

Mi: Machado, 1920a; Casares, 1932; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Sérgio & Schumacker, 1992.

Pt: Machado, 1933; Casares, 1932.

***Andreaea rupestris* Hedw.**

IPmap: Casas *et al.*, 1996.

BA: Sérgio, 1994a; Sérgio & Séneca, 1994; Casas *et al.*, 1996.

BA/BB: Levier, 1880; Henriques, 1883; Casares, 1932; Casas *et al.*, 1996.

BB: Machado, 1933.

Mi: Anônimo, 1887; Anônimo, 1890; Sampaio, 1901-1902; Machado, 1913; Machado, 1913; Machado, 1917b; Machado, 1933; Casares, 1932; Sá-Nogueira, 1950d; Sérgio & Schumaker, 1992; Casas *et al.*, 1996.

TM: Sérgio & Schumaker, 1992; Casas *et al.*, 1996.

***Anomobryum julaceum* (P. Gaertn., B. Mey. & Scherb.) Schimp.**

AAI: Allorge, 1974.

Ag: Solms-Laubach, 1868 original ; Welwitsch, 1872; Henriques, 1889; Luisier, 1910c; Dixon, 1912; Pereira-Coutinho, 1917b; Luisier, 1924; Machado, 1930; Loeske, 1932; Allorge, 1935; Sérgio, 1970-1971; Pierrot, 1972; Allorge, 1974; Guerra *et al.*, 1981; Jiménez *et al.*, 2002.

BA: Henriques, 1883; Henriques, 1889; Pais, 1964; Allorge, 1974; Sérgio, 1994a.

BA/BB: Pereira-Coutinho, 1917b; Machado, 1930; Greven & Melick, 1994.

BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.

BB: Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b.

BL: Warnstorff, 1899; Allorge, 1935; Allorge, 1974.

DL: Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b.

Mi: Machado, 1913; Machado, 1920a; Barros, 1942b; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

TM: Machado, 1915b; Ervideira, 1922.

The original description as *Anomobryum juliforme* in Solms-Laubach (1868).

****Anomobryum lusitanicum* (I. Hagen in Luisier) Thér.**

IPmap: Sérgio *et al.*, 1994c; Casas *et al.*, 1996; Sérgio & Draper, 2002b.

AAI: Allorge, 1935; Pierrot, 1972; Casas *et al.*, 1996; Sérgio *et al.*, 1996; Sérgio *et al.*, 1997b.

BA: Allorge, 1931b; Machado, 1933; Casas *et al.*, 1996; Sérgio *et al.*, 1996.

BB: Luisier, 1915a (*Orig. descrip.*), Luisier, 1915c; Luisier, 1915d; Luisier, 1916b; Luisier, 1924; Machado, 1930; Allorge, 1931b; Casas *et al.*, 1996; Sérgio *et al.*, 1996.

Mi: Luisier, 1915c.

Pt: Thériot, 1933; Luisier, 1934.

For a review of this Iberian species see Sérgio *et al.* (1994c).

***Anomodon viticulosus* (Hedw.) Hook. & Taylor**

Eurmap: Granzow De La Cerda, 1988.

BL: Allorge, 1928a; Machado, 1933; Allorge, 1974; Granzow De La Cerda, 1988; Sérgio *et al.*, 2002b.

Species only collected in Buçaco by P. & V. Allorge, 1928 and 1929. It was considered to have disappeared from the area (Allorge, 1974), however there is a recent gathering in Serra de Sicó (Sérgio *et al.*, 2002b).

***Antitrichia californica* Sull.**

Wmap: Allorge, 1931c; Sérgio, 1990.

IPmap: Casas *et al.*, 1985.

Ptmap: Sim-Sim & Sérgio, 1998.

AAI: Sá-Nogueira, 1958; Sérgio, 1969; Pierrot, 1972; Casas *et al.*, 1985; Sérgio *et al.*, 1997b.

AAI/BAL: Allorge, 1938.

BA: Allorge, 1931b; Machado, 1933; Sérgio, 1969; Pierrot, 1972; Casas *et al.*, 1985; Sérgio, 1994a.

BB: Allorge, 1938; Casas *et al.*, 1985; Catarino *et al.*, 1987.

R: Catarino *et al.*, 1987; Sérgio, C. & Sim-Sim, M., 1994; Sérgio *et al.*, 1998d.

TM: Allorge, 1931b; Machado, 1933; Machado, 1933; Allorge, 1938; Allorge & Allorge, 1949; Casas *et al.*, 1985.

***Antitrichia curtipendula* (Hedw.) Brid.**

IPmap: Casas *et al.*, 1989.

Ptmap: Sim-Sim & Sérgio, 1998.

AAI: Casas *et al.*, 1989.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Luisier, 1924; Machado, 1933; Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1989.

BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1974; Casas *et al.*, 1989; Jansen, 1994; Sérgio, 1994a; Sérgio *et al.*, 2001d.

BA/BB: Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.

BB: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Casas *et al.*, 1989.

BL: Henriques, 1889; Machado, 1933; Allorge, 1974; Casas *et al.*, 1989.

DL: Casas *et al.*, 1989.

E: Brotero, 1804; Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Casas *et al.*, 1989.

Mi: Brotero, 1804; Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Luisier, 1924; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1989; Sérgio & Schumacker, 1992; Albertos, 2001; Calleja *et al.*, 2001.

TM: Ervideira, 1922; Ervideira, 1926; Machado, 1933; Allorge & Allorge, 1949; Allorge, 1974; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

***Archidium alternifolium* (Hedw.) Mitt.**

Wmap: Sérgio, 1990.

IPmap: Casas *et al.*, 1992.

AAI: Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998c.

Ag: Solms-Laubach, 1868; Henriques, 1889; Machado, 1928; Casares, 1932; Pierrot, 1972; Sérgio *et al.*, 1984; Sérgio, 1991; Casas *et al.*, 1992.

BA: Sérgio, 1991; Casas *et al.*, 1992; Jansen & Sequeira, 1999.

BAL: Sérgio, 1991; Casas *et al.*, 1992; Sérgio *et al.*, 1998c; Sérgio *et al.*, 1999a.

BB: Sérgio *et al.*, 1998c; Sérgio *et al.*, 2002c.

BL: Sérgio *et al.*, 1988; Casas *et al.*, 1992.

E: Sérgio, 1972a; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Arts, 1990; Sérgio, 1991; Casas *et al.*, 1992.

R: Sérgio *et al.*, 1988; Sérgio, 1991; Casas *et al.*, 1992; Sérgio *et al.*, 1998c.

***Aschisma carniolicum* (F. Weber & D. Mohr) Lindb.**

IPmap: Casas *et al.*, 1985; Gil & Castro, 1987.

Ptmap: Sérgio, 1972c.

AAI: Sérgio *et al.*, 1997b.

BAL: Casas *et al.*, 1985.

BL: Sérgio *et al.*, 1988.

E: Sérgio, 1972c; Sérgio & Correia, 1981; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a; Gil & Castro, 1987; Sérgio *et al.*, 1988.

***Astomum crispum* (Hedw.) Hampe**

Ag: Solms-Laubach, 1868; Henriques, 1889; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BL: Sérgio *et al.*, 1988; Guerra *et al.*, 2002.

DL: Sampaio, 1901-1902; Machado, 1928.

E: Pierrot, 1972; Sérgio & Correia, 1981.

Mi: Luisier, 1907a; Machado, 1913; Machado, 1928; Casares, 1932.

R: Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

***Astomum levieri* (Limpr.) Kindb.**

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Guerra *et al.*, 2002.

Atrichum angustatum* (Brid.) Bruch & Schimp. var. *angustatum

AAI: Sérgio *et al.*, 1997b.

Ag: Allorge, 1974.

BL: Allorge, 1931a; Anônimo, 1967; Allorge, 1974.

DL: Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.

Mi: Machado, 1914a; Luisier, 1916b; Machado, 1920a; Machado, 1933; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924.

***Atrichum angustatum* (Brid.) Bruch & Schimp. var. *rhystophyllum* (Müll. Hal.) P. W. Richards & E. C. Wallace**

Ag: Dixon, 1912; Machado, 1933; Allorge, 1974.

BL: Dixon, 1912; Machado, 1933; Allorge, 1974.

When no var. is specified in the different reports, we assume that it corresponds to var. type. However, we think that var. *rhystophyllum* can be the most frequent taxon in Portugal.

***Atrichum undulatum* (Hedw.) P. Beauv.**

Ag: Estácio da Veiga, 1869; Henriques, 1889; Allorge, 1935.

BA: Tavares, 1956; Sérgio, 1969; Allorge, 1974; Sérgio, 1994a; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Luisier, 1916b; Pereira-Coutinho, 1917b; Sérgio *et al.*, 2002c.

BL: Henriques, 1889; Warnstorff, 1899; Anónimo, 1969; Allorge, 1974.

DL: Anónimo, 1883a; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Luisier, 1916b; Pereira-Coutinho, 1917b.

E: Henriques, 1889.

Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1917a; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Sérgio & Schumacker, 1992.

Pt: Machado, 1933.

***Aulacomnium androgynum* (Hedw.) Schwägr.**

IPmap: Casas *et al.*, 1989.

AAI: Pierrot, 1972; Allorge, 1974; Casas *et al.*, 1989; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Pereira-Coutinho, 1917b; Machado, 1930; Allorge, 1974; Casas *et al.*, 1989.

BA: Braun-Blanquet *et al.*, 1956; Casas *et al.*, 1989; Sérgio, 1994a; Jansen & Sequeira, 1999.

BA/BB: Greven & Melick, 1994.

BB: Allorge, 1974; Jansen, 1994.

BL: Allorge, 1935; Sá-Nogueira, 1950a; Sá-Nogueira, 1950e; Allorge, 1974; Casas *et al.*, 1989.

E: Barros, 1944a; Sá-Nogueira, 1950e; Allorge, 1974; Casas *et al.*, 1989.

Mi: Henriques, 1889; Machado, 1917b; Machado, 1930; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1989.

R: Pereira-Coutinho, 1917b; Machado, 1930; Allorge, 1974; Casas *et al.*, 1989.

TM: Ervideira, 1922; Machado, 1930; Allorge & Allorge, 1949; Allorge, 1974; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

***Aulacomnium palustre* (Hedw.) Schwägr.**

IPmap: Casas *et al.*, 1989.

BA: Henriques, 1883; Henriques, 1889; Machado, 1917b; Pereira-Coutinho, 1917b; Braun-Blanquet *et al.*, 1952; Tavares, 1956; Casas *et al.*, 1989; Jansen, 1994; Sérgio, 1994a; Jansen & Sequeira, 1999.

BA/BB: Levier, 1880; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1930; Greven & Melick, 1994.

BB: Luisier, 1916b; Casas *et al.*, 1989; Jansen, 1994.

BL: Casas *et al.*, 1989.

DL: Henriques, 1889.

Mi: Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1930; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Teles, 1970; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Machado, 1930; Allorge & Allorge, 1949; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924.

Barbula convoluta* Hedw. var. *convoluta

AAl: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984.

BA: Jansen & Sequeira, 1999.

BL: Sá-Nogueira, 1950a; Sérgio, 1969; Anónimo, 1969; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932; Allorge, 1974.

E: Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Ade & Koppe, 1942; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Machado, 1913; Machado, 1920a; Machado, 1928; Casares, 1932; Barros, 1942b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Sérgio, 1972a; Allorge, 1974; Sérgio *et al.*, 1988.

***Barbula convoluta* Hedw. var. *commutata* (Jur.) Husn.**

Mi: Machado, 1916; Machado, 1918; Machado, 1920a; Machado, 1928.

The distribution of var. *commutata* is probably not fully known.

***Barbula ehrenbergii* (Lorentz) M. Fleisch.**

IPmap: Casas *et al.*, 1989; Sérgio *et al.*, 1994c.

E: Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casas *et al.*, 1989.

***Barbula unguiculata* Hedw.**

AAl: Sérgio *et al.*, 1997b.

Ag: Sérgio *et al.*, 1984.

BAI: Pereira-Coutinho, 1917b.

BL: Henriques, 1889; Machado, 1928; Sá-Nogueira, 1950a; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Allorge, 1974.

E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Barros, 1942b; Barros, 1942c; Barros, 1943; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.

Mi: Machado, 1913; Machado, 1920a; Machado, 1928; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988.

***Bartramia ithyphylla* Brid.**

IPmap: Casas *et al.*, 1992.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Machado, 1930; Casas *et al.*, 1992.

BA: Henriques, 1883; Henriques, 1889; Sérgio, 1969; Casas *et al.*, 1992; Sérgio, 1994; Jansen 1998.

BA/BB: Levier, 1880; Pereira-Coutinho, 1917b; Machado, 1930; Greven & Melick, 1994.

Mi: Pereira-Coutinho, 1917b; Sá-Nogueira, 1950d; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

***Bartramia pomiformis* Hedw.**

IPmap: Casas *et al.*, 1992.

AAL: Allorge, 1974; Casas *et al.*, 1992; Sérgio *et al.*, 1997b.

Ag: Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1931a; Allorge, 1974; Casas *et al.*, 1992.

BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b; Barros, 1942b; Braun-Blanquet *et al.*, 1956; Tavares, 1956; Allorge, 1974; Casas *et al.*, 1992; Sérgio, 1994a; Sérgio *et al.*, 2001d.

BA/BB: Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.

BB: Luisier, 1916b; Casas *et al.*, 1992; Jansen, 1994; Sérgio *et al.*, 2002c.

BL: Brotero, 1804; Henriques, 1889; Pereira-Coutinho, 1917b; Sá-Nogueira, 1950a; Allorge, 1974; Casas *et al.*, 1992; Werner, 1997.

DL: Anónimo, 1883a; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Braun-Blanquet *et al.*, 1964; Casas *et al.*, 1992; Werner, 1997.

E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Casas *et al.*, 1992.

Mi: Henriques, 1889; Anónimo, 1899; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

R: Barros, 1942a; Allorge, 1974; Casas *et al.*, 1992.

TM: Ervideira, 1926; Allorge & Allorge, 1949; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

Pt: Ervideira, 1922; Machado, 1930.

***Bartramia stricta* Brid.**

IPmap: Casas *et al.*, 1992.

AAL: Luisier, 1916b; Allorge, 1974; Casas *et al.*, 1992; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Luisier, 1916b; Sérgio, 1970-1971; Allorge, 1974; Guerra *et al.*, 1981; Sérgio *et al.*, 1984; Casas *et al.*, 1992.

BA: Braun-Blanquet *et al.*, 1952; Sérgio, 1994a.

BAI: Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1992; Sérgio *et al.*, 1999a.

BB: Catarino *et al.*, 1987; Casas *et al.*, 1992.

- BL:** Henriques, 1889; Warnstorff, 1899; Pereira-Coutinho, 1917b; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
- DL:** Henriques, 1889; Sampaio, 1901-1902; Casas *et al.*, 1992.
- E:** Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Barros, 1942b; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
- Mi:** Machado, 1913; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.
- R:** Pereira-Coutinho, 1917b; Barros, 1942a; Barros, 1942b; Allorge, 1974; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
- TM:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1915b; Ervideira, 1922; Barros, 1942b; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Casas *et al.*, 1992.
- Pt:** Luisier, 1924; Machado, 1930.

***Brachydontium trichodes* (F. Weber) Milde**

DL: Machado, 1917d; Machado, 1928; Casares, 1932; Sérgio *et al.*, 2001e.
It has not been seen since 1917, in spite of the careful searches performed in the area, so is certainly extinct (Sérgio *et al.*, 2001e).

***Brachythecium albicans* (Hedw.) Schimp.**

- AAL:** Sérgio *et al.*, 1997b.
- Ag:** Solms-Laubach, 1868; Henriques, 1889; Machado, 1933; Sérgio *et al.*, 2001e.
- BA:** Machado, 1917b; Sérgio, 1972a; Sérgio, 1994a; Jansen & Sequeira, 1999.
- BA/BB:** Greven & Melick, 1994.
- BB:** Luisier, 1916b; Machado, 1933; Sérgio *et al.*, 2002c.
- DL:** Machado, 1933; Luisier, 1948.
- Mi:** Machado, 1914a; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d.
- TM:** Machado, 1933; Allorge & Allorge, 1949; Sérgio & Schumacker, 1992.

See note under *Brachythecium oxycladum*.

***Brachythecium campestre* (Müll. Hal.) Schimp.**

- DL:** Henriques, 1889; Machado, 1933.
- Mi:** Sá-Nogueira, 1950d; Sérgio, 1972a; Sérgio & Schumacker, 1992.
We believe that new localities can be found.

***Brachythecium dieckii* Roell**

- IPmap:** Sérgio & Draper, 2002b.
- BA:** Henriques, 1889; Machado, 1933; Sérgio, 1994a; Jansen 1998; Sérgio & Jansen, 2000.
- BB:** Machado, 1933.
- TM:** Sérgio & Jansen 2000.
- Pt:** Kindberg, 1887.

Based on the taxonomic revision of the *B. velutinum* group (Sérgio & Jansen, 2000), some plants formerly considered as var. *salicinum* (Schimp.) Mönk. or *B. venustum* De Not. correspond to this species, as it happen to the material of Beira Alta, Serra da Estrela, S. Romão, *leg.* Levier (G!) first reported by Henriques (1889) as *B. venustum*.

***Brachythecium glareosum* (Spruce) Schimp.**

BA: Pierrot, 1972 (*Comm.*), Sérgio, 1994a.
E: Machado, 1917a; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1943.
TM: Sérgio & Schumacker, 1992.

***Brachythecium mildeanum* (Schimp.) Milde**

BA: Teles, 1970.
BB: Sérgio *et al.*, 2002c.
E: Sérgio *et al.*, 1987b; Sérgio *et al.*, 1988.
TM: Teles, 1970; Sérgio & Schumacker, 1992.

***Brachythecium oxycladum* (Brid.) A. Jaeger**

[**Ag:** Solms-Laubach, 1868; Henriques, 1889; Machado, 1933].
We have had the opportunity to study the only specimen recorded in Portugal (Solms-Laubach, 1868) sub *B. lactum* (BM!). But in fact this material corresponds to *Brachythecium albicans*.

***Brachythecium plumosum* (Hedw.) Schimp.**

AAI/BAL: Machado, 1933.
BA: Sérgio, 1972a.
BA/BB: Greven & Melick, 1994.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1933.
Mi: Machado, 1913; Machado, 1916; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.
TM: Machado, 1933.
Pt: Brotero, 1804.

***Brachythecium populeum* (Hedw.) Schimp.**

BA: Machado, 1917a; Sérgio, 1994a.
BB: Machado, 1914a; Machado, 1916; Machado, 1917b; Machado, 1933; Allorge, 1974.
BL: Allorge, 1974.
Mi: Machado, 1933.

***Brachythecium rivulare* Schimp.**

AAI: Sérgio *et al.*, 1997b.
Ag: Pereira-Coutinho, 1917b; Machado, 1933.
BA: Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1972a; Sérgio, 1994a.
BA/BB: Greven & Melick, 1994.
BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.
DL: Luisier, 1916b.
Mi: Henriques, 1889; Machado, 1913; Luisier, 1916b; Machado, 1917a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Teles, 1970; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Ervideira, 1922; Allorge & Allorge, 1949; Teles, 1970.

***Brachythecium rutabulum* (Hedw.) Schimp.**

- AAI:** Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Henriques, 1889; Allorge, 1974.
BA: Sérgio *et al.*, 2001d.
BAL: Luisier, 1916b.
BL: Sá-Nogueira, 1950a; Sérgio, 1972a; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974.
E: Mitten, 1853; Henriques, 1889; Warnstorf, 1899; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1943; Braun-Blanquet *et al.*, 1964; Allorge, 1974; Sérgio & Sim-Sim, 1985a.
Mi: Henriques, 1889; Machado, 1913; Machado, 1914a; Machado, 1916; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
TM: Allorge, 1974.

Some reports of *B. rutabulum* var. *turgescens* Limpr. are included in this species. The mentioned variety was reported from different localities by Allorge (1974).

***Brachythecium salebrosum* (F. Weber & D. Mohr) Schimp.**

- AAI/BAL:** Henriques, 1889; Machado, 1933; Allorge, 1974.
Ag: Solms-Laubach, 1868; Henriques, 1889; Machado, 1933; Allorge, 1974.
BA: Sérgio *et al.*, 2001d.
BAL: Sérgio, 1970-1971; Allorge, 1974.
BL: Allorge, 1974.
E: Barros, 1943; Barros, 1944a; Allorge, 1974.
Mi: Allorge, 1974.

***Brachythecium starkei* (Brid.) Schimp.**

- BA:** Machado, 1917a; Machado, 1917b; Machado, 1933; Sérgio, 1994a; Sérgio *et al.*, 2001b; Sérgio *et al.*, 2002a.
DL: Henriques, 1889; Machado, 1933.
Pt: Luisier, 1924.

Its occurrence in Beira Alta and Portugal is confirmed on the basis of new collections. So, now it is to be considered a species not extinct from Portugal (Sérgio *et al.*, 2002a).

***Brachythecium velutinum* (Hedw.) Schimp.**

- AAI:** Sérgio *et al.*, 1997b.
Ag: Sérgio, 1970-1971; Allorge, 1974.
BA: Henriques, 1889; Machado, 1917b; Machado, 1933; Allorge, 1974; Sérgio, 1994a.
BA/BB: Sampaio, 1901-1902; Greven & Melick, 1994.
BAL: , Sérgio *et al.*, 2002d.
BL: Warnstorf, 1899; Allorge, 1974; Sérgio & Sim-Sim, 1988.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974.
E: Machado, 1933; Allorge, 1974; Sérgio, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985d.
Mi: Machado, 1914a; Machado, 1915a; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Allorge, 1974.

R: Sérgio *et al.*, 1998d.

TM: Ervideira, 1922; Machado, 1933; Allorge, 1974; Sérgio & Schumacker, 1992.

***Bruchia vogesiaca* Schwägr.**

Eurmap: Bonnot, 1967b; Sérgio *et al.*, 1998b.

IPmap: Elias, 1987-1988; Sérgio *et al.*, 1994c.; Casas *et al.*, 1996; Sérgio & Draper, 2002a; Sérgio & Draper, 2002b.

BA: Séneca & Sérgio, 1992; Sérgio, 1994a; Casas *et al.*, 1996; Sérgio *et al.*, 1998b.

BB: Luisier, 1913; Machado, 1928; Casares, 1932; Elias, 1987-1988; Bonnot, 1967b; Casas *et al.*, 1996; Sérgio *et al.*, 1998b.

Mi: Machado, 1918a; Machado, 1920a; Machado, 1928; Casares, 1932; Bonnot, 1967b; Sérgio *et al.*, 1998b; Rushing, 1986; Elias, 1987-1988; Séneca & Sérgio, 1992; Casas *et al.*, 1996.

Pt: Bonnot, 1967a; Sérgio *et al.*, 1994c.

For a review of this endangered species see Sérgio *et al.* (1998b).

***Bryoerythrophyllum campylocarpum* (Müll. Hal.) Crum.**

IPmap: Sérgio *et al.*, 1994c.

BL: Allorge, 1974.

DL: Luisier, 1948.

Mi: Machado, 1917a; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Sérgio, 1968-1969; Hill, 1981; Sollman, 1990; Casas *et al.*, 1996; Sérgio, 1997b; Sérgio *et al.*, 2001e.

Pt: Luisier, 1934; Sérgio, 1968-1969.

Firstly described by Machado (1917a, *Orig. descrip.*), for Minho (Paredes de Coura, Mantelães) sub *Hyophila crenulata*, was later synonymised to *Hyophila machadoana* Sérgio and *Bryoerythrophyllum machadoanum* (Sérgio) M. O. Hill (Sérgio, 1968-1969; Hill, 1981). Later, Sollman (1990) affirmed that this species is the same taxa of *B. campylocarpum*. For other information on this species see under *Amphidium lapponicum*.

***Bryoerythrophyllum lusitanicum* (Cardot & Dixon) M. Hill.**

BL: Dixon, 1912 (*Orig. descrip.*), G. Roth, 1913; Machado, 1928; Casares, 1932; Allorge, 1974; Hill, 1981; Zander, 1986.

Pt: Luisier, 1934.

Dixon (1912) described this taxon as a new species of portuguese bryoflora. The interpretation of the mentioned taxon, accordind to Sollman (1990), should be regarded as synonymy of *B. campylocarpum* (Müll. Hal.) Crum.

***Bryum alpinum* With. s. l.**

AAl: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1931a; Sérgio, 1970-1971; Allorge, 1974.

BA: Henriques, 1883; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Pierrot, 1972; Allorge, 1974; Sérgio, 1994a; Jansen 1998; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Levier, 1880; Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.

BB: Sérgio *et al.*, 2002c.

BL: Allorge, 1935; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Werner, 1997.

E: Henriques, 1889; Sérgio & Tauleigne Gomes, 2001.

Mi: Anônimo, 1887; Henriques, 1889; Anônimo, 1890; Sampaio, 1901-1902; Machado, 1913; Machado, 1914a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988.

TM: Machado, 1915b; Ervideira, 1922; Ervideira, 1926; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924; Machado, 1930.

Many reports of this species belong to var. *meridionale* Schimp., that is in fact the more frequent variety in Portugal.

***Bryum argenteum* Hedw.**

AAI: Barros, 1942b; Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Allorge, 1931a; Sérgio *et al.*, 1984.

BA: Sérgio, 1994a.

BA/BB: Greven & Melick, 1994.

BB: Machado, 1917b; Séneca-Cardoso, 1989.

BL: Brotero, 1804; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1931a; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Anônimo, 1883a; Henriques, 1889; Anônimo, 1890; Sampaio, 1901-1902; Pereira-Coutinho, 1917b.

E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Barros, 1942b; Barros, 1942c; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio, 1987b.

Mi: Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1920a; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988.

TM: Pereira-Coutinho, 1917b; Ervideira, 1922; Ervideira, 1926; Sérgio & Schumacker, 1992.

Pt: Machado, 1930.

***Bryum caespiticium* Hedw.**

AAI: Sérgio *et al.*, 1997b.

Ag: Machado, 1930; Sérgio *et al.*, 1984.

BA: Machado, 1917a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1918b; Machado, 1930; Sérgio, 1969; Teles, 1970; Sérgio, 1994a.

BA/BB: Machado, 1930.

BL: Brotero, 1804; Sérgio, 1969; Sérgio *et al.*, 1988.

E: Ade & Koppe, 1942; Sérgio, 1970-1971; Pierrot, 1972; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.

Mi: Luisier, 1907a; Machado, 1913; Machado, 1917a; Machado, 1930.

R: Sérgio *et al.*, 1988.

TM: Machado, 1915b; Pereira-Coutinho, 1917b; Machado, 1918b; Ervideira, 1926; Machado, 1930; Teles, 1970.

Pt: Luisier, 1924.

We have included in the type variety the reports of *Bryum caespiticium* var. *pseudokunzei* (Limpr.) A. Mach. and *Bryum caespiticium* Hedw. var. *comense* (Schimp.) A. Mach. Without new studies these varieties can not be considered taxonomically significant.

***Bryum canariense* Brid.**

Ag: Solms-Laubach, 1868; Welwitsch, 1872; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1930; Sérgio, 1970-1971.

BA: Sérgio, 1969.

BL: Sérgio *et al.*, 1988.

E: Pierrot, 1972; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.

TM: Allorge, 1935; Allorge & Allorge, 1949.

Pt: Luisier, 1924.

The var. *provinciale* (Philib.) Husn. is not separated from the var. type by several authors, however the two varieties are included in the check-list of the mosses of Italy by Cortinini Pedrotti (2001). Only reported from Beira Alta in one locality by Sérgio (1969). Future observations could confirm the taxonomic status of this taxa in Portugal.

***Bryum capillare* Hedw.**

AAl: Catarino *et al.*, 1987; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Pereira-Coutinho, 1917b; Sérgio, 1970-1971; Sérgio *et al.*, 1984.

BA: Henriques, 1883; Henriques, 1889; Sérgio, 1994a; Jansen 1998; Sérgio *et al.*, 2001d.

BA/BB: Levier, 1880; Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

BB: Luisier, 1916b; Catarino *et al.*, 1987; Sérgio *et al.*, 2002c.

BL: Brotero, 1804; Henriques, 1889; Barros, 1942a; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902.

E: Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Barros, 1942a; Barros, 1942b; Barros, 1942c; Barros, 1943; Sá-Nogueira, 1950b; Sérgio, 1970-1971; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.

Mi: Machado, 1913; Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

R: Barros, 1942a; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio, C. & Sim-Sim, M., 1994; Sérgio *et al.*, 1998d.

TM: Ervideira, 1926; Sérgio & Schumacker, 1992.

Pt: Ervideira, 1922; Machado, 1930.

We have included in the type variety the reports of *B. capillare* var. *meridionale* Schimp.

***Bryum dichotomum* Hedw.**

AAl: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Welwitsch, 1872; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1931a; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984.

BA/BB: Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Allorge, 1974.

BB: Sérgio *et al.*, 2002c.

BL: Levier, 1880; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1931a (Type material ? of var. *pseudo-blindii* Amann); Sá-Nogueira, 1950a; Allorge & Casas de Puig 1958; Allorge, 1974; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Séneca-Cardoso, 1989.

E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Ade & Koppe, 1942; Barros, 1942a; Barros, 1942b; Barros, 1943; Sá-Nogueira, 1950b; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Pereira-Coutinho, 1917b; Barros, 1942a; Barros, 1942b; Allorge, 1974; Sérgio *et al.*, 1988.

TM: Machado, 1915b; Ervideira, 1922.

Pt: Machado, 1930.

This is a polymorphic taxon (= *Bryum bicolor* Dicks.) that was considered complex that includes different species as *Bryum barnesii* J. B. Wood. However this species is now indicated as a distinct species (Vanderpoorten & Zartman, 2002). So, the distribution of this species may change a lot after the revision of the different herbarium specimens.

Bryum donianum Grev.

AAl: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Allorge, 1974; Sérgio *et al.*, 1984.

BA: Sérgio *et al.*, 2001d.

BAI: Sérgio & Garcia, 2001b.

BL: Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Séneca-Cardoso, 1989.

E: Henriques, 1889; Warnstorff, 1899; Pereira-Coutinho, 1917b; Ade & Koppe, 1942; Barros, 1942a; Allorge, 1974; Sérgio & Sim-Sim, 1985a.

Mi: Pereira-Coutinho, 1917b; Machado, 1920a; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Venturi, 1881; Luisier, 1924; Machado, 1930.

Bryum dunense A. J. E. Sm. & H. Whitehouse

Ag: Sérgio *et al.*, 1984.

BL: Leitão *et al.*, 1996.

E: Guerra & Puche, 1984.

Mi: Guerra & Puche, 1984.

Based on the taxonomic study of *Bryum bicolor* complex (Vanderpoorten & Zartman, 2002) this species is considered a synonym of *B. bicolor* see *B. dichotomum*. For Portugal, all taxa of this complex (*B. bicolor*, *B. gemmiluscens*, *B. gemmiferum* and *B. barnesii*) need to be revised.

Bryum elegans Nees

Ag: Dixon, 1912; Machado, 1930.

BA: Sérgio, 1994a.

BA/BB: Pereira-Coutinho, 1917b; Machado, 1930; Greven & Melick, 1994.
Mi: Machado, 1920a.
Pt: Luisier, 1924; Machado, 1930.

***Bryum gemmiferum* R. Wilczek & Demaret**

Ag: Sérgio *et al.*, 1984.
BL: Sérgio *et al.*, 1988.
R: Sérgio *et al.*, 1988.

***Bryum gemmilucens* R. Wilczek & Demaret**

IPmap: Elias, 1988.
Ag: Sérgio *et al.*, 1984.
BB: Sérgio *et al.*, 2002c.
BL: Sérgio *et al.*, 1988.

***Bryum gemmiparum* De Not.**

AAI: Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Machado, 1930; Allorge, 1931a; Allorge, 1974; Sérgio *et al.*, 1984.
BL: Allorge, 1931a; Allorge, 1974.
E: Allorge, 1931a; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d.

***Bryum klinggraeffii* Schimp.**

Ag: Townsend, 1994.

***Bryum machadoi* G. Roth.**

A species erroneously reported from Portugal by Podpera, 1954. Moenkemeyer (1927) reported the species to “Salamanka in Portugal” based on a collection from Machado in 1914 as *Bryum pendulum* subsp. *machadoi* (G. Roth) Amann. This report is to be placed in Spain.

***Bryum mildeanum* Jur.**

Ag: Sérgio *et al.*, 1984.
BA: Teles, 1970.
E: Sérgio *et al.*, 1987b.
TM: Teles, 1970.

***Bryum minii* Podp.**

Ipmap: Sérgio & Draper, 2002b.
Ptmap: Sérgio *et al.*, 1999b.
AAI: Pierrot, 1972; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1999b.
BA: Machado, 1918; Machado, 1930; Machado, 1935; Jansen & Sequeira, 1999; Sérgio *et al.*, 1999b; Sérgio *et al.*, 2001d.
BB: Sérgio, 1968-1969; Sérgio *et al.*, 1999b; Sérgio *et al.*, 2001d; Sérgio *et al.*, 2001c; Sérgio *et al.*, 2002c.
DL: Pereira-Coutinho, 1917b; Sérgio *et al.*, 1999b.

Mi: Machado, 1916; Machado, 1918; Machado, 1920a; Machado, 1930; Machado, 1935; Sérgio & Schumacker, 1992; Sérgio *et al.*, 1999b.

Pt: Luisier, 1924; Podpera, 1954; Podpera, 1955; Podpera, 1973.

The first published record of this species in Portugal was provided by Machado (1916) who cited a specimen of *Bryum marginatum* Schimp. collected in Minho, Famalicão, in the northern part of the country. Machado (1935) considered that this species should be included in the *Pseudotriquetra* Section as a new species, *B. minii* Podp. *in litt.* based on Podepera observations (*Orig. descrip.*). Sérgio (1968-1969) reported this species again at a new locality, Beira Baixa, and more recently it was considered a more or less frequent species in Portugal (Sérgio *et al.*, 1999b).

***Bryum muehlenbeckii* Bruch & Schimp.**

AAl: Sérgio *et al.*, 1997b.

BA: Machado, 1920b; Machado, 1930; Sérgio, 1994a.

Mi: Sérgio & Schumacker, 1992.

R: Ferreira, 1992.

Pt: Machado, 1930.

***Bryum neodamense* Itzig. ex Müll. Hal.**

AAl: Sérgio & Casas, 2002.

***Bryum pallescens* Schwägr.**

BA: Machado, 1917b; Machado, 1933; Sérgio, 1968-1969; Sérgio, 1994a.

BB: Pereira-Coutinho, 1917b.

TM: Allorge & Allorge, 1949.

***Bryum platyloma* Schwägr.**

Mi: Machado, 1917a; Machado, 1917b; Machado, 1930; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

Pt: Luisier, 1934.

***Bryum pseudotriquetrum* (Hedw.) P. Gaertn., B. Mey. & Scherb.**

AAl: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1930; Guerra *et al.*, 1981.

BA: Teles, 1970; Pierrot, 1972; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Sérgio *et al.*, 2002c.

BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.

BL: Allorge, 1931a; Sá-Nogueira, 1950a; Werner, 1997.

DL: Henriques, 1889; Sampaio, 1901-1902.

E: Sá-Nogueira, 1950e; Sérgio *et al.*, 1988.

Mi: Machado, 1914a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1930; Barros, 1944b; Sá-Nogueira, 1950d; Teles, 1970; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Allorge & Allorge, 1949; Teles, 1970; Séneca-Cardoso, 1989.

Pt: Machado, 1930.

Bryum radiculosum Brid.

- AAl:** Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Machado, 1930.
BL: Warnstorff, 1899.
DL: Anônimo, 1883a; Henriques, 1889; Anônimo, 1890; Sampaio, 1901-1902; Luisier, 1916b; Pereira-Coutinho, 1917b.
E: Barros, 1943; Sérgio & Tauleigne Gomes, 2001.
Mi: Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

Bryum rubens Mitt.

- Ag:** Townsend, 1994.
BA: Sérgio *et al.*, 2001a.
BL: Allorge, 1974; Sérgio, 2002b.
E: Pereira-Coutinho, 1917b; Machado, 1930; Allorge, 1974.
Mi: Machado, 1914a.

Bryum ruderale Crundw. & Nyholm

- TM:** Pierrot, 1972.

Bryum schleicheri Schwägr.

- BA:** Sérgio, 1968-1969.

Bryum subapiculatum Hampe

- BA:** Sérgio *et al.*, 2001d.

Bryum torquescens De Not.

- AAl:** Pereira-Coutinho, 1917b; Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984.
BA: Sérgio, 1994a.
BAl: Pereira-Coutinho, 1917b; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1999a.
BL: Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b.
E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1920a.
R: Pereira-Coutinho, 1917b; Sérgio *et al.*, 1988.
TM: Machado, 1915b.
Pt: Machado, 1930.

Bryum valparaisense Thér.

- Wmap:** Arts *et al.*, 1995.
Ag: Townsend, 1994.
BAl: Sérgio & Garcia, 2001b.

Buckiella undulata* (Hedw.) Ireland*IPmap:** Casas *et al.*, 1992.**[E:** Henriques, 1889; Machado, 1933].**Mi:** Machado, 1920a; Machado, 1933; Casas *et al.*, 1992; Sérgio & Schumaker, 1992.**TM:** Casas *et al.*, 1992.

The species was reported dubiously to Estremadura, Mafra. In fact, all the reports gathered by E. da Veiga and reported by Henriques or Machado are uncertain.

Calliergonella cuspidata* (Hedw.) Loeske*Ag:** Machado, 1933; Allorge, 1974.**BA:** Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Sérgio, 1969; Teles, 1970; Allorge, 1974; Sérgio, 1994a.**BB:** Machado, 1933.**BL:** Allorge, 1931a; Machado, 1933; Anónimo, 1969; Allorge, 1974.**DL:** Sampaio, 1901-1902; Machado, 1933; Sá-Nogueira, 1958; Allorge, 1974.**E:** Luisier, 1910c; Luisier, 1916b; Machado, 1933; Allorge, 1974.**Mi:** Henriques, 1889; Machado, 1913; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Teles, 1970; Allorge, 1974; Sérgio & Schumacker, 1992.**TM:** Ervideira, 1922; Machado, 1933; Allorge & Allorge, 1949; Teles, 1970; Allorge, 1974; Sérgio & Schumacker, 1992.***Campyliadelphus chrysophyllus* (Brid.) R. S. Chopra****BL:** Allorge, 1931b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 2001e.Is certainly an extinct species (Sérgio *et al.*, 2001e).***Campylium stellatum* (Hedw.) C. E. O. Jensen****BL:** Sérgio, 1968-1969; Anónimo, 1969.

Only reported from Vouga region, Pateira de Fermentelos. The two specimens in COI were recently confirmed (!).

Campylopus atrovirens* De Not.*[E:** Machado, 1928].

The report of its occurrence in Portugal, Estremadura: Arrentela and Algarve, is still uncertain, as Machado (1928) could not validate the species identification (*nom. vidi*). In LISU the specimen from Arrentela (*Leg. Welwitsch*) was not found.

Campylopus brevipilus* Bruch & Schimp.*AAl:** Sérgio *et al.*, 1997b.**Ag:** Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Machado, 1928; Casares, 1932; Sérgio, 1970-1971; Allorge, 1974.**BA/BB:** Greven & Melick, 1994.**BB:** Braun-Blanquet *et al.*, 1964.**BL:** Allorge, 1935; Anónimo, 1967; Allorge, 1974.**DL:** Werner, 1997.**E:** Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Sim-Sim, 1985a.

Mi: Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casares, 1932; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Braun-Blanquet *et al.*, 1964; Allorge, 1974.

R: Sérgio *et al.*, 1988.

TM: Ervideira, 1922; Sérgio & Schumacker, 1992.

***Campylopus flexuosus* (Hedw.) Brid.**

AAl: Sérgio *et al.*, 1997b.

Ag: Dixon, 1912; Casares, 1932; Allorge, 1974.

BA/BB: Greven & Melick, 1994.

BL: Allorge, 1935; Sá-Nogueira, 1950a; Sérgio, 1972a; Allorge, 1974.

DL: Allorge, 1974.

Mi: Luisier, 1907a; Machado, 1913; Machado, 1920a; Machado, 1928; Casares, 1932; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio, 1972a; Allorge, 1974.

TM: Sérgio & Schumacker, 1992.

***Campylopus fragilis* (Brid.) Bruch & Schimp.**

Ag: Solms-Laubach, 1868; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casares, 1932; Allorge, 1974; Guerra *et al.*, 1981.

BA: Sérgio, 1972a; Allorge, 1974.

BL: Allorge, 1935; Allorge, 1974.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932; Sérgio, 1969; Allorge, 1974.

E: Levier, 1880; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Ade & Koppe, 1942; Allorge, 1974.

Mi: Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Barros, 1944b; Allorge, 1974; Sérgio & Schumacker, 1992.

***Campylopus introflexus* (Hedw.) Brid.**

Wmap: Söderström, 1992.

BL: Sérgio, 2001b.

DL: Sérgio, 2001b.

E: Sérgio, 1997c.

Mi: Sérgio, 2001b.

***Campylopus pilifer* Brid.**

IPmap: Casas *et al.*, 1989.

AAl: Casas *et al.*, 1989; Sérgio *et al.*, 1997b.

AAI/BAI: Machado, 1928; Casares, 1932; Allorge, 1974.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Sérgio, 1970-1971; Allorge, 1974; Guerra *et al.*, 1981; Casas *et al.*, 1989.

Ba: Barros, 1942a; Sérgio, 1969; Allorge, 1974; Gradstein & Sipman, 1978; Casas *et al.*, 1989; Sérgio *et al.*, 2001d.

BA/BB: Casares, 1932; Greven & Melick, 1994.

BB: Luisier, 1907c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974; Casas *et al.*, 1989.

BL: Levier, 1880; Warnstorff, 1899; Allorge, 1931a; Barros, 1942b; Anónimo, 1967; Sérgio, 1969; Allorge, 1974; Casas *et al.*, 1989; Werner, 1997.

DL: Venturi, 1881; Henriques, 1889; Sampaio, 1901-1902; Luisier, 1907c; Machado, 1928; Braun-Blanquet *et al.*, 1964; Allorge, 1974; Casas *et al.*, 1989; Werner, 1997.

E: Mitten, 1853; Henriques, 1889; Luisier, 1907a; Luisier, 1907c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Barros, 1942c; Allorge, 1974; Casas *et al.*, 1989.

Mi: Luisier, 1907c; Machado, 1913; Machado, 1914b; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Allorge, 1931a; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Gradstein & Sipman, 1978; Casas *et al.*, 1989; Reinoso *et al.*, 1990; Sérgio & Schumacker, 1992.

R: Luisier, 1916b; Sérgio *et al.*, 1988; Casas *et al.*, 1989.

TM: Machado, 1915b; Ervideira, 1926; Machado, 1928; Allorge, 1974; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

Pt: Pereira-Coutinho, 1917b; Ervideira, 1922; Casares, 1932.

***Campylopus pyriformis* (Schultz) Brid.**

Mi: Sérgio & Schumacker, 1992; Sérgio & Séneca, 1994.

***Campylopus subulatus* Schimp.**

AAI: Sérgio *et al.*, 1994d; Sérgio *et al.*, 1997b.

[Mi: Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sá-Nogueira, 1950e].

R: Sérgio *et al.*, 1994d.

The different reports to Minho: Serra do Gerês, Escurêdo, by Sá-Nogueira, correspond to *C. pyriformis* (Sérgio & Schumacker 1992).

***Campylostelium strictum* Solms**

IPmap: Casas *et al.*, 1989.

AAI: Sérgio *et al.*, 1994d; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868 (*Orig. descrip.*), Welwitsch, 1872; Henriques, 1889; Machado, 1933; Casas *et al.*, 1989.

BA: Casas *et al.*, 1989; Sérgio *et al.*, 1994d.

BL: Allorge, 1931a; Sérgio *et al.*, 1994d.

DL: Sampaio, 1901-1902; Machado, 1933; Casas *et al.*, 1989.

Mi: Machado, 1914a; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

Pt: Venturi, 1881.

Ceratodon purpureus* (Hedw.) Brid. subsp. *purpureus

AAI: Sérgio *et al.*, 1997b.

Ag: Estácio da Veiga, 1869; Allorge, 1974; Burley & Pritchard, 1990.

BA: Henriques, 1883; Henriques, 1889; Luisier, 1916b; Braun-Blanquet *et al.*, 1952; Sérgio, 1994a; Jansen 1998; Jansen & Sequeira, 1999; Jansen *et al.*, 2000.

BA/BB: Séneca-Cardoso, 1989; Greven & Melick, 1994.

BB: Luisier, 1910c; Luisier, 1916b; Allorge, 1974; Burley & Pritchard, 1990; Sérgio *et al.*, 2002c.

BL: Henriques, 1889; Allorge, 1935; Allorge, 1974.

DL: Henriques, 1889.

E: Brotero, 1804; Henriques, 1889; Luisier, 1916b; Ade & Koppe, 1942; Allorge, 1974; Sérgio *et al.*, 1988.

Mi: Henriques, 1889; Luisier, 1910c; Machado, 1913; Machado, 1916; Machado, 1917b; Machado, 1920a; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988;

TM: Machado, 1915b; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Machado, 1928.

***Ceratodon purpureus* (Hedw.) Brid. subsp. *stenocarpus* (Bruch & Schimp.) Dixon**

Ag: Solms-Laubach, 1868; Welwitsch, 1872; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932.

BA: Henriques, 1889; Machado, 1928.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928.

TM: Allorge & Allorge, 1949.

Many reports from Portugal have been placed generically under *Ceratodon purpureus* s. l. A revision of herbarium material is necessary. *C. purpureus* var. *pallidisetus* Luisier (Luisier, 1916b) corresponds to the var. type (Burley & Pritchard, 1990).

***Ceratodon purpureus* (Hedw.) Brid. var. *xanthopus* Sull. & Lesq. ex Lesq. & James**

[**BA:** Pereira-Coutinho, 1917b; Sá-Nogueira, 1950e; Sérgio, 1994a.

BB: Machado, 1913; Machado, 1928.

Mi: Pereira-Coutinho, 1917b; Machado, 1928; Barros, 1944b; Sá-Nogueira, 1950d.

TM: Ervideira, 1922; Machado, 1928.]

Many reports correspond also to *C. purpureus* var. *pallidisetus* Luis, and according to Burley & Pritchard (1990) to the var. type.

***Cheilothela chloropus* (Brid.) Broth.**

IPmap: Casas *et al.*, 1985.

AAl: Allorge, 1935; Casas *et al.*, 1985; Sérgio *et al.*, 1997b.

Ag: Dixon, 1912; Sérgio *et al.*, 1984; Casas *et al.*, 1985.

BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.

BB: Casas *et al.*, 1985.

BL: Casares, 1932; Braun-Blanquet *et al.*, 1956; Pierrot, 1972; Casas *et al.*, 1985; Sérgio *et al.*, 1988.

E: Mitten, 1853; Levier, 1880; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Pierrot, 1972; Sérgio, 1972a; Sérgio & Correia, 1981; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

R: Sérgio, 1972a; Casas *et al.*, 1985; Sérgio *et al.*, 1988.

TM: Casas *et al.*, 1985.

***Cinclidotus aquaticus* (Hedw.) Bruch & Schimp.**

BL: Sérgio *et al.*, 1987b; Sérgio *et al.*, 1988.

R: Sérgio *et al.*, 1987b; Sérgio *et al.*, 1988.

***Cinclidotus fontinaloides* (Hedw.) P. Beauv.**

AAl: Sérgio *et al.*, 1994d.

- BAI:** Sérgio, 1970-1971.
BB: Luisier, 1916b; Machado, 1928; Casares, 1932.
BL: Sérgio, 1969; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932.
E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Barros, 1944a; Sérgio *et al.*, 1988.
Mi: Henriques, 1889; Machado, 1913; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.

Cinclidotus riparius (Brid.) Arn.

- R:** Sérgio, 1972a; Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

Cirriphyllum crassinervium (Taylor) M. Loeske & Fleisch.

- Ag:** Dixon, 1912; Machado, 1933; Allorge, 1974.
BA/BB: Greven & Melick, 1994.
BL: Dixon, 1912; Allorge, 1931a; Machado, 1933; Allorge, 1974.
DL: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
E: Levier, 1880; Henriques, 1889; Allorge, 1931a; Machado, 1933; Sá-Nogueira, 1950b; Allorge, 1974.
Mi: Machado, 1914a; Machado, 1916; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
TM: Allorge & Allorge, 1949.

Claopodium whippleanum (Sull.) Ren. & Cardot

- Wmap:** Allorge, 1931c; Sérgio, 1990.
IPmap: Casas *et al.*, 1985; Jiménez *et al.*, 1986.
AAI: Allorge, 1974; Sérgio *et al.*, 1994d; Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Welwitsch, 1872; Schimper 1876; Henriques, 1889; Dixon, 1912; Luisier, 1915d; Machado, 1933; Machado, 1933; Allorge, 1935; Sharp, 1973-1974; Allorge, 1974; Guerra *et al.*, 1981; Casas *et al.*, 1985; Jiménez *et al.*, 2002.
BA: Allorge, 1931b; Machado, 1933; Pierrot, 1972; Allorge, 1974; Casas *et al.*, 1985; Sérgio, 1994a; Sérgio *et al.*, 1994d; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAL: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.
BB: Machado, 1933; Sérgio *et al.*, 1994d.
BL: Dixon, 1912; Allorge, 1931b; Machado, 1933; Machado, 1933; Allorge, 1935; Allorge, 1974; Casas *et al.*, 1985.
Mi: Machado, 1920b; Allorge, 1931b; Machado, 1933; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1985; Sérgio & Schumacker, 1992.
R: Sérgio, 1972a; Allorge, 1974; Casas *et al.*, 1985.
TM: Allorge, 1931b; Machado, 1933; Allorge & Allorge, 1949; Allorge, 1974; Casas *et al.*, 1985; Sérgio *et al.*, 1994d.
Pt: Kindberg, 1887; Luisier, 1934.

First reported from Algarve, Monchique, *leg.* Solms-Laubach as *Thuidium punctulatum* sensu Solms. The original description in Schimper (1876) was as *Leskea? algarvica* Schimp., and after it was included in *Thuidium algaricum* (Kindberg, 1887).

***Climaciumpunctulatum* (Hedw.) F. Weber & D. Mohr**

IPmap: Casas *et al.*, 1985.

BA/BB: Greven & Melick, 1994; Sérgio *et al.*, 2001e.

Mi: Casas *et al.*, 1985.

Only known from one locality in Minho (Casas *et al.*, 1985), *leg.* Ricardo da Cunha, 1865 (LISU!). A more recent record from Serra da Estrela (Greven & Melick, 1994) was indicated but has not been revised by us.

***Coscinodon cibrosus* (Hedw.) Spruce**

IPmap: Casas *et al.*, 1985; Jiménez *et al.*, 1986.

Ag: Dixon, 1912; Machado, 1930; Casas *et al.*, 1985.

BA: Pierrot, 1972; Casas *et al.*, 1985.

***Cratoneuron filicinum* (Hedw.) Spruce**

BA/BB: Greven & Melick, 1994.

BL: Henriques, 1889; Machado, 1933; Sérgio *et al.*, 2001e.

BB: Luisier, 1916b; Machado, 1933.

TM: Allorge & Allorge, 1949.

The first Portuguese reporting of this species was from Coimbra, Quinta das Lágrimas, by Henriques (1889) based on Moller's material, sub *Hypnum filicinum* L. The specimens named *C. filicinum* var. *fallax* Brid. from Coimbra gathered by Welwitsch, 1848 (LISU!) was reported by Pereira-Coutinho (1917) as *Amblystegium irriguum* var. *spinifolium*. We have studied these specimens and corresponds to this taxon (*C. filicinum*).

***Crossidium crassinerve* (De Not.) Jur.**

AAI: Sérgio, 1994b.

***Crossidium squamiferum* (Viv.) Jur.**

IPmap: Fuertes, 1983.

AAI: Machado, 1928; Casares, 1932; Fuertes, 1983.

Ag: Dixon, 1912; Machado, 1928; Allorge, 1931a; Casares, 1932; Fuertes, 1983; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BL: Henriques, 1889; Casares, 1932; Fuertes, 1983; Sérgio *et al.*, 1988.

E: Pereira-Coutinho, 1917b; Pierrot, 1972; Fuertes, 1983; Sérgio & Sim-Sim, 1985a.

R: Sérgio *et al.*, 1988.

TM: Machado, 1915b; Machado, 1928; Casares, 1932; Pierrot, 1972; Fuertes, 1983.

Pt: Sérgio *et al.*, 1987a.

***Cryphaea heteromalla* (Hedw.) D. Mohr**

Ptmap: Sim-Sim & Sérgio, 1998.

IPmap Casas *et al.*, 1992.

AAI: Allorge, 1974; Casas *et al.*, 1992.

Ag: Solms-Laubach, 1868; Henriques, 1889; Machado, 1933; Allorge, 1974; Casas *et al.*, 1992.

- BA:** Sérgio *et al.*, 2001d.
BAI: Casas *et al.*, 1992; Sérgio *et al.*, 2002d.
BB: Calleja *et al.*, 2001.
BL: Brotero, 1804; Levier, 1880; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Sá-Nogueira, 1950a; Allorge, 1974; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Kindberg, 1898; Casas *et al.*, 1992.
DL: Anônimo, 1883a; Henriques, 1889; Anônimo, 1890; Sampaio, 1901-1902; Luisier, 1916b; Pereira-Coutinho, 1917b; Casas *et al.*, 1992.
E: Rao, 2001; Mitten, 1853; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Barros, 1942c; Barros, 1943; Sá-Nogueira, 1950b; Pais, 1966; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
Mi: Machado, 1913; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950c; Allorge, 1974; Casas *et al.*, 1992.
R: Sérgio *et al.*, 1988; Casas *et al.*, 1992; Sérgio *et al.*, 1998d.
Pt: Venturi, 1881; Sérgio *et al.*, 1987a.

***Ctenidium molluscum* (Hedw.) Mitt.**

- BL:** Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1935; Sérgio, 1972a; Allorge, 1974; Sérgio *et al.*, 1988.
E: Brotero, 1804; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Allorge, 1974.
Pt: Sérgio *et al.*, 1987a.

***Cyclodictyon laetevirens* (Hook. & Taylor) Mitt.**

- Wmap:** Sérgio, 1990.
Mi: Machado, 1920b; Machado, 1933; Sá-Nogueira, 1950d; Casas *et al.*, 1992; Sérgio & Schumacker, 1992; Sérgio *et al.*, 2001b.

***Cynodontium bruntonii* (Sm.) Bruch & Schimp.**

- AAI:** Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Machado, 1928; Casares, 1932; Allorge, 1974.
BA: Pereira-Coutinho, 1917b; Machado, 1928; Barros, 1942a; Pierrot, 1972; Allorge, 1974; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.
BB: Sérgio, 1972a.
BL: Allorge, 1974; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1974; Werner, 1997.
E: Machado, 1928; Sérgio *et al.*, 1988.

Mi: Mitten, 1853; Welwitsch, 1872; Henriques, 1889; Machado, 1913; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio, 1972a; Allorge, 1974.

TM: Machado, 1915b; Pereira-Coutinho, 1917b; Ervideira, 1922; Machado, 1928; Casares, 1932; Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Sérgio *et al.*, 1987a.

***Cynodontium gracilescens* (F. Weber & D. Mohr) Schimp.**

BA: Sérgio *et al.*, 2001b; Garcia *et al.*, 2002.

[**E:** Henriques, 1889.

Mi: Henriques, 1889.]

Pt: Luisier, 1924; Sérgio *et al.*, 2001e.

Luisier (1924) considered the record from Estremadura-Mafra and Minho-Gerês almost certainly an error. We were able to study the specimen from Gerês (COI!) and it corresponds to *Dicranoweisia cirrata*. *C. gracilescens* was recently found in Serra da Estrela.

***Cynodontium jenneri* (Schimp.) Stirt.**

BA: Sérgio *et al.*, 1994b.

BA/BB: Greven & Melick, 1994.

***Cynodontium polycarpon* (Hedw.) Schimp.**

[**BA:** Sérgio, 1969.

DL: Sérgio, 1969.

Mi: Henriques, 1889; Machado, 1913; Machado, 1928; Casares, 1932; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.]

TM: Séneca-Cardoso, 1989; Sérgio *et al.*, 2001e.

The species was only reported from one locality, Trás-os-Montes e Alto Douro: Vimioso, Argosêlo, leg. Miranda Lopes, 1929, PO 543B (Séneca-Cardoso, 1989). More recent reports (Sérgio, 1969 and Sérgio & Schumacker, 1992) are erroneous, so this species needs to be considered as certainly extinct (Sérgio *et al.*, 2001e).

***Cynodontium tenellum* (Schimp.) Limpr.**

[**Mi:** Machado, 1917b; Machado, 1928; Sá-Nogueira, 1950d].

The reports from Minho: Serra do Gerês, Leonte (Machado, 1917b, 1928) not being found in herbarium specimens, are to be considered as uncertain.

***Dendrocyphaea lamyana* (Mont.) P. Rao**

IPmap: Casas *et al.*, 1992; Sérgio *et al.*, 1994c; Sérgio & Draper, 2002b.

Ag: Rao, 2001; Casas *et al.*, 1992.

BA: Casas *et al.*, 1992.

BAl: Sérgio, 1970-1971; Casas *et al.*, 1992.

BB: Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942b; Casas *et al.*, 1992.

BL: Machado, 1933; Casas *et al.*, 1992.

DL: Gomes Da Silva, 1881; Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Casas *et al.*, 1992.

Mi: Rao, 2001; Machado, 1918; Machado, 1920a; Machado, 1933; Casas *et al.*, 1992.

TM: Casas *et al.*, 1992.

Pt: Kindberg, 1887.

Desmatodon meridionalis Luisier

[**BAI:** Luisier, 1915a; Luisier, 1916b; Machado, 1928; Sérgio & Granzow De La Cerdia, 2001.]

Pt: Luisier, 1924; Luisier, 1934; Whitehouse, 1965].

Firstly described by Luisier (1915a), the Holotype specimen (INA!) was subsequently studied and considered as a synonym of *Tortula marginata* (Sérgio & Granzow de la Cerdia, 2001). Only known in sterile form, Dixon suggested in a letter to Luisier, that this specimen could be a sterile form of *D. cernuus*. Whitehouse (1961) examined authentic material and considered that it might be a stunted form of *T. marginata* (in Corley *et al.*, 1981).

Dalytrichia mucronata (Brid.) Broth. var. *mucronata*

Ptmap: Sérgio & Sim-Sim, 1984.

Ipmmap: Casas *et al.*, 1985.

AAl: Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d.

Ag: Solms-Laubach, 1868; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio *et al.*, 1984; Casas *et al.*, 1985; Sérgio *et al.*, 1987a.

BA: Casas *et al.*, 1985.

BA/BB: Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1985; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

BB: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1974; Casas *et al.*, 1985; Catarino *et al.*, 1987.

BL: Allorge, 1931a; Allorge, 1974; Casas *et al.*, 1985; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.

DL: Ade & Koppe, 1942; Casas *et al.*, 1985.

E: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Barros, 1942c; Barros, 1943; Pierrot, 1972; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bentoo-Pereira & Sérgio, 1983; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.

Mi: Machado, 1928; Casares, 1932; Allorge, 1974; Casas *et al.*, 1985; Sérgio & Schumacker, 1992.

R: Casas *et al.*, 1985; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d.

TM: Machado, 1915b; Machado, 1928; Casares, 1932; Allorge, 1974; Casas *et al.*, 1985.

Pt: Luisier, 1924; Sérgio *et al.*, 1987a; Zander, 1993.

We assumed the criteria of Zander (1993) to consider *D. mucronata* in the genus *Dalytrichia* apart from *Cinclidotus*.

***Dalytrichia mucronata* (Brid.) Broth. var. *conferta* (Corb.) Corb. in Pitard**

E: Sérgio & Correia, 1981.
Pt: Sérgio & Sim-Sim, 1984.

***Dalytrichia mucronata* (Brid.) Broth. var. *fragilifolia* Bizot & Roux**

AAl: Sérgio *et al.*, 1997b.
BAl: Sérgio *et al.*, 1999a.
BL: Allorge, 1974.
E: Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.
R: Sérgio *et al.*, 1998d.
Pt: Sérgio & Sim-Sim, 1984.

***Dichodontium pellucidum* (Hedw.) Schimp.**

[**E:** Henriques, 1889; Machado, 1928; Casares, 1932].
The species was reported dubiously from Estremadura, Mafra. In fact, all the reports correspond to the material gathered by E. da Veiga and can be erroneous.

***Dicranella heteromalla* (Hedw.) Schimp.**

AAl: Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Welwitsch, 1872; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casares, 1932; Allorge, 1974; Guerra *et al.*, 1981; Jiménez *et al.*, 2002.
BA: Allorge, 1974; Sérgio, 1994a; Jansen 1998; Sérgio *et al.*, 2001d.
BA/BB: Machado, 1917b; Casares, 1932; Greven & Melick, 1994.
BAI: Sérgio, 1970-1971; Anônimo, 1967; Allorge, 1974.
BB: Machado, 1928.
BL: Allorge, 1931a; Allorge, 1935; Allorge, 1974; Werner, 1997.
DL: Henriques, 1889; Warnstorf, 1899 (*Orig. descrip.*); Sampaio, 1901-1902; Machado, 1917a; Machado, 1928; Casares, 1932; Allorge, 1974; Werner, 1997.
E: Machado, 1928; Casares, 1932; Allorge, 1974.
Mi: Machado, 1913; Machado, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
TM: Ervideira, 1922; Ervideira, 1926; Casares, 1932; Sérgio & Schumacker, 1992.
We include in this taxon *D. heteromalla* var. *lusitanica* (Warnst.) Podp. reported from Beira Litoral, Buçaco, *leg.* Matz (ap. Warnstorf) (Allorge, 1974). See also Limpricht (1890) and Podpera (1954).

***Dicranella howei* Renaud & Cardot**

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BL: Warnstorf, 1899; Casares, 1932; Crundwell & Nyholm, 1977; Sérgio *et al.*, 1988.
E: Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
R: Sérgio *et al.*, 1988.
Pt: Luisier, 1924; Sérgio *et al.*, 1987a.

***Dicranella rufescens* (With.) Schimp.**

BA: Sérgio *et al.*, 2001a.
DL: Werner, 1997; Sérgio *et al.*, 2001e.

Mi: Machado, 1917a; Machado, 1920a; Machado, 1928; Casares, 1932.
 In Machado (1928), this species was recorded in a few localities of the Coura region, Minho. Only in 1995 was refound (Werner, 1997) in Serra da Freita and, more recently, was collected in different localities of Serra da Estrela (Sérgio *et al.*, 2001a).

***Dicranella subulata* (Hedw.) Schimp.**

BA: Sérgio *et al.*, 2001e; Sérgio *et al.*, 2002a.

Mi: Machado, 1917a; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932.

Species considered extinct in the Iberian Red List but that was recently recorded in new localities (Sérgio *et al.*, 2001e).

***Dicranella varia* (Hedw.) Schimp.**

AAI: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Machado, 1928; Allorge, 1935; Allorge, 1974.

BA: Sérgio, 1994a.

BAI: Sérgio, 1970-1971; Allorge, 1974.

BL: Brotero, 1804; Henriques, 1889; Machado, 1928; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928.

E: Brotero, 1804; Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974.

Mi: Mitten, 1853; Henriques, 1889; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

R: Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974.

Pt: Sérgio *et al.*, 1987a.

***Dicranoweisia cirrata* (Hedw.) Lindb. ex Milde**

AAI: Catarino *et al.*, 1987; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d.

AAI/BAI: Henriques, 1889; Machado, 1928; Allorge, 1974.

Ag: Solms-Laubach, 1868; Machado, 1928; Casares, 1932.

BA: Allorge, 1974.

BA/BB: Greven & Melick, 1994.

BB: Catarino *et al.*, 1987.

BL: Henriques, 1889; Warnstorf, 1899; Sampaio, 1901-1902; Machado, 1928; Sá-Nogueira, 1950a; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932; Allorge, 1974.

E: Barros, 1943; Sá-Nogueira, 1950e; Allorge, 1974; Sérgio, 1981; Sérgio & Sim-Sim, 1985a.

Mi: Machado, 1913; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos, 2001.

R: Catarino *et al.*, 1987; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d.

TM: Machado, 1928; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Brotero, 1804; Venturi, 1881; Sérgio *et al.*, 1987a.

See note under *Cynodontium gracilescens*.

Dicranum crassifolium Sérgio, Ochyra & Séneca**Ptmap:** Sérgio *et al.*, 1997b.**AAI:** Sérgio *et al.*, 1997b.**Ag:** Sérgio *et al.*, 1995b.**BA:** Sérgio *et al.*, 1995b; Sérgio *et al.*, 2001d.**BB:** Sérgio *et al.*, 1995b.**BL:** Sérgio *et al.*, 1995b.**DL:** Sérgio *et al.*, 1995b.**E:** Sérgio *et al.*, 1995b.**Mi:** Sérgio *et al.*, 1995b.**TM:** Sérgio *et al.*, 1995b.*Orig. descrip.* In Sérgio *et al.*, 1995b.*Dicranum fuscescens* Turner**[DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932; Sérgio *et al.*, 2001b].

Recorded only in Douro Litoral, Serra do Pilar by Newton (Henriques, 1889). However, the specimen does not exist in any herbarium collection, as Machado (1928) indicated. It may be a dubious species (Sérgio *et al.*, 2001e) to Portugal.

Dicranum majus Turner**[BL:** Sá-Nogueira, 1950e.**E:** Henriques, 1889; Machado, 1928].

The species was reported dubiously for Estremadura, Mafra. In fact, all the reports correspond to material gathered by E. da Veiga and should be erroneous. So, this species should be considered as critical and be excluded from Portugal until the report from Beira Litoral, Figueiró dos Vinhos, is confirmed (not stored in LISFA herbarium).

Dicranum scoparium Hedw.**AAI:** Allorge, 1974; Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Sérgio, 1970-1971; Allorge, 1974.**BA:** Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b; Braun-Blanquet *et al.*, 1952; Braun-Blanquet *et al.*, 1956; Tavares, 1956; Allorge, 1974; Jansen, 1994; Sérgio, 1994a; Jansen 1998; Jansen *et al.*, 2000; Albertos, 2001; Sérgio *et al.*, 2001d.**BA/BB:** Sampaio, 1901-1902; Machado, 1917b; Greven & Melick, 1994; Jansen, 1994.**BB:** Mitten, 1853; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1974; Jansen, 1994; Jansen *et al.*, 1997.**BL:** Henriques, 1889; Allorge, 1935; Sá-Nogueira, 1950a; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Catarino *et al.*, 1987.**DL:** Henriques, 1889; Sampaio, 1901-1902; Braun-Blanquet *et al.*, 1964.**E:** Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Ade & Koppe, 1942; Barros, 1942c; Barros, 1943; Sá-Nogueira, 1950b; Braun-Blanquet *et al.*, 1956; Braun-Blanquet *et al.*, 1964; Allorge, 1974.**Mi:** Mitten, 1853; Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Allorge, 1931a;

Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos, 2001; Calleja *et al.*, 2001.

TM: Ervideira, 1922; Ervideira, 1926; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Brotero, 1804; Luisier, 1907a; Machado, 1928.

***Dicranum tauricum* Sapjegin**

AAl: Sérgio *et al.*, 1997b.

Ag: Sérgio, 2001b.

BA/BB: Greven & Melick, 1994.

BB: Allorge, 1931b; Machado, 1933.

Mi: Allorge, 1928a; Casares, 1932; Machado, 1933; Albertos, 2001.

TM: Sérgio & Schumacker, 1992.

***Didymodon acutus* (Brid.) K. Saito**

AAl: Sérgio, 1969.

Ag: Dixon, 1912; Machado, 1928; Casares, 1932; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BL: Henriques, 1889; Machado, 1928; Casares, 1932; Sérgio, 1969; Sérgio *et al.*, 1988.

E: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Braun-Blanquet *et al.*, 1956; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Sérgio, 1972a.

R: Sérgio, 1972a; Sérgio *et al.*, 1988.

TM: Séneca-Cardoso, 1989.

Pt: Sérgio *et al.*, 1987a.

The revision of LISU material showed that some old collections of *D. acutus* correspond to *D. fallax*.

***Didymodon australasiae* (Hook. & Grev.) Zander var. *umbrosus* (Müll. Hal.) Zander**

Wmap: Söderström, 1992.

IPmap: Guerra & Ros, 1987.

E: Pierrot, 1972; Crundwell & Whitehouse, 1978; Guerra & Ros, 1987.

****Didymodon bistratosus* Hebr. & R. B. Pierrot**

IPmap: Sérgio *et al.*, 2000a.

AAl: Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998a.

BA: Sérgio *et al.*, 1998a.

BB: Sérgio *et al.*, 1998a.

Another new report corresponds to Baixo Alentejo, Pulo do Lobo, Rio Guadiana, *leg.* Sérgio 2000 (LISU!), rev. Juan Antonio Jiménez.

***Didymodon fallax* (Hedw.) Zander**

Ag: Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAl: Sérgio, 1970-1971; Allorge, 1974.

BL: Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Allorge, 1974.

E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Ade & Koppe, 1942; Barros, 1942c; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

R: Barros, 1942b; Allorge, 1974; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994.

Pt: Luisier, 1924; Sérgio *et al.*, 1987a.

This species can be more frequent in Portugal. See note under *D. acutus* and *D. luridus*.

***Didymodon insulanus* (De Not.) M. Hill**

AAI: Machado, 1928; Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Crundwell, 1956; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Townsend, 1994.

BA: Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAL: Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1999a.

BL: Henriques, 1889; Machado, 1928; Allorge, 1935; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932.

E: Warnstorff, 1899; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1918; Machado, 1928; Casares, 1932; Allorge, 1935; Allorge, 1974; Sérgio & Correia, 1981.

Mi: Machado, 1920a; Machado, 1928; Casares, 1932; Allorge, 1974.

R: Pereira-Coutinho, 1917b.

TM: Machado, 1915b; Ervideira, 1922; Machado, 1928; Casares, 1932; Allorge & Allorge, 1949; Allorge, 1974.

Pt: Sérgio *et al.*, 1987a.

Using new criteria this species can be a variety of the lastest taxon, *D. vinealis* var. *flaccida* (Bruch & Schimp.) Zander.

***Didymodon luridus* Hornsch.**

AAI: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Henriques, 1889; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BB: Luisier, 1916b; Machado, 1928; Casares, 1932; Allorge, 1974.

BL: Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1988.

E: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Ade & Koppe, 1942; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Luisier, 1910c; Machado, 1913; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1974; Séneca-Cardoso, 1989.

R: Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

Another report is for Baixo Alentejo, Vidigueira, Vila de Frades, *leg.* Sérgio 1995 (LISU!), rev. Juan Antonio Jiménez. The revision of LISU material showed that some old collections of *D. luridus* correspond to *D. fallax*.

***Didymodon nicholsonii* Culm.**

AAI: Sérgio *et al.*, 1997b.

BAL: Sérgio & Garcia, 2001b.

E: Séneca-Cardoso, 1989.

Mi: Séneca-Cardoso, 1989.

Occuring also in Douro Litoral, Leça do Balio, Mosteiro, *leg.* Sérgio 1996 (LISU!), rev. Juan Antonio Jiménez.

***Didymodon rigidulus* Hedw.**

AAI: Sérgio *et al.*, 1997b.

Ag: Henriques, 1889; Machado, 1928; Casares, 1932.

BA: Sérgio, 1969.

BL: Henriques, 1889; Machado, 1928; Casares, 1932.

DL: Sérgio, 1972a.

E: Levier, 1880; Machado, 1928; Casares, 1932.

TM: Séneca-Cardoso, 1989.

Occuring also in Ribatejo, Santarém, Mação, *leg.* Sérgio 1985 (LISU!), rev. Juan Antonio Jiménez.

***Didymodon tophaceus* (Brid.) Lisa**

Ag: Solms-Laubach, 1868; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Allorge, 1935; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA/BB: Greven & Melick, 1994.

BAL: Sérgio, 1970-1971; Sérgio *et al.*, 1999a.

BL: Henriques, 1889; Warnstorf, 1899; Machado, 1928; Sérgio *et al.*, 1988.

DL: Machado, 1928.

E: Pereira-Coutinho, 1917b; Machado, 1928; Barros, 1942c; Sérgio & Sim-Sim, 1985a.

Mi: Séneca-Cardoso, 1989.

R: Pereira-Coutinho, 1917b; Machado, 1928; Barros, 1942b; Sérgio *et al.*, 1988.

TM: Machado, 1915b; Machado, 1928.

Pt: Sérgio *et al.*, 1987a.

Occuring also in Alto Alentejo, Castelo de Vide, Termas de Fadagosa, *leg.* Sérgio 1997(LISU!), rev. Juan Antonio Jiménez.

***Didymodon vinealis* (Brid.) Zander**

AAI: Sérgio, 1969; Pierrot, 1972; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Machado, 1928; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA/BB: Greven & Melick, 1994.

BAL: Luisier, 1916b; Machado, 1928; Sérgio *et al.*, 1999a

BL: Sérgio *et al.*, 1988.

E: Pereira-Coutinho, 1917b; Machado, 1928; Barros, 1943; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.

Mi: Machado, 1913; Machado, 1920a; Machado, 1928.

R: Machado, 1928.

TM: Machado, 1915b; Ervideira, 1922; Machado, 1928.

Pt: Sérgio *et al.*, 1987a.

Other reports in (LISU!) are for Beira Alta, S. Pedro do Sul, pr. de Pena, *leg.* Sérgio 1975, Pinhel, Cidadelhe, *leg.* Sérgio 1993; Beira Baixa, Idânh-a-Velha, Penha Garcia, *leg.* Sérgio 1994, rev. Juan Antonio Jiménez.

Diphyscium foliosum (Hedw.) D. Mohr**IPmap:** Casas *et al.*, 1989.**AAI:** Sérgio *et al.*, 1997b.**BA:** Sérgio, 1969; Allorge, 1974; Casas *et al.*, 1989; Sérgio & Séneca, 1994; Sérgio *et al.*, 2001d.**BL:** Allorge, 1931a; Anónimo, 1969; Allorge, 1974; Casas *et al.*, 1989; Werner, 1997.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974; Casas *et al.*, 1989.**E:** Allorge, 1931a; Allorge, 1974; Casas *et al.*, 1989.**Mi:** Henriques, 1889; Sampaio, 1901-1902; Luisier, 1910c; Machado, 1913; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.**TM:** Ervideira, 1926; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.**Pt:** Brotero, 1804.*Ditrichum cylindricum* (Hedw.) Grout**Ag:** Guerra *et al.*, 1981.**BA:** Sérgio *et al.*, 2001a; Sérgio *et al.*, 2001d.**BL:** Sérgio, 2002b.**Mi:** Séneca-Cardoso, 1989.*Ditrichum heteromallum* (Hedw.) Britton**BA:** Henriques, 1883; Henriques, 1889; Sérgio, 1994a.**BA/BB:** Levier, 1880; Casares, 1932.**BB:** Machado, 1928.**DL:** Séneca-Cardoso, 1989.**Mi:** Machado, 1914a; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.*Ditrichum subulatum* Hampe**AAI:** Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casares, 1932; Sérgio, 1970-1971; Pierrot, 1972; Allorge, 1974; Guerra *et al.*, 1981; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Arts, 1994.**BA:** Sérgio, 1969; Allorge, 1974.**BA/BB:** Greven & Melick, 1994.**BAL:** Sérgio *et al.*, 1999a.**BL:** Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1935; Sérgio, 1969; Allorge, 1974.**DL:** Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Machado, 1928; Casares, 1932; Allorge, 1974.**E:** Mitten, 1853; Levier, 1880; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casares, 1932; Barros, 1943; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1914a; Machado, 1920a; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio & Schumacker, 1992; Arts, 1994.

R: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Barros, 1942a; Allorge, 1974.

TM: Sérgio, 1969; Allorge, 1974.

Pt: Venturi, 1881; Sérgio *et al.*, 1987a.

***Drepanocladus aduncus* (Hedw.) Warnst.**

BL: Sérgio *et al.*, 1987b; Sérgio *et al.*, 1988.

[**E:** Henriques, 1889; Luisier, 1924; Machado, 1933].

Pt: Sérgio *et al.*, 1987a.

The species was reported dubiously to Estremadura, Mafra. In fact, all reports correspond to material gathered by E. da Veiga and can be erroneous.

***Drepanocladus polygamus* (Schimp.) Hedenäs**

BA: Sérgio *et al.*, 2001e.

BL: Allorge, 1928a; Allorge, 1931a; Machado, 1933.

DL: Sá-Nogueira, 1958.

Mi: Teles, 1970.

TM: Sá-Nogueira, 1958; Teles, 1970.

***Encalypta ciliata* Hedw.**

BA: Jansen, 1998.

TM: Allorge, 1931b; Machado, 1933; Allorge & Allorge, 1949.

***Encalypta streptocarpa* Hedw.**

BA/BB: Greven & Melick, 1994; Sérgio *et al.*, 2001e.

TM: Allorge, 1931b; Machado, 1933.

Recorded only in Trás-os-Montes, it was considered extinct (Sérgio *et al.*, 1994). In spite of the species being reported as recently discovered in Serra da Estrela by Greven & Melick, was not revised by us (Sérgio *et al.*, 2001e).

***Encalypta vulgaris* Hedw.**

BA: Sérgio, 1969.

BL: Sérgio *et al.*, 1988.

E: Sérgio & Correia, 1981.

R: Machado, 1928; Casares, 1932; Sérgio *et al.*, 1988.

TM: Machado, 1915b; Machado, 1928; Casares, 1932.

Pt: Sérgio *et al.*, 1987a.

***Entodon concinnus* (De Not.) Paris**

Wmap: Ochyra & Bednarek-Ochyra, 2000.

[**Ag:** Solms-Laubach, 1868; Welwitsch, 1872; Luisier, 1924; Machado, 1933; Allorge, 1938; Sérgio *et al.*, 2001e].

Only an old and dubious record from the Algarve (Solms-Laubach, 1868). The specimen is not stored in the BM herbarium and it is a very critical plant for Portugal (Sérgio *et al.*, 2001e).

Entosthodon attenuatus (Dicks.) Bryhn**IPmap:** Casas *et al.*, 1996.**AAI:** Allorge, 1974; Casas *et al.*, 1996; Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1996.**BA:** Pierrot, 1972; Sérgio, 1994a; Casas *et al.*, 1996; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BAI:** Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1996; Sérgio *et al.*, 1999a.**BB:** Luisier, 1916b; Casas *et al.*, 1996.**BL:** Henriques, 1889; Allorge, 1935; Allorge, 1974; Casas *et al.*, 1996.**DL:** Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Séneca-Cardoso, 1989; Casas *et al.*, 1996.**E:** Mitten, 1853; Levier, 1880; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Barros, 1943; Sérgio *et al.*, 1988; Casas *et al.*, 1996.**Mi:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Casas *et al.*, 1996.**R:** Barros, 1942b; Allorge, 1974; Casas *et al.*, 1996.**TM:** Ervideira, 1922; Casas *et al.*, 1996.**Pt:** Machado, 1930; Sérgio *et al.*, 1987a.*Entosthodon convexus* (Spruce) Brugués**IPmap:** Casas *et al.*, 1996.**AAI:** Casas *et al.*, 1996.**Ag:** Pereira-Coutinho, 1917b; Allorge, 1935; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1996.**BA:** Casas *et al.*, 1996.**BB:** Luisier, 1916b; Casas *et al.*, 1996.**BL:** Sérgio *et al.*, 1988; Casas *et al.*, 1996.**DL:** Casas *et al.*, 1996.**E:** Luisier, 1916b; Pereira-Coutinho, 1917b; Sérgio *et al.*, 1988; Casas *et al.*, 1996.**R:** Sérgio *et al.*, 1988; Casas *et al.*, 1996.**TM:** Séneca-Cardoso, 1989; Casas *et al.*, 1996.**Pt:** Machado, 1930; Sérgio *et al.*, 1987a.*Entosthodon fascicularis* (Hedw.) Müll. Hal.**IPmap:** Casas *et al.*, 1996.**AAI:** Machado, 1930; Barros, 1942b; Casas *et al.*, 1996; Sérgio *et al.*, 1997b.**Ag:** Sérgio, 1970-1971.**BAl:** Casas *et al.*, 1996; Sérgio *et al.*, 1999a.**BB:** Casas *et al.*, 1996; Sérgio *et al.*, 2002c.**BL:** Henriques, 1889; Luisier, 1924; Machado, 1930; Sérgio *et al.*, 1988.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1930; Casas *et al.*, 1996.**E:** Pereira-Coutinho, 1917b; Machado, 1930; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Casas *et al.*, 1996.**Mi:** Sá-Nogueira, 1950e.**R:** Casas *et al.*, 1996.**TM:** Séneca-Cardoso, 1989.**Pt:** Sérgio *et al.*, 1987a.

Entosthodon obtusus (Hedw.) Lindb.

- IPmap:** Casas *et al.*, 1996.
AAL: Casas *et al.*, 1996; Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Séneca-Cardoso, 1989; Casas *et al.*, 1996.
BAL: Casas *et al.*, 1996.
BL: Henriques, 1889; Casas *et al.*, 1996.
DL: Henriques, 1889; Sampaio, 1901-1902; Casas *et al.*, 1996.
E: Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Barros, 1943; Sérgio, 1970-1971; Casas *et al.*, 1996.
Mi: Machado, 1913; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Casas *et al.*, 1996.
R: Barros, 1942a; Sérgio *et al.*, 1988; Casas *et al.*, 1996.
TM: Machado, 1915b.
Pt: Machado, 1930; Sérgio *et al.*, 1987a.

Entosthodon pulchellus (H. Philib.) Brugués

- IPmap:** Gil & Castro, 1987; Casas *et al.*, 1996.
AAL: Casas *et al.*, 1996; Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1935; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1996.
BAL: Henriques, 1889.
BB: Casas *et al.*, 1996.
BL: Henriques, 1889; Anónimo, 1893; Warnstorf, 1899; Pereira-Coutinho, 1917b; Allorge, 1974; Sérgio *et al.*, 1988; Casas *et al.*, 1996.
DL: Henriques, 1889; Séneca-Cardoso, 1989; Casas *et al.*, 1996.
E: Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Sérgio & Sim-Sim, 1985a; Casas *et al.*, 1996.
R: Pereira-Coutinho, 1917b; Sérgio *et al.*, 1988; Casas *et al.*, 1996.
TM: Casas *et al.*, 1996.
Pt: Machado, 1930.

Entosthodon schimperi Brugués

- E:** Brugués *et al.*, 2001.
R: Brugués *et al.*, 2001.

These records were previously published as *Funaria convexa* Spruce.

Ephemerum minutissimum Lindb.

- IPmap:** Gil & Castro, 1987.
AAL: Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998c.
BB: Sérgio *et al.*, 1998c; Sérgio *et al.*, 2001d; Sérgio *et al.*, 2002c.
BL: Sérgio, 1982; Sérgio *et al.*, 1998a.

Ephemerum recurvifolium (Dicks.) Boulay

- Ag:** Sérgio *et al.*, 1984; Casas *et al.*, 1985; Sérgio *et al.*, 1987a.

Ephemerum serratum (Hedw.) Hampe

- AAL:** Sérgio *et al.*, 1998c.

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
E: Sérgio, 1982.

***Ephemerum sessile* (Bruch) Müll. Hal.**

IPmap: Casas *et al.*, 1989.
AAl: Sérgio *et al.*, 1998c.
Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1989.
BAl: Sérgio, 1982; Casas *et al.*, 1989; Sérgio *et al.*, 1998c.
BL: Sérgio *et al.*, 1988; Casas *et al.*, 1989.
E: Pereira-Coutinho, 1917b; Machado, 1930; Sérgio & Correia, 1981; Sérgio, 1982; Casas *et al.*, 1989.
R: Casas *et al.*, 1989; Sérgio *et al.*, 1998c.
Pt: Sérgio *et al.*, 1987a.

***Ephemerum stellatum* H. Philib.**

IPmap: Casas *et al.*, 1989.
BL: Sérgio *et al.*, 1987b; Sérgio *et al.*, 1988; Casas *et al.*, 1989.
Pt: Sérgio *et al.*, 1987a.

***Epipterygium tozeri* (Grev.) Lindb.**

Eurmap: Arts & Nordhorn-Richter, 1986.
IPmap: Casas *et al.*, 1996.
AAl: Casas *et al.*, 1996; Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Henriques, 1889; Crundwell, 1956; Sérgio, 1970-1971; Allorge, 1974; Guerra *et al.*, 1981; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1996; Jiménez *et al.*, 2002.
BA: Allorge, 1974; Casas *et al.*, 1996; Sérgio *et al.*, 2001d.
BAl: Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1996; Sérgio *et al.*, 1999a.
BB: Casas *et al.*, 1996; Sérgio *et al.*, 2002c.
BL: Allorge, 1974; Arts & Nordhorn-Richter, 1986; Casas *et al.*, 1996.
DL: Henriques, 1889; Sampaio, 1901-1902; Casas *et al.*, 1996.
E: Luisier, 1916b; Pereira-Coutinho, 1917b; Barros, 1943; Allorge, 1974; Sérgio *et al.*, 1988; Casas *et al.*, 1996.
Mi: Sampaio, 1901-1902; Luisier, 1907a; Machado, 1913; Machado, 1914a; Machado, 1920a; Séneca-Cardoso, 1989; Casas *et al.*, 1996.
R: Sá-Nogueira, 1950e; Casas *et al.*, 1996.
TM: Ervideira, 1922; Casas *et al.*, 1996.
Pt: Luisier, 1924; Machado, 1930; Sérgio *et al.*, 1987a.

***Eucladium verticillatum* (Brid.) Bruch & Schimp.**

Eurmap: Pentcost & Zhaohui, 2002.
Ag: Solms-Laubach, 1868; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BAl: Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974.
BL: Warnstorff, 1899; Allorge, 1931a; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Machado, 1928; Allorge, 1974.
E: Mitten, 1853; Henriques, 1889; Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Sá-Nogueira, 1947; Allorge, 1974.
Mi: Sampaio, 1901-1902; Machado, 1913.
Pt: Sérgio *et al.*, 1987a.

Eurhynchium hians (Hedw.) Sande Lac. var. *hians*

- AA:** Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868.
BA: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
BAl: Sérgio *et al.*, 2002d.
BB: Pereira-Coutinho, 1917b.
BL: Pereira-Coutinho, 1917b; Allorge, 1974.
E: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
Mi: Machado, 1914a; Machado, 1933; Allorge, 1974.
TM: Teles, 1970.

Eurhynchium hians (Hedw.) Sande Lac. var. *rigidum* (Boul.) Düll.

- Ag:** Dixon, 1912; Machado, 1933.

Eurhynchium meridionale (Schimp.) De Not.

- AA:** Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Machado, 1933; Allorge, 1974.
BL: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1988; Kindberg, 1898.
E: Mitten, 1853; Levier, 1880; Henriques, 1889; Warnstorf, 1899; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1935; Ade & Koppe, 1942; Barros, 1943; Pierrot, 1972; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.
R: Sérgio *et al.*, 1988.
TM: Allorge & Allorge, 1949; Allorge, 1974.
Pt: Sérgio *et al.*, 1987a.

Eurhynchium praelongum (Hedw.) Schimp. s. l.

- AA:** Sérgio *et al.*, 1997b.
Ag: Machado, 1933; Jiménez *et al.*, 2002; Henriques, 1889; Guerra *et al.*, 1981.
BA: Sérgio *et al.*, 2001d; Jansen, 1998.
BA/BB: Greven & Melick, 1994; Brotero, 1804.
BB: Sérgio *et al.*, 2002c.
BAI: Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.
BL: Sérgio *et al.*, 1988; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933; Henriques, 1889; Barros, 1942a.
DL: Sampaio, 1901-1902; Machado, 1933; Henriques, 1889.
E: Sérgio *et al.*, 1988; Pereira-Coutinho, 1917b; Machado, 1933; Henriques, 1889; Brotero, 1804.
Mi: Sérgio & Schumacker, 1992; Sampaio, 1901-1902; Machado, 1933; Machado, 1920a; Machado, 1917b; Machado, 1913.
R: Sérgio *et al.*, 1988; Pereira-Coutinho, 1917b; Machado, 1933.
TM: Sérgio & Schumacker, 1992.
Pt: Luisier, 1924.

These reports can represent *E. praelongum* in a broad sense, but can eventually correspond to plants related to var. *stokesii*. This variety seems to be the more frequent form in Portugal.

Eurhynchium praelongum (Hedw.) Schimp. var. *stokesii* (Turner) Dixon**AAl:** Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Sérgio *et al.*, 1987a; Sérgio *et al.*, 1984; Pereira-Coutinho, 1917b; Machado, 1933; Luisier, 1924; Henriques, 1889; Estácio da Veiga, 1869; Allorge, 1974; Allorge, 1931a.**BA:** Teles, 1970; Henriques, 1889; Henriques, 1883, Braun-Blanquet *et al.*, 1952; Allorge, 1974.**BAI:** Sérgio, 1970-1971; Allorge, 1974.**BB:** Machado, 1933; Luisier, 1916b.**BL:** Sá-Nogueira, 1950a; Pereira-Coutinho, 1917b; Machado, 1933; Anónimo, 1969; Allorge, 1974.**DL:** Machado, 1933; Luisier, 1916b; Henriques, 1889; Allorge, 1974.**E:** Sérgio & Sim-Sim, 1985a; Sá-Nogueira, 1950b; Pereira-Coutinho, 1917b; Machado, 1933; Luisier, 1916b; Barros, 1943; Barros, 1942c; Allorge, 1974.**Mi:** Teles, 1970; Sérgio & Schumacker, 1992; Sá-Nogueira, 1950d; Machado, 1933; Machado, 1920a; Machado, 1913; Luisier, 1916b; Barros, 1944b; Allorge, 1974; Allorge, 1935.**TM:** Machado, 1933; Ervideira, 1926; Allorge & Allorge, 1949; Allorge, 1974.**Pt:** Ervideira, 1922; Sérgio *et al.*, 1987a.*Eurhynchium pulchellum* (Hedw.) Jenn.**AAl:** Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Machado, 1933.**BA:** Jansen & Sequeira, 1999.**BA/BB:** Greven & Melick, 1994.**BAI:** Sérgio *et al.*, 1999a.**DL:** Henriques, 1889; Machado, 1933.**E:** Levier, 1880; Machado, 1933.**Mi:** Sérgio & Schumacker, 1992.*Eurhynchium pumilum* (Wilson) Schimp.**AAl:** Sérgio *et al.*, 1997b.**Ag:** Dixon, 1912; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.**BA:** Sérgio *et al.*, 2001d.**BAI:** Sérgio *et al.*, 1999a.**BL:** Allorge, 1935; Sérgio, 1972a; Allorge, 1974; Sérgio *et al.*, 1988.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Ade & Koppe, 1942; Allorge, 1974.**E:** Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1943; Allorge, 1974; Sérgio & Sim-Sim, 1985a.**Mi:** Machado, 1914a; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.**R:** Sérgio *et al.*, 1988.**Pt:** Sérgio *et al.*, 1987a.*Eurhynchium schleicheri* (F. Weber & D. Mohr) Milde**BL:** Allorge, 1974.

Eurhynchium speciosum (Brid.) Jur.

- AAI:** Sérgio *et al.*, 1997b.
Ag: Sérgio *et al.*, 1984.
BAl: Sérgio *et al.*, 1999a.
BL: Machado, 1933; Anônimo, 1969; Sérgio, 1972a; Sérgio & Sim-Sim, 1988.
DL: Luisier, 1916b.
E: Luisier, 1916b; Ade & Koppe, 1942; Barros, 1943; Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

Eurhynchium striatum (Hedw.) Schimp.

- BA:** Henriques, 1889; Allorge, 1974; Jansen 1998; Sérgio *et al.*, 2001d.
BAl: Sérgio *et al.*, 2002d.
BB: Machado, 1933.
BL: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Sá-Nogueira, 1950a; Sérgio, 1969; Anônimo, 1967; Allorge, 1974.
DL: Henriques, 1889; Luisier, 1916b; Machado, 1933; Allorge, 1974.
E: Machado, 1933; Allorge, 1974.
Mi: Machado, 1913; Luisier, 1916b; Machado, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
Pt: Brotero, 1804.

Fabronia pusilla Raddi

- Ptmap:** Sim-Sim & Sérgio, 1998.
IPmap: Casas *et al.*, 1985.
AAI: Casas *et al.*, 1985; Catarino *et al.*, 1987; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d.
Ag: Welwitsch, 1872; Dixon, 1912; Luisier, 1924; Machado, 1933; Crundwell, 1956; Sérgio *et al.*, 1984; Casas *et al.*, 1985; Sérgio *et al.*, 1987a.
BA: Pierrot, 1972; Casas *et al.*, 1985.
BAl: Machado, 1933; Sérgio *et al.*, 2002d.
BB: Luisier, 1907a; Luisier, 1916b; Luisier, 1948; Casas *et al.*, 1985; Catarino *et al.*, 1987.
BL: Casas *et al.*, 1985; Sérgio & Sim-Sim, 1988.
E: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1981; Bento-Pereira & Sérgio, 1983; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985d.
Mi: Machado, 1933; Barros, 1942b; Luisier, 1948; Casas *et al.*, 1985; Sérgio & Schumacker, 1992.
R: Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d.
Pt: Luisier, 1924; Allorge, 1938; Sérgio *et al.*, 1987a.

Fissidens adianthoides Hedw.

- BL:** Allorge, 1931b; Machado, 1933; Allorge, 1938; Potier de la Varde, 1945; Sérgio, 1969; Allorge, 1974.

Pt: Luisier, 1946.

Reported only for two localities, all the material needs future revision.

Fissidens bryoides Hedw. var. bryoides

- Ag:** Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Machado, 1928; Casares, 1932; Allorge, 1935; Potier de la Varde, 1945; Sérgio, 1970-1971; Allorge, 1974; Guerra *et al.*, 1981.
- BA:** Henriques, 1883; Henriques, 1889; Potier de la Varde, 1945; Allorge, 1974.
- BA/BB:** Casares, 1932; Bruggeman-Nannenga, 1985; Greven & Melick, 1994.
- BAI:** Sérgio, 1970-1971; Allorge, 1974.
- BL:** Brotero, 1804; Henriques, 1889; Machado, 1928; Allorge, 1931a; Casares, 1932; Allorge, 1935; Potier de la Varde, 1945; Sá-Nogueira, 1950a; Anónimo, 1967; Allorge, 1974.
- DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932; Allorge, 1974.
- E:** Henriques, 1889; Machado, 1928; Casares, 1932; Barros, 1942a; Barros, 1942b; Barros, 1943; Sá-Nogueira, 1950b; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Sim-Sim, 1985a.
- Mi:** Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Barros, 1944b; Potier de la Varde, 1945; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
- TM:** Ervideira, 1922; Casares, 1932.
- Pt:** Luisier, 1946.

See note concerning *F. ovatifolius* and *F. bryoides* Hedw. var. *caespitans*.

Fissidens bryoides Hedw. var. caespitans Schimp.

- IPmap:** Gil & Castro, 1987.
- AI:** Sérgio *et al.*, 1997b.
- Ag:** Luisier, 1948; Sérgio, 1970-1971; Allorge, 1974.
- BA:** Potier de la Varde, 1945; Allorge, 1974.
- BB:** Luisier, 1948; Pierrot, 1972; Allorge, 1974.
- BL:** Machado, 1917a; Machado, 1928; Allorge, 1931a; Casares, 1932; Potier de la Varde, 1945; Allorge, 1974.
- DL:** Luisier, 1948; Allorge, 1974.
- Mi:** Machado, 1918; Machado, 1920a; Machado, 1928; Casares, 1932; Potier de la Varde, 1945; Luisier, 1948; Allorge, 1974; Sérgio & Schumacker, 1992.
- TM:** Sérgio & Schumacker, 1992.
- Pt:** Luisier, 1946.

According to Bruggeman-Nannenga (1985) *Fissidens curnovii* Mitt is a synonym of this species. However, the herbarium specimens sub *F. curnowii* (Serra do Buçaco) in Bryoth. Iber. III, 120, leg. Allorge 1929 (L, G), correspond to an intermediate form between var. *bryoides* and var. *caespitans*, and number 121 is *F. bryoides* f. *fascigera* (L, G).

*Fissidens crassipes Bruch & Schimp. subsp. *crassipes**

- AAI:** Pereira-Coutinho, 1917b; Casares, 1932; Ferreira, 1992.
- Ag:** Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
- BAI:** Sérgio *et al.*, 1999a.
- BL:** Sérgio *et al.*, 1988.
- DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932.

- E:** Luisier, 1910c; Pereira-Coutinho, 1917b; Casares, 1932; Barros, 1944a; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Machado, 1918; Machado, 1920a; Machado, 1928; Casares, 1932; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sá-Nogueira, 1950e; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
Pt: Luisier, 1946; Sérgio *et al.*, 1987a.

***Fissidens crassipes* Bruch & Schimp. subsp. *warnstorffii* (Fleisch.) Brugg.- Nann.**

- Ag:** Machado, 1928; Allorge, 1931a; Casares, 1932; Potier de la Varde, 1945; Bruggeman-Nannenga, 1982.
BL: Sérgio, 1969; Sérgio *et al.*, 1988.
E: Luisier, 1907a; Luisier, 1907b; Luisier, 1910c; Luisier, 1916b; Machado, 1928; Allorge, 1931a; Casares, 1932; Potier de la Varde, 1945; Bruggeman-Nannenga, 1982.
Pt: Sérgio *et al.*, 1987a.

***Fissidens curvatus* Hornsch.**

- IPmap:** Casas *et al.*, 1985; Gil & Castro, 1987.
AAl: Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868 (*Orig. descrip. as Fissidens algarvicus*), Welwitsch, 1872; Henriques, 1889; Dixon, 1912; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1984; Casas *et al.*, 1985; Sérgio *et al.*, 1987a; Bruggeman-Nannenga & Purcell, 1995.
BAI: Casas *et al.*, 1985.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932; Casas *et al.*, 1985.
E: Sérgio & Correia, 1981; Casas *et al.*, 1985; Sérgio *et al.*, 1988.
R: Sérgio, 1972a; Casas *et al.*, 1985.
Pt: Luisier, 1946; Sérgio *et al.*, 1987a.

Bruggeman-Nannenga & Purcell (1995) showed that *F. algarvicus* Solms is a synonym of *F. curvatus*. The original material of *F. algarvicus* is from “Silves, ad terram, leg. Solms s.n. Holotype: 1866 (GOET- Flora Lusitanica Algarve 18)”.

***Fissidens dubius* P. Beauv.**

- Ag:** Dixon, 1912; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BA: Sérgio, 1969; Allorge, 1974.
BL: Henriques, 1889; Allorge, 1931a; Casares, 1932; Potier de la Varde, 1945; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1988.
E: Levier, 1880; Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1935; Ade & Koppe, 1942; Potier de la Varde, 1945; Sá-Nogueira, 1950b; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Henriques, 1889; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Ervideira, 1922; Machado, 1928; Casares, 1932; Allorge, 1974.
Pt: Luisier, 1946; Sérgio *et al.*, 1987a.

Fissidens exilis Hedw.

- Ag:** Machado, 1933.
BL: Allorge, 1931b; Machado, 1933; Allorge, 1974.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Potier de la Varde, 1945; Allorge, 1974.
Pt: Luisier, 1946.

Species that needs to be classified as extinct.

Fissidens grandifrons Brid.

- Mi:** Allorge, 1928a; Casares, 1932; Sérgio *et al.*, 2001e.
Pt: Welwitsch, 1872; Luisier, 1946.
 Recorded only in one locality, Caminha (PC!), it was revised by Sérgio *et al.* (2001e). The other report (Welwitsch 1872) is dubious.

Fissidens incurvus Starke ex Röhl.

- AAl:** Sérgio, 1969.
Ag: Casares, 1932; Potier de la Varde, 1945; Crundwell, 1956; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BA: Sérgio *et al.*, 2001d.
BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.
BB: Luisier, 1916b; Machado, 1928.
BL: Machado, 1928; Casares, 1932; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928.
E: Henriques, 1889; Warnstorff, 1899; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Potier de la Varde, 1945; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Sampaio, 1901-1902; Luisier, 1916b; Machado, 1920a; Machado, 1928.
R: Sérgio *et al.*, 1988.
TM: Machado, 1915b; Ervideira, 1926; Machado, 1928.
Pt: Luisier, 1946; Sérgio *et al.*, 1987a.

* *Fissidens jansenii* Sérgio & Pursell

- BA:** Sérgio & Pursell, 2001 (*Orig. descrip.*).
 For the description of this endemic species see Sérgio & Pursell (2001).

Fissidens limbatus Sull. var. *limbatus*

- [**Ag:** Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
E: Pierrot, 1972.
R: Sérgio *et al.*, 1988.
Pt: Luisier, 1946; Sérgio *et al.*, 1987a].

These records must be included in var. *bambergeri*, which is probably a more widespread taxon in Portugal.

Fissidens limbatus Sull. var. *bambergeri* (Schimp. ex Milde) Düll.

- Ag:** Allorge, 1931b; Machado, 1933; Potier de la Varde, 1945; Sérgio, 1970-1971.
BAI: Sérgio, 1970-1971.
BB: Sérgio, 1972a.
BL: Henriques, 1889; Sérgio, 1972a; Bruggeman-Nannenga, 1978.

E: Pierrot, 1972; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.

R: Sérgio, 1972a.

Bruggeman-Nannenga (1978) showed that *Fissidens firmus* Lindb. ex G. Roth (non Mitt.) "Roth 1904, Eur. Laubm. I: 563 t lii, f. 3 Type Henriques, Coimbra, Portugal (S- iso); holotype in H (Herb. Lindb. not seen)" is *F. limbatus* var. *bambergeri*.

***Fissidens osmundoides* Hedw.**

AAI: Sérgio *et al.*, 1997b.

Mi: Machado, 1918a; Machado, 1920a; Machado, 1928; Casares, 1932; Sérgio *et al.*, 2001b.

Pt: Luisier, 1946.

Only one locality from Minho, Coura, was found by Machado, but the material was not revised. A more recent record was published from Serra de São Mamede (Sérgio *et al.* 1997b). However, its taxonomic position should be considered critical until further investigation (Sérgio *et al.*, 2001e).

***Fissidens ovatifolius* R. Ruthe**

Eurmap: Bonnot, 1963.

[**BL:** Allorge, 1931a; Machado, 1933; Potier de la Varde, 1945; Allorge, 1974; Bruggeman-Nannenga, 1985].

E: Potier de la Varde, 1945; Allorge, 1974.

Pt: Luisier, 1946.

The reports of Beira Litoral, the herbarium specimen (Serra do Buçaco) in Bryoth. Iber. III, 119, leg. Allorge 1930, sub *F. ovatifolius* in L, FH, Z and LAU, corresponds to *Fissidens bryoides* Hedw. (Bruggeman-Nannenga, 1985). However some specimens of other herbaria can correspond to this taxon.

***Fissidens polyphyllus* Wilson ex Bruch & Schimp.**

Wmap: Sérgio, 1990.

AAI: Sérgio *et al.*, 1997b.

BA: Tavares, 1956.

BL: Anónimo, 1967; Anónimo, 1969; Werner, 1997.

DL: Henriques, 1889; Husnot, 1892-1894; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Werner, 1997.

Mi: Anónimo, 1886; Henriques, 1889; Anónimo, 1890; Anónimo, 1895; Sampaio, 1901-1902; Luisier, 1907a; Luisier, 1910a; Machado, 1913; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Allorge, 1935; Barros, 1942b; Barros, 1944b; Potier de la Varde, 1945; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Casares, 1932; Sérgio & Schumacker, 1992.

Pt: Roth, 1904; Schimper, 1876; Husnot, 1892-1894; Luisier, 1924; Luisier, 1946.

Until a new taxonomic revision, *F. polyphyllus* var. *newtonii* Husn., var. *welwitschii* (Schimp.) Husn. and var. *lusitanicus* (Paris) Luisier are included in var. type.

***Fissidens pusillus* (Wilson) Milde**

AAI: Sérgio, 1969.

BA: Sérgio *et al.*, 2001d.

BL: Sérgio, 1969.

E: Luisier, 1916b; Machado, 1928; Casares, 1932; Sérgio & Sim-Sim, 1985a.
Pt: Luisier, 1946.

***Fissidens rivularis* Bruch & Schimp.**

DL: Henriques, 1889; Machado, 1928; Casares, 1932.
[Mi: Allorge, 1938; Potier de la Varde, 1945, Bruggeman-Nannenga, 1985].
Pt: Pereira-Coutinho, 1917b; Luisier, 1946.

The report of the occurrence of this species in Minho by Allorge (1938) and Bruggeman-Nannenga (1985) should not be considered because of the erroneous geographic position of this Newton gathering in Minho when it is, in fact, in Douro region. We suppose, however, that it can be a species present in other localities in the north of Portugal.

***Fissidens serrulatus* Brid.**

IPmap: Gil & Castro, 1987.
AAl: Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Serqueira, 1881; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Potier de la Varde, 1945; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1997c.
BA: Potier de la Varde, 1945; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 2001d.
BL: Henriques, 1889; Anônimo, 1893; Luisier, 1907a; Luisier, 1907b; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casares, 1932; Potier de la Varde, 1945; Allorge, 1974; Sérgio *et al.*, 1997c.
DL: Bottini, 1886; Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Machado, 1928; Casares, 1932; Allorge, 1974.
E: Schimper, 1836-1856; Mitten, 1853; Levier, 1880; Bottini, 1886; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio *et al.*, 1997c.
Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Casares, 1932; Potier de la Varde, 1945; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Sérgio *et al.*, 1997c.
R: Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974.
TM: Ervideira, 1922; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio & Schumacker, 1992.
Pt: Luisier, 1946.

The reports of var. *henriquesii* Luisier are included in the broad sense of *F. serrulatus* Brid.

***Fissidens taxifolius* Hedw.**

AAl: Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Machado, 1928; Casares, 1932; Potier de la Varde, 1945; Sérgio, 1970-1971; Allorge, 1974.
BA/BB: Casares, 1932.
BAl: Sérgio *et al.*, 1999a.
BL: Warnstorff, 1899; Machado, 1928; Casares, 1932; Anônimo, 1969; Allorge, 1974; Sérgio *et al.*, 1988.
E: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Barros, 1943; Potier de la Varde, 1945; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Séneca-Cardoso, 1989.

TM: Potier de la Varde, 1945; Allorge & Allorge, 1949; Allorge, 1974.

Pt: Brotero, 1804; Luisier, 1946; Sérgio *et al.*, 1987a.

Fissidens viridulus* (Sw.) Wahlenb. var. *viridulus

AAl: Potier de la Varde, 1945; Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Allorge, 1931b; Machado, 1933; Allorge, 1935; Potier de la Varde, 1945; Sérgio, 1970-1971; Allorge, 1974; Guerra *et al.*, 1981; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Potier de la Varde, 1945; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAl: Sérgio, 1970-1971.

BL: Allorge, 1931b; Machado, 1933; Anónimo, 1969; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1988.

E: Mitten, 1853; Potier de la Varde, 1945; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Machado, 1918a; Machado, 1920a; Machado, 1928; Casares, 1932.

R: Sérgio *et al.*, 1988.

TM: Potier de la Varde, 1945.

Pt: Luisier, 1946; Sérgio *et al.*, 1987a.

Bruggeman-Nannenga (1982) has indicated *F. crassipes* Wilson var. *pusillus* A. Mach. as a synonym of this taxon, “I am almost certain that *F. c.* var. *pusillus* is either *F. minutulus* Sull. or *Fissidens viridulus*”. This opinion is based upon a figure of the type-collection....”.

***Fissidens viridulus* (Sw.) Wahlenb. var. *intralimbatus* (R. Ruthe) Düll**

AAl: Sérgio *et al.*, 1997b.

Ag: Ruthe, 1870 (*Orig. descrip.*), Machado, 1928; Casares, 1932; Potier de la Varde, 1942; Crundwell, 1956; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

E: Sérgio & Sim-Sim, 1985a.

Pt: Luisier, 1946.

Fissidens intralimbatus was described by Ruthe (1870) based in plants gathered by Solms-Laubach in Algarve, Tavira. It was integrated by Corley *et al.* (1981) in *F. viridulus*, however we agree with Cortini Pedrotti (2001) and consider it as a variety of *F. viridulus*.

Fontinalis antipyretica* Hedw. var. *antipyretica

AAl: Sérgio *et al.*, 1997b; Sérgio *et al.*, 2000b.

Ag: Mitten, 1853; Solms-Lauchbach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Sérgio, 1970-1971.

BA: Henriques, 1883; Henriques, 1889; Machado, 1917a; Pereira-Coutinho, 1917b; Braun-Blanquet *et al.*, 1952; Jansen & Sequeira, 1999.

BA/BB: Machado, 1917b; Greven & Melick, 1994.

BB: Mitten, 1853; Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933.

BL: Brotero, 1804; Sérgio, 1972a.

DL: Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Machado, 1933.

E: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio *et al.*, 1988.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d.

R: Sérgio, 1972a.

TM: Ervideira, 1922; Machado, 1933; Sérgio & Schumacker, 1992.

Fontinalis antipyretica Hedw. var. gracilis (Lindb.) Schimp.

Mi: Séneca-Cardoso, 1989.

Fontinalis hypnoides Hartm. var. hypnoides

BAl: Sérgio *et al.*, 1999a.

BL: Sérgio *et al.*, 1988.

R: Sérgio *et al.*, 1988.

Fontinalis hypnoides Hartm. var. duriaeae (Schimp.) Kindb.

Ag: Serqueira, 1881; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933.

BA: Sérgio, 1972a; Allorge, 1974.

BAl: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1999a.

BB: Luisier, 1916b.

BL: Sérgio, 1972a; Allorge, 1974.

E: Henriques, 1889; Luisier, 1910c; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1935; Sá-Nogueira, 1950b; Allorge, 1974.

Mi: Machado, 1915a; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Sérgio *et al.*, 1987a.

Fontinalis squamosa Hedw. var. squamosa

AAl: Sérgio, 1972a; Ferreira, 1992.

Ag: Dixon, 1912; Sérgio *et al.*, 1984.

BA: Henriques, 1889; Pereira-Coutinho, 1917b; Tavares, 1956; Sérgio, 1972a; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Pereira-Coutinho, 1917b.

BAI: Sérgio, 1970-1971; Sérgio *et al.*, 1999a.

BB: Mitten, 1853.

BL: Sérgio, 1972a; Werner, 1997.

DL: Henriques, 1889; Sampaio, 1901-1902.

Mi: Brotero, 1804; Henriques, 1889; Luisier, 1907a; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Allorge, 1931a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992

TM: Barros, 1942b; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924.

Fontinalis squamosa Hedw. var. capillaris Luisier

DL: Luisier, 1907a; Pereira-Coutinho, 1917b; Machado, 1933.

Mi: Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d.

The taxonomic position of this taxon needs to be revised. See original description in Luisier (1907a).

Fontinalis squamosa Hedw. var. *dixonii* (Cardot) A. J. E. Sm.

Ag: Sérgio *et al.*, 1987a.

Funaria hygrometrica Hedw.

AAI: Barros, 1942b; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1935; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA/BB: Greven & Melick, 1994.

BAL: Pereira-Coutinho, 1917b; Barros, 1942b; Sérgio, 1970-1971.

BB: Luisier, 1916b.

BL: Brotero, 1804; Henriques, 1889; Anónimo, 1893; Pereira-Coutinho, 1917b; Luisier, 1924; Machado, 1930; Barros, 1942b; Sá-Nogueira, 1950a; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Barros, 1942b.

E: Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1930; Ade & Koppe, 1942; Barros, 1942a; Barros, 1942b; Barros, 1943; Sá-Nogueira, 1950b; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

R: Barros, 1942a; Barros, 1942b; Sérgio *et al.*, 1988.

TM: Sampaio, 1901-1902; Machado, 1915b; Ervideira, 1922; Machado, 1930; Sérgio & Schumacker, 1992.

Pt: Machado, 1930; Sérgio *et al.*, 1987a.

Funaria microstoma Bruch ex Schimp.

[**BL:** Luisier, 1924; Machado, 1930.

E: Luisier, 1916b; Machado, 1930.

TM: Machado, 1930].

The different reports for Portugal are considered erroneous by Casas *et al.* (1996), since these correspond to *F. hygrometrica*.

Funaria muehlenbergii Turner

[**Ag:** Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAL: Mitten, 1853.

E: Mitten, 1853; Sérgio & Correia, 1981.

TM: Machado, 1915b; Machado, 1930].

Reported incorrectly by various authors, the majority of the material corresponds to *Entosthodon convexus*. The report from Estremadura: Pedra Furada, *leg.* Sérgio 1978 (LISU 152663!), corresponds to *E. Fascicularis* (Casas *et al.*, 1996).

Funariella curviseta (Schwägr.) Sérgio

IPmap: Casas *et al.*, 1989; Sérgio *et al.*, 1994c.

Ag: Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Machado, 1930; Allorge, 1935; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1989.

E: Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio, 1988; Casas *et al.*, 1989.

R: Sérgio *et al.*, 1988; Casas *et al.*, 1989.

Pt: Sérgio *et al.*, 1987a.

Grimmia alpestris (F. Weber & D. Mohr) Schleich.

[**Mi:** Cardoso & Sérgio, 1985; Séneca-Cardoso, 1989; Sérgio & Schumacker, 1992]. All reports need to be studied, since Sérgio *et al.* (1994) considered them dubious.

Grimmia austrofunalis Müll. Hal.

Ag: Een, 1994.

Pt: Smith, 1992.

Greven (1997) placed *Grimmia britanica* A. J. E. Sm. as synonymy of *G. austrofunalis*.

Grimmia caespiticia (Brid.) Jur.

BA: Sérgio *et al.*, 1994e; Greven, 1995.

Grimmia curvata (Brid.) De Sloover

BA: Henriques, 1883; Henriques, 1889; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Tavares, 1956; Jansen, 1994; Sérgio, 1994a; Greven, 1995.

BA/BB: Levier, 1880; Pereira-Coutinho, 1917b; Machado, 1930; Greven & Melick, 1994.

BB: Luisier, 1916b.

Mi: Machado, 1917b; Machado, 1930; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

Grimmia decipiens (Schultz) Lindb.

AAl: Allorge, 1935; Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Mitten, 1853; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1931a; Sérgio, 1970-1971; Allorge, 1974.

BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b; Tavares, 1956; Allorge, 1974; Greven, 1995; Albertos, 2001; Sérgio *et al.*, 2001d.

BA/BB: Levier, 1880; Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.

BB: Anónimo, 1906; Anónimo, 1911; Luisier, 1916b; Pereira-Coutinho, 1917b; Séneca-Cardoso, 1989.

BL: Allorge, 1974; Casas *et al.*, 1992; Werner, 1997.

DL: Anónimo, 1883a; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Werner, 1997.

E: Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Ade & Koppe, 1942; Allorge, 1974.

Mi: Mitten, 1853; Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

TM: Henriques, 1889; Machado, 1915b; Pereira-Coutinho, 1917b; Ervideira, 1922; Ervideira, 1926; Allorge & Allorge, 1949; Allorge, 1974.

Pt: Venturi, 1881; Luisier, 1924; Machado, 1930; Allorge, 1938.

Grimmia elatior Bals.-Criv. & De Not.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1930; Sérgio *et al.*, 2001e.

This *Grimmia* was only recorded only in Pinhão, Baião, by Newton (Henriques, 1889). It is a particularly critical occurrence, the existence of this arctic-alpine species, in a locality with a low altitude. However no specimen was found in Portuguese herbaria (Sérgio *et al.*, 2001e).

Grimmia funalis (Schwägr.) Bruch & Schimp.**Ag:** Solms-Laubach, 1868; Henriques, 1889; Machado, 1930.**Mi:** Anônimo, 1888; Anônimo, 1890; Sá-Nogueira, 1950d.

The reports of its occurrence in Portugal, Algarve and Gerês are still uncertain as Machado could not validate the species identification (*non vidi*).

Grimmia hartmanii Schimp.**BL:** Henriques, 1889; Machado, 1930; Allorge, 1938.**Mi:** Luisier, 1910c; Machado, 1913; Luisier, 1916b; Machado, 1930; Allorge, 1938.**Pt:** Luisier, 1924.

All the reports need to be revised since all correspond to old collections.

Pt: Luisier, 1924.

All the reports need to be revised since correspond to old collections. The revision of LISU material showed that some more recent collections of *G. hartmanii* Schimp represent new reports for Beira Alta and Ribatejo, *leg.* Sérgio 1967, 1981 (LISU!), rev. Jesus Muñoz.

Grimmia laevigata (Brid.) Brid.**AAl:** Allorge, 1935; Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Henriques, 1889; Allorge, 1931a; Sérgio, 1970-1971.**BA:** Henriques, 1883; Henriques, 1889; Machado, 1917a; Pereira-Coutinho, 1917b; Tavares, 1956; Greven, 1995.**BA/BB:** Greven & Melick, 1994.**BAI:** Sérgio, 1970-1971.**BB:** Luisier, 1907a; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1930.**DL:** Henriques, 1889; Sampaio, 1901-1902.**E:** Pereira-Coutinho, 1917b.**Mi:** Machado, 1915a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1930; Sá-Nogueira, 1950d.**TM:** Machado, 1915b; Ervideira, 1922; Allorge & Allorge, 1949; Séneca-Cardoso, 1989; Sérgio & Schumacker, 1992.**Pt:** Machado, 1930.*Grimmia lisae* De Not.**Ag:** Solms-Laubach, 1868; Welwitsch, 1872; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Machado, 1930; Crundwell, 1956; Sérgio, 1970-1971; Greven, 1995.**BA:** Henriques, 1889; Greven, 1995.**BA/BB:** Greven & Melick, 1994.**BB:** Luisier, 1916b; Sá-Nogueira, 1950e.**BL:** Werner, 1997; Sérgio & Muñoz, 2001.**DL:** Henriques, 1889; Machado, 1916; Pereira-Coutinho, 1917b; Machado, 1918; Machado, 1930.**E:** Pereira-Coutinho, 1917b; Machado, 1930.**Mi:** Machado, 1916; Machado, 1920a; Machado, 1930; Sá-Nogueira, 1950d; Crundwell, 1956.**TM:** Machado, 1930; Allorge & Allorge, 1949.**Pt:** Luisier, 1924.

Grimmia montana Bruch & Schimp.

- BA:** Henriques, 1883; Henriques, 1889; Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Greven, 1995; Jansen 1998; Jansen & Sequeira, 1999.
BA/BB: Levier, 1880; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1930; Greven & Melick, 1994.
BB: Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1930; Jansen *et al.*, 1997.
DL: ; Pereira-Coutinho, 1917b; Séneca-Cardoso, 1989; Werner, 1997.
Mi: Machado, 1915a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1930; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d Sérgio & Schumacker, 1992.
TM: Ervideira, 1922; Sérgio & Schumacker, 1992.

Grimmia orbicularis Wilson

- BA:** Jansen 1998.
BL: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1930; Sérgio *et al.*, 1988.
E: Sérgio & Sim-Sim, 1985a.
R: Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

Grimmia ovalis (Hedw.) Lindb.

- Ag:** Dixon, 1912.
BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b.
BA/BB: Machado, 1930.
BB: Séneca-Cardoso, 1989.
BL: Machado, 1916.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1930.
Mi: Machado, 1930; Sérgio & Schumacker, 1992.
TM: Machado, 1930.
Pt: Venturi, 1881; Luisier, 1924.

Grimmia pilosissima Herzog

- AAI:** Sérgio *et al.*, 1997b.
BA: Greven, H., 1994; Sérgio *et al.*, 1994e; Greven, 1995.
BA/BB: Greven & Melick, 1994.

Grimmia pitardii Corb.

- IPmap:** Casas *et al.*, 1985.
BL: Casas *et al.*, 1985; Sérgio *et al.*, 1987b; Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

Grimmia pulvinata (Hedw.) Sm.

- AAI:** Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Sérgio, 1970-1971; Sérgio *et al.*, 1987a.
BA: Pereira-Coutinho, 1917b; Pais, 1964; Greven, 1995; Sérgio *et al.*, 2001d.
BA/BB: Machado, 1917b; Greven & Melick, 1994.
BAL: Sérgio *et al.*, 1999a.
BB: Luisier, 1916b; Sérgio *et al.*, 2002c.

BL: Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902.

E: Anônimo, 1884; Henriques, 1889; Anônimo, 1890; Pereira-Coutinho, 1917b; Ade & Koppe, 1942; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988; Sérgio *et al.*, 1998d.

TM: Machado, 1915b; Pereira-Coutinho, 1917b; Ervideira, 1922.

Pt: Brotero, 1804; Venturi, 1881; Machado, 1930; Sérgio *et al.*, 1987a.

Grimmia trichophylla Grev.

AAI: Sérgio *et al.*, 1997b.

Ag: Crundwell, 1956; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Henriques, 1883; Greven, 1995; Jansen 1998; Sérgio *et al.*, 2001d.

BA/BB: Levier, 1880; Pereira-Coutinho, 1917b; Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

BB: Luisier, 1910c.

BL: Sérgio *et al.*, 1988.

DL: Sampaio, 1901-1902.

Mi: Machado, 1915a; Machado, 1918; Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Albertos, 2001.

R: Sérgio *et al.*, 1988.

TM: Machado, 1915b; Ervideira, 1922; Ervideira, 1926; Allorge & Allorge, 1949; Sérgio & Schumacker, 1992.

Pt: Machado, 1930; Sérgio *et al.*, 1987a.

Gymnostomum aeruginosum Sm.

[**E:** Henriques, 1889; Machado, 1928; Casares, 1932].

This species was reported dubiously for Estremadura, Mafra. In fact, all the reports of Henriques gathered by E. da Veiga can be erroneous.

Gymnostomum calcareum Nees & Hornsch.

Eurmap: Whitehouse & Crundwell, 1991.

AAI: Sérgio, 1969; Pierrot, 1972; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Allorge, 1935; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Whitehouse & Crundwell, 1992.

BA: Pierrot, 1972.

BAI: Pereira-Coutinho, 1917b.

BB: Luisier, 1916b; Machado, 1928; Allorge, 1974.

BL: Anônimo, 1893; Warnstorf, 1899; Pereira-Coutinho, 1917b; Machado, 1928; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1988; Leitão *et al.*, 1996.

DL: Sampaio, 1901-1902; Machado, 1928; Allorge, 1974.

E: Levier, 1880; Henriques, 1889; Warnstorf, 1899; Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Pierrot, 1972; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Whitehouse & Crundwell, 1992.

Mi: Sampaio, 1901-1902; Machado, 1913; Luisier, 1907a; Pereira-Coutinho, 1917b;

Machado, 1920a; Machado, 1928; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a; Whitehouse & Crundwell, 1992.

***Gymnostomum viridulum* Brid.**

IPmap: Sérgio, 1984a; Casas *et al.*, 1985.

AAI: Sérgio, 1984a; Casas *et al.*, 1985; Sérgio *et al.*, 1997b.

Ag: Henriques, 1889; Sérgio, 1984a; Sérgio *et al.*, 1984; Casas *et al.*, 1985; Sérgio *et al.*, 1987a; Whitehouse & Crundwell, 1992.

BA: Sérgio, 1984a; Casas *et al.*, 1985; Pierrot, 1989.

BA/BB: Greven & Melick, 1994.

BAI: Sérgio, 1984a; Casas *et al.*, 1985; Whitehouse & Crundwell, 1992.

BL: Henriques, 1889; Sérgio, 1984a; Casas *et al.*, 1985; Sérgio *et al.*, 1988.

DL: Henriques, 1889.

E: Mitten, 1853; Henriques, 1889; Sérgio, 1984a; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Pierrot, 1989.

Mi: Sérgio, 1972c; Sérgio, 1984a; Casas *et al.*, 1985; Sérgio & Schumacker, 1992; Whitehouse & Crundwell, 1992.

R: Sérgio, 1984a; Casas *et al.*, 1985; Sérgio *et al.*, 1988.

Pt: Crundwell, 1981; Sérgio *et al.*, 1987a, Zander, 1993.

***Gyroweisia reflexa* (Brid.) Schimp.**

DL: Séneca-Cardoso, 1989.

E: Ade & Koppe, 1942.

Mi: Machado, 1928.

***Gyroweisia tenuis* (Hedw.) Schimp.**

TM: Pierrot, 1972; Sérgio, 1994b.

***Habrodon perpusillus* (De Not.) Lindb.**

Ptmap: Sim-Sim & Sérgio, 1998.

Ag: Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Luisier, 1924; Machado, 1933; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Pierrot, 1972; Albertos, 2001; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Calleja *et al.*, 2001.

E: Pereira-Coutinho, 1917b; Barros, 1944a.

Mi: Sérgio & Schumacker, 1992.

***Hedwigia ciliata* (Hedw.) P. Beauv.**

IPmap: Casas & Sérgio, 1996.

AAI: Allorge, 1935; Sá-Nogueira, 1950e; Sérgio, 1969; Allorge, 1974; Casas *et al.*, 1996; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1996.

BA: Henriques, 1883; Henriques, 1889; Barros, 1942a; Braun-Blanquet *et al.*, 1952; Tavares, 1956; Sérgio, 1969; Allorge, 1974; Casas *et al.*, 1996; Sérgio *et al.*, 2001d.

- BA/BB:** Levier, 1880; Machado, 1917b; Greven & Melick, 1994; Casas *et al.*, 1996.
BB: Luisier, 1916b; Machado, 1933; Allorge, 1974; Casas *et al.*, 1996.
BL: Henriques, 1889; Machado, 1933; Sérgio, 1969; Anónimo, 1967; Allorge, 1974; Casas *et al.*, 1996.
DL: Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Casas *et al.*, 1996.
E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
Mi: Anónimo, 1887; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Casas *et al.*, 1996.
TM: Machado, 1915b; Machado, 1933; Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992; Casas *et al.*, 1996.
Pt: Ervideira, 1922.

The majority of the Portuguese herbarium material of the *Hedwigia* was recently revised and some reports correspond to *H. stellata*. Casas *et al.* (1996) published their occurrence and distribution in Iberian Peninsula.

Hedwigia stellata Hedenäs

- Eurmap:** Erzberger, 1996.
IPmap: Casas & Sérgio, 1996.
AAI: Casas *et al.*, 1996; Sérgio *et al.*, 1997b.
Ag: Casas *et al.*, 1996.
BA: Casas *et al.*, 1996; Erzberger, 1996; Jansen 1998; Sérgio *et al.*, 2001d.
BA/BB: Erzberger, 1996.
BB: Casas *et al.*, 1996.
BL: Casas *et al.*, 1996.
DL: Casas *et al.*, 1996; Werner, 1997.
E: Casas *et al.*, 1996.
Mi: Casas *et al.*, 1996; Erzberger, 1996.
TM: Casas *et al.*, 1996.

See note under *H. ciliata*.

Heterocladium heteropterum Bruch & Schimp. var. *heteropterum*

- AAI:** Sérgio *et al.*, 1997b.
Ag: Crundwell, 1956; Allorge, 1974.
BA: Tavares, 1956; Allorge, 1974; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BL: Dixon, 1912; Allorge, 1931a; Machado, 1933; Allorge, 1974.
DL: Ervideira, 1917; Sérgio & Garcia, 2002.
Mi: Machado, 1914a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1920b; Machado, 1933; Allorge, 1935; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
TM: Sérgio & Schumacker, 1992.
Pt: Luisier, 1924.

See note in *Leskeia brevifolia* Lindb.

Heterocladium heteropterum* Bruch & Schimp. var. *wulfsbergii* I. Hagen*BL:** Buch, 1942; Allorge, 1974.**Mi:** Sérgio & Schumacker, 1992.

Without new studies this variety can not be considered taxonomically important in Portugal.

Homalia lusitanica* Schimp.*Medmap:** He, 1997.**IPmap:** Gil & Guerra, 1981; Casas *et al.*, 1992.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Casas *et al.*, 1992.

E: Schimper, 1836-1856 (*Orig. descrip.*); Mitten, 1853; Levier, 1880; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1920b; Allorge, 1931a; Machado, 1933; Allorge, 1938; Barros, 1943; Barros, 1944a; Duell-Hermans, 1986; Dirkse, 1987; Casas *et al.*, 1992; He, 1997.

Mi: Allorge, 1938.**R:** Casas *et al.*, 1992.**Pt:** Welwitsch, 1872.

Schimper (1856) described this species as *Omalia lusitanica* and the type specimen is in BM. The occurrence in Baixo Alentejo reported by He (1997) was erroneously charted, as Santa Luzia is located in Madeira Island and not in Baixo Alentejo.

Homalia trichomanoides* (Hedw.) Schimp.*BL:** Allorge, 1974.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974.

[**E:** Henriques, 1889; Machado, 1933; Allorge, 1974].

Mi: Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974.

The species was reported dubiously from Estremadura, Mafra. In fact, all the reports of Henriques gathered by E. da Veiga can be erroneous. However the report from Douro Litoral, Serra do Pilar, *leg.* Newton (LISU 173609!) was revised and corresponds to this taxon.

Homalothecium aureum* (Spruce) H. Rob.*Eurmap:** Hofmann 1998.**IPmap:** Casas *et al.*, 1985.**AAI:** Machado, 1933; Casas *et al.*, 1985; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Machado, 1933; Casas *et al.*, 1985.

BA: Allorge, 1931a; Pierrot, 1972; Casas *et al.*, 1985.**BB:** Luisier, 1916b.**BL:** Braun-Blanquet *et al.*, 1956; Casas *et al.*, 1985; Sérgio *et al.*, 1988.

E: Sérgio, 1972a; Sérgio & Correia, 1981; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

R: Casas *et al.*, 1985; Sérgio *et al.*, 1988; Sérgio *et al.*, 1998d.**TM:** Ervideira, 1922; Machado, 1933; Allorge & Allorge, 1949; Casas *et al.*, 1985.**Pt:** Sérgio *et al.*, 1987a.***Homalothecium lutescens* (Hedw.) H. Rob.****BA:** Greven & Melick, 1994.

BL: Allorge, 1974.

[**E:** Henriques, 1889; Allorge, 1931a; Machado, 1933; Allorge, 1974].

TM: Machado, 1933; Allorge & Allorge, 1949; Allorge, 1974.

The species was reported dubiously from Estremadura, Mafra. In fact, all the reports of Henriques gathered by E. da Veiga can be erroneous. Other material that needs to be studied corresponds to the reports from Sintra (PC, Bryoth. Iber. ass. 150). The material reported by Greven & Melick (1994) was revised and confirmed (Beira Alta, wooded ravine N of "Centro de Acolhimento", 1700 m, 1993, leg. H. Melick).

Homalothecium lutescens var. *fallax* (Philib. ex Schimp.) Düll.

DL: Machado, 1933.

The reports from Douro Litoral, in the vicinity of Porto, by I. Newton, are to be considered as uncertain. There is no herbarium specimens to back the records

Homalothecium philippeanum (Spruce) Schimp.

[**Eurmap:** Hofmann, 1998.]

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BB: Luisier, 1916b.

BL: Pereira-Coutinho, 1917b; Machado, 1933; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.

E: Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1981; Sérgio & Sim-Sim, 1985a.

R: Pereira-Coutinho, 1917b; Machado, 1933.

Pt: Luisier, 1924].

Reported incorrectly by different authors from Portugal. All herbarium specimens correspond to *H. sericeum* with an epapillose seta. In fact it seems that this characteristic can be observed in some particular forms (Hofmann, 1998).

Homalothecium sericeum (Hedw.) Schimp.

AAI: Machado, 1933; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d; Jones, 1999.

Ag: Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Jones, 1999.

BA: Pereira-Coutinho, 1917b; Machado, 1933; Tavares, 1956; Allorge, 1974; Jones, 1999; Albertos, 2001; Sérgio *et al.*, 2001d.

BA/BB: Machado, 1917b; Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Allorge, 1974; Jones, 1999; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

BB: Machado, 1933; Catarino *et al.*, 1987; Sérgio *et al.*, 1998d; Calleja *et al.*, 2001.

BL: Brotero, 1804; Henriques, 1889; Warnstorff, 1899; Sampaio, 1901-1902; Allorge, 1931a; Machado, 1933; Allorge, 1935; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Jones, 1999.

DL: Henriques, 1889b; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Jones, 1999.

E: Mitten, 1853; Anónimo, 1884; Henriques, 1889; Anónimo, 1890; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Ade & Koppe, 1942; Barros, 1942a; Barros, 1942b; Barros, 1942c; Barros, 1943; Braun-Blanquet *et al.*, 1956; Allorge,

1974; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio, 1987b; Sérgio *et al.*, 1988; Jones, 1999.

Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999; Albertos, 2001.

R: Barros, 1942a; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d; Jones, 1999.

TM: Machado, 1915b; Ervideira, 1926; Machado, 1933; Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999.

Pt: Ervideira, 1922; Sérgio *et al.*, 1987a.

***Homomallium incurvatum* (Brid.) Loeske**

BL: Pereira-Coutinho, 1917b; Machado, 1933.

E: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933.

The reports presented are older, however this species was recently gathered in Estremadura, Sintra, *leg.* Sérgio 1984 (LISU!).

***Hookeria lucens* (Hedw.) Sm.**

IPmap: Casas *et al.*, 1992.

BA: Tavares, 1956.

BL: Henriques, 1889; Machado, 1933; Casas *et al.*, 1992.

DL: Machado, 1933.

E: Henriques, 1889; Machado, 1933; Casas *et al.*, 1992.

Mi: Brotero, 1804; Mitten, 1853; Anónimo, 1887; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

TM: Casas *et al.*, 1992.

Pt: Welwitsch, 1872.

***Hygroamblystegium tenax* (Hedw.) Jenn.**

BL: Pereira-Coutinho, 1917b; Sérgio *et al.*, 2001e.

Mi: Machado, 1913; Machado, 1933; [Sá-Nogueira, 1950d]; Teles, 1970; Sérgio & Schumacker, 1992.

Pt: Welwitsch, 1872; Machado, 1933.

The report by Sá-Nogueira (1950d) from Gerês, gathered by Rigo (COI!) corresponds to an indeterminated *Philonotis*.

***Hygrohypnum luridum* (Hedw.) Jenn.**

[**BL:** Machado, 1933; Sérgio *et al.*, 2001e].

Only reported from Buçaco (BL) by Henriques (Machado, 1932, *non vidi*) sub *Hygrohypnum palustre*. The herbarium specimen was not be found, so it is to be considered as an uncertain species. Moreover, Allorge (1974) does not have information of this species from Serra do Buçaco.

***Hygrohypnum ochraceum* (Wilson) Loeske**

BA: Henriques, 1883, Henriques, 1889.

BB: Machado, 1933.

Mi: Machado, 1913; Machado, 1914a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922.

***Hylocomium brevirostre* (Brid.) Schimp.**

IPmap: Casas *et al.*, 1992.

DL: Braun-Blanquet *et al.*, 1964.

Mi: Séneca-Cardoso, 1989; Sérgio & Séneca 1991; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

The species was only recorded in two localities: Serra do Gerês, *leg.* Machado, 1931 (LISU!), and in Valongo, 1949 (Braun-Blanquet *et al.* 1964). We think that it should be considered an extinct moss (Sérgio *et al.* 2001e).

***Hylocomium splendens* (Hedw.) Schimp.**

BA: Tavares, 1956; Jansen, 1994; Sérgio & Séneca, 1994; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

Mi: Henriques, 1889; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Sérgio & Séneca, 1994.

TM: Ervideira, 1922; Ervideira, 1926; Machado, 1933; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956.

Pt: Brotero, 1804.

***Hymenostylium recurvirostrum* (Hedw.) Dixon**

Ag: Estácio da Veiga, 1869; Henriques, 1889; Machado, 1928; Casares, 1932.

The species was reported dubiously from Estremadura, Mafra. In fact, all the reports correspond to the material gathered by E. da Veiga and can be erroneous.

***Hyocomium armoricum* (Brid.) Wijk & Marg.**

Wmap: Sérgio, 1990.

Eurmap: Allorge, 1931c.

IPmap: Elias, 1988; Casas *et al.*, 1985; Sérgio *et al.*, 1994c.

BA: Sérgio, 1972a; Casas *et al.*, 1985.

BL: Sérgio, 1972a; Casas *et al.*, 1985; Werner, 1997.

DL: Machado, 1933; Casas *et al.*, 1985; Werner, 1997.

Mi: Machado, 1914a; Machado, 1915a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio, 1972a; Casas *et al.*, 1985; Sérgio & Schumacker, 1992.

TM: Machado, 1933; Sérgio & Schumacker, 1992.

***Hypnum andoi* A. J. E. Smith**

AAI: Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d.

Ag: Sérgio, 1970-1971; Allorge, 1974.

BA: Braun-Blanquet *et al.*, 1956; Ando, 1992; Jansen 1998; Albertos, 2001; Sérgio *et al.*, 2001d.

BAL: Sérgio *et al.*, 2002d.

BB: Calleja *et al.*, 2001.

BL: Anônimo, 1969; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902.

E: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio & Sim-Sim, 1985a.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1914a; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos, 2001; Calleja *et al.*, 2001.

R: Barros, 1942a; Allorge, 1974; Sérgio *et al.*, 1988; Sérgio *et al.*, 1998d.

TM: Séneca-Cardoso, 1989; Sérgio & Schumacker, 1992.

Pt: Sérgio *et al.*, 1987a.

Hypnum cupressiforme Hedw. s.l.

AAI: Catarino *et al.*, 1987; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d; Sérgio *et al.*, 1993b; Jones, 1999.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Allorge, 1931a; Sérgio, 1970-1971; Guerra *et al.*, 1981; Sérgio *et al.*, 1993b; Jones, 1999.

BA: Henriques, 1889; Pereira-Coutinho, 1917b; Braun-Blanquet *et al.*, 1952; Braun-Blanquet *et al.*, 1956; Pais, 1964; Jansen, 1994; Jansen 1998; Jansen & Sequeira, 1999; Jones, 1999; Jansen *et al.*, 2000; Albertos, 2001; Sérgio *et al.*, 2001d; Sérgio *et al.*, 1993b.

BA/BB: Machado, 1917b; Greven & Melick, 1994.

BAI: Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

BB: Pereira-Coutinho, 1917b; Catarino *et al.*, 1987; , Sérgio *et al.*, 1993b; Sérgio *et al.*, 1998d.

BL: Henriques, 1889; Sampaio, 1901-1902; Barros, 1942b; Sá-Nogueira, 1950a; Braun-Blanquet *et al.*, 1956; Braun-Blanquet *et al.*, 1964; Anônimo, 1967; Anônimo, 1969; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Sérgio *et al.*, 1993b; Jones, 1999.

DL: Henriques, 1889; Sampaio, 1901-1902; Braun-Blanquet *et al.*, 1964; Sérgio *et al.*, 1993b; Jones, 1999.

E: Mitten, 1853; Levier, 1880; Henriques, 1889; Warnstorff, 1899; Ade & Koppe, 1942; Barros, 1942b; Barros, 1942c; Barros, 1943; Sá-Nogueira, 1950b; Braun-Blanquet *et al.*, 1956; Braun-Blanquet *et al.*, 1964; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Sérgio *et al.*, 1993b; Jones, 1999.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Machado, 1920a; Allorge, 1931a; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Sérgio *et al.*, 1993b; Jones, 1999; Albertos, 2001.

R: Barros, 1942a; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio *et al.*, 1993b; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d; Jones, 1999.

TM: Machado, 1915b; Ervideira, 1926; Barros, 1942b; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Sérgio & Schumacker, 1992; Sérgio *et al.*, 1993b; Jones, 1999.

Pt: Brotero, 1804; Ervideira, 1922; Machado, 1933; Sérgio *et al.*, 1987a; Figueira *et al.*, 2001.

The interpretation of the involved infraspecific names of *H. cupressiforme* is controversial and many reports can correspond to different varieties, including *H. andoi*.

Hypnum imponens Hedw.

- Ag:** Solms-Laubach, 1868; Welwitsch, 1872; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1970-1971.
BA: Pereira-Coutinho, 1917b; Machado, 1933; Sérgio *et al.*, 2001d.
BL: Pereira-Coutinho, 1917b; Machado, 1933.
E: Pereira-Coutinho, 1917b; Machado, 1933; Sérgio *et al.*, 1988.
Mi: Machado, 1920a; Machado, 1933; Sérgio & Schumacker, 1992.
Pt: Luisier, 1924; Sérgio *et al.*, 1987a.

Hypnum jutlandicum Holmen & E. Warncke

- BA:** Braun-Blanquet *et al.*, 1952; Tavares, 1956; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BB: Jansen, 1994.
Mi: Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

Hypnum lacunosum (Brid.) Hofm. ex Brid.

- Ag:** Machado, 1917a; Crundwell, 1956.
BA: Henriques, 1883; Pereira-Coutinho, 1917b; Machado, 1933; Tavares, 1956; Sérgio *et al.*, 2001d.
BB: Pereira-Coutinho, 1917b; Machado, 1933.
DL: Machado, 1933.
E: Pereira-Coutinho, 1917b; Machado, 1933.
Mi: Machado, 1913; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d.
R: Pereira-Coutinho, 1917b; Machado, 1933.
TM: Sérgio & Schumacker, 1992; Séneca-Cardoso, 1989.

Hypnum resupinatum Taylor

- AAI:** Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Crundwell, 1956; Allorge, 1974.
BA: Sérgio *et al.*, 2001d.
BL: Allorge, 1935; Allorge, 1974; Sérgio & Sim-Sim, 1988; Ando, 1990.
DL: Machado, 1933; Allorge, 1974.
E: Machado, 1933; Barros, 1942c; Barros, 1943; Sá-Nogueira, 1950b; Allorge, 1974.
Mi: Machado, 1913; Machado, 1914a; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Albertos, 2001.
R: Sérgio & Sim-Sim, 1994.

This species is considered a synonym of *H. cupressiforme* by different authors, but we consider it a species in its own right, according to Ando (*pers. comm.*).

Hypnum uncinulatum Jur.

- BL:** Allorge, 1974.

Hypopterygium tamarisci (Sw.) Brid. ex Müll. Hal.

- Wmap:** Pfeiffer *et al.* 2000.

- BL:** Allorge, 1931a; Luisier, 1934; Allorge, 1974; Kruijer, 1997.

This species has been recently considered as a new name of *H. muelleri* Hampe (Pfeiffer *et al.* 2000).

Isopterygiopsis pulchella (Hedw.) Z. Iwats.**BL:** Allorge, 1974.*Isothecium algarvicum* W. E. Nicholson & Dixon**IPmap:** Guerra, 1980.**Ag:** Dixon, 1912 (*Orig. descrip.*), Luisier, 1924; Machado, 1933; Guerra, 1980; Sérgio, 1980-1981.**BAI:** Sérgio & Garcia, 2001b; Sérgio *et al.*, 2001b; Sérgio *et al.*, 2002d.*Isothecium alopecuroides* (Dubois) Isov.**Ag:** Dixon, 1912; Machado, 1933; Allorge, 1974.**BA:** Allorge, 1974; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BL:** Henriques, 1889; Machado, 1933; Sérgio, 1969; Allorge, 1974.**DL:** Machado, 1933; Allorge, 1974.**E:** Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Pais, 1964; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d.**Mi:** Machado, 1917b; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.**TM:** Ervideira, 1922; Machado, 1933; Allorge, 1974.*Isothecium holtii* Kindb.**BA:** Sérgio & Séneca, 1994; Sérgio *et al.*, 2001d; Sérgio & Garcia, 2001a.**BL:** Werner, 1997; Sérgio & Garcia, 2001a.**Mi:** Sérgio & Schumacker, 1992; Sérgio & Séneca, 1994; Sérgio & Garcia, 2001a.*Isothecium myosuroides* Brid.**AAI:** Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Machado, 1933; Allorge, 1974.**BA:** Pereira-Coutinho, 1917b; Allorge, 1974; Jansen 1998; Sérgio *et al.*, 2001d.**BA/BB:** Machado, 1917b; Greven & Melick, 1994.**BB:** Machado, 1933; Calleja *et al.*, 2001.**BL:** Henriques, 1889; Warnstorff, 1899; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1935; Anónimo, 1967; Sérgio, 1969; Anónimo, 1969; Allorge, 1974.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974.**E:** Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942c; Sá-Nogueira, 1950b; Allorge, 1974.**Mi:** Anónimo, 1887; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Allorge, 1935; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos, 2001; Calleja *et al.*, 2001.**TM:** Ervideira, 1922; Ervideira, 1926; Machado, 1933; Allorge, 1974; Sérgio & Schumacker, 1992.**Pt:** Luisier, 1924.*Isothecium striatum* (Spruce) Kindb.**Ag:** Machado, 1933.

BA: Henriques, 1883.
BA/BB: Levier, 1880.
BB: Machado, 1933.
BL: Warnstorff, 1899.
E: Pereira-Coutinho, 1917b; Machado, 1933; Sérgio & Sim-Sim, 1985a.
Mi: Séneca-Cardoso, 1989.
R: Pereira-Coutinho, 1917b; Machado, 1933.

***Kiaeria blyttii* (Bruch & Schimp.) Broth.**

BA: Henriques, 1883; Henriques, 1889; Jansen 1998.
BB: Machado, 1928.

***Kiaeria falcata* (Hedw.) I. Hagen**

BA: Henriques, 1883; Henriques, 1889; Jansen 1998.
BA/BB: Levier, 1880; Casares, 1932.
BB: Machado, 1928.

***Kiaeria starkei* (F. Weber & D. Mohr) I. Hagen**

IPmap: Elias, 1988.
BA: Henriques, 1883; Henriques, 1889; Machado, 1917b; Pereira-Coutinho, 1917b.
BA/BB: Levier, 1880; Casares, 1932; Greven & Melick, 1994.
BB: Machado, 1928.
[DL: Sampaio, 1901-1902].

The report from Douro Litoral is considered erroneous, it was not mentioned by Machado to this region, being its occurrence very improbable phytogeographically.

***Leptobarbula berica* (De Not.) Schimp.**

IPmap: Casas *et al.*, 1985.
Ag: Pierrot, 1972; Sérgio *et al.*, 1984; Appleyard *et al.*, 1985; Casas *et al.*, 1985; Sérgio *et al.*, 1987a.

***Leptobryum pyriforme* (Hedw.) Wilson**

BL: Anônimo, 1969; Sérgio, 1972a.
DL: Henriques, 1889; Sampaio, 1901-1902; Luisier, 1924; Machado, 1930.

***Leptodon smithii* (Hedw.) F. Weber & D. Mohr**

Wmap: Sérgio, 1990.
IPmap: Casas *et al.*, 1992.
AAl: Allorge, 1974; Casas *et al.*, 1992; Jones, 1999.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1992; Jones, 1999.
BA: Allorge, 1974; Casas *et al.*, 1992; Jones, 1999; Albertos, 2001; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAl: Jones, 1999.
BB: Catarino *et al.*, 1987; Casas *et al.*, 1992; Calleja *et al.*, 2001.

- BL:** Brotero, 1804; Brotero, 1816; Henriques, 1889; Anónimo, 1893; Sampaio, 1901-1902; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Pierrot, 1972; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Kindberg, 1898; Casas *et al.*, 1992; Jones, 1999.
- DL:** Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Machado, 1933; Allorge, 1974; Casas *et al.*, 1992.
- E:** Mitten, 1853; Levier, 1880; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Ade & Koppe, 1942; Barros, 1942c; Barros, 1943; Sá-Nogueira, 1950b; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Casas *et al.*, 1992; Jones, 1999.
- Mi:** Machado, 1914a; Luisier, 1916b; Machado, 1920a; Machado, 1933; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992; Jones, 1999; Albertos, 2001.
- R:** Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Casas *et al.*, 1992; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d; Jones, 1999.
- TM:** Machado, 1915b; Ervideira, 1926; Machado, 1933; Allorge, 1935; Allorge & Allorge, 1949; Allorge, 1974; Casas *et al.*, 1992.
- Pt:** Welwitsch, 1872; Venturi, 1881; Sérgio *et al.*, 1987a; Sim-Sim *et al.*, 2000a.

Leptodontium flexifolium (With.) Hampe

E: Cardoso & Sérgio, 1985; Séneca-Cardoso, 1989; Sérgio *et al.*, 2001e.

Leptophascum leptophyllum (Müll. Hal.) J. Guerra M. J. Cano

R: Garcia & Sérgio, 2001b.

Leskea brevifolia Lindb.

[DL: Ervideira 1917; Luisier 1924; Machado 1932].

It was treated as an independent species for Portugal by Lindberg, in a publication of Ervideira (1917). Studying the LISU original collection, Douro Litoral: Porto, São Cristovão de Mafamude (Holotype), Sérgio & Garcia (2002) showed that it is a mixed sample that includes plants of *Leskea polycarpa* Hedw. and *Heterocladium heteropterum* (Brid.) Bruch & Schimp.

Leskea polycarpa Hedw.

BL: Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Sérgio & Sim-Sim, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Sérgio & Garcia, 2002.

Mi: Machado, 1933.

R: Sérgio & Garcia, 2002.

Pt: Luisier, 1924.

Leucobryum glaucum (Hedw.) Ängstr.

IPmap: Casas *et al.*, 1996.

BL: Casas *et al.*, 1996.

Leucobryum juniperoides (Brid.) Müll. Hal.

IPmap: Casas *et al.*, 1996.

BA: Casas *et al.*, 1996.

BAI: Sérgio *et al.*, 2002d.

BA/BB: Greven & Melick, 1994.

BL: Henriques, 1889; Machado, 1928; Barros, 1942b; Anónimo, 1967; Anónimo, 1969; Sérgio, 1969; Pierrot, 1972; Allorge, 1974; Casas *et al.*, 1996.

DL: Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974; Casas *et al.*, 1996.

E: Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974; Casas *et al.*, 1996.

Mi: Sampaio, 1901-1902; Machado, 1913; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Barros, 1942b; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Casas *et al.*, 1996.

(Pt) Brotero, 1804.

The most part of the Portuguese herbarium material from the genus *Leucobryum* was revised and the majority of reports corresponds to *L. juniperoides* (Casas *et al.*, 1996).

***Leucodon sciuroides* (Hedw.) Schwägr. var. *morenensis* (Schwägr.) De Not.**

IPmap: Fuertes *et al.*, 1997.

AAI: Machado, 1933; Pierrot, 1972; Allorge, 1974; : Catarino *et al.*, 1987; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d; Jones, 1999.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Machado, 1933; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Fuertes *et al.*, 1997; Fuertes *et al.*, 1997; Jones, 1999.

BA: Barros, 1942b; Allorge, 1974; Jones, 1999; Albertos, 2001; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Allorge, 1974; Jones, 1999.

BB: Luisier, 1916b; Sérgio *et al.*, 1998d.

BL: Kindberg, 1898; Henriques, 1889; Anónimo, 1893; Sampaio, 1901-1902; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Sérgio, 1972a; Allorge, 1974; Catarino *et al.*, 1987 Sérgio & Sim-Sim, 1988; Sérgio *et al.*, 1988; Fuertes *et al.*, 1997; Werner, 1997; Jones, 1999.

E: Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942c; Barros, 1943; Allorge, 1974; Sérgio, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Fuertes *et al.*, 1997; Jones, 1999.

Mi: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1913; Machado, 1915a; Luisier, 1916b; Machado, 1917b; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Séneca-Cardoso, 1989; Sérgio & Schumacker, 1992; Fuertes *et al.*, 1997; Jones, 1999; Albertos, 2001.

R: Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942a; Barros, 1942b; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Fuertes *et al.*, 1997; Sérgio *et al.*, 1998d; Jones, 1999.

TM: Ervideira, 1922; Machado, 1933; Allorge, 1935; Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992; Fuertes *et al.*, 1997.

After revision of several herbarium specimens, only few reports from Portugal correspond to var. *sciuroides*, being var. *morenensis* more widespread. So we included all reports in var. *morenensis*.

Metaneckera menziesii* (Drumm.) Steere*IPmap:** Casas *et al.*, 1985.**TM:** Allorge, 1931b; Machado, 1933; Allorge, 1935; Allorge & Allorge, 1949; Casas *et al.*, 1985; Sérgio *et al.*, 2001e.This species was only collected in a restricted area in Trás-os-Montes, in 1931, by Allorge (PC!), so it should be considered extinct (Sérgio *et al.* 2001e).***Mielichhoferia mielichhoferiana* (Funck) Loeske****BB:** Sérgio & Casas, 1992.***Mnium ambiguum* H. Muell.****[BA:** Pereira-Coutinho, 1917b.**BB:** Machado, 1930].Reported from Portugal sub *Mnium lycopodioides* (Hook.) Schaewg., it is considered as an uncertain species. After revision of herbarium material (Beira Baixa: Serra da Estrela, Cântaro Gordo, 1848, Welwitsch, LISU 54381 and LISU 148597) we concluded that the records correspond to *M. hornum* Hedw.***Mnium hornum* Hedw.****IPmap:** Fuertes & Acón, 1999.**AAL:** Sérgio *et al.*, 1997b; Fuertes & Acón, 1999.**Ag:** Dixon, 1912; Machado, 1930.**BA:** Pereira-Coutinho, 1917b; Tavares, 1956; Fuertes & Acón, 1999; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BB:** Fuertes & Acón, 1999.**BL:** Sá-Nogueira, 1950a; Anónimo, 1969; Fuertes & Acón, 1999.**DL:** Anónimo, 1883a; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Pereira-Coutinho, 1917b.**E:** Pereira-Coutinho, 1917b; Fuertes & Acón, 1999.**Mi:** Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Fuertes & Acón, 1999.**TM:** Ervideira, 1922; Sérgio & Schumacker, 1992; Fuertes & Acón, 1999.***Mnium marginatum* (Dicks.) P. Beauv.****[DL:** Henriques, 1889; Machado, 1930.**Pt:** Luisier, 1924.]The report of its occurrence in Portugal, Douro Litoral: Porto, gathered by I. Newton, is still uncertain. Machado could not validate the species identification (*non vidi*).***Mnium stellare* Hedw.****IPmap:** Casas *et al.*, 1989; Fuertes & Acón, 1999.**BL:** Casas *et al.*, 1989; Fuertes & Acón, 1999.**TM:** Allorge, 1931b; Machado, 1933; Allorge & Allorge, 1949; Casas *et al.*, 1989; Fuertes & Acón, 1999.***Neckera cephalonica* Jur. & Unger**

[**BA/BB:** Greven & Melick, 1994].

This report corresponds to *N. pumila* Hedw. (Beira Alta. Serra da Estrela, steep ravine "Covão da Ametade" W of Albergaria, 1500 m, 1993, H. Melick and LISU!).

***Neckera complanata* (Hedw.) Huebener**

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Machado, 1933; Allorge, 1974.

BA: Sérgio *et al.*, 2001d.

BB: Calleja *et al.*, 2001.

BL: Levier, 1880; Henriques, 1889; Sampaio, 1901-1902; Allorge, 1931a; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1988; Werner, 1997.

E: Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Ade & Koppe, 1942; Barros, 1942b; Barros, 1943; Sá-Nogueira, 1950b; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Luisier, 1907a; Machado, 1913; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Calleja *et al.*, 2001.

R: Sérgio *et al.*, 1988.

TM: Allorge & Allorge, 1949; Allorge, 1974.

Pt: Brotero, 1804; Sérgio *et al.*, 1987a.

***Neckera crispa* Hedw.**

BL: Henriques, 1889; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 2001b.

E: Sá-Nogueira, 1950b; Sérgio *et al.*, 2001b.

Mi: Brotero, 1804; Henriques, 1889; Luisier, 1910c; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 2001b.

Neckera pumila* Hedw. var. *pumila

IPmap: Guerra & Gil, 1981.

Ag: Solms-Laubach, 1868; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1933; Crundwell, 1956; Allorge, 1974; Jones, 1999.

BA: Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Calleja *et al.*, 2001.

BL: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1988; Werner, 1997; Jones, 1999.

E: Allorge, 1974; Jones, 1999.

Mi: Luisier, 1907a; Luisier, 1910c; Anónimo, 1911; Machado, 1913; Machado, 1914a; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999; Albertos, 2001; Calleja *et al.*, 2001.

R: Sérgio *et al.*, 1988.

TM: Sérgio & Schumacker, 1992.

Pt: Luisier, 1924.

We have included *N. pumilla* var. *elongata* Lindb. ex Henriq. (*Orig. descrip.* in Henriques, 1889) from Beira Litoral: Mata de Foja, *leg.* Moller in the broad sense of *N. pumilla* Hedw.

***Neckera pumila* Hedw. var. *pilifera* Jur.**

- Ag:** Allorge, 1974.
BL: Allorge, 1974.
E: Allorge, 1974.
Mi: Machado, 1918; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974.

***Octodiceras fontanum* (Bach. Pyl.) Lindb.**

- IPmap:** Casas *et al.*, 1989.
AAl: Sérgio *et al.*, 1994d; Garcia & Sérgio, 2001a.
Ag: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1938; Casas *et al.*, 1989; Garcia & Sérgio, 2001a.
BAl: Casas *et al.*, 1989.
BL: Henriques, 1889; Anónimo, 1893; Anónimo, 1897; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1938; Casas *et al.*, 1989.
E: Mitten, 1853; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1938; Barros, 1942b; Sérgio *et al.*, 1988; Casas *et al.*, 1989.
R: Garcia & Sérgio, 2001a.
Pt: Luisier, 1946.

***Orthotrichum acuminatum* H. Philib.**

- Wmap:** Pluijm, 2001.
AAl: Sérgio *et al.*, 1997b.
BA: Lara & Mazimpaka, 1992.
BB: Calleja *et al.*, 2001; Sérgio *et al.*, 2001d.

***Orthotrichum affine* Brid.**

- AAl:** Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Luisier, 1916b; Machado, 1933; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BA: Henriques, 1883; Henriques, 1889; Allorge, 1974; Albertos, 2001; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BB: Luisier, 1916b; Machado, 1933; Allorge, 1974.
BL: Allorge, 1974; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.
DL: Serqueira, 1881; Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
E: Sérgio & Correia, 1981; Sérgio *et al.*, 1988.
Mi: Brotero, 1804; Machado, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Ervideira, 1922; Machado, 1933; Allorge, 1974; Sérgio & Schumacker, 1992.
Pt: Sérgio *et al.*, 1987a.

The report from Douro Litoral: Quinta da Carreira, Penafiel (Serqueira, 1881) sub *O. stramineum* Hornsch. ex Brid., was included by Henriques (1883) in *O. affine* Brid.

***Orthotrichum anomalum* Hedw.**

- Ag:** Henriques, 1889; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
- BA:** Sérgio *et al.*, 2001d.
- BL:** Machado, 1933; Sérgio *et al.*, 1988; Séneca-Cardoso, 1989.
- E:** Mitten, 1853; Pereira-Coutinho, 1917b; Machado, 1933; Pais, 1964; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
- R:** Sérgio *et al.*, 1988.
- Pt:** Luisier, 1924; Sérgio *et al.*, 1987a.

***Orthotrichum consimile* Mitt.**

- Ptmap:** Lara *et al.*, 2001.
- TM:** Lara *et al.*, 2001.

***Orthotrichum cupulatum* Brid.**

- AAI:** Sérgio *et al.*, 1997b.
- Ag:** Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
- BL:** Sérgio *et al.*, 1988.
- Pt:** Sérgio *et al.*, 1987a.

***Orthotrichum diaphanum* Brid.**

- AAI:** Catarino *et al.*, 1987; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1997b.
- Ag:** Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Machado, 1933; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
- BA:** Sérgio *et al.*, 2001d.
- BAI:** Sérgio *et al.*, 2002d.
- BB:** Catarino *et al.*, 1987.
- BL:** Henriques, 1889; Anónimo, 1893; Machado, 1933; Sérgio, 1969; Sérgio & Sim-Sim, 1988.
- DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933.
- E:** Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Ade & Koppe, 1942; Barros, 1942c; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d.
- Mi:** Machado, 1913; Machado, 1933.
- R:** Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d.
- TM:** Allorge & Allorge, 1949.
- Pt:** Sérgio *et al.*, 1987a.

***Orthotrichum ibericum* F. Lara & Mazimpaka**

- IPmap:** Lara, 1994; Garilleti *et al.*, 1997.
- Ptmap:** Lara, 1994.
- BA:** Lara & Mazimpaka, 1993; Albertos, 2001; Lara *et al.*, 2001.
- BB:** Calleja *et al.*, 2001; Lara *et al.*, 2001; Sérgio *et al.*, 2001d.
- TM:** Lara *et al.*, 2001.

Orthotrichum lyellii Hook. & Taylor**Ptmap:** Sim-Sim & Sérgio, 1998.**AAI:** Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d; Jones, 1999.**Ag:** Dixon, 1912; Machado, 1933; Allorge, 1974; Jones, 1999.**BA:** Henriques, 1883; Henriques, 1889; Pierrot, 1972; Allorge, 1974; Jones, 1999; Albertos, 2001; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BB:** Machado, 1933; Catarino *et al.*, 1987; Calleja *et al.*, 2001.**BL:** Allorge, 1974; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Werner, 1997; Jones, 1999.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974; Jones, 1999.**E:** Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Jones, 1999.**Mi:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999; Albertos, 2001; Calleja *et al.*, 2001.**R:** Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d; Jones, 1999.**TM:** Sérgio & Schumacker, 1992; Jones, 1999.**Pt:** Brotero, 1804; Luisier, 1924; Allorge, 1938; Sérgio *et al.*, 1987 A, Sim-Sim *et al.*, 2000a.*Orthotrichum pumilum* Sw.**[Ag:** Solms-Laubach, 1868; Henriques, 1889; Luisier, 1924; Machado, 1933; Sérgio, 1970-1971.**BL:** Sérgio & Sim-Sim, 1988.**E:** Sérgio, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.**Mi:** Séneca-Cardoso, 1989.**R:** Sérgio *et al.*, 1988.**Pt:** Sérgio *et al.*, 1987a].

All the reports concerning the occurrence of *O. pumilum* have been erroneously assigned, corresponding mainly to *O. tenellum*, including the material of Solms from Algarve (BM!).

Orthotrichum rivulare Turner**TM:** Sérgio & Ribeiro, 1997.*Orthotrichum rupestre* Schwägr. var. *rupestre***IPmap:** Gil & Castro, 1987.**AAI:** Sérgio *et al.*, 1997b.**Ag:** Dixon, 1912; Gil & Castro, 1987.**BA:** Pereira-Coutinho, 1917b; Jansen, 1994; Jansen 1998; Albertos, 2001; Sérgio *et al.*, 2001d.

- BA/BB:** Machado, 1917b; Greven & Melick, 1994.
BB: Sérgio *et al.*, 2001d.
E: Sérgio & Sim-Sim, 1985a.
Mi: Machado, 1913; Machado, 1914a; Machado, 1917b; Barros, 1944b; Sá-Nogueira, 1950d; Albertos, 2001; Calleja *et al.*, 2001.
TM: Ervideira, 1922; Allorge & Allorge, 1949; Séneca-Cardoso, 1989; Sérgio & Schumacker, 1992.
Pt: Machado, 1933.

***Orthotrichum rupestre* Schwägr. var. *sturmii* (Hoppe & Hornsch.) Jur.**

- AAI:** Pierrot, 1972.
BA/BB: Greven & Melick, 1994.
BB: Pierrot, 1972.
DL: Pereira-Coutinho, 1917b.
E: Pereira-Coutinho, 1917b.
Mi: Luisier, 1916b; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d.
Pt: Machado, 1933.

***Orthotrichum scanicum* Gronvall**

- Eurmap:** Hallingbäck, 2001.
Ptmap: Lara *et al.*, 2001.
Ag: Lara *et al.*, 2001.
BA: Lara *et al.*, 2001.

***Orthotrichum schimperi* Hammar**

TM: Allorge & Allorge, 1949.
The only report of its occurrence have been supported by the recent revision of the herbarium specimen gathered by P. Allorge (PC!).

***Orthotrichum speciosum* Nees**

- Ptmap:** Lara *et al.*, 2001.
BA: Lara *et al.*, 2001.
BA/BB: Greven & Melick, 1994.
Mi: Lara *et al.*, 2001.
TM: Lara *et al.*, 2001.

***Orthotrichum stramineum* Brid.**

Ptmap: Lara *et al.*, 2001.
BA: Lara *et al.*, 2001; Sérgio *et al.*, 2001d.
Formerly assigned to be an excluded taxa, according to Sequeira (1881) was considered as uncertain: "Mister Lindberg m'a communiqué l'année dernière un petit échantillon d'*Orthotrichum*, qu'il avait reçu d' Oporto, et je l'ai trouvé être un *Orthotrichum stramineum*". Recently he occurrence of this taxon in Portugal was confirmed by Lara *et al.* (2001).

***Orthotrichum striatum* Hedw.**

- AAI:** Pierrot, 1972; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Machado, 1933; Allorge, 1974.

BA: Albertos, 2001; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Catarino *et al.*, 1987; Calleja *et al.*, 2001.

BL: Allorge, 1931a; Allorge, 1974.

DL: Machado, 1933; Allorge, 1974.

Mi: Luisier, 1910c; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos, 2001.

TM: Ervideira, 1922; Machado, 1933; Allorge, 1974.

Pt: Brotero, 1804.

Orthotrichum tenellum Brid.

AAl: Allorge, 1974; Catarino *et al.*, 1987; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d.

Ag: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Allorge, 1974; Sérgio *et al.*, 2001d.

BAl: Sérgio *et al.*, 1999a; **BAI:** Sérgio *et al.*, 2002d.

BB: Luisier, 1916b; Machado, 1933; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1998d; Calleja *et al.*, 2001.

BL: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1935; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974.

E: Mitten, 1853; Henriques, 1889; Luisier, 1907a; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942c; Barros, 1943; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.

Mi: Machado, 1913; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Albertos, 2001.

R: Sérgio, 1972a; Allorge, 1974; Catarino *et al.*, 1987; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d.

TM: Ervideira, 1922; Machado, 1933; Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Venturi, 1881; Luisier, 1924; Sérgio *et al.*, 1987a.

Orthotrichum urnigerum Myrin

Ptmap: Lara *et al.*, 2001.

AAl: Lara *et al.*, 2001.

TM: Lara *et al.*, 2001.

Palustriella commutata (Hedw.) Ochyra

Eurmap: Pentcost & Zhaohui, 2002.

[**Pt?:** Pentcost & Zhaohui, 2002].

The report from Portugal corresponds only to a distribution map (without precise location) by Pentcost & Zhaohui (2002). So, it is considered an uncertain species, its occurrence in the country is highly improbable phytogeographically.

Phascum cuspidatum Hedw. var. *cuspidatum***Ptmap:** Sérgio, 1972c.**AAI:** Sérgio *et al.*, 1997b.**BAL:** Sérgio, 1972c.**DL:** Sérgio, 2001b.**E:** Mitten, 1853; Henriques, 1889; Machado, 1928; Casares, 1932; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.**Pt:** Sérgio *et al.*, 1987a.*Phascum cuspidatum* Hedw. subsp. *papillosum* (Lindb.) J. Guerra & Ros**IPmap:** Guerra *et al.*, 1991.**Ag:** Guerra *et al.*, 1991.*Phascum cuspidatum* Hedw. var. *piliferum* (Hedw.) Hook. & Taylor**IPmap:** Gil & Castro, 1987; Guerra *et al.*, 1991.**Ptmap:** Sérgio, 1972c.**Ag:** Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Guerra *et al.*, 1991.**BL:** Sérgio *et al.*, 1988.**E:** Luisier, 1907a; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Sérgio, 1972c; Sérgio & Sim-Sim, 1985a; Gil & Castro, 1987.**Pt:** Sérgio *et al.*, 1987a.*Philonotis arnelli* Husn.**AAI:** Sérgio *et al.*, 1997b.**BA:** Pereira-Coutinho, 1917b; Barros, 1942b; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 2001d.**BA/BB:** Machado, 1930.**BB:** Machado, 1917b; Sérgio, 1969; Pierrot, 1972; : Allorge, 1974.**BL:** Sérgio, 1972; Allorge, 1974.**Mi:** Machado, 1914a; Machado, 1920a; Machado, 1930; Allorge, 1974.**R:** Sérgio, 1972a.**TM:** Séneca-Cardoso, 1989.*Philonotis caespitosa* Jur.**AAI:** Sérgio *et al.*, 1997b.**BA:** Sérgio, 1969; Jansen 1998.**BL:** Machado, 1930; Sérgio, 1969.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1930; Séneca-Cardoso, 1989.**Mi:** Machado, 1914a; Machado, 1916; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1930; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.*Philonotis calcarea* (Bruch & Schimp.) Schimp.**BA/BB:** Greven & Melick, 1994.**[BB:** Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1930.**BL:** Allorge, 1931a.**DL:** Henriques, 1889.**R:** Pereira-Coutinho, 1917b; Machado, 1930].**TM:** Sérgio, 1969.

P. calcarea is often confused with *P. fontana*, especially in older literature. LISU material corresponds in fact to *P. fontana*. This species seems to have a restricted distribution, perhaps only to Trás-os-Montes e Alto Douro. Therefore, we believe that the reports need to be revised.

***Philonotis fontana* (Hedw.) Brid.**

- AA:** Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Machado, 1930.
BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1935; Braun-Blanquet *et al.*, 1952; Jansen, 1994; Jansen 1998; Jansen & Sequeira, 1999.
BA/BB: Levier, 1880; Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.
BAL: Sérgio *et al.*, 1999a.
DL: Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Werner, 1997.
Mi: Brotero, 1804; Henriques, 1889; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Allorge, 1935; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.
TM: Machado, 1915b; Ervideira, 1922; Ervideira, 1926; Allorge & Allorge, 1949; Séneca-Cardoso, 1989; Sérgio & Schumacker, 1992.
Pt: Machado, 1930.

***Philonotis marchica* (Hedw.) Brid.**

- AA:** Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Machado, 1930.
BA: Sérgio *et al.*, 2001d.
BB: Sérgio *et al.*, 2002c.
BL: Machado, 1930; Sérgio, 1969.
Mi: Machado, 1915a.

***Philonotis rigida* Brid.**

- Eurmap:** Raeymaekers, 1983.
IPmap: Casas *et al.*, 1989.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Pereira-Coutinho, 1917b; Machado, 1930; Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1989.
BA: Allorge, 1935; Sérgio, 1969; Allorge, 1974; Casas *et al.*, 1989; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BB: Sérgio, 1969; Allorge, 1974; Casas *et al.*, 1989.
BL: Henriques, 1889; Allorge, 1935; Allorge, 1974; Casas *et al.*, 1989.
DL: Henriques, 1889; Sampaio, 1901-1902; Casas *et al.*, 1989.
E: Pereira-Coutinho, 1917b; Casas *et al.*, 1989.
Mi: Pereira-Coutinho, 1917b; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.
R: Casas *et al.*, 1989.
TM: Ervideira, 1922.
Pt: Machado, 1930.

Philonotis seriata Mitt.

- AAI:** Sérgio *et al.*, 1997b.
BA: Sérgio, 1969; Jansen & Sequeira, 1999.
BA/BB: Sampaio, 1901-1902.
BB: Machado, 1933.
Mi: Sérgio & Schumacker, 1992.

Philonotis tomentella Molendo

- Ag:** Dixon, 1912; Machado, 1930.
BA: Tavares, 1956; Sérgio *et al.*, 2001d.
BB: Sérgio *et al.*, 2002c.
BL: Dixon, 1912; Machado, 1930.
Mi: Séneca-Cardoso, 1989.

Physcomitrium pyriforme (Hedw.) Hampe

- IPmap:** Casas *et al.*, 1996.
AAI: Casas *et al.*, 1996; Sérgio *et al.*, 1997b.
BA: Sérgio, 1972a; Casas *et al.*, 1996; Jansen & Sequeira, 1999.
BL: Sérgio, 1972a; Casas *et al.*, 1996.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1930; Casas *et al.*, 1996.
Mi: Machado, 1913; Machado, 1930; Casas *et al.*, 1996.
R: Barros, 1942a.
Pt: Brotero, 1804.

Plagiomnium affine (Blandow) T. J. Kop.

- Wmap:** Koponen, 1971.
IPmap: Gómes-Menor *et al.*, 1999.
AAI: Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1935; Sérgio, 1970-1971; Koponen, 1971; Allorge, 1974; Gómes-Menor *et al.*, 1999.
BA: Allorge, 1974; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAI: Pereira-Coutinho, 1917b.
BB: Pereira-Coutinho, 1917b; Sérgio *et al.*, 2002c.
BL: Henriques, 1889; Allorge, 1974; Sérgio *et al.*, 1988; Gómes-Menor *et al.*, 1999; Fuentes & Acon, 2000.
DL: Henriques, 1889; Sampaio, 1901-1902.
E: Pereira-Coutinho, 1917b; Barros, 1943; Koponen, 1971; Sérgio *et al.*, 1988.
Mi: Sampaio, 1901-1902; Luisier, 1907a; Machado, 1913; Machado, 1920a; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Teles, 1970; Allorge, 1974; Sérgio & Schumacker, 1992; Gómes-Menor *et al.*, 1999.
TM: Pereira-Coutinho, 1917b; Ervideira, 1922; Allorge, 1974.
Pt: Brotero, 1804; Luisier, 1924; Machado, 1930; Sérgio *et al.*, 1987a.

Plagiomnium elatum (Bruch & Schimp.) T. J. Kop.

- BA:** Teles, 1970.
[BL: Henriques, 1889; Machado, 1930.
DL: Henriques, 1889; Machado, 1930].

TM: Machado, 1930; Allorge & Allorge, 1949.

The species was reported dubiously by Machado (1930) from Portugal. In fact, all the previous reports were not confirmed by this author. The specimens gathered by Allorge and by Teles need to be revised.

***Plagiomnium medium* (Bruch & Schimp.) T. J. Kop.**

IPmap: Gómes-Menor *et al.*, 1999; Fuertes *et al.*, 2001.

BA: Gómes-Menor *et al.*, 1999; Sérgio & Koponen, 2001.

BA/BB: Greven & Melick, 1994.

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

IPmap: Gómes-Menor *et al.*, 1999; Fuertes *et al.*, 2001.

AAI: Gómes-Menor *et al.*, 1999; Sérgio, 2001e; Sérgio *et al.*, 2001e.

Ag: Crundwell, 1956; Allorge, 1974.

BA: Sérgio *et al.*, 2001e; Sérgio *et al.*, 2002a.

BL: Allorge, 1974; Gómes-Menor *et al.*, 1999.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1930.

E: Sérgio, 2001e.

Species considered extinct in Portugal but that has been recently recorded in Serra de São Mamede and Serra da Estrela (Sérgio, 2001).

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

IPmap: Gómes-Menor *et al.*, 1999.

AAI: Sérgio *et al.*, 1997b.

BA: Sérgio *et al.*, 2001d.

BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.

BB: Luisier, 1916b; Tavares, 1956a.

BL: Henriques, 1889; Sérgio *et al.*, 1988; Gómes-Menor *et al.*, 1999.

DL: Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Gómes-Menor *et al.*, 1999.

E: Sá-Nogueira, 1950b; Sérgio *et al.*, 1988; Séneca-Cardoso, 1989; Gómes-Menor *et al.*, 1999.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1930; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Gómes-Menor *et al.*, 1999.

Sérgio *et al.*, 1987a.

TM: Ervideira, 1922; Allorge & Allorge, 1949; Sérgio & Schumacker, 1992; Gómes-Menor *et al.*, 1999.

Pt: Brotero, 1804; Welwitsch, 1872; Luisier, 1924.

***Plagiothecium cavifolium* (Brid.) Z. Iwats.**

BA: Garcia *et al.*, 2002.

BL: Allorge, 1974.

***Plagiothecium denticulatum* (Hedw.) Schimp.**

BA: Henriques, 1883; Henriques, 1889; Allorge, 1974; Jansen 1998.

BA/BB: Levier, 1880; Machado, 1933; Greven & Melick, 1994.

BL: Allorge, 1974.

Mi: Machado, 1913; Machado, 1916; Machado, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

***Plagiothecium latebricola* Schimp.**

BA: Sérgio *et al.*, 2001a.

***Plagiothecium nemorale* (Mitt.) A. Jaeger**

BA: Allorge, 1974; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Machado, 1917b; Machado, 1933.

BL: Allorge, 1974.

E: Sá-Nogueira, 1950b; Séneca-Cardoso, 1989.

Mi: Machado, 1914a; Pereira-Coutinho, 1917b; Machado, 1918; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Allorge & Allorge, 1949; Sérgio, 1969; Allorge, 1974.

***Plagiothecium piliferum* (Hartm.) Schimp.**

[**BA/BB:** Greven & Melick, 1994].

BL: Greven & Melick, 1994.

[**E:** Henriques, 1889; Machado, 1933].

This species was reported dubiously by Machado (1930) from Portugal. In fact, the report of Henriques based on a collection of E. da Veiga in Estremadura, Mafra, is erroneous. The report of Greven & Melick (1994) in Serra da Estrela, corresponds to a specimen of *P. piliferum* collected in another region (Beira Litoral: Arganil, Côja, Mata da Margaraça, *leg. H. v. Melick, 1993 !*), in fact, the only known locality in Portugal.

***Plagiothecium succulentum* (Wilson) Lindb.**

BA/BB: Greven & Melick, 1994.

Mi: Séneca-Cardoso, 1989; Sérgio & Schumacker, 1992.

***Platyhypnidium lusitanicum* (Schimp.) Ochyra & Bednarek-Ochyra**

AAl: Sérgio *et al.*, 1997b.

BA: Henriques, 1883; Henriques, 1889.

BA/BB: Schimper, 1876 (*Orig. descrip.*), Pereira-Coutinho, Greven & Melick, 1994.

BB: Machado, 1933; Lara *et al.*, 1994.

BL: Lara *et al.*, 1994; Werner, 1997.

DL: Sampaio, 1901-1902; Werner, 1997.

Mi: Schimper, 1876 (*Orig. descrip.*), Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1918; Machado, 1920a; Machado, 1933; Buch, 1942; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Lara *et al.*, 1994.

TM: Sérgio & Schumacker, 1992.

Pt: Henriques, 1889; Machado, 1917d; Ochyra & Bednarek-Ochyra, 1999.

The generic placement of *Platyhypnidium* follows Ochyra & Bednarek-Ochyra (1999).

***Pleuridium acuminatum* Lindb.**

Aal: Sérgio *et al.*, 1997b.

Ag: Sérgio *et al.*, 1987a; Sérgio *et al.*, 1984.

- BA:** Jansen , 1994.
BA/BB: Greven & Melick, 1994.
BAI: Sérgio *et al.*, 1999a.
BB: Sérgio, 1969; Jansen *et al.*, 1997; Sérgio *et al.*, 2002c.
BL: Sérgio *et al.*, 1988; Brotero, 1804.
DL: Sérgio, 1969.
E: Sérgio & Sim-Sim, 1985d; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Machado, 1913; Machado, 1916; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

***Pleuridium subulatum* (Hedw.) Rabenb.**

- AAI:** Machado, 1928; Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Henriques, 1889; Luisier, 1910c; Machado, 1928; Casares, 1932; Sérgio, 1970-1971; Allorge, 1931a; Allorge, 1974.
BA: Allorge, 1974; Sérgio *et al.*, 2001d.
BAI: Allorge, 1974; Sérgio, 1970-1971.
BB: Luisier, 1910c; Luisier, 1916b; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio *et al.*, 2002c.
BL: Warnstorff, 1899; Henriques, 1889; Machado, 1928; Casares, 1932; Allorge, 1974.
DL: Venturi, 1889 In Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932; Allorge, 1974.
E: Mitten, 1853; Henriques, 1889; Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casares, 1932; Barros, 1943; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Correia, 1981; Sérgio *et al.*, 1988.
Mi: Machado, 1913; Machado, 1920a; Machado, 1928; Casares, 1932; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974.
R: Sérgio *et al.*, 1988.
TM: Henriques, 1889; Machado, 1915b; Ervideira, 1922; Machado, 1928; Casares, 1932; Allorge & Allorge, 1949; Allorge, 1974.
Pt: Venturi, 1881. Sérgio *et al.*, 1987a.

The distribution of this species requires further elucidation due to its nomenclatural problems. The oldest reports still need to be revised.

***Pleurochaete squarrosa* (Brid.) Lindb.**

- AAI:** Machado, 1928; Allorge, 1931a; Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BA: Allorge, 1931a.
BAI: Sérgio, 1970-1971; Allorge, 1974.
BL: Machado, 1928; Braun-Blanquet *et al.*, 1956; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Allorge, 1974.
E: Henriques, 1889; Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Braun-Blanquet *et al.*, 1956; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Machado, 1928; Allorge, 1974.

R: Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974; Sérgio *et al.*, 1988.

TM: Machado, 1915b; Machado, 1928; Allorge, 1930b; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Allorge, 1974.

Pt: Sérgio *et al.*, 1987a.

***Pleurozium schreberi* (Brid.) Mitt.**

BA: Machado, 1917a; Jansen, 1994; Jansen *et al.*, 2000.

BA/BB: Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.

BB: Machado, 1933.

Mi: Teles, 1970; Séneca-Cardoso, 1989; Sérgio & Schumacker, 1992.

***Pogonatum aloides* (Hedw.) P. Beauv.**

IPmap: Casas *et al.*, 1992.

AAI: Casas *et al.*, 1992; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Pereira-Coutinho, 1917b; Sérgio, 1970-1971; Allorge, 1974; Guerra *et al.*, 1981; Casas *et al.*, 1992.

BA: Henriques, 1883; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Tavares, 1956; Allorge, 1974; Casas *et al.*, 1992; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Levier, 1880; Machado, 1917b; Greven & Melick, 1994.

BB: Luisier, 1916b; Machado, 1933; Allorge, 1974; Casas *et al.*, 1992; Sérgio *et al.*, 2002c.

BL: Brotero, 1804; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1931a; Allorge, 1935; Anônimo, 1969; Allorge, 1974; Séneca-Cardoso, 1989; Casas *et al.*, 1992.

DL: Henriques, 1889; Machado, 1916; Séneca-Cardoso, 1989; Casas *et al.*, 1992; Werner, 1997.

E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Barros, 1942b; Barros, 1943; Allorge, 1974; Sérgio *et al.*, 1988; Casas *et al.*, 1992.

Mi: Mitten, 1853; Henriques, 1889; Machado, 1913; Machado, 1916; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1942b; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

R: Barros, 1942a; Barros, 1942b; Allorge, 1974; Casas *et al.*, 1992.

TM: Ervideira, 1922; Ervideira, 1926; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924; Machado, 1933; Sérgio *et al.*, 1987a.

***Pogonatum nanum* (Hedw.) P. Beauv.**

IPmap: Casas *et al.*, 1992.

AAI: Pereira-Coutinho, 1917b; Séneca-Cardoso, 1989; Casas *et al.*, 1992; Sérgio *et al.*, 1997b.

Ag: Luisier, 1910c; Dixon, 1912; Sérgio, 1970-1971; Casas *et al.*, 1992.

BA: Casas *et al.*, 1992.

BA/BB: Greven & Melick, 1994.

BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.

BB: Luisier, 1916b; Casas *et al.*, 1992.

BL: Casas *et al.*, 1992.

DL: Sampaio, 1901-1902; Séneca-Cardoso, 1989; Casas *et al.*, 1992.

E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Casas *et al.*, 1992.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1914a; Machado, 1920a; Séneca-Cardoso, 1989; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

R: Casas *et al.*, 1992.

TM: Rozeira, 1946; Casas *et al.*, 1992.

Pt: Brotero, 1804; Luisier, 1924; Machado, 1933.

***Pogonatum urnigerum* (Hedw.) P. Beauv.**

IPmap: Casas *et al.*, 1992; Sérgio *et al.*, 1994c.

BA: Sérgio *et al.*, 2001a; Sérgio *et al.*, 2001e.

BA/BB: Greven & Melick, 1994.

Mi: Cardoso & Sérgio, 1985; Séneca-Cardoso, 1989; Casas *et al.*, 1992.

First collected in Castro Laboreiro by Machado, 1915 (PO!), the species was recent recorded from Serra da Estrela by Sérgio & *a.l* (2001a).

***Pohlia aff. andalusica* (Höhn.) Broth.**

BA: Sérgio *et al.*, 2001a.

Further investigation is needed to ascertain its taxonomic position.

***Pohlia annotina* (Hedw.) Lindb.**

AAI: Sérgio *et al.*, 1997b.

Ag: Allorge, 1974.

BA: Allorge, 1974; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001a; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Sérgio *et al.*, 2001a; Sérgio *et al.*, 2002c.

BL: Allorge, 1974.

DL: Werner, 1997.

Pt: Brotero, 1804; Machado, 1930.

***Pohlia bulbifera* (Warnst.) Warnst.**

BA: Sérgio *et al.*, 2001a.

Mi: Sérgio & Schumacker, 1992.

***Pohlia cruda* (Hedw.) Lindb.**

Ag: Pereira-Coutinho, 1917b.

BA: Henriques, 1883 Henriques, 1889; Braun-Blanquet *et al.*, 1956; Jansen, 1994; Jansen 1998.

BA/BB: Levier, 1880; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1930; Greven & Melick, 1994.

DL: Werner, 1997.

Mi: Sérgio & Schumacker, 1992.

TM: Allorge & Allorge, 1949; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924.

Pohlia crudoides (Sull. & Lesq.) Broth.

BA/BB: Greven & Melick, 1994.

Only reported in Serra da Estrela without specific locality, and not being confirmed by herbarium specimens, is to be considered as an uncertain species. A specimen of *Pohlia* cf. *crudoides* in LISU (!), leg. Jansen, was studied and corresponds to *P. annotina*.

Pohlia elongata Hedw. var. *elongata*

AA: Allorge, 1974; Sérgio *et al.*, 1997b.

BA: Henriques, 1883; Sérgio, 1972a; Jansen 1998; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Ervideira, 1922.

BL: Pierrot, 1972; Allorge, 1974.

DL: Anónimo, 1883a; Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Werner, 1997.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1920a; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio, 1972a.

TM: Ervideira, 1922.

Pt: Venturi, 1881; Machado, 1930.

Pohlia elongata Hedw. var. *acuminata* (Hoppe & Hornsch.) Huebener

BA: Luisier, 1948.

DL: Anónimo, 1890.

E: Dixon, 1912; Machado, 1930.

Pt: Luisier, 1924.

Pohlia elongata Hedw. var. *polymorpha* (Hoppe & Hornsch.) Nyholm

BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b.

BA/BB: Levier, 1880; Machado, 1930.

BB: Machado, 1917b.

Pohlia longicollis (Hedw.) Lindb.

BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b.

BA/BB: Levier, 1880; Machado, 1917b; Machado, 1930.

BB: Pereira-Coutinho, 1917b.

Mi: Machado, 1917b; Pereira-Coutinho, 1917b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924.

Pohlia melanodon (Brid.) Shaw

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

E: Machado, 1930; Sérgio & Sim-Sim, 1985a.

Pohlia nutans (Hedw.) Lindb.

BA: Henriques, 1883; Henriques, 1889; Machado, 1917a; Braun-Blanquet *et al.*, 1952; Jansen, 1994; Jansen 1998; Jansen *et al.*, 2000; Sérgio *et al.*, 2001d.

BA/BB: Levier, 1880; Machado, 1917b; Machado, 1930; Greven & Melick, 1994; Jansen, 1994.

BB: Jansen, 1994; Jansen *et al.*, 1997.

Mi: Machado, 1913; Machado, 1916; Machado, 1920a; Machado, 1930; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

TM: Ervideira, 1926.

***Pohlia proligera* (Kindb.) Broth.**

Ag: Dixon, 1912; Luisier, 1924; Machado, 1930; Allorge, 1931a; Sérgio, 1970-1971.

Mi: Machado, 1918; Machado, 1920a; Machado, 1930; Sérgio & Schumacker, 1992.

***Pohlia wahlenbergii* (F. Weber & D. Mohr) A. L. Andrews**

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

TM: Allorge, 1931b; Machado, 1933; Allorge & Allorge, 1949.

***Polytrichum alpinum* Hedw.**

BA: Brotero, 1804; Henriques, 1883; Henriques, 1889; Luisier, 1916b; Machado, 1917b; Braun-Blanquet *et al.*, 1952; Sérgio, 1969; Jansen 1998.

BA/BB: Pereira-Coutinho, 1917b.

BB: Machado, 1933.

[**E:** Henriques, 1889; Machado, 1933].

Mi: Brotero, 1804; Henriques, 1889; Machado, 1913; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

The species was reported dubiously from Estremadura, Mafra. Inf act, all the reports of Henriques gathered by E. da Veiga are erroneous.

***Polytrichum commune* Hedw.**

AAl: Sérgio *et al.*, 1997b.

BA: Henriques, 1883; Henriques, 1889; Anônimo, 1895; Pereira-Coutinho, 1917b; Barros, 1942a; Tavares, 1956; Teles, 1970; Jansen, 1994; Jansen 1998; Jansen & Sequeira, 1999.

BA/BB: Sampaio, 1901-1902; Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.

BB: Luisier, 1916b; Machado, 1933; Jansen, 1994.

BL: Henriques, 1889; Machado, 1933; Barros, 1942a; Allorge, 1974.

DL: Henriques, 1889; Machado, 1933; Werner, 1997.

Mi: Anônimo, 1886; Henriques, 1889; Anônimo, 1890; Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1942b; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

TM: Ervideira, 1926; Sérgio & Schumacker, 1992.

Pt: Brotero, 1804; Luisier, 1924.

***Polytrichum formosum* Hedw.**

AAl: Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Dixon, 1912; Allorge, 1931a; Allorge, 1974; Guerra *et al.*, 1981.

BA: Henriques, 1889; Braun-Blanquet *et al.*, 1952; Braun-Blanquet *et al.*, 1956; Teles, 1970; Jansen, 1994; Sérgio *et al.*, 2001d.

- BA/BB:** Greven & Melick, 1994; Jansen, 1994.
BB: Luisier, 1916b; Pereira-Coutinho, 1917b; Jansen, 1994.
BL: Henriques, 1889; Pereira-Coutinho, 1917b; Barros, 1942a; Braun-Blanquet *et al.*, 1956; Anônimo, 1967; Allorge, 1974; Werner, 1997.
DL: Sampaio, 1901-1902; Braun-Blanquet *et al.*, 1956; Séneca-Cardoso, 1989; Werner, 1997.
E: Henriques, 1889.
Mi: Anônimo, 1899; Machado, 1913; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
TM: Ervideira, 1926; Sérgio & Schumacker, 1992.
Pt: Ervideira, 1922.

***Polytrichum juniperinum* Hedw.**

- AAI:** Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Luisier, 1916b; Pereira-Coutinho, 1917b; Sérgio, 1970-1971; Allorge, 1974.
BA: Pereira-Coutinho, 1917b; Allorge, 1931a; Barros, 1942a; Braun-Blanquet *et al.*, 1952; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Jansen, 1994; Jansen 1998; Jansen & Sequeira, 1999; Jansen *et al.*, 2000; Sérgio *et al.*, 2001d.
BA/BB: Pereira-Coutinho, 1917b; Greven & Melick, 1994; Jansen, 1994.
BAI: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.
BB: Luisier, 1916b; Pereira-Coutinho, 1917b; Braun-Blanquet *et al.*, 1964; Jansen *et al.*, 1997.
BL: Brotero, 1804; Henriques, 1889; Pereira-Coutinho, 1917b; Barros, 1942b; Sá-Nogueira, 1950a; Braun-Blanquet *et al.*, 1956; Braun-Blanquet *et al.*, 1964; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Sampaio, 1901-1902; Barros, 1942b; Allorge, 1974.
E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Barros, 1943; Sá-Nogueira, 1950b; Braun-Blanquet *et al.*, 1956; Braun-Blanquet *et al.*, 1964; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Henriques, 1889; Anônimo, 1899; Machado, 1913; Machado, 1914a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1920a; Allorge, 1931a; Barros, 1944b; Rozeira, 1946; Sá-Nogueira, 1950d; Braun-Blanquet *et al.*, 1964; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Pereira-Coutinho, 1917b; Barros, 1942a; Allorge, 1974; Sérgio *et al.*, 1988.
TM: Machado, 1915b; Barros, 1942b; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Sérgio & Schumacker, 1992.
Pt: Machado, 1933; Sérgio *et al.*, 1987a.

***Polytrichum piliferum* Hedw.**

- AAI:** Luisier, 1916b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Luisier, 1910c; Luisier, 1916b; Machado, 1933; Braun-Blanquet *et al.*, 1956; Sérgio, 1970-1971; Allorge, 1974; Guerra *et al.*, 1981.
BA: Pereira-Coutinho, 1917b; Allorge, 1931a; Barros, 1942a; Barros, 1942b; Braun-Blanquet *et al.*, 1952; Braun-Blanquet *et al.*, 1956; Tavares, 1956; Allorge, 1974; Jansen, 1994; Jansen 1998; Jansen & Sequeira, 1999; Jansen *et al.*, 2000; Sérgio *et al.*, 2001d.

- BA/BB:** Machado, 1917b; Greven & Melick, 1994; Jansen, 1994.
BB: Luisier, 1916b; Jansen, 1994; Jansen *et al.*, 1997; Sérgio *et al.*, 2002c.
BL: Brotero, 1804; Pereira-Coutinho, 1917b; Sá-Nogueira, 1950a; Allorge, 1974.
DL: Sampaio, 1901-1902; Barros, 1942b; Braun-Blanquet *et al.*, 1964; Allorge, 1974; Werner, 1997.
Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Allorge, 1931a; Barros, 1942b; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Barros, 1942a; Barros, 1942b; Allorge, 1974.
TM: Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Sérgio & Schumacker, 1992.
Pt: Ervideira, 1922.

Pottia commutata Limpr.

- Ag:** Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Townsend, 1994.
BL: Sérgio *et al.*, 1988.
E: Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.
Pt: Sérgio *et al.*, 1987a.

All reports should be included in *Pottia davalliana*. See note about this species.

Pottia crinita Wilson ex Bruch & Schimp.

- [**Ag:** Schimper, 1876; Henriques, 1889].
DL: Henriques, 1889.
Mi: Machado, 1917d; Machado, 1920a; Machado, 1928; Casares, 1932; Sérgio *et al.*, 2001e; Sérgio, 2002c.
[R: Pereira-Coutinho, 1917b; Machado, 1928].

See note about *Pottia pallida*.

Pottia davalliana (Sm.) C. O. E. Jensen

- Ag:** Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Townsend, 1994.
BL: Sérgio *et al.*, 1988.
E: Mitten, 1853; Henriques, 1889; Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1918; Machado, 1928; Casares, 1932; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.
Pt: Sérgio *et al.*, 1987a.

According to Ros *et al.* (1996) this is one of the two taxa that should be considered at species level in *P. starckeana* agg. Among its synonyms is *P. commutata*, which was formerly included by Corley *et al.* (1981) as an independent species.

Pottia intermedia (Turner) Fuernr.

- BL:** Sérgio *et al.*, 1988.
DL: Machado, 1918; Machado, 1928.
E: Mitten, 1853; Pereira-Coutinho, 1917b; Machado, 1928; Sérgio, 1972a; Sérgio & Tauleine Gomes, 2001.
Mi: Machado, 1920a; Sérgio, 1972a.
R: Sérgio *et al.*, 1988.
Pt: Casares, 1932; Sérgio *et al.*, 1987a.

Pottia lanceolata (Hedw.) Müll. Hal.

- AAI:** Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Machado, 1928; Casares, 1932.
E: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932.
Pt: Luisier, 1924.

Pottia pallida Lindb.

- Ag:** Sérgio *et al.*, 2001e; Sérgio, 2002c.
E: Sérgio *et al.*, 2001e.
R: Sérgio, 2002c.

The reports sub *Pottia cuneifolia* Solms (Henriques, 1889; Pereira-Coutinho, 1917) correspond to *P. pallida* not to *P. crinita* Bruch & Schimp as they had been considered by Corley *et al.* (1981). Really, the original material of *P. cuneifolia* (Algarve:Tavira, BM!) corresponds to *P. pallida*. This species is therefore a new element to the Portuguese bryoflora, but needs to be considered as an extinct species in Portugal as the last known collection corresponds to Solms sample (Sérgio, 2002e).

Pottia recta (With.) Mitt.

- BAL:** Sérgio & Garcia, 2001b.
BL: Sérgio *et al.*, 1987b; Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

Pottia starckeana (Hedw.) Müll. Hal.

- AAI:** Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Machado, 1928; Allorge, 1931a; Casares, 1932; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BL: Henriques, 1889; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1988.
DL: Sampaio, 1901-1902.
E: Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Barros, 1942b; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Tauleigne Gomes, 2001.
Pt: Luisier, 1924; Sérgio *et al.*, 1987a.

Pottia truncata (Hedw.) Bruch & Schimp.

- AAI:** Sérgio *et al.*, 1997b.
Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BL: Brotero, 1804; Henriques, 1889; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1988.
BB: Sérgio *et al.*, 2002c.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932.
E: Mitten, 1853; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Barros, 1942a; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.
Mi: Sampaio, 1901-1902; Luisier, 1907a; Machado, 1913; Machado, 1928; Casares, 1932.
R: Sérgio, 1972a.
Pt: Luisier, 1924; Sérgio *et al.*, 1987a.

***Pottia wilsonii* (Hook.) Bruch & Schimp.**

- Ag:** Solms-Laubach, 1868; Henriques, 1889; Machado, 1928.
BL: Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

***Pottiopsis caespitosa* (Bruch) Blockeel & A. J. E. Sm.**

- Ag:** Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BL: Machado, 1928; Casares, 1932; Sérgio *et al.*, 1988.
E: Luisier, 1916b; Machado, 1928; Casares, 1932; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
R: Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

***Protobryum bryoides* J. Guerra & M. J. Cano**

E: Henriques, 1889; Luisier, 1924; Machado, 1928; Casares, 1932.
This species was reported dubiously from Portugal sub *Phascum bryoides*. In fact, all the reports based in material gathered by E. da Veiga in Estremadura, Mafra, which as a rule are erroneous.

***Pseudephemerum nitidum* (Hedw.) Reim.**

- IPmap:** Casas *et al.*, 1989.
AAl: Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998c.
BB: Sérgio *et al.*, 2001d; Sérgio *et al.*, 2002c.
E: Mitten, 1853; Henriques, 1889; Machado, 1928; Casares, 1932; Sérgio & Sim-Sim, 1985a; Casas *et al.*, 1989; Sérgio *et al.*, 1998c.
Mi: Machado, 1920a; Machado, 1928; Casares, 1932; Luisier, 1948; Casas *et al.*, 1989.
R: Casas *et al.*, 1989; Sérgio *et al.*, 1998a.

***Pseudocrossidium hornschuchianum* (Schultz) Zander**

- AAl:** Machado, 1928; Casares, 1932; Sérgio, 1969; Sérgio *et al.*, 1997b.
Ag: Dixon, 1912; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BA: Sá-Nogueira, 1950e; Sérgio *et al.*, 2001d.
BB: Sérgio, 1969.
BL: Sérgio, 1972a; Sérgio *et al.*, 1988.
DL: Luisier, 1916b; Machado, 1928.
E: Barros, 1942a; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Séneca-Cardoso, 1989.
Mi: Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Machado, 1928.
Pt: Sérgio *et al.*, 1987a.

***Pseudocrossidium revolutum* (Brid.) Zander**

- AAl:** Sérgio *et al.*, 1997b.

Ag: Dixon, 1912; Machado, 1928; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928.

E: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932.

Mi: Machado, 1913; Machado, 1920a; Machado, 1928; Casares, 1932.

***Pseudoleskea incurvata* (Hedw.) Loeske**

BA: Henriques, 1883; Henriques, 1889; Machado, 1917b; Pereira-Coutinho, 1917b; Séneca-Cardoso, 1989; Jansen 1998.

BA/BB: Allorge, 1938.

BB: Machado, 1933.

Pt: Luisier, 1924.

***Pseudoleskea patens* (Lindb.) Kindb.**

BA: Machado, 1917a; Machado, 1917b; Machado, 1933; Jansen 1998.

BA/BB: Greven & Melick, 1994.

***Pseudotaxiphyllum elegans* (Brid.) Z. Iwats.**

AAl: Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.

BA: Henriques, 1883; Henriques, 1889; Sérgio, 1972a; Allorge, 1974; Jansen, 1994.

BA/BB: Greven & Melick, 1994.

BB: Machado, 1933.

BL: Allorge, 1931a; Sérgio, 1972a; Allorge, 1974.

Mi: Machado, 1915a; Machado, 1917b; Machado, 1920a; Machado, 1933; Allorge, 1935; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Machado, 1933; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924.

Pterigynandrum filiforme* Hedw. var. *filiforme

BA: Henriques, 1889; Jansen 1998; Albertos, 2001.

BA/BB: Levier, 1880; Machado, 1917b; Pereira-Coutinho, 1917b; Allorge, 1938; Greven & Melick, 1994.

BB: Luisier, 1916b; Machado, 1933.

E: Luisier, 1916b.

Mi: Calleja *et al.*, 2001.

All Portuguese herbarium specimens need to be revised.

***Pterigynandrum filiforme* Hedw. var. *majus* (De Not.) De Not.**

BA: Pereira-Coutinho, 1917b.

BA/BB: Pereira-Coutinho, 1917b.

Pt: Machado, 1933.

***Pterogonium gracile* (Hedw.) Sm.**

AAl: Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d; Jones, 1999.

Ag: Mitten, 1853; Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Jones, 1999.

- BA:** Henriques, 1883; Henriques, 1889; Allorge, 1974; Jones, 1999; Albertos, 2001; Sérgio *et al.*, 2001d.
- BA/BB:** Greven & Melick, 1994.
- BAI:** Sérgio, 1970-1971; Jones, 1999; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.
- BB:** Luisier, 1916b; Machado, 1933; Catarino *et al.*, 1987; Calleja *et al.*, 2001.
- BL:** Henriques, 1889; Warnstorf, 1899; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Kindberg, 1898; Jones, 1999.
- DL:** Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Machado, 1933; Allorge, 1974; Jones, 1999.
- E:** Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942c; Barros, 1943; Braun-Blanquet *et al.*, 1956; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Jones, 1999.
- Mi:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999; Albertos, 2001; Calleja *et al.*, 2001.
- R:** Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d; Jones, 1999.
- TM:** Ervideira, 1926; Allorge, 1935; Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999.
- Pt:** Ervideira, 1922; Sérgio *et al.*, 1987a.

***Pterygoneurum sampaianum* (A. Mach.) A. Mach.**

Ag: Machado, 1917c (*Orig. descrip.*) Machado, 1917d; Machado, 1928; Casares, 1932; Guerra *et al.*, 1995; Sérgio *et al.*, 2001e.

Pt: Luisier, 1934.

In Portugal, this species is known only from the type locality, Portimão, 1917 (PO!, Machado 1917). The site has been visited and surveyed and we were not able to collect new samples.

***Ptychomitrium nigrescens* (Kunze) Wijk & Margad.**

Ptmap: Allorge, 1931c; Allorge, 1947.

Ag: Solms-Laubach, 1868; Welwitsch, 1872; Dixon, 1912; Pereira-Coutinho, 1917b; Allorge, 1931a; Allorge, 1931c; Machado, 1933; Sérgio, 1970-1971; Pierrot, 1972.

Pt: Luisier, 1924; Luisier, 1934.

***Ptychomitrium polyphyllum* (Sw.) Bruch & Schimp.**

Ag: Dixon, 1912; Machado, 1933; Allorge, 1938; Casas *et al.*, 1989.

BA: Sérgio, 1969.

BL: Casas *et al.*, 1989.

DL: Serqueira, 1881; Anónimo, 1883b; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Luisier, 1907c; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942b; Casas *et al.*, 1989.

Mi: Sampaio, 1901-1902; Luisier, 1907a; Luisier, 1907c; Luisier, 1909; Luisier, 1910c; Machado, 1913; Luisier, 1916b; Machado, 1917b; Machado, 1920a;

Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

Pt: Venturi, 1882a; Venturi, 1882b.

***Pylaisia polyantha* (Hedw.) Schimp.**

BL: Allorge, 1928a; Machado, 1933; Allorge, 1974.

E: Sérgio, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

***Racomitrium aciculare* (Hedw.) Brid.**

IPmap: Casas *et al.*, 1992.

AAI: Sérgio *et al.*, 1997b.

BA: Henriques, 1883; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Tavares, 1956; Casas *et al.*, 1992; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Machado, 1917b; Greven & Melick, 1994.

BB: Pereira-Coutinho, 1917b; Casas *et al.*, 1992; Sérgio *et al.*, 2001d.

BL: Casas *et al.*, 1992.

DL: Henriques, 1889; Sampaio, 1901-1902; Casas *et al.*, 1992; Werner, 1997.

Mi: Henriques, 1889; Machado, 1913; Luisier, 1916b; Machado, 1916; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1918; Machado, 1920a; Machado, 1930; Barros, 1944b; Sá-Nogueira, 1950d; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Ervideira, 1926; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

Pt: Luisier, 1924; Machado, 1930.

***Racomitrium affine* (F. Weber & D. Mohr) Lindb.**

Wmap: Frisvoll, 1988.

IPmap: Muñoz, 1991; Casas *et al.*, 1992.

BA: Pereira-Coutinho, 1917b; Braun-Blanquet *et al.*, 1952; Tavares, 1956; Allorge, 1974; Casas *et al.*, 1992; Jansen, 1994; Sérgio *et al.*, 2001d.

BA/BB: Machado, 1917b; Greven & Melick, 1994.

BB: Pereira-Coutinho, 1917b; Machado, 1930; Casas *et al.*, 1992.

DL: Casas *et al.*, 1992.

Mi: Machado, 1916; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1930; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Casas *et al.*, 1992.

TM: Braun-Blanquet *et al.*, 1956; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

See note under *Racomitrium microcarpum*.

***Racomitrium aquaticum* (Schrad.) Brid.**

IPmap: Casas *et al.*, 1992.

AAI: Allorge, 1974; Casas *et al.*, 1992; Sérgio *et al.*, 1997b.

BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b; Casas *et al.*, 1992; Jansen, 1994; Sérgio *et al.*, 2001d.

BA/BB: Levier, 1880; Greven & Melick, 1994.

BL: Allorge, 1935; Allorge, 1974; Casas *et al.*, 1992.

DL: Henriques, 1889; Casas *et al.*, 1992.

E: Casas *et al.*, 1992.

Mi: Machado, 1914a; Luisier, 1916b; Machado, 1916; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Ervideira, 1926; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

Pt: Kindberg, 1887; Luisier, 1924; Machado, 1930.

***Racomitrium elongatum* Frisvoll**

Wmap: Frisvoll, 1983.

IPmap: Casas *et al.*, 1988.

AAl: Sérgio *et al.*, 1994a; Sérgio *et al.*, 1997b.

Ag: Guerra *et al.*, 1981.

BA: Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1931a; Allorge, 1935; Barros, 1942b; Braun-Blanquet *et al.*, 1952; Braun-Blanquet *et al.*, 1956; Tavares, 1956; Allorge, 1974; Frisvoll, 1983; Casas *et al.*, 1992; Jansen, 1994; Jansen, 1998; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Machado, 1917b; Machado, 1920b; Jansen, 1994. Jansen *et al.*, 1997.

BL: Allorge, 1974; Frisvoll, 1983; Casas *et al.*, 1992.

DL: Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Braun-Blanquet *et al.*, 1964; Casas *et al.*, 1992; Werner, 1997.

E: Casas *et al.*, 1992.

Mi: Brotero, 1804; Henriques, 1889; Machado, 1913; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1920a; Barros, 1942b; Sá-Nogueira, 1950d; Allorge, 1974; Séneca-Cardoso, 1989; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

R: Casas *et al.*, 1992.

TM: Ervideira, 1922; Barros, 1942b; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Casas *et al.*, 1992.

Pt: Machado, 1930.

The records before Frisvoll (1983) were included in *Racomitrium canescens* (Hedw.) Brid. (Casas *et al.*, 1992a).

***Racomitrium fasciculare* (Hedw.) Brid.**

Pt: Henriques, 1889; Machado, 1930.

The species was reported as a dubious taxa by Machado (1930) from Portugal. In fact, the reports of Henriques gathered by E. da Veiga are probably erroneous.

****Racomitrium hespericum* Sérgio, Muñoz & Ochyra**

IPmap: Sérgio *et al.*, 1995a; Casas *et al.*, 1996; Sérgio & Draper, 2002b.

AAl: Sérgio *et al.*, 1995a; Casas *et al.*, 1996; Sérgio *et al.*, 1997b.

BA: Sérgio *et al.*, 1995a (*Orig. descrip.*), Casas *et al.*, 1996; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Casas *et al.*, 1996

BB: Sérgio *et al.*, 1995a; Casas *et al.*, 1996.

BL: Casas *et al.*, 1996.

DL: Sérgio *et al.*, 1995a; Casas *et al.*, 1996; Werner, 1997.

Mi: Sérgio *et al.*, 1995a; Casas *et al.*, 1996.

Racomitrium heterostichum* (Hedw.) Brid.*Wmap:** Frisvoll, 1988.**IPmap:** Muñoz, 1991; Casas *et al.*, 1992.**Ag:** Solms-Laubach, 1868; Dixon, 1912; Allorge, 1931a; Braun-Blanquet *et al.*, 1956; Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1992.**BA:** Henriques, 1883; Henriques, 1889; Barros, 1942a; Pais, 1964; Allorge, 1974; Casas *et al.*, 1992; Jansen 1998; Jansen & Sequeira, 1999; Albertos, 2001; Sérgio *et al.*, 2001d.**BA/BB:** Machado, 1917b; Greven & Melick, 1994.**BB:** Luisier, 1916b; Casas *et al.*, 1992; Jansen, 1994.**BL:** Allorge, 1974; Casas *et al.*, 1992.**DL:** Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Séneca-Cardoso, 1989; Casas *et al.*, 1992; Werner, 1997.**E:** Casas *et al.*, 1992.**Mi:** Brotero, 1804; Henriques, 1889; Machado, 1913; Machado, 1914a; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Reinoso *et al.*, 1990; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.**R:** Pereira-Coutinho, 1917b.**TM:** Ervideira, 1922; Allorge & Allorge, 1949; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.**Pt:** Machado, 1930.***Racomitrium lamprocarpum* (Müll. Hal.) A. Jaeger****Wmap:** Ochyra *et al.*, 1988.**IPmap** Sérgio, 1993b.**AAI:** Sérgio *et al.*, 1997b.**BA:** Ochyra *et al.*, 1988; Casas *et al.*, 1992; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BL:** Werner, 1997.**DL:** Werner, 1997.**Mi:** Machado, 1915a; Machado, 1930; Sá-Nogueira, 1950d; Ochyra *et al.*, 1988; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.**Pt:** Kindberg, 1887; Luisier, 1934; Sérgio, 1993b.

It was formerly described as Portuguese endemic species under *Racomitrium levieri* Kindb. (Kindberg 1887) and *R. dixonii* A. Mach. (Machado 1915a). More recently it was synonymised to *R. lamprocarpum*, a taxon from Austral Continents, by Ochyra *et al.* (1988).

Racomitrium lanuginosum* (Hedw.) Brid.*AAI:** Allorge, 1974.**Ag:** Serqueira, 1881; Luisier, 1910c; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Luisier, 1924.**BA:** Henriques, 1883; Henriques, 1889; Barros, 1942b; Tavares, 1956; Allorge, 1974; Jansen, 1994; Jansen 1998; Sérgio *et al.*, 2001d.**BA/BB:** Levier, 1880; Machado, 1917b; Greven & Melick, 1994.**BB:** Anônimo, 1906; Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Séneca-Cardoso, 1989.

BL: Allorge, 1974.

DL: Sampaio, 1901-1902; Braun-Blanquet *et al.*, 1964; Séneca-Cardoso, 1989; Werner, 1997.

E: Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b.

Mi: Henriques, 1889; Sampaio, 1901-1902; Luisier, 1907a; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Barros, 1942b; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Ervideira, 1926; Sérgio & Schumacker, 1992.

Pt: Brotero, 1804; Machado, 1930.

****Racomitrium lusitanicum* Ochyra & Sérgio**

IPmap: Sérgio, 1993b.

BA: Ochyra & Sérgio, 1992 (*Orig. descrip.*), Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

Mi: Ochyra & Sérgio, 1992; Sérgio & Schumacker, 1992.

Racomitrium macounii* Kindb. subsp. *macounii

BA: Casas *et al.*, 1992; Jansen 1998; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

***Racomitrium macounii* Kindb. subsp. *alpinum* (Lawt.) Frisvoll**

IPmap: Muñoz, 1991.

BA: Casas *et al.*, 1992.

***Racomitrium microcarpum* (Hedw.) Brid.**

[**Mi:** Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1930; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.]

Pt: Luisier, 1924].

The only Portuguese specimen, collected by Luisier 1908 (LISU 54014!), Minho: Serra do Gerês, near Modorno, was studied by J. Muñoz in 1989 and corresponds to *R. affine*. Frisvoll (1988) did not include this taxon in the Iberian Peninsula on the world map.

***Racomitrium obtusum* (Brid.) Brid.**

IPmap: Muñoz, 1991; Casas *et al.*, 1992.

AAl: Sérgio *et al.*, 1997b.

BA: Casas *et al.*, 1992; Sérgio, 2001b.

BA/BB: Greven & Melick, 1994.

DL: Casas *et al.*, 1992.

Mi: Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

TM: Casas *et al.*, 1992.

***Racomitrium sudeticum* (Funck) Bruch & Schimp.**

IPmap: Casas *et al.*, 1992; Muñoz, 1991.

AAl: Sérgio *et al.*, 1997b.

BA: Henriques, 1883; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1930; Casas *et al.*, 1992.

Mi: Machado, 1915a; Machado, 1917b; Machado, 1930; Sá-Nogueira, 1950d; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

Pt: Henriques, 1889.

***Rhabdoweisia fugax* (Hedw.) Bruch & Schimp.**

AA: Sérgio *et al.*, 1997b.

BA: Sérgio *et al.*, 2001d.

BL: Dixon, 1912; Machado, 1928; Casares, 1932; Allorge, 1974; Werner, 1997.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Casares, 1932; Allorge, 1974.

Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1920a; Machado, 1928; Casares, 1932; Allorge, 1974.

R: Sérgio, 1972a; Allorge, 1974.

TM: Machado, 1915b; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio & Schumacker, 1992.

***Rhamphidium purpuratum* Mitt.**

Mi: Luisier, 1947b; Luisier, 1948; Sérgio *et al.*, 2001e.

Collected for the first time in 1946, by Luisier in Minho, Caldelas, this specimen was revised from INA collections, and considered an extint moss in the Iberian Peninsula (Sérgio *et al.* 2001e).

***Rhizomnium magnifolium* (Horik.) T. J. Kop.**

IPmap: Fuertes *et al.*, 2001.

BA: Sérgio *et al.*, 1994b; Fuertes & Acón, 2000.

[Mi: Sá-Nogueira, 1950d; Fuertes & Acón, 2000.

TM: Ervideira, 1922].

The reports of Ervideira 1922, sub *Mnium punctatum* (L.) Hedw. var. *elatum* Schimp., Trás-os-Montes e Alto Douro: Vale de Vila Pouca, 1921 (LISU 54387) and Fuertes & Acón (2000) in Minho, Gerês, *leg.* Mendes (LISU 154500) correspond to *R. punctatum*. The specimen reported by Sá-Nogueira (1950d) from Minho was not found in herbarium collections.

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

IPmap: Fuertes & Acón, 2000.

BA: Henriques, 1883; Tavares, 1956; Sérgio, 1969; Fuertes & Acón, 2000.

BA/BB: Pereira-Coutinho, 1917b; Machado, 1930; Greven & Melick, 1994.

BB: Luisier, 1916b; Machado, 1917b.

BL: Brotero, 1804.

DL: Barros, 1942b.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1914a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1930; Allorge, 1935; Barros, 1944b; Sá-Nogueira, 1950d; Koponen, 1980; Sérgio & Schumacker, 1992; Fuertes & Acón, 2000.

TM: Machado, 1930; Allorge & Allorge, 1949; Sá-Nogueira, 1958; Sérgio & Schumacker, 1992; Fuertes & Acón, 2000.

Pt: Henriques, 1889.

Rhynchostegiella curviseta (Brid.) Limpr. var. *curviseta*

Ag: Dixon, 1912; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1984.
BL: Sá-Nogueira, 1950a; Allorge, 1974; Sérgio *et al.*, 1988.
E: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1988.
R: Sérgio *et al.*, 1988.
TM: Ervideira, 1926; Sá-Nogueira, 1958.
Pt: Sérgio *et al.*, 1987a.

Rhynchostegiella curviseta (Brid.) Limpr. var. *laeviseta* (W. E. Nicholson & Dixon) Podp.

Ag: Dixon, 1912; Machado, 1933; Duell, 1986; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

Rhynchostegiella durieui (Mont.) P. Allorge & Perss.

BAI: Sérgio & Mágua, 1991.

Rhynchostegiella teesdalei (Schimp.) Limpr.

Ag: Dixon, 1912; Machado, 1933.

This species was only reported for one locality, Algarve: Caldas, (Dixon & Nicholson, 1911), and not being confirmed by herbarium material, is to be considered as uncertain.

Rhynchostegiella tenella (Dicks.) Limpr. var. *tenella*

Ag: Dixon, 1912; Machado, 1933; Allorge, 1974.
BL: Allorge, 1935; Sérgio, 1972a; Allorge, 1974; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.
E: Henrique, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Ade & Koppe, 1942; Barros, 1943; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Machado, 1915a.
R: Sérgio, 1972a; Allorge, 1974; Catarino *et al.*, 1987.
TM: Ervideira, 1922.
Pt: Sérgio *et al.*, 1987a.

Rhynchostegiella tenella (Dicks.) Limpr. var. *litorea* (De Not.) P. W. Richards & E. C. Wallace

Ag: Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAI: Sérgio *et al.*, 2002d.

BL: Sá-Nogueira, 1950a; Sérgio, 1972a.

DL: Machado, 1933.

E: Mitten, 1853; Machado, 1917a; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

Rhynchostegium confertum (Dicks.) Schimp.

AAI: Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Dixon, 1912; Machado, 1933; Allorge, 1935; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Allorge, 1974; Sérgio *et al.*, 2001d.

- BA/BB:** Greven & Melick, 1994.
BAl: Sérgio, 1970-1971.
BB: Catarino *et al.*, 1987.
BL: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Sérgio & Sim-Sim, 1988; Kindberg, 1898.
DL: Anónimo, 1883a; Henriques, 1889; Anónimo, 1890; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
E: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Ade & Koppe, 1942; Barros, 1942c; Allorge, 1974.
Mi: Machado, 1913; Machado, 1914a; Machado, 1916; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Ervideira, 1922; Machado, 1933.
Pt: Sérgio *et al.*, 1987a.

Rhynchosstegium megapolitanum* (F. Weber & D. Mohr) Schimp. var. *megapolitanum

- AAl:** Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BAl: Sérgio *et al.*, 2002d.
BB: Sérgio *et al.*, 2002c.
BL: Henriques, 1889; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1988.
E: Mitten, 1853; Henriques, 1889; Luisier, 1916b; Sérgio, 1972a; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Machado, 1914a; Machado, 1920a; Machado, 1933; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Sérgio, 1972a; Allorge, 1974.
TM: Machado, 1915b; Machado, 1933.
Pt: Sérgio *et al.*, 1987a.

Rhynchosstegium megapolitanum* (F. Weber & D. Mohr) Schimp. var. *meridionale
Schimp.

- Ag:** Machado, 1933; Allorge, 1935; Allorge, 1974.
BAl: Sérgio *et al.*, 2002d.
E: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.

***Rhynchosstegium murale* (Hedw.) Schimp.**

- BA/BB:** Greven & Melick, 1994.
[DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1933].

The only report, Douro Litoral: Lordelo do Ouro, *leg.* I. Newton, not being confirmed by herbarium specimens, is to be considered as uncertain.

***Rhynchosstegium ripariooides* (Hedw.) Cardot**

- AAl:** Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1970-1971; Allorge, 1974.
BA: Henriques, 1889; Luisier, 1916b; Machado, 1917a; Allorge, 1974; Sérgio *et al.*, 2001d.

- BA/BB:** Pereira-Coutinho, 1917b; Greven & Melick, 1994.
BB: Mitten, 1853; Anônimo, 1906; Anônimo, 1911; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
BL: Henriques, 1889; Anônimo, 1892; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Sá-Nogueira, 1950a; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Machado, 1933; Allorge, 1974.
E: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
Mi: Mitten, 1853; Henriques, 1889; Machado, 1913; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
TM: Ervideira, 1922; Ervideira, 1926; Machado, 1933; Allorge & Allorge, 1949; Allorge, 1974.
Pt: Sérgio *et al.*, 1987a.

We have included under this taxon *R. rusciforme* var. *lutescens* Schimp., var. *inundatum* Schimp. and *Plathyhypnidium rusciforme* var. *atlanticum* (Brid.) A. Mach.

***Rhytidadelphus loreus* (Hedw.) Warnst.**

- BA:** Henriques, 1883; Henriques, 1889; Sérgio, 1969; Jansen, 1994; Jansen 1998.
BA/BB: Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.
BB: Machado, 1933.
Mi: Mitten, 1853; Anônimo, 1886; Henriques, 1889; Anônimo, 1890; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1933; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.
TM: Ervideira, 1922; Ervideira, 1926; Machado, 1933.
Pt: Brotero, 1804; Welwitsch, 1872.

***Rhytidadelphus squarrosus* (Hedw.) Warnst.**

- BA:** Tavares, 1956.
BA/BB: Greven & Melick, 1994.
DL: Machado, 1933.
Mi: Machado, 1920a; Machado, 1933; Sérgio & Schumacker, 1992.
TM: Sérgio & Schumacker, 1992.
Pt: Brotero, 1804.

***Rhytidadelphus triquetrus* (Hedw.) Warnst.**

- BA:** Henriques, 1883; Anônimo, 1901; Tavares, 1956; Jansen, 1994; Sérgio *et al.*, 2001d.
BA/BB: Machado, 1917b; Pereira-Coutinho, 1917b; Greven & Melick, 1994.
BB: Machado, 1933.
Mi: Henriques, 1889; Machado, 1913; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.
TM: Allorge & Allorge, 1949.

***Sanionia uncinata* (Hedw.) Loeske**

- BA:** Pereira-Coutinho, 1917b; Machado, 1933; Jansen, 1994; Jansen 1998.
BA/BB: Greven & Melick, 1994.
Mi: Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

Schistidium agassizii Sull. & Lesq.

[**BA:** Sérgio, 1969].

Some authors include *Schistidium alpicola* (Hedw.) Limpr. in this taxon. Therefore we think that the only report from Beira Alta: Serra do Caramulo, Sérgio, 1966 (COI) sub *S. alpicola* needs to be revised.

***Schistidium apocarpum* (Hedw.) Bruch & Schimp.**

AAl: Sérgio *et al.*, 1997b.

Ag: Sérgio, 1970-1971.

BA/BB: Greven & Melick, 1994.

[**BL:** Sérgio *et al.*, 1988].

E: Ade & Koppe, 1942; Sérgio *et al.*, 1988.

Mi: Brotero, 1804; Machado, 1917a; Machado, 1920a; Machado, 1930.

Pt: Luisier, 1924; Sérgio *et al.*, 1987a.

We include the records of *Schistidium gracile* G. Roth. from Minho in this species, although all herbarium specimens from this area need to be revised. The material of Beira Litoral, Eireiras, reported by Sérgio *et al.* (1988) corresponds to *S. elegantulum* subsp. *wilsonii*.

Schistidium brunnescens* Limpr. subsp. *brunnescens

BA: Sérgio *et al.*, 2001d.

Schistidium confertum (Funck) Bruch & Schimp.

[**BL:** Sérgio *et al.*, 1988].

This record corresponds to *Schistidium crassipilum*.

***Schistidium crassipilum* H. H. Blom**

Eurmap (North Hemisphaere): Blom, 1996.

BL: Sérgio *et al.*, 1988; Blom, 1996.

Mi: Sérgio & Schumacker, 1992; Blom, 1996.

See note under *Schistidium confertum*.

***Schistidium elegantulum* H. H. Blom subsp. *wilsonii* H. H. Blom**

Eurmap (North Hemisphaere): Blom, 1996.

BL: Blom, 1996.

See note under *Schistidium apocarpum*.

***Schistidium flaccidum* (De Not.) Ochyra**

Ag: Sérgio *et al.*, 1984.

[**BL:** Sérgio *et al.*, 1988].

***Schistidium rivulare* (Brid.) Podp.**

Wmap: Bremer, 1980.

BA: Sérgio *et al.*, 2001b; Sérgio *et al.*, 2001d.

Mi: Machado, 1918; Machado, 1920a; Machado, 1930; Barros, 1944b; Bremer, 1980.

Schistostega pennata (Hedw.) F. Web. & D. Mohr**IPmap:** Casas *et al.*, 1989; Sérgio, 1996.**BA:** Allorge, 1931b; Machado, 1933; Luisier, 1950; Tavares, 1955; Tavares, 1956; Casas *et al.*, 1989; Sérgio, 1996; Sérgio *et al.*, 2001d.**BL:** Casas *et al.*, 1989.**DL:** Tavares, 1955; Casas *et al.*, 1989.**Mi:** Machado, 1918; Machado, 1920a; Machado, 1930; Luisier, 1950; Tavares, 1955; Casas *et al.*, 1989.**TM:** Ervideira, 1922; Machado, 1930; Luisier, 1950; Tavares, 1955; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.***Schizymenium pontevedrensis** (Luisier) Sérgio, Casas, Cros & Brugués**IPmap:** Elias, 1988; Casas *et al.*, 1989; Sérgio *et al.*, 1990; Sérgio, 1993b; Sérgio *et al.*, 1994c; Sérgio & Draper, 2002b.**AAl:** Casas *et al.*, 1989; Sérgio *et al.*, 1990; Sérgio *et al.*, 1997b.**BA:** Pierrot, 1972; Casas *et al.*, 1989; Sérgio *et al.*, 1990.**BA/BB:** Greven & Melick, 1994.**BB:** Shaw, 2000.**R:** Casas *et al.*, 1989; Sérgio *et al.*, 1990.*Scleropodium ceaspitans* (Müll. Hal.) L. Koch**BL:** Allorge, 1928a; Machado, 1933.**Mi:** Albertos, 2001.*Scleropodium purum* (Hedw.) Limpr.**AAl:** Allorge, 1974; Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Allorge, 1974.**BA:** Braun-Blanquet *et al.*, 1956; Tavares, 1956; Teles, 1970; Allorge, 1974; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BB:** Luisier, 1916b; Sérgio *et al.*, 2002c.**BAI:** Allorge, 1974.**BL:** Henriques, 1889; Warnstorf, 1899; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Barros, 1942b; Sá-Nogueira, 1950a; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Sérgio *et al.*, 1988; Werner, 1997.**DL:** Henriques, 1889; Sampaio, 1901-1902; Braun-Blanquet *et al.*, 1956.**E:** Henriques, 1889; Pereira-Coutinho, 1917b; Ade & Koppe, 1942; Barros, 1943; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Sérgio *et al.*, 1988.**Mi:** Anônimo, 1887; Henriques, 1889; Anônimo, 1890; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.**R:** Barros, 1942b; Allorge, 1974; Sérgio *et al.*, 1988.**TM:** Ervideira, 1926; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Allorge, 1974.**Pt:** Brotero, 1804; Ervideira, 1922; Sérgio *et al.*, 1987a.

Scleropodium touretii (Brid.) L. Koch

- AAl:** Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1972a; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1993b; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d.
- Ag:** Solms-Laubach, 1868; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
- BA:** Pais, 1964; Allorge, 1974; Sérgio *et al.*, 1993b; Sérgio *et al.*, 2001d.
- BA/BB:** Pereira-Coutinho, 1917b; Greven & Melick, 1994.
- BAl:** Sérgio, 1970-1971; Sérgio *et al.*, 1993b; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.
- BB:** Luisier, 1916b; Machado, 1933; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1993b; Sérgio *et al.*, 2002c.
- BL:** Kindberg, 1898; Sérgio, 1972a; Allorge, 1974; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.
- DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974.
- E:** Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Ade & Koppe, 1942; Barros, 1943; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Sérgio *et al.*, 1993b.
- Mi:** Henriques, 1889; Machado, 1913; Machado, 1914a; Luisier, 1916b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
- R:** Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio *et al.*, 1993b; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d.
- TM:** Machado, 1915b; Ervideira, 1922; Ervideira, 1926; Allorge, 1931a; Machado, 1933; Allorge & Allorge, 1949; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Sérgio *et al.*, 1993b.
- Pt:** Brotero, 1804; Sérgio *et al.*, 1987a; Figueira *et al.*, 2001.

Scorpiurium circinatum (Brid.) M. Fleisch. & Loeske

- IPmap:** Casas *et al.*, 1989.
- AAl:** Allorge, 1974; Casas *et al.*, 1989.
- Ag:** Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Allorge, 1931a; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1989.
- Ba:** Barros, 1942b; Sérgio, 1972a; Allorge, 1974; Casas *et al.*, 1989.
- BA/BB:** Greven & Melick, 1994.
- BAl:** Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1989; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.
- BB:** Allorge, 1974.
- BL:** Kindberg, 1898; Henriques, 1889; Allorge, 1931a; Machado, 1933; Allorge, 1935; Sá-Nogueira, 1950a; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Casas *et al.*, 1989.
- DL:** Machado, 1933; Allorge, 1974; Casas *et al.*, 1989.
- E:** Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Ade & Koppe, 1942; Barros, 1942b; Barros, 1942c; Braun-

Blanquet *et al.*, 1956; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Casas *et al.*, 1989; Sérgio & Tauleigne Gomes, 2001.

R: Sérgio, 1972a; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Casas *et al.*, 1989; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d.

Pt: Luisier, 1924; Sérgio *et al.*, 1987a.

***Scorpiurium deflexifolium* (Solms) M. Fleisch. & Loeske**

IPmap: Casas *et al.*, 1996.

AAl: Casas *et al.*, 1996; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868 (*Orig. descrip.*), Welwitsch, 1872; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1933; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1996.

BAl: Casas *et al.*, 1996; Sérgio *et al.*, 1999a.

BB: Luisier, 1916b; Casas *et al.*, 1996.

BL: Sérgio, 1969; Sérgio *et al.*, 1988; Casas *et al.*, 1996.

DL: Casas *et al.*, 1996.

E: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942b; Sérgio & Sim-Sim, 1985a; Casas *et al.*, 1996.

Mi: Machado, 1933; Casas *et al.*, 1996.

R: Sérgio *et al.*, 1988; Casas *et al.*, 1996.

TM: Machado, 1933; Casas *et al.*, 1996.

Pt: Luisier, 1924; Sérgio *et al.*, 1987a.

The basionime of this species is *Hypnum deflexifolium* described from Algarve by Solms-Laubach (1868).

***Scorpiurium sendtneri* (Schimp.) M. Fleisch.**

IPmap: Casas *et al.*, 1985.

Ag: Sérgio *et al.*, 1984; Casas *et al.*, 1985; Sérgio *et al.*, 1987a.

BL: Sérgio *et al.*, 1988.

E: Barros, 1943; Casas *et al.*, 1985; Sérgio, 1985b; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985c; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

***Seligeria pusilla* (Hedw.) Bruch & Schimp.**

BL: Dixon, 1912; Machado, 1928; Casares, 1932; [Allorge, 1935; Allorge, 1974], Sérgio *et al.*, 1988; Puche, 1990.

Based on the taxonomic revision and distribution of *Seligeria* species (Gos & Ochyra, 1994), the Allorge specimen (Bryoth. Iber. 168) reported from Buçaco, in Beira Litoral, corresponds to *Seligeria paucifolia*. All the others reports need to be revised.

***Seligeria paucifolia* (Dicks.) Carruth.**

Eurmap: Gos & Ochyra, 1994.

BL: Allorge, 1935; Allorge, 1974; Gos & Ochyra, 1994.

See note under *S. pusilla*.

***Sematophyllum substrumulosum* (Hampe) Brid.**

Eurmap: Beer & Arts, 2000.

IPmap: Casas *et al.*, 1985.

Ptmap: Sim-Sim & Sérgio, 1998.

Ag: Solms-Laubach, 1868; Welwitsch, 1872; Allorge, 1935; Sérgio, 1970-1971; Allorge, 1974; Casas *et al.*, 1985.

BAI: Henriques, 1889; Machado, 1933; Allorge, 1974; Casas *et al.*, 1985; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

BL: Dixon, 1912; Machado, 1933; Allorge, 1935; Sá-Nogueira, 1950a; Allorge, 1974; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Allorge, 1974; Casas *et al.*, 1985.

E: Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Barros, 1942c; Barros, 1943; Allorge, 1974; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a.

Mi: Machado, 1915a; Machado, 1933; Allorge, 1974; Casas *et al.*, 1985.

Sphagnum L.

IPmap: Allorge, 1947.

Ptmap: Sérgio & Draper, 2001; Sérgio & Draper, 2002a.

Sphagnum angustifolium (Warnst.) C. O. E. Jensen

Ptmap: Séneca, 1998.

BA: Machado, 1917a; Machado, 1917b; Machado, 1918b; Machado, 1933; Séneca, 1998.

Mi: Machado, 1933.

We include in this taxon *S. intermedium var. parvifolium* (Warnst.) A. Mach. (Machado, 1918b). See also note concerning *Sphagnum recurvum*.

Sphagnum auriculatum Schimp.

Ptmap: Séneca, 1998.

AAI: Sérgio *et al.*, 1997b; Séneca, 1998.

Ag: Allorge, 1938.

BA: Tavares, 1956; Sérgio, 1969; Teles, 1970; Sérgio, 1972a; Séneca & Sérgio, 1992; Séneca, 1998; Jansen & Sequeira, 1999.

BAI: Séneca, 1998.

BB: Sérgio, 1972a; Séneca & Sérgio, 1992; Séneca, 1998.

BL: Anônimo, 1967; Sérgio, 1972a; Séneca & Sérgio, 1992; Séneca, 1998.

DL: Henriques, 1889; Machado, 1933; Allorge & Allorge, 1949; Séneca & Sérgio, 1992; Werner, 1997; Séneca, 1998.

E: Sérgio, 1972a; Séneca & Sérgio, 1992; Séneca, 1998.

Mi: Machado, 1920a; Allorge, 1928a; Machado, 1933; Allorge, 1938; Sá-Nogueira, 1950d; Séneca & Sérgio, 1992; Sérgio & Schumacker, 1992; Séneca, 1998.

TM: Ervideira, 1926; Machado, 1933; Allorge, 1938; Allorge & Allorge, 1949; Séneca & Sérgio, 1992; Sérgio & Schumacker, 1992; Séneca, 1998.

This is a polymorphic species that is considered as a synonym of *S. denticulatum* Brid.

Sphagnum capillifolium (Ehrh.) Hedw.

Ptmap: Séneca, 1998.

BA: Henriques, 1883; Henriques, 1889; Braun-Blanquet *et al.*, 1952; Jansen, 1994; Séneca, 1998; Jansen & Sequeira, 1999.

BA/BB: Levier, 1880; Sampaio, 1901-1902; Machado, 1917b; Greven & Melick, 1994.

BB: Machado, 1933.

BL: Sérgio, 1969; Séneca, 1998.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1933.

E: Mitten, 1853; Henriques, 1889; Machado, 1933.

Mi: Henriques, 1889; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Séneca, 1998.

TM: Ervideira, 1926; Machado, 1933; Allorge & Allorge, 1949; Séneca, 1998.

Sphagnum centrale C. E. O. Jensen

BA: Séneca, 1993; Séneca & Daniels, 1994; Séneca, 1998; Sérgio *et al.*, 2001b.

Sphagnum compactum Lam. & DC.

IPmap: Casas *et al.*, 1996.

Ptmap: Séneca, 1998.

BA: Henriques, 1883; Henriques, 1889; Braun-Blanquet *et al.*, 1952; Barendregt & Van Den Dries, 1984; Jansen, 1994; Casas *et al.*, 1996; Séneca, 1998; Jansen & Sequeira, 1999; Jansen *et al.*, 2000.

BA/BB: Levier, 1880; Sampaio, 1901-1902; Machado, 1917b; Machado, 1933; Greven & Melick, 1994.

BL: Anônimo, 1969; Sérgio, 1972a; Casas *et al.*, 1996; Séneca, 1998.

Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Casas *et al.*, 1996; Séneca, 1998.

TM: Sérgio & Schumacker, 1992; Casas *et al.*, 1996; Séneca, 1998.

Sphagnum cuspidatum Hoffm.

IPmap: Munín & Fuertes, 2000.

Ptmap: Séneca, 1998.

BA: Tavares, 1956; Séneca, 1998; Jansen & Sequeira, 1999; Munín & Fuertes, 2000.

BA/BB: Greven & Melick, 1994.

DL: Sampaio, 1901-1902.

Mi: Sérgio & Schumacker, 1992; Séneca, 1998.

TM: Séneca, 1998.

Sphagnum flexuosum Dozy & Molk.

IPmap: Munín & Fuertes, 2000.

Ptmap: Séneca, 1998.

BA: Séneca, 1998; Munín & Fuertes, 2000.

Mi: Séneca, 1998.

TM: Séneca, 1998.

Sphagnum girgensohnii Russow

Ptmap: Séneca, 1998.

BA: Séneca, 1993; Séneca & Daniels, 1994; Séneca, 1998.

Sphagnum molle Sull.**IPmap:** Casas, 1958.**Ptmap:** Séneca, 1998.**BA:** Braun-Blanquet *et al.*, 1952; Barendregt & Van Den Dries, 1984.**BL:** Anónimo, 1967; Séneca & Daniels, 1994; Séneca, 1998.

The report of its occurrence in Beira Alta, not being supported by herbarium specimens, is to be considered as uncertain. Séneca (1998) indicated the presence of this *Sphagnum* only in Beira Litoral.

Sphagnum palustre L.**IPmap:** Casas *et al.*, 1992.**Ptmap:** Séneca, 1998.**BA:** Tavares, 1956; Barendregt & Van Den Dries, 1984; Casas *et al.*, 1992; Séneca, 1998.**BA/BB:** Pereira-Coutinho, 1917b.**BB:** Machado, 1933; Allorge, 1938.**BL:** Séneca, 1998.**DL:** Séneca, 1998.**Mi:** Machado, 1933; Allorge, 1938; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Casas *et al.*, 1992; Sérgio & Schumacker, 1992; Séneca, 1998.**TM:** Casas *et al.*, 1992; Séneca, 1998.**Pt:** Brotero, 1804.*Sphagnum papillosum* Lindb. var. *laeve* Warnst.**IPmap:** Casas *et al.*, 1992.**Ptmap:** Séneca, 1998.**BA:** Casas *et al.*, 1992; Séneca, 1998.**Mi:** Casas *et al.*, 1992; Séneca, 1998.*Sphagnum platyphyllum* (Braithw.) Warnst.**Ptmap:** Séneca, 1998.**BA/BB:** Warnstorff, 1911; Machado, 1933.**Mi:** Séneca, 1998.

The report of its occurrence in Serra da Estrela (BA/BB) *leg.* Levier, was supported by herbarium specimens, revised by Warnstorff. However it seems to be extinct from this area, since Séneca (1998) indicated its presence only in Minho.

Sphagnum rubellum Wilson**Ptmap:** Séneca, 1998.**BA:** Séneca, 1998.**BL:** Séneca, 1998.**Mi:** Machado, 1933; Sá-Nogueira, 1950d; Sérgio, 1972a; Sérgio & Schumacker, 1992; Séneca, 1998.**TM:** Séneca, 1998.*Sphagnum recurvum* P. Beauv.**[BA:** Jansen & Sequeira, 1999].

This species is included in a polymorphic group with *S. angustifolium* and *S. flexuosum* which can occur only in few localities of Serra da Estrela. This group needs to be studied.

Sphagnum russowii Warnst.**IPmap:** Munín & Fuertes, 1998.**Ptmap:** Séneca, 1998.**BA:** Séneca & Daniels, 1994; Munín & Fuertes, 1998; Séneca, 1998.**BA/BB:** Jansen, 1994.**TM:** Munín & Fuertes, 1998.*Sphagnum squarrosum* Crome**IPmap:** Casas *et al.*, 1996.**Ptmap:** Séneca, 1998.**BA:** Séneca & Daniels, 1994; Casas *et al.*, 1996; Séneca, 1998.**DL:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1933; Casas *et al.*, 1996; Séneca, 1998.*Sphagnum subnitens* Russow & Warnst.**Ptmap:** Séneca, 1998.**Ag:** Crundwell, 1956.**BA:** Séneca, 1998.**BB:** Pereira-Coutinho, 1917b; Machado, 1933; Séneca, 1998.**BL:** Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Anónimo, 1969; Sérgio, 1972a; Séneca, 1998.**DL:** Séneca, 1998.**E:** Pereira-Coutinho, 1917b; Machado, 1933; Séneca, 1998.**Mi:** Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1935; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Séneca, 1998.**TM:** Machado, 1933; Allorge & Allorge, 1949; Sérgio & Schumacker, 1992; Séneca, 1998.*Sphagnum subsecundum* Nees subsp. *subsecundum***Ptmap:** Séneca, 1998.**BA:** Henriques, 1883; Henriques, 1889; Pereira-Coutinho, 1917b; Braun-Blanquet *et al.*, 1952; Jansen & Sequeira, 1999.**BA/BB:** Levier, 1880; Sampaio, 1901-1902; Machado, 1917b.**BB:** Pereira-Coutinho, 1917b; Séneca, 1998.**BL:** Anónimo, 1969; Séneca, 1998.**DL:** Henriques, 1889; Sampaio, 1901-1902.**E:** Pereira-Coutinho, 1917b.**Mi:** Anónimo, 1899; Sampaio, 1901-1902; Anónimo, 1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Séneca, 1998.**TM:** Sérgio & Schumacker, 1992; Séneca, 1998.**Pt:** Machado, 1933.*Sphagnum subsecundum* Nees. subsp. *inundatum* (Russow) A. Eddy**Ptmap:** Séneca, 1998.**BA:** Sérgio, 1972a; Séneca, 1998.**BL:** Sérgio, 1972a; Séneca, 1998.**DL:** Séneca, 1998.

Mi: Machado, 1933; Sá-Nogueira, 1950d; Séneca, 1998.
TM: Séneca, 1998.

Sphagnum tenellum (Brid.) Brid.

IPmap: Munín & Fuertes, 2000.
Ptmap: Séneca, 1998.
BA: Séneca, 1998; Munín & Fuertes, 2000.
DL: Séneca, 1998.
Mi: Machado, 1917a; Machado, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Séneca, 1998; Munín & Fuertes, 2000.
TM: Sérgio & Schumacker, 1992; Séneca, 1998.

Sphagnum teres (Schimp.) Ängstr.

[**BA :** Barendregt & Van Den Dries, 1984.
BA: Casas *et al.*, 1996].

Erroneously reported from Serra da Estrela, the specimen corresponds to *S. compactum*. So, the indication of Casas *et al.* (1996), based in the formerly occurrence, is to be considered erroneous.

Straminergon stramineum (Dickson ex Brid.) Hedenäs

BA: Machado, 1917a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1933; Jansen, 1994; Sérgio, 1994a.
BA/BB: Greven & Melick, 1994.

Syntrichia laevipila Brid.

AAI: Gallego *et al.*, 2002; Luisier, 1916b; Machado, 1928; Allorge, 1974; Catarino *et al.*, 1987; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d; Jones, 1999.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Jones, 1999.
BA: Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAl: Sérgio, 1970-1971; Allorge, 1974; Jones, 1999; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.
BB: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Catarino *et al.*, 1987; Sérgio *et al.*, 1998d.
BL: Henriques, 1889; Machado, 1928; Allorge, 1931a; Sérgio, 1969; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Jones, 1999.
DL: Henriques, 1889; Machado, 1928; Allorge, 1974.
E: Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Barros, 1942a; Barros, 1942b; Barros, 1942c; Barros, 1943; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Jones, 1999.
Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1920a; Machado, 1928; Luisier, 1948; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999.

R: Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d; Jones, 1999.

TM: Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Sérgio *et al.*, 1987a.

***Syntrichia latifolia* (Bruch ex Hartm.) Huebener**

AAI: Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1997b; Gallego *et al.*, 2002b.

BA: Gallego & Garcia, 2002.

BB: Sim-Sim & Sérgio, 1992; Gallego *et al.*, 2002b.

TM: Sérgio & Schumacker, 1992; Sim-Sim & Sérgio, 1992; Gallego *et al.*, 2002b; Gallego, 2002.

***Syntrichia montana* Nees**

AAI: Sérgio *et al.*, 1997b.

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BL: Sérgio *et al.*, 1988.

DL: Henriques, 1889; Machado, 1928.

E: Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Gallego, 2002.

R: Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

***Syntrichia norvegica* F. Weber**

[**BA:** Sérgio, 1968-1969].

This report corresponds to *Syntrichia ruralis* var. *ruralis* (Gallego *et al.*, 2002b).

***Syntrichia papillosa* (Wilson) Jur.**

AAI: Gallego *et al.*, 2002b.

BA/BB: Greven & Melick, 1994.

BB: Sim-Sim & Sérgio, 1992.

BL: Gallego *et al.*, 2002b.

E: Gallego *et al.*, 2002b.

Mi: Allorge, 1931b; Machado, 1933; Sá-Nogueira, 1950d; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

R: Gallego, 2002.

TM: Sérgio, 2001b; Gallego *et al.*, 2002b.

***Syntrichia papilloissima* (Copp.) Loeske**

TM: Gallego, 2002.

***Syntrichia princeps* (De Not.) Mitt.**

AAI: Sérgio *et al.*, 1997b.

BA: Machado, 1928; Tavares, 1956; Pierrot, 1972; Sérgio *et al.*, 2001d; Gallego & Cano, 2002; Gallego & Garcia, 2002.

BA/BB: Greven & Melick, 1994.

DL: Machado, 1928.

Mi: Machado, 1920a; Machado, 1928.

TM: Henriques, 1889; Sampaio, 1901-1902; Machado, 1915b; Pereira-Coutinho, 1917b; Ervideira, 1922; Machado, 1928; Allorge, 1935; Gallego, 2002.

Syntrichia ruralis (Hedw.) F. Weber & D. Mohr var. *ruralis*

- AA:** Sérgio *et al.*, 1997b.
BA: Henriques, 1883; Henriques, 1889; Jansen 1998.
BA/BB: Machado, 1917b; Greven & Melick, 1994.
BB: Machado, 1928.
BL: Brotero, 1804; Henriques, 1889; Machado, 1928; Sérgio, 1969; Sérgio *et al.*, 1988; Gallego *et al.*, 2002a.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Sérgio, 1972a.
E: Pereira-Coutinho, 1917b; Machado, 1928; Sérgio & Sim-Sim, 1985a.
Mi: Sérgio & Schumacker, 1992.
TM: Ervideira, 1922; Machado, 1928; Allorge & Allorge, 1949; Sérgio & Schumacker, 1992.
Pt: Sérgio *et al.*, 1987a.

Syntrichia ruralis (Hedw.) F. Weber & D. Mohr var. *ruraliformis* (Besch.) T. Durand

- BA:** Allorge, 1931a; Gallego *et al.*, 2002b.
BL: Gallego, 2002; Gallego *et al.*, 2002a.
Mi: Séneca-Cardoso, 1989; Gallego *et al.*, 2002b.
TM: Gallego, 2002.

Syntrichia subpapillosissima (Bizot & R. B. Pierrot) M. T. Gallego & J. Guerra

- BA:** Gallego & Garcia, 2002.
TM: Gallego *et al.*, 2002a; Gallego, 2002.

Syntrichia virescens (De Not.) Ochyra

- [**BA/BB:** Greven & Melick, 1994].
TM: Gallego & Cano, 2002.

The material reported by Greven & Melick (1994) was revised and corresponds to *Syntrichia princeps*.

Tetraphis pellucida Hedw.

- [**BA/BB:** Greven & Melick, 1994].

The report of its occurrence in Portugal, Serra da Estrela (without locality), not being supported by herbarium specimens, is to be considered uncertain.

Thamnobryum alopecurum (Hedw.) Gangulee

- Ag:** Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Luisier, 1916b; Machado, 1933; Allorge, 1974.
BA: Sérgio *et al.*, 2001d.
BL: Allorge, 1931a; Sérgio, 1972a; Allorge, 1974.
DL: Henriques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.
E: Levier, 1880; Henriques, 1889; Pereira-Coutinho, 1917b; Allorge, 1931a; Machado, 1933; Ade & Koppe, 1942; Barros, 1943; Allorge, 1974.
Mi: Anônimo, 1886; Henriques, 1889; Anônimo, 1890; Sampaio, 1901-1902; Machado, 1913; Machado, 1914a; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.

TM: Ervideira, 1922; Ervideira, 1926; Machado, 1933; Allorge, 1974.
Pt: Mitten, 1853.

Thamnobryum maderense (Kindb.) Hedenäs

IPmap: Jiménez *et al.*, 2000.
BA: Sérgio & Garcia, 2000; Sérgio *et al.*, 2001d.
BA/BB: Jiménez *et al.*, 2000.
Mi: Jiménez *et al.*, 2000.
TM: Sérgio & Garcia, 2000.

According to Stech *et al.* (2001) this taxon should be regarded as a variety of *T. alopecurum*, supported by molecular data. The actual distribution of this taxon needs to be investigated.

Thuidium delicatulum (Hedw.) Schimp.

[**E:** Henrques, 1889; Machado, 1933].
The species was reported dubiously by Machado (1932) for Portugal. In fact, the report of Henrques, gathered by E. da Veiga is probably erroneous.

Thuidium recognitum (Hedw.) Lindb.

BL: Machado, 1918b; Machado, 1933.
The report of its occurrence in Portugal, Buçaco, is still uncertain as Machado could not validate the species identification (*nom. vidi*) and Allorge (1974) did not include this taxon for Buçaco.

Thuidium tamariscinum (Hedw.) Schimp.

IPmap: Casas *et al.*, 1992.
BA: Braun-Blanquet *et al.*, 1956; Sérgio, 1969; Allorge, 1974; Casas *et al.*, 1992; Sérgio *et al.*, 2001d.
BB: Luisier, 1916b.
BL: Henrques, 1889; Warnstorf, 1899; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Casas *et al.*, 1992.
DL: Henrques, 1889; Sampaio, 1901-1902; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974; Casas *et al.*, 1992.
E: Henrques, 1889; Machado, 1933; Allorge, 1974.
Mi: Mitten, 1853; Henrques, 1889; Sampaio, 1901-1902; Machado, 1913; Luisier, 1916b; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.
TM: Ervideira, 1922; Ervideira, 1926; Allorge, Machado, 1933; 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.
Pt: Welwitsch, 1872.

Timmiella barbuloides (Brid.) Mönk.

AA: Allorge, 1931a; Sérgio, 1969; Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henrques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA/BB: Greven & Melick, 1994.

BL: Anônimo, 1892; Warnstorf, 1899; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1988; Werner, 1997.

DL: Sampaio, 1901-1902; Machado, 1928.

E: Mitten, 1853; Levier, 1880; Henriques, 1889; Luisier, 1907a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Casares, 1932; Barros, 1942b; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Machado, 1913; Machado, 1928; Casares, 1932; Barros, 1942b.

R: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1988.

TM: Machado, 1915b.

Pt: Sérgio *et al.*, 1987a.

***Timmiella flexiseta* (Bruch) Limpr.**

AAL: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Welwitsch, 1872; Henriques, 1889; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Guerra *et al.*, 1981; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

E: Luisier, 1910c; Luisier, 1916b; Machado, 1928; Casares, 1932; Sérgio *et al.*, 1988.

***Tomentypnum nitens* (Hedw.) Loeske**

[Mi: Brotero, 1804; Henriques, 1889; Machado, 1913; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992].

The only known report from Portugal corresponds to one locality “In humidis Gerez frequens” (Brotero, 1804) and is to be considered uncertain. Machado (1932) pointed out the Brotero gathering for Minho but with the note “*non vidi*”. We think that it can be *Brachythecium albicans*, a frequent species in this area.

***Tortella flavovirens* (Bruch) Broth.**

Ag: Solms-Laubach, 1868; Machado, 1928; Casares, 1932; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAL: Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1999a.

BL: Warnstorf, 1899; Allorge, 1935; Sá-Nogueira, 1950a; Braun-Blanquet *et al.*, 1956; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Machado, 1928; Allorge, 1974.

E: Mitten, 1853; Henriques, 1889; Warnstorf, 1899; Dixon, 1912; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Barros, 1942a; Sérgio, 1970-1971; Allorge, 1974; Sérgio, 1981; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Guerra & Puche, 1984; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Sérgio & Tauleigne Gomes, 2001.

Mi: Luisier, 1907a; Machado, 1913; Machado, 1928; Casares, 1932; Allorge, 1974.

R: Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

Some reports of Warnstorf (1899) were integrated in *Tortella flavovirens* var. *viridiflava* (De Not.) Casares-Gil.

***Tortella humilis* (Hedw.) Jenn.**

Ag: Machado, 1928; Casares, 1932; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

Tortella inclinata (Hedw. f.) Limpr.

- Ag:** Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BAl: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b.
BL: Machado, 1928; Sérgio, 1972a.
E: Ade & Koppe, 1942; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d.

Tortella inflexa (Bruch) Broth.

- IPmap:** Casas *et al.*, 1989.
Ag: Solms-Laubach, 1868; Dixon, 1912; Machado, 1928; Casares, 1932; Pierrot, 1972; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1989.
BB: Sérgio *et al.*, 2002c.
BL: Allorge, 1974; Casas *et al.*, 1989.
E: Sérgio & Sim-Sim, 1985a; Casas *et al.*, 1989.
R: Sérgio *et al.*, 1988; Casas *et al.*, 1989.
Pt: Sérgio *et al.*, 1987a.

Tortella nitida (Lindb.) Broth.

- AAl:** Allorge, 1974.
Ag: Dixon, 1912; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BA: Pereira-Coutinho, 1917b.
BL: Pereira-Coutinho, 1917b; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1988.
E: Pereira-Coutinho, 1917b; Ade & Koppe, 1942; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
R: Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

Tortella tortuosa (Hedw.) Limpr.

- AAl:** Sérgio *et al.*, 1997b.
BL: Allorge, 1931a; Allorge, 1931b; Machado, 1933; Allorge, 1974; Sérgio *et al.*, 1988.
E: Sá-Nogueira, 1950b; Sérgio *et al.*, 1988.
Mi: Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Allorge, 1931b; Allorge & Allorge, 1949; Allorge, 1974.
Pt: Sérgio *et al.*, 1987a.

Tortula atrovirens (Sm.) Lindb.

- AAl:** Sérgio *et al.*, 1997b.
Ag: Allorge, 1931a; Crundwell, 1956; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BA/BB: Greven & Melick, 1994.
BL: Henriques, 1889; Machado, 1928; Casares, 1932.
DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928.
E: Barros, 1943.
R: Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932.
TM: Machado, 1915b; Machado, 1928; Casares, 1932.
Pt: Luisier, 1924.

Tortula canescens* Mont.*AA:** Sérgio, 1969.**Ag:** Solms-Laubach, 1868; Henriques, 1889; Dixon, 1912; Machado, 1928; Sérgio, 1970-1971.**BL:** Levier, 1880; Sérgio, 1972a; Sérgio *et al.*, 1988.**DL:** Henriques, 1889; Machado, 1928.**Mi:** Machado, 1928; Sérgio, 2001b.**R:** Sérgio & Sim-Sim, 1994.**Pt:** Sérgio *et al.*, 1987a.***Tortula cuneifolia* (Dicks.) Turner****AA:** Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1935; Pierrot, 1972.**BA:** Sérgio, 1969; Pierrot, 1972.**BAL:** Sérgio, 1970-1971; Sérgio *et al.*, 1999a.**BB:** Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928.**BL:** Henriques, 1889; Warnstorff, 1899; Pereira-Coutinho, 1917b; Machado, 1928.**E:** Mitten, 1853; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Pierrot, 1972; Sérgio & Sim-Sim, 1985a.**Mi:** Machado, 1914a; Machado, 1920a; Machado, 1928.**R:** Pereira-Coutinho, 1917b; Barros, 1942b.**TM:** Henriques, 1889; Sampaio, 1901-1902; Machado, 1915b; Pereira-Coutinho, 1917b; Machado, 1928.**Pt:** Luisier, 1924.***Tortula freibergii* Dixon & Loeske****Eurmap:** Rumsey, 1992.**Ag:** Blockeel & Rumsey, 1990.**E:** Machado, 1928; Sérgio & Cardoso, 1985.

This species was recently reported from Beira Alta, Vouzela, *leg.* Sérgio 2002 (LISU 181534!). The specimen gathered by Machado and reported sub *T. solmsii* (Sérgio & Cardoso, 1985) corresponds to this taxon (rev. M. Jesus Cano 2002).

Tortula guepini* (Bruch & Schimp.) Broth.*[BB:** Sérgio, 1978].

According to Zander (1993), and based in the Steere concept, this species (=*Desmatodon guepini*) would better be regarded as a subspecies of *D. latifolius*. The report from Portugal (Beira Baixa: Castelo Branco, *leg.* C. Alves COI ! and LISU!) corresponds to *Tortula cuneifolia* (*Comm.* M. J. Cano).

Tortula inermis* (Brid.) Mont.*BB:** Luisier, 1916b; Machado, 1928.**[E:** Machado, 1928.**R:** Sérgio, 1969; Sérgio *et al.*, 1988].**Pt:** Sérgio *et al.*, 1987a.

The references from Estremadura and Ribatejo need to be confirmed.

***Tortula marginata* (Bruch & Schimp.) Spruce**

Ag: Solms-Laubach, 1868; Henriques, 1889; Machado, 1928; Allorge, 1935; Sérgio, 1970-1971; Pierrot, 1972; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Pierrot, 1972.

BAI: Mitten, 1853; Henriques, 1889; Luisier, 1915a; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974; Sérgio & Granzow De La Cerda, 2001.

BL: Allorge, 1935; Sérgio, 1969; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Allorge, 1974.

E: Mitten, 1853; Levier, 1880; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1931a; Ade & Koppe, 1942; Allorge, 1974; Sérgio & Sim-Sim, 1985a.

Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1920a; Machado, 1928; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974; Sérgio *et al.*, 1988.

Pt: Schimper, 1836-1856; Venturi, 1881; Luisier, 1924; Luisier, 1934; Whitehouse, 1965; Sérgio *et al.*, 1987a; Zander, 1993.

This species was first described by Luisier (1915a) sub *Desmatodon meridionalis* that was subsequently considered as a synonym of *T. marginata* (Sérgio & Granzow de La Cerda, 2001).

Tortula muralis* Hedw. var. *muralis

AAI: Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Guerra *et al.*, 1992.

BA: Guerra *et al.*, 1992; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Allorge, 1974; Guerra *et al.*, 1992.

BB: Luisier, 1916b.

BL: Henriques, 1889; Anónimo, 1893; Pereira-Coutinho, 1917b; Sá-Nogueira, 1950a; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902.

E: Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Ade & Koppe, 1942; Barros, 1942a; Barros, 1943; Sá-Nogueira, 1950b; Allorge, 1974; Sérgio, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Guerra *et al.*, 1992.

Mi: Sampaio, 1901-1902; Machado, 1913; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Guerra *et al.*, 1992.

R: Barros, 1942a; Allorge, 1974; Sérgio *et al.*, 1988; Guerra *et al.*, 1992.

TM: Pereira-Coutinho, 1917b; Ervideira, 1922; Sérgio & Schumacker, 1992.

Pt: Brotero, 1804; Machado, 1928; Sérgio *et al.*, 1987a.

***Tortula muralis* (Hedw.) var. *aestiva* Brid. ex Hedw.**

Pt: Machado, 1928.

***Tortula muralis* (Hedw.) var. *obcordata* Schimp.**

BL: Guerra *et al.*, 1992.

Tortula solmsii* (Schimp.) Limpr.*Wmap:** Long & Hill, 1982.**Ag:** Henriques, 1889; Machado, 1928; Sérgio *et al.*, 1984; Sérgio & Cardoso, 1985; Sérgio *et al.*, 1987a.**BL:** Sérgio & Cardoso, 1985; Sérgio *et al.*, 1988.**[E:** Luisier, 1916b; Machado, 1928; Sérgio & Cardoso, 1985].**Mi:** Sérgio & Cardoso, 1985.**Pt:** Luisier, 1924; Sérgio *et al.*, 1987a.

The references from Estremadura need to be confirmed.

Tortula subulata* Hedw.*AAI:** Sérgio *et al.*, 1997b.**BA:** Jansen & Sequeira, 1999.**BA/BB:** Greven & Melick, 1994.**BB:** Machado, 1928.**BL:** Brotero, 1804; Henriques, 1889; Machado, 1928.**E:** Luisier, 1916b; Machado, 1928; Sérgio *et al.*, 1988.**TM:** Allorge & Allorge, 1949.***Tortula vahliana* (Schultz) Mont.****AAI:** Machado, 1928.**Ag:** Dixon, 1912; Machado, 1928.**E:** Pereira-Coutinho, 1917b; Machado, 1928.**TM:** Machado, 1915b; Machado, 1928.**Pt:** Luisier, 1924.

As all records correspond to material gathered before 1950, it is necessary to consider this species an extinct moss.

Trichostomum brachydontium* Bruch var. *brachydontium**AAI:** Pereira-Coutinho, 1917b; Sérgio *et al.*, 1997b.**Ag:** Solms-Laubach, 1868; Schimper, 1876; Casares, 1932; Pierrot, 1972; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.**BA:** Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BAL:** Sérgio *et al.*, 1999a.**BL:** Allorge, 1974; Sérgio *et al.*, 1988; Leitão *et al.*, 1996.**E:** Mitten, 1853; Levier, 1880; Henriques, 1889; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Ade & Koppe, 1942; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.**Mi:** Machado, 1928; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.**R:** Sérgio *et al.*, 1988.**Pt:** Sérgio *et al.*, 1987a.***Trichostomum brachydontium* Bruch var. *littorale* (Mitt.) C. O. E. Jens.****Ag:** Dixon, 1912; Machado, 1928; Casares, 1932; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

- BAI:** Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Casares, 1932; Allorge, 1974; Sérgio *et al.*, 1999a.
BL: Dixon, 1912; Machado, 1928; Casares, 1932; Allorge, 1935; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Casares, 1932.
E: Sérgio, 1970-1971; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Machado, 1915a; Machado, 1920a; Machado, 1928; Casares, 1932; Allorge, 1974.
R: Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

***Trichostomum crispulum* Bruch**

- AAI:** Sérgio *et al.*, 1997b.
Ag: Solms-Laubach, 1868; Schimper, 1876; Pereira-Coutinho, 1917b; Machado, 1928; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BAI: Sérgio, 1970-1971; Allorge, 1974.
BB: Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Allorge, 1974.
BL: Henriques, 1889; Machado, 1928; Sá-Nogueira, 1950a; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Henriques, 1889; Machado, 1928; Allorge, 1974.
E: Warnstorff, 1899; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Ade & Koppe, 1942; Barros, 1942a; Braun-Blanquet *et al.*, 1956; Sérgio, 1970-1971; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.
Mi: Machado, 1920a; Machado, 1928; Sá-Nogueira, 1950c; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Machado, 1915b; Ervideira, 1922; Machado, 1928; Allorge, 1974.
Pt: Sérgio *et al.*, 1987a.

We have included in this taxon the var. *algarvicum* Schimp. and var. *pseudo-weisia* Schimp. (Schimper 1876), *leg.* Solms-Laubach in Algarve. The report of *T. brachydontium* var. *cylindricum* (Schimp.) Cout. from Algarve, Albufeira, *leg.* Palhinha & Mendes, also corresponds to this species.

***Trichostomum triumphans* De Not.**

- Ag:** Guerra *et al.*, 2002; Machado, 1917d; Machado, 1928; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
R: Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

****Triquetrella arapilensis* Luisier**

- Wmap:** Allorge, 1931c; Allorge, 1947.
IPmap: Casas *et al.*, 1985; Gil & Castro, 1987; Casas *et al.*, 1993; Sérgio *et al.*, 1994c; Sérgio & Draper, 2002b.
Ptmap: Sérgio *et al.*, 2000a.
AAI: Casas *et al.*, 1985; Casas *et al.*, 1993; Sérgio *et al.*, 1997b.
BA: Allorge, 1931a; Allorge, 1931b; Allorge, 1931c; Machado, 1933; Pierrot, 1972; Casas *et al.*, 1985.

BAI: Casas *et al.*, 1993; Casas *et al.*, 1993.

BB: Casas *et al.*, 1985.

TM: Machado, 1915b; Pereira-Coutinho, 1917b; Ervideira, 1922; Machado, 1928; Allorge, 1931b; Allorge, 1931c; Casares, 1932; Machado, 1933; Allorge & Allorge, 1949; Casas *et al.*, 1985; Gil & Castro, 1987.

Pt: Luisier, 1915b; Luisier, 1924; Luisier, 1934.

***Ulota bruchii* Brid.**

IPmap: Albertos *et al.*, 2000.

E: Sá-Nogueira, 1950b.

Mi: Machado, 1916; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992; Albertos *et al.*, 2000; Albertos, 2001; Albertos *et al.*, 2001.

***Ulota calvescens* Wilson**

IPmap: Allorge, 1931c; Allorge, 1947.

Ag: Dixon, 1912; Luisier, 1924; Allorge, 1931b; Machado, 1933; Sérgio, 1970-1971; Allorge, 1974.

BL: Allorge, 1931b; Machado, 1933; Allorge, 1974.

Mi: Machado, 1933; Allorge, 1974.

***Ulota crispa* (Hedw.) Brid.**

IPmap: Albertos *et al.*, 2000.

Ag: Henriques, 1889; Machado, 1933.

BL: Warnstorff, 1899; Machado, 1933; Allorge, 1974.

E: Sérgio & Correia, 1981.

Mi: Anônimo, 1886; Henriques, 1889; Anônimo, 1890; Sampaio, 1901-1902; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1933; Barros, 1944b; Sá-Nogueira, 1950d; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos *et al.*, 2000; Albertos, 2001; Albertos *et al.*, 2001.

Pt: Brotero, 1804.

***Ulota hutchinsiae* (Sm.) Hammar**

Mi: Mitten, 1853; Henriques, 1889; Machado, 1913; Machado, 1917b; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1938; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

Pt: Welwitsch, 1872.

***Warnstorffia exannulata* (Schimp.) Loeske**

BA: Machado, 1917a; Teles, 1970; Jansen & Sequeira, 1999.

BA/BB: Machado, 1917b; Pereira-Coutinho, 1917b.

BB: Machado, 1933.

Mi: Machado, 1933.

***Warnstorffia fluitans* (Hedw.) Loeske**

Ag: Solms-Laubach, 1868.

BA: Henriques, 1883; Henriques, 1889; Braun-Blanquet *et al.*, 1952; Jansen & Sequeira, 1999.

BA/BB: Levier, 1880; Pereira-Coutinho, 1917b.

BB: Luisier, 1916b; Machado, 1933.

DL: Henriques, 1889; Sampaio, 1901-1902; Pereira-Coutinho, 1917b; Machado, 1933.

E: Machado, 1933.

TM: Ervideira, 1926; Sá-Nogueira, 1958.

Weissia brachycarpa (Nees & Hornsch.) Jur.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Machado, 1928.

BL: Sérgio *et al.*, 1988.

E: Guerra *et al.*, 2002; Sérgio *et al.*, 1988.

R: Barros, 1942a; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

Weissia condensa (Voit) Lindb. var. *condensa*

AAI: Sérgio *et al.*, 1997b.

Ag: Solms-Laubach, 1868; Estácio da Veiga, 1869; Henriques, 1889; Dixon, 1912; Machado, 1928; Casares, 1932; Crundwell, 1956; Sérgio, 1970-1971; Allorge, 1974; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Henriques, 1889; Sérgio, 1972a; Sérgio *et al.*, 2001d.

BA/BB: Levier, 1880.

BAI: Sérgio, 1970-1971; Sérgio *et al.*, 1999a.

BB: Pereira-Coutinho, 1917b; Machado, 1928.

BL: Brotero, 1804; Henriques, 1889; Anónimo, 1893; Pereira-Coutinho, 1917b; Machado, 1928; Sá-Nogueira, 1950a; Sérgio, 1972a; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1889; Sampaio, 1901-1902; Machado, 1928; Allorge, 1974.

E: Mitten, 1853; Luisier, 1916b; Pereira-Coutinho, 1917b; Machado, 1928; Sá-Nogueira, 1950b; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Machado, 1913; Pereira-Coutinho, 1917b; Machado, 1920a; Machado, 1928; Barros, 1944b; Sá-Nogueira, 1950d; Sérgio & Schumacker, 1992.

R: Barros, 1942a; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

Weissia condensa (Voit) Lindb. var. *armata* (Thér. & Trab.) M. J. Cano, Ros & J.

Guerra

Ag: Moya *et al.*, 1995.

E: Guerra *et al.*, 2002.

Weissia controversa Hedw. var. *controversa*

Ag: Guerra *et al.*, 2002.

BAI: Guerra *et al.*, 2002.

Weissia controversa Hedw. var. *crispata* (Nees & Hornsch.) Nyholm

Ag: Dixon, 1912; Machado, 1928; Casares, 1932; Sérgio *et al.*, 2001e.

Weissia leptocarpa Schimp. ex Besch.

[**E:** Levier, 1880; Machado, 1928.

Pt: Luisier, 1924].

This is a doubtful species, *hom. illeg.* in Index Muscorum (Wijk *et al.* 1959-1969). For description see Levier (1880), in Leresche & Levier "Deux excursions botaniques dans le Nord de l'Espagne et en Portugal". The type material needs to be revised.

***Weissia wimmeriana* (Sendtn.) Bruch & Schimp. subsp. *pallescens* (Schimp. ex Besch.) Giacom.**

AAl: Sérgio & Guerra, 2002.

BL: Henriques, 1889; Machado, 1928; Casares, 1932; Sérgio *et al.*, 2001e; Sérgio & Guerra, 2002.

E: Machado, 1928; Casares, 1932; Séneca-Cardoso, 1989; Sérgio *et al.*, 2001e; Sérgio & Guerra, 2002.

Pt: Venturi, 1881.

After revision of the herbarium specimens, all reports of *W. wimmeriana* from Portugal correspond to subsp. *pallescens*, taxon that only exists in the Mediterranean region (Italy and North Africa) and regions with lower altitude (Sérgio & Guerra, 2002).

***Zygodon conoideus* (Dicks.) Hook. & Taylor**

E: Ade & Koppe, 1942.

Mi: Sérgio & Schumacker, 1992; Albertos, 2001.

***Zygodon forsteri* (Dicks.) Mitt.**

IPmap: Casas *et al.*, 1985.

E: Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985b.

***Zygodon rupestris* Schimp. ex Lorentz**

Ptmap: Sim-Sim & Sérgio, 1998.

AAl: Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d; Jones, 1999.

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a, Jones, 1999.

BA: Sérgio, 1972a; Jones, 1999; Albertos, 2001; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAL: Jones, 1999; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

BB: Catarino *et al.*, 1987; Calleja *et al.*, 2001.

BL: Sérgio, 1972a; Allorge, 1974; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Jones, 1999.

DL: Jones, 1999.

E: Sérgio, 1981; Bento-Pereira & Sérgio, 1983; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Jones, 1999.

Mi: Machado, 1933; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999; Albertos, 2001; Calleja *et al.*, 2001.

R: Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1994; Sérgio *et al.*, 1998d; Jones, 1999.

TM: Allorge, 1974; Sérgio & Schumacker, 1992.

Zygodon viridissimus* (Dicks.) Brid.*Ptmap:** Sim-Sim & Sérgio, 1998.**Ag:** Solms-Laubach, 1868; Henriques, 1889; Pereira-Coutinho, 1917b; Machado, 1933; Allorge, 1974.**BA:** Allorge, 1974.**BAl:** Sérgio *et al.*, 2002d.**BL:** Henriques, 1889; Allorge, 1931a; Sá-Nogueira, 1950a; Allorge, 1974; Sérgio & Sim-Sim, 1988.**E:** Mitten, 1853; Henriques, 1889; Luisier, 1910c; Luisier, 1916b; Pereira-Coutinho, 1917b; Allorge, 1931a; Ade & Koppe, 1942; Barros, 1942b; Barros, 1942c; Barros, 1943; Allorge, 1974; Sérgio & Correia, 1981; Sérgio *et al.*, 1988.**Mi:** Machado, 1915a; Machado, 1920a; Allorge, 1974; Albertos, 2001.**R:** Sérgio *et al.*, 1988.**TM:** Allorge & Allorge, 1949.**Pt:** Machado, 1933; Sérgio *et al.*, 1987a.

The report of Sérgio *et al.* (2002d) from Baixo Alentejo corresponds to *fo. mediterranea* Malta.

Mosses to be excluded, uncertain occurrence on the Portuguese bryoflora, or taxa with taxonomic problems*Amphidium lapponicum* (Hedw.) Schimp.*Andreaea crassinervia* Bruch*Brachythecium oxycladum* (Brid.) A. Jaeger*Bryoerythrophyllum lusitanicum* (Cardot & Dixon) M. Hill.*Bryum machadoi* G. Roth.*Campylopus atrovirens* De Not.*Ceratodon purpureus* (Hedw.) Brid. var. *xanthopus* Sull. & Lesq. ex Lesq. & James*Cynodontium tenellum* (Schimp.) Limpr.*Dichodontium pellucidum* (Hedw.) Schimp.*Dicranum fuscescens* Turner*Dicranum majus* Turner*Entodon concinnus* (De Not.) Paris*Fissidens limbatus* Sull. var. *limbatus**Fontinalis squamosa* Hedw. var. *capillaris* Luisier*Funaria microstoma* Bruch ex Schimp.*Funaria muehlenbergii* Turner*Grimmia elatior* Bals.-Criv. & De Not.*Grimmia funalis* (Schwägr.) Bruch & Schimp.*Gymnostomum aeruginosum* Sm.*Homalothecium lutescens* var. *fallax* (Philib. ex Schimp.) Düll.*Homalothecium philippeanum* (Spruce) Schimp.*Hygrohypnum luridum* (Hedw.) Jenn.*Hymenostylium recurvirostrum* (Hedw.) Dixon*Mnium ambiguum* H. Muell.*Mnium marginatum* (Dicks.) P. Beauv.*Neckera cephalonica* Jur. & Unger*Orthotrichum pumilum* Sw.

Palustriella commutata (Hedw.) Ochyra
Pohlia crudoides (Sull. & Lesq.) Broth.
Pottia commutata Limpr.
Protobryum bryoides J. Guerra & M. J. Cano
Racomitrium fasciculare (Hedw.) Brid.
Racomitrium microcarpum (Hedw.) Brid.
Schistidium agassizii Sull. & Lesq.
Schistidium confertum (Funck) Bruch & Schimp.
Sphagnum recurvum P. Beauv.
Sphagnum teres (Schimp.) Ängstr.
Syntrichia norvegica F. Weber
Tetraphis pellucida Hedw.
Thuidium delicatulum (Hedw.) Schimp.
Thuidium recognitum (Hedw.) Lindb.
Tomentypnum nitens (Hedw.) Loeske
Tortula guepinii (Bruch & Schimp.) Broth.
Weissia leptocarpa Schimp. ex Besch.

Synonyms List

Acaulon mediterraneum Limpr. = *Acaulon muticum* var. *mediterraneum*
Acaulon minus (Hook. & Taylor) Jaeger = *Acaulon muticum*
Acaulon muticum var. *minus* Hook. & Taylor = *Acaulon muticum*
Acrocladium cuspidatum (Hedw.) Lindb. = *Calliergonella cuspidata*
Aloina alooides var. *ambigua* (Bruch & Schimp.) Craig = *Aloina ambigua*
Aloina rigida var. *ambigua* (Bruch & Schimp.) Craig. = *Aloina ambigua*
Alisia circinnata (Brid.) Kindb. = *Scorpiurium circinatum*
Amblystegium irriguum Bruch & Schimp. = *Hygroamblystegium tenax*
Amblystegium tenax (Hedw.) C. Jens. = *Hygroamblystegium tenax*
Amphoridium mougeotii (Bruch & Schimp.) Schimp. = *Amphidium mougeotii*
Andreaea blyttii subsp. *angustata* (Lindb. ex Limpr.) W. Schuetze-Motel p.p. = *Andreaea heinemannii* subsp. *crassifolia*
Andreaea crassifolia Luisier = *Andreaea heinemannii* subsp. *crassifolia*
Andreaea crassinervia Bruch subsp. *huntii* (Limpr.) Amann. = *Andreaea rothii* subsp. *falcata*
Andreaea falcata Schimp. = *Andreaea rothii* subsp. *falcata*
Andreaea huntii Limpr. ex Broth. = *Andreaea rothii* subsp. *falcata*
Andreaea petrophila Ehrh. = *Andreaea rupestris*
Andreaea rothii var. *falcata* (Schimp.) Lindb. = *Andreaea rothii* subsp. *falcata*
Anisothecium rubrum (Huds.) Lindb. = *Dicranella varia*
Anisothecium rufescens (Dicks.) Lindb. = *Dicranella rufescens*
Anisothecium varium (Hedw.) Mitt. = *Dicranella varia*
Anomobryum filiforme var. *juliforme* (Solms) Loske = *Anomobryum julaceum*
Anomobryum juliforme Solms = *Anomobryum julaceum*
Antitrichia hispanica (Schimp.) Torre & Sarnth. = *Antitrichia californica*
Archidium phascoides Brid. = *Archidium alternifolium*
Aschisma carniolicum var. *speciosum* Limpr. = *Aschisma carniolicum*

- Atrichum angustatum* var. *muelleri* (Schimp.) Barth. = *Atrichum angustatum* var. *rhytidophyllum*
Atrichum undulatum var. *minor* F. Web. & D. Mohr = *Atrichum undulatum*
Aulacomnium palustre var. *cincinnatum* Luisier = *Aulacomnium palustre*
Barbula acuta Brid. = *Didymodon acutus*
Barbula acuta var. *viridis* Bruch & Schimp. = *Didymodon acutus*
Barbula aloides (Schultz) Bruch = *Aloina aloides*
Barbula ambigua Bruch & Schimp. = *Aloina ambigua*
Barbula atrovirens Schimp. = *Tortula atrovirens*
Barbula brebissonii Brid. = *Dalytrichia mucronata*
Barbula canescens Bruch & Schimp. = *Tortula canescens*
Barbula cylindrica (Taylor) Schimp. = *Didymodon insulanus*
Barbula convoluta var. *sardoa* Müll. Hal. = *Barbula convoluta* var. *commutata*
Barbula cuneifolia (Dicks.) F. Weber & D. Mohr = *Tortula cuneifolia*
Barbula fallax Hedw. = *Didymodon fallax*
Barbula gracilis Schwägr. = *Didymodon acutus*
Barbula gracilis var. *viridis* Bruch & Schimp. = *Didymodon acutus*
Barbula hornschuchiana Schultz = *Pseudocrossidium hornschuchianum*
Barbula intermedia Milde = *Syntrichia montana* var. *montana*.
Barbula laevipila Brid. = *Syntrichia laevipila*
Barbula laevipila var. *laevipiliformis* (De Not.) Husn. = *Syntrichia laevipila*
Barbula lurida (Hornschr.) Lindb. = *Didymodon luridus*
Barbula marginata Schimp. = *Tortula marginata*
Barbula membranifolia Schultz = *Crossidium squamiferum*
Barbula mulleri Brid. = *Syntrichia princeps*
Barbula muralis Hedw. = *Tortula muralis*
Barbula revoluta (Schrad.) Brid. = *Pseudocrossidium revolutum*
Barbula rigidula (Hedw.) Milde = *Didymodon rigidulus*
Barbula ruralis Hedw. = *Syntrichia ruralis* var. *ruralis*
Barbula sinuosa (Mitt.) Garv. = *Didymodon vinealis*
Barbula solmsii Schimp. = *Tortula solmsii*
Barbula squarrosa Brid. = *Pleurochaete squarrosa*
Barbula subulata P. Beauv. = *Tortula subulata*
Barbula tophacea (Brid.) Mitt. = *Didymodon tophaceus*
Barbula vinealis subsp. *cylindrica* (Taylor) Podp. = *Didymodon insulanus*
Barbula vinealis var. *cylindrica* (Taylor) Boulay = *Didymodon insulanus*
Bartramia pomiformis var. *longiseta* Cout. = *Bartramia pomiformis*
Brachymenium lusitanicum (Luisier) Hagen = *Anomobryum lusitanicum*
Brachyodon trichodes (Web.) Fürnr. = *Brachydontium trichodes*
Brachyodus trichodes Fürnr. = *Brachydontium trichodes*
Brachysteleum pulvinare Mitt. = *Ptychomitrium nigrescens*
Brachythecium albicans var. *dumetorum* Limpr. = *Brachythecium albicans*
Brachythecium plumosum var. *homomallum* Bruch & Schimp. = *Brachythecium plumosum*
Brachythecium populeum var. *attenuatum* Bruch & Schimp. = *Brachythecium populeum*
Brachythecium purum Dixon = *Scleropodium purum*
Brachythecium rivulare Schimp. var. *cataractum* Sauter = *Brachythecium rivulare*
Brachythecium rivulare var. *cataractarum* Sauter = *Brachythecium rivulare*

- Brachythecium rutabulum* var. *turgescens* Limpr. = *Brachythecium rutabulum*
Brachythecium vagans Mild. = *Brachythecium velutinum*
Bryoerythrophyllum machadoanum (Sérgio) M. O. Hill = *Bryoerythrophyllum campylocarpum*
Bryum affine J. E. Gmel. ex Brot. = *Orthotrichum affine*
Bryum alpinum subsp. *Gemmiparum* (De Not.) Kindb. = *Bryum gemmiparum*
Bryum alpinum var. *meridionale* (Schimp.) Kindb. = *Bryum alpinum*
Bryum alpinum var. *viride* Husn. = *Bryum alpinum*
Bryum annotinum Hedw. = *Pohlia annotina*
Bryum apocarpon Hedw. = *Schistidium apocarpum*
Bryum atropurpureum Bruch & Schimp. = *Bryum dichotum*
Bryum atrovirens var. *minii* (Podp.) Wijk & Marg. = *Bryum minii*
Bryum badium (Brid.) Schimp. = *Bryum caespiticium*
Bryum bicolor Dicks. = *Bryum dichotum*
Bryum bicolor var. *doliooides* (Solms) Warnst. = *Bryum dichotum*
Bryum bicolor var. *pseudoblindii* Amann = *Bryum dichotum*
Bryum caespiticium var. *comense* (Schimp.) A. Mach. = *Bryum caespiticium*
Bryum caespiticium var. *comense* (Schimp.) Amann = *Bryum caespiticium*
Bryum caespiticium var. *badium* Bruch ex Brid. = *Bryum caespiticium*
Bryum canariense subsp. *provinciale* (Philib.) Giac. = *Bryum canariense*
Bryum capillare subsp. *torquescens* (De Not.) Kindb. = *Bryum torquescens*
Bryum capillare var. *majus* Bruch & Schimp. = *Bryum capillare*
Bryum capillare var. *meridionale* Schimp. = *Bryum capillare*
Bryum capillare var. *torquescens* (De Not.) Husn. = *Bryum torquescens*
Bryum cirratum Hoppe & Hornsch. = *Bryum pallescens*
Bryum cirrhatum Brot. = *Dicranoweisia cirrata*
Bryum comense Schimp. = *Bryum caespiticium*
Bryum crispum Brot. = *Ulota crispa*
Bryum crudum Schreb. = *Pohlia nutans*
Bryum donii Grev. = *Bryum donianum*
Bryum elegans var. *ferchelii* (Funck.) Breidl. = *Bryum elegans*
Bryum erythrocarpum Schwaegr. = *Bryum rubens*
Bryum haistii Schimp. = *Bryum elegans*
Bryum juliforme Solms = *Anomobryum julaceum* var. *julaceum*
Bryum lanuginosum (Hedw.) Brot. = *Racomitrium lanuginosum*
Bryum marginatum Bruch & Schimp. (senso A. Mach.) = *Bryum minii*
Bryum muehlenbeckii var. *obtusifolium* A. Mach. = *Bryum muehlenbeckii*
Bryum murale L. = *Tortula muralis*
Bryum murale Wilson = *Bryum radiculosum*
Bryum pomiformis L. = *Bartramia pomiformis*
Bryum pseudokunzei Limpr. = *Bryum caespiticium*
Bryum pulvinatum L. = *Grimmia pulvinata*
Bryum pyriferum Crundw. & Whitehouse = *Bryum valparaisense*
Bryum pyriforme L. = *Physcomitrium pyriforme*
Bryum rigidum Hedw. = *Aloina ambigua*
Bryum rurale L. = *Syntrichia ruralis* var. *ruralis*
Bryum simplex L. = *Dicranella varia*
Bryum striatum L. = *Orthotrichum striatum*

- Bryum subulatum* L. = *Tortula subulata*
Bryum torquescens var. *brevifolium* = *Bryum torquescens*
Bryum tozeri Grev. = *Epipterygium tozeri*
Bryum truncatulum L. = *Pottia truncata*
Bryum ventricosum Dicks. = *Bryum pseudotriquetrum*
Bryum ventricosum var. *brevifolium* A. Mach. = *Bryum pseudotriquetrum*
Bryum viridulum L. = *Weissia condensa*
Buxbaumia foliosa L. = *Diphyscium foliosum*
Calliergon stramineum (Brid.) Kindb. = *Straminergon stramineum*
Camptothecium aureum (Lag.) Bruch & Schimp. = *Homalothecium aureum*
Camptothecium lutescens (Hedw.) Brid. = *Homalothecium lutescens*
Camptothecium lutescens var. *fallax* (Philib.) G. Roth. = *Homalothecium lutescens* var. *fallax*
Camptothecium nitens Schimp. = *Tomentypnum nitens*
Camptothecium sericeum (Hedw.) Kindb. = *Homalothecium sericeum*
Campylium chrysophyllum (Brid.) Lange = *Campyliadelphus chrysophyllum*
Campylium polygamum (Schimp.) C. E. O. Jensen = *Drepanocladus polygamus*
Campylopus longipilus Brid. = *Campylopus pilifer*
Campylopus polytrichoides Brid. = *Campylopus pilifer*
Catharinea angustata Brid. = *Atrichum angustatum*
Catharinea angustata var. *rhystophyla* Dixon = *Atrichum angustatum* var. *rhystophyllum*
Catharinea undulata (Hedw.) F. Weber & D. Mohr = *Atrichum undulatum*
Catharinea undulata minor F. Weber & D. Mohr = *Atrichum undulatum*
Ceratodon chloropus Brid. = *Cheilotrichia chloropus*
Ceratodon corsicus Bruch & Schimp. = *Ceratodon purpureus* subsp. *stenocarpus*
Ceratodon purpureus var. *corsicus* Bruch & Schimp. = *Ceratodon purpureus* subsp. *stenocarpus*
Ceratodon purpureus var. *pallidisetus* Luisier = *Ceratodon purpureus* subsp. *purpureus*
Ceratodon purpureus var. *xanthopus* Sull. & Lesq. ex Lesq. & James = *Ceratodon purpureus* subsp. *purpureus*
Cinclidotus minor Lindb. = *Cinclidotus fontinaloides*
Cinclidotus mucronatus (Brid.) A. Mach. = *Dalytrichia mucronata*
Cinclidotus nigricans (Brid.) Wijk & Marg. = *Cinclidotus riparius*
Claopodium algaricum G. Roth. = *Claopodium whippleanum*
Conomitrium julianum Mont. = *Octodiceras fontanum*
Cratoneurum filicinum var. *fallax* Brid. = *Cratoneuron filicinum*
Cryphaea arborea (Huds.) Lindb. = *Cryphaea heteromalla*
Cryphaea heteromalla var. *aquatica* De Not. = *Dendrocryphaea lamyana*
Cryphaea heteromalla var. *aquatilis* Wilson = *Dendrocryphaea lamyana*
Cryphaea lamyana (Mont.) Lindb. ex Broth. = *Dendrocryphaea lamyana*
Cryphaea lamyi Müll. Hal. = *Dendrocryphaea lamyana*
Cylindrothecium concinnum Schimp. = *Entodon concinnus*
Daltonia lamyi Mont. = *Dendrocryphaea lamyana*
Desmatodon convolutus (Brid.) Grout = *Tortula atrovirens*
Desmatodon guepinii Bruch & Schimp. = *Tortula guepinii*
Desmatodon meridionalis Luisier = *Tortula marginata*
Dalytrichia brebissoni (Brid.) Limpr. = *Dalytrichia mucronata*
Dicranella curvata (Hedw.) Schimp. = *Dicranella subulata*

- Dicranella heteromalla* var. *castanetorum* Solms = *Dicranella heteromalla*
Dicranella heteromalla var. *interrupta* (Hedw.) Schimp. = *Dicranella heteromalla*
Dicranella heteromalla var. *stricta* Schimp. = *Dicranella heteromalla*
Dicranella lusitanica Warnst. = *Dicranella howei*
Dicranella varia var. *tenuifolia* Schimp. = *Dicranella howei*
Dicranoweisia bruntoni Schimp. = *Cynodontium bruntonii*
Dicranoweisia robusta Venturi in Sequeira = *Ptychomitrium polyphyllum*
Dicranum blyttii Bruch & Schimp. = *Kiaeria blyttii*
Dicranum falcatum Hedw. = *Kiaeria falcata*
Dicranum heteromallum Hedw. = *Dicranella heteromalla*
Dicranum longipilum Brid. = *Campylopus pilifer*
Dicranum polycarpum Ehrh. = *Cynodontium polycarpon*
Dicranum starkii F. Web. & D. Mohr = *Kiaeria starkei*
Dicranum varium Hedw. = *Dicranella varia*
Didymodon azoricus (Cardot) Kindb. = *Trichostomum triumphans*
Didymodon ehrenbergii Kindb. = *Barbula ehrenbergii*
Didymodon cylindricus Bruch & Schimp. = *Didymodon insulanus*
Didymodon luridus var. *nicholsonii* (Culm.) Loeske = *Didymodon nicholsonii*
Didymodon tophaceus fo. *acutifolia* Schimp. = *Didymodon tophaceus*
Didymodon trifarius (Hedw.) Roehl. = *Didymodon luridus*
Didymodon vinealis var. *flaccida* (Bruch & Schimp.) Zander = *Didymodon insulanus*
Diphyscium sessile (Schmid.) Lindb. = *Diphyscium foliosum*
Drepanium cupressiforme var. *tectorum* (Brid.) G. Roth = *Hypnum lacunosum*
Drepanocladus exannulatus (Schimp.) Warnst. = *Warnstorffia exannulata*
Drepanocladus exannulatus var. *purpurascens* Schimp. = *Warnstorffia exannulata*
Drepanocladus exannulatus var. *sphagnetorum* (Moenk) A. Mach. = *Warnstorffia exannulata*
Drepanocladus fluitans (Hedw.) Warnst. = *Warnstorffia fluitans*
Drepanocladus purpurascens G. Roth. = *Warnstorffia exannulata*
Drepanocladus uncinatus (Hedw.) Warnst. = *Sanionia uncinata*
Dryptodon hartmanni (Schimp.) Limpr. var. *epilosa* Milde = *Grimmia hartmanii*
Dryptodon patens (Hedw.) Brid. = *Grimmia curvata*
Encalypta contorta (Wulf.) Lindb. = *Encalypta streptocarpa*
Encalypta vulgaris var. *apiculata* = *Encalypta vulgaris*
Entodon orthocarpus (La Pyl.) Lindb. = *Entodon concinnus*
Entosthodon curvisetus (Schwaegr.) Müll. Hal. = *Funariella curviseta*
Entosthodon ericetorum (De Not.) Müll. Hal. = *Entosthodon obtusus*
Entosthodon templetonii (Sm.) Schwaegr. = *Entosthodon attenuatus*
Ephemerum serratum var. *minutissimum* (Lindb.) Grout. = *Ephemerum minutissimum*
Ephemerum stenophyllum Schimp. = *Ephemerum sessile*
Eurhynchium hercynicum (Milde) Jaeg. = *Rhynchostegium confertum*
Eurhynchium algerianum Kindb. = *Rhynchostegiella tenella*
Eurhynchium algerianum var. *meridionale* Brizi = *Rhynchostegiella tenella*
Eurhynchium circinatum Bruch & Schimp. = *Scorpiurium circinatum*
Eurhynchium circinatum var. *deflexifolium* Boulay = *Scorpiurium deflexifolium*
Eurhynchium confertum (Dicks.) Milde = *Rhynchostegium confertum*
Eurhynchium crassinervium (Taylor) Bruch & Schimp. = *Cirriphyllum crassinervium*
Eurhynchium crassinervium var. *tenue* = *Cirriphyllum crassinervium*

- Eurhynchium curvisetum* Husn. = *Rhynchostegiella curviseta*
Eurhynchium curvisetum var. *laevisetum* Nichols. & Dixon = *Rhynchostegiella curviseta*
 var. *laeviseta*
Eurhynchium deflexifolium (Solms) G. Roth. = *Scorpiurium deflexifolium*
Eurhynchium illecebrum Milde = *Scleropodium touretii*
Eurhynchium myosuroides Schimp. = *Isothecium myosuroides*
Eurhynchium rusciforme Milde = *Rhynchostegium ripariooides*
Eurhynchium stokesii (Turn.) Bruch & Schimp. = *Eurhynchium praelongum* var.
stokesii
Eurhynchium striatum (Spruce) Bruch & Schimp. = *Isothecium striatum*
Eurhynchium striatum var. *duriæanum* Mont. = *Eurhynchium meridionale*
Eurhynchium striatum var. *meridionale* Schimp. = *Eurhynchium meridionale*
Eurhynchium strigosum (Hoffm.) Bruch & Schimp. = *Eurhynchium pulchellum*
Eurhynchium swartzii (Turn.) Curnow. = *Eurhynchium hians*
Eurhynchium swartzii var. *rigidum* Boulay = *Eurhynchium* var. *rigidum*
Eurhynchium teesdalei Schimp. = *Rhynchostegiella teesdalei*
Fissidens algaricus Solms = *Fissidens curvatus*
Fissidens attenuatus Bryhn. = *Fissidens curvatus*
Fissidens bambengeri Schimp. = *Fissidens limbatus* var. *bambengeri*
Fissidens bryoides subsp. *curnovii* (Mitt.) Dixon = *Fissidens bryoides* var. *caespitans*
Fissidens bryoides subsp. *viridulus* (Sw.) Kindb. = *Fissidens viridulus*
Fissidens crassipes var. *philibertii* Besch. = *Fissidens crassipes* subsp. *warnstorffii*
Fissidens crassipes var. *pusillus* A. Mach. = *Fissidens viridulus*
Fissidens cristatus Mitt. = *Fissidens dubius*
Fissidens curnovii Mitt. = *Fissidens bryoides* var. *caespitans*
Fissidens decipiens De Not. = *Fissidens dubius*
Fissidens firmus Lindb. ex G. Roth (non Mitt.) = *Fissidens limbatus* var. *bambengeri*
Fissidens herzogii Ruthe ex Herz. = *Fissidens limbatus*
Fissidens impar Mitt. = *Fissidens viridulus*
Fissidens inconstans Schimp. = *Fissidens bryoides*
Fissidens incurvus Stark. var. *tamarindifolius* Turn. = *Fissidens incurvus*
Fissidens intralimbatus Ruthe = *Fissidens viridulus* var. *intralimbatus*
Fissidens julianus (Sw.) Schimp. = *Octodiceras fontanum*
Fissidens minutulus Sull. = *Fissidens limbatus* var. *bambengeri*
Fissidens minutulus subsp. *pusillus* (Wilson) Wijk. & Marg. = *Fissidens pusillus*
Fissidens pallidicaulis Mitt. = *Fissidens taxifolius*
Fissidens polyphyllus var. *lusitanicus* (Par.) Luisier = *Fissidens polyphyllus*
Fissidens polyphyllus var. *newtonii* Husn. = *Fissidens polyphyllus*
Fissidens polyphyllus var. *welwitschii* Bott. = *Fissidens polyphyllus*
Fissidens serrulatus var. *henriquesii* Luisier = *Fissidens serrulatus*
Fissidens serrulatus var. *langei* (De Not.) Bott. = *Fissidens serrulatus*
Fissidens viridulus var. *bambengeri* (Schimp.) Waldh. = *Fissidens limbatus* var.
bambengeri
Fissidens warnstorffii M. Fleisch. = *Fissidens crassipes* subsp. *warnstorffii*
Fissidens welwitschii Schimp. non Duby = *Fissidens polyphyllus*
Fontinalis antipyretica var. *alpestris* Milde = *Fontinalis antipyretica*
Fontinalis antipyretica var. *montana* Müll. Hal = *Fontinalis antipyretica*
Fontinalis duriaeae Schimp. = *Fontinalis hypnoides* var. *duriaeae*

- Fontinalis duriae fo. latifolia* Card. = *Fontinalis hypnoides* var. *duriae*
Fontinalis heteromalla Brot. = *Cryphaea heteromalla*
Fontinalis minor Brot. = *Fontinalis squamosa*
Funaria attenuata (Dicks.) Lindb. = *Entosthodon attenuatus*
Funaria calcarea Wahlenb. = *Entosthodon pulchellus*
Funaria convexa Spruce = *Entosthodon convexus*
Funaria curviseta (Schwaegr.) Milde = *Funariella curviseta*
Funaria dentata Crome = *Entosthodon convexus*
Funaria ericetorum Dixon = *Entosthodon obtusus*
Funaria fascicularis (Hedw.) Lindb. = *Entosthodon fascicularis*
Funaria mediterranea Lindb. = *Entosthodon pulchellus*
Funaria obtusata (Dicks.) Lindb. = *Entosthodon obtusus*
Funaria pulchella H. Philib. = *Entosthodon pulchellus*
Funaria templetonii Sm. = *Entosthodon attenuatus*
Glyphomitrium nigricans Card. = *Ptychomitrium nigrescens*
Glyphomitrium polyphyllum Lindb. = *Ptychomitrium polyphyllum*
Glyphomitrium strictum Lindb. = *Campylostelium strictum*
Grimmia aciculares Müll. Hal. = *Racomitrium aciculare*
Grimmia ancistrodes Mont. = *Grimmia lisae*
Grimmia apocarpa Hedw. = *Schistidium apocarpum*
Grimmia apocarpa subsp. *confertum* (Funck.) Boulay = *Schistidium apocarpum*
Grimmia britanica A. J. E. Sm. = *Grimmia austrofunalis*
Grimmia campestris Bruch = *Grimmia laevigata*
Grimmia campestris var. *elongata* A. Mach. = *Grimmia laevigata*
Grimmia commutata fo. *rivularis* Loesk. ex Luisier = *Grimmia ovalis*
Grimmia commutata Huebener = *Grimmia ovalis*
Grimmia decipiens fo. *major* Luisier = *Grimmia austrofonalis*
Grimmia fragilis Schimp. = *Grimmia montana*
Grimmia gracilis Schleich. = *Schistidium apocarpum*
Grimmia heterosticha Müll. Hal. = *Racomitrium heterostichum*
Grimmia hypnoides Lindb. = *Racomitrium lanuginosum*
Grimmia leucophaea (Brid.) Grev. = *Grimmia laevigata*
Grimmia leucophaea var. *elongata* A. Mach. = *Grimmia laevigata*
Grimmia patens (Dicks.) Bruch & Schimp. = *Grimmia curvata*
Grimmia retracta Stirton = *Grimmia lisae*
Grimmia rivularis Brid. = *Schistidium rivulare*
Grimmia sardoa De Not. = *Grimmia lisae*
Grimmia sardoa var. *gracilis* M. Fleisch. & Warnst. = *Grimmia trichophylla*
Grimmia schultzii (Brid.) Huebener = *Grimmia decipiens*
Grimmia subsquarrosa Wilson = *Grimmia lisae*
Grimmia trichophylla subsp. *lisae* (Not.) Bott. = *Grimmia lisae*
Grimmia trichophylla var. *lusitanica* Schimp. = *Grimmia trichophylla*
Grimmia trichophylla var. *robusta* (Ferg.) A. J. E. Sm. = *Grimmia austrofunalis*
Grimmia trichophylla var. *sardoa* (De Not.) Bott. = *Grimmia lisae*
Grimmia trichophylla var. *meridionalis* Bruch & Schimp. = *Grimmia lisae*
Gymnostomum calcareum var. *brevifolium* Schimp. = *Gymnostomum viridulum*
Gymnostomum calcareum var. *tenellum* Schimp. = *Gymnostomum calcareum*
Gymnostomum curvirostre Hedw. = *Hymenostylium recurvirostrum*

- Gymnostomum luisieri* (Sérgio) Sérgio ex Crundw. = *Gymnostomum viridulum*
Gymnostomum microstomum Hedw. = *Weissia brachycarpa*
Gymnostomum tortile Schwaegr. = *Weissia condensa*
Gyroweisia tenuis fo. *compacta* I. Hagen = *Gyroweisia tenuis*
Habrodon notarisi Schimp. = *Habrodon perpusillus*
Habrodon perpusillus (De Not.) Lindb. var. *welwitschii* Cout. = *Leptodon smithii*
Hedwigia albicans (Web.) Lindb. = *Hedwigia ciliata*
Heterocladium heteropterum var. *wulfsbergii* I. Hagen = *Heterocladium heteropterum*
Heterocladium wulfsbergii (Hagen) C. Jens. & Pers. = *Heterocladium heteropterum*
Homalothecium nitens (Hedw.) H. Rob. = *Tomenthypnum nitens*
Hookeria laetevirens Hook. & Taylor = *Cyclodictyon laetevirens*
Hpnum litoreum De Not. = *Rhynchostegiella tenella* var. *litorea*
Hygroamblystegium fallax (Brid.) Loesk. ex G. Roth. = *Hygroamblystegium tenax*
Hygroamblystegium irriguum (Wilson) Loesk. var. *spinifolium* Schimp. =
Hygroamblystegium tenax
Hygrohypnum lusitanicum (Schimp.) Cout. = *Platyhypnidium lusitanicum*
Hygrohypnum ochraceum Brot. = *Hygrohypnum ochraceum*
Hygrohypnum ochraceum var. *uncinatum* Milde = *Hygrohypnum ochraceum*
Hygrohypnum palustre (Huds.) Loesk. = *Hygrohypnum luridum*
Hylocomium loereum Schimp. = *Rhytidadelphus loereus*
Hylocomium meridionale (Schimp.) Kindb. = *Eurhynchium meridionale*
Hylocomium proliferum Lindb. = *Hylocomium splendens*
Hylocomium triquetrum Schimp. = *Rhytidadelphus triquetrus*
Hymenostomum microstomum (Hedw.) R. Br. = *Weissia brachycarpa*
Hymenostomum tortile (Schwaegr.) Bruch & Schimp. = *Weissia condensa*
Hyocomium flagellare Bruch & Schimp. = *Hyocomium armoricum*
Hyonum riparium L. = *Amblystegium riparium*
Hyophila crenulata A. Mach. = *Bryoerythrophyllum campylocarpum*
Hyophila lusitanica Card. & Dixon = *Bryoerythrophyllum campylocarpum*
Hyophila machadoana Sérgio = *Bryoerythrophyllum campylocarpum*
Hypopterygium muelleri Hampe = *Hypopterygium tamarisci*
Hypnum aduncus Hedw. = *Drepanocladus aduncus*
Hypnum alopecurum Hedw. = *Thamnobryum alopecurum*
Hypnum bryoides L. = *Fissidens bryoides*
Hypnum canariense Mitt. = *Hypnum uncinatum*
Hypnum cincinatum Brot. = *Leptodon smithii*
Hypnum circinatum Brid. = *Scorpiurium circinatum*
Hypnum complanatum L. = *Neckera complanata*
Hypnum compressum L. = *Ctenidium molluscum*
Hypnum concinnum De Not. = *Entodon concinnus*
Hypnum confertum Dicks. = *Rhynchostegium confertum*
Hypnum crispum L. = *Neckera crispa*
Hypnum cupressiforme subsp. *imponens* (Hedw.) Boulay = *Hypnum imponens*
Hypnum cupressiforme subsp. *resupinatum* Schimp. = *Hypnum resupinatum*
Hypnum cupressiforme var. *elatum* Bruch & Schimp. = *Hypnum lacunosum*
Hypnum cupressiforme var. *ericetorum* Bruch & Schimp. = *Hypnum jutlandicum*
Hypnum cupressiforme var. *filiforme* Brid. = *Hypnum mamillatum*
Hypnum cupressiforme var. *lacunosum* = *Hypnum lacunosum*

- Hypnum cupressiforme* var. *resupinatum* (Taylor) Schimp. = *Hypnum resupinatum*
Hypnum cupressiforme var. *subjulaceum* Mol. = *Hypnum lacunosum*
Hypnum cupressiforme var. *tectorum* Brid. = *Hypnum lacunosum*
Hypnum curtipedulum L. = *Antitrichia curtipedula*
Hypnum cuspidatum L. = *Calliergonella cuspidata*
Hypnum deflexifolium Solms = *Scorpiurium deflexifolium*
Hypnum denticulatum L. = *Plagiothecium denticulatum*
Hypnum fallax Brid. = *Hygroamblystegium tenax*
Hypnum filicinum L. = *Cratoneuron filicinum*
Hypnum fluitans L. = *Warnstorffia fluitans*
Hypnum fluitans var. *alpinum* Schimp. = *Warnstorffia fluitans*
Hypnum illecebrum L. = *Scleropodium turetii*
Hypnum incurvatum Schrad. = *Homomallium incurvatum*
Hypnum irriguum Hook. & Wilson = *Hygroamblystegium tenax*
Hypnum loreum L. = *Rhytidadelphus loreus*
Hypnum lusitanicum Schimp. = *Platyhypnidium lusitanicum*
Hypnum mamillatum (Brid.) Loeske = *Hypnum andoi*
Hypnum megapolitanum Bland. = *Rhynchostegium megapolitanum*
Hypnum molluscum Hedw. = *Ctenidium molluscum*
Hypnum murale Dicks. = *Rhynchostegium murale*
Hypnum myosuroides L. = *Isothecium myosuroides*
Hypnum nitens Schreb. = *Tomentypnum nitens* (Hedw.) Loeske
Hypnum ochraceum Turn. = *Hygrohypnum ochraceum*
Hypnum plumosum Hedw. = *Brachythecium plumosum*
Hypnum polyanthum Schreb. = *Pylaisia polyantha*
Hypnum praelongum Hedw. = *Eurhynchium praelongum*
Hypnum proliferum L. = *Hylocomium splendens*
Hypnum pumilum Wilson = *Eurhynchium pumilum*
Hypnum purum L. = *Scleropodium purum*
Hypnum pyriforme L. = *Physcomitrium pyriforme*
Hypnum riparium var. *angustifolium* Warnst. = *Amblystegium riparium*
Hypnum riparium var. *inundatum* Schimp. = *Amblystegium riparium*
Hypnum rivulare Bruch = *Brachythecium rivulare*
Hypnum rusciforme Neck. = *Platyhypnidium lusitanicum*
Hypnum rutabulum Hedw. = *Brachythecium rutabulum*
Hypnum sericeum L. = *Homalothecium sericeum*
Hypnum serpens L. = *Amblystegium serpens*
Hypnum splendens Hedw. = *Hylocomium splendens*
Hypnum squarrosum L. = *Rhytidadelphus squarrosum*
Hypnum stokesii Turn. = *Eurhynchium praelongum* var. *stokesii*
Hypnum striatum Brot. = *Eurhynchium meridionale*
Hypnum striatum var. *duriaeanum* Mont. = *Eurhynchium meridionale*
Hypnum striatum Schreb. = *Eurhynchium striatum*
Hypnum tamariscinum Hedw. = *Thuidium tamariscinum*
Hypnum taxifolium L. = *Fissidens taxifolius*
Hypnum triquetrum L. = *Rhytidadelphus triquetrus*
Hypnum velutinum L. = *Brachythecium velutinum*
Hypophila lusitanica Cardot & Dixon = *Bryoerythrophyllum campylocarpum*

- Isopterigium piliferum* (Hartm.) Loeske = *Plagiothecium piliferum*
Isopterygium elegans (Brid.) Lindb. = *Pseudotaxiphyllum elegans*
Isopterygium pulchellum (Hedw.) Jaeger = *Isopterygiopsis pulchella*
Isothecium myurum Brid. = *Isothecium alopecuroides*
Isothecium ornithopodioides Boulay = *Pterogonium gracile*
Isothecium viviparum (Neck.) Lindb. = *Isothecium alopecuroides*
Leptobarbula tenuis (Hedw.) Schimp. = *Leptobarbula berica*
Leptodictyum riparium (Hedw.) Warnst. = *Amblystegium riparium*
Leptodictyum riparium var. *longifolium* (Schultz) Bruch & Schimp. = *Amblystegium riparium*
Leptotrichum homomallum Hampe = *Ditrichum heteromallum*
Leptotrichum subulatum Hampe = *Ditrichum subulatum*
Leptotrichum subulatum var. *purpurascens* A. Mach. = *Ditrichum subulatum*
Lescuraea incurvata (Hedw.) Lawt. = *Pseudoleskea incurvata*
Lescuraea patens (Lindb.) H. Arn. & C. Jens. = *Pseudoleskea patens*
Leskea ? algarvica Schimp. = *Claopodium whippleanum*
Leskea brevifolia Lindb. = *Leskea polycarpa* p.p.
Leucodon morense Schwaegr. = *Leucodon sciuroides* var. *morense*
Limnobium ochraceum Bruch & Schimp. = *Hygrohypnum ochraceum*
Limnobium ochraceum var. *complanatum* Milde = *Hygrohypnum ochraceum*
Mielichhoferia pontevedrensis Luisier = *Schizymenium pontevedrensis*
Mildeella bryoides (Dicks.) Limpr. = *Protobryum bryoides*
Mniobryum albicans (Wahlemb.) Limpr. = *Pohlia wahlenbergii*
Mnium affine Bland. = *Plagiommium affine*
Mnium annotinum L. = *Pohlia annotina*
Mnium caespiticium Brot. = *Bryum caespiticium*
Mnium capillare L. = *Bryum capillare*
Mnium carneum (Hedw.) Limpr. = *Pohlia melanodon*
Mnium ciliare Lindb. = *Plagiommium affine*
Mnium cuspidatum var. *ciliare* Müll. Hal. = *Plagiommium affine*
Mnium fontanum L. = *Philonotis fontana*
Mnium glaucum Brot. = *Leucobryum glaucum*
Mnium hygrometricum L. = *Funaria hygrometrica*
Mnium longirostrum Brid. = *Plagiommium rostratum*
Mnium punctatum Hedw. = *Rhizomnium punctatum*
Mnium punctatum var. *elatum* Schimp. = *Rhizomnium magnifolium*
Mnium purpureum L. = *Ceratodon purpureus* subsp. *purpureus*
Mnium rostratum Schrad. = *Plagiommium rostratum*
Mnium scoparium Hedw. = *Dicranum scoparium*
Mnium seligeri Jur. = *Plagiommium elatum*
Mnium serratum Schrad. = *Mnium marginatum*
Mnium undulatum Hedw. = *Plagiommium undulatum*
Neckera complanata var. *flagellifera* J. Henr. ? = *Neckera complanata*
Neckera fontinaloides Lindb. = *Neckera pumila*
Neckera pumilla var. *elongata* Lindb. ex J. Henr. = *Neckera pumila*
Neckera pumilla var. *philippiana* Milde = *Neckera pumila* var. *pilifera*
Neckera turgida Jur. = *Metaneckera menziesii*
Octodiceras julianus (Savi) Brid. = *Octodiceras fontanum*

- Omalia lusitanica* Schimp. = *Homalia lusitanica*
Oreoweisia bruntonii (Sm.) Milde = *Cynodontium bruntonii*
Orthodicranum strictum (Schleich.) Culm. = *Dicranum tauricum*
Orthothecium duriaeae (Mont.) Besch. = *Rhynchostegiella durieui*
Orthotrichum affine var. *flavicans* Serqueira = *Orthotrichum affine*
Orthotrichum anomalum var. *saxatile* Milde = *Orthotrichum anomalum*
Orthotrichum crispum Hedw. = *Ulota crispa*
Orthotrichum hutchinsiae Sm. = *Ulota hutchinsiae*
Orthotrichum leiocarpum Bruch & Schimp. = *Orthotrichum striatum*
Orthotrichum pallens Bruch ex Brid. = *Orthotrichum pumilum*
Orthotrichum rupestre var. *rupicola* Schimp. = *Orthotrichum rupestre*
Orthotrichum sturmii Hornsch. = *Orthotrichum rupestre* var. *sturmii*
Orthotrichum tenellum var. *pumillum* Boulay = *Orthotrichum pumilum*
Oxyrrhynchium pallidirostrum (Brid.) F. Koppe = *Eurhynchium pumilum*
Oxyrrhynchium praelongum (Hedw.) Warnst. ex Broth. = *Eurhynchium praelongum*
Oxyrrhynchium praelongum var. *rigidum* (Boulay) Corb. = *Eurhynchium hians* var. *rigidum*
Oxyrrhynchium pumillum (Wilson) Loeske = *Eurhynchium pumilum*
Oxyrrhynchium rusciforme var. *inundatum* Bruch & Schimp. = *Rhynchostegium ripariooides*
Oxyrrhynchium rusciforme Warnst. = *Rhynchostegium ripariooides*
Oxyrrhynchium schleischeri (Hedw. fil.) Lor. = *Eurhynchium schleicheri*
Oxyrrhynchium speciosum (Brid.) Warnst. = *Eurhynchium speciosum*
Oxyrrhynchium swartzii (Turn.) Warnst. = *Eurhynchium hians*
Phascum acaulon L. = *Phascum cuspidatum*
Phascum bryoides Dicks. = *Protobryum bryoides*
Phascum leptophyllum Müll. Hal. = *Leptophascum leptophyllum*
Phascum piliferum Schreb. = *Phascum cuspidatum* var. *piliferum*
Phascum serratum Hedw. = *Ephemerum serratum*
Phascum sessile Bruch & Schimp. = *Ephemerum sessile*
Phascum subulatum Huds. = *Pleuridium acuminatum*
Philonotis caespitosa var. *laxa* Loeske & Warnst. = *Philonotis caespitosa*
Philonotis caespitosa var. *laxiretis* Loeske = *Philonotis caespitosa*
Philonotis capillaris Lindb. = *Philonotis arnelli*
Philonotis capillaris var. *gemmaclada* = *Philonotis arnelli*
Philonotis fontana var. *capillaris* Lindb. = *Philonotis arnelli*
Philonotis fontana var. *seriata* Brid. = *Philonotis seriata*
Philonotis fontana var. *tomentella* (Molendo) Dixon = *Philonotis tomentella*
Philonotis laxa Limpr. = *Philonotis marchica*
Philonotis marchica var. *laxa* Limpr. = *Philonotis marchica*
Philonotis ryani H. Philib. = *Philonotis arnelli*
Physcomitrium ericetorum (Bals. & De Not.) Bruch = *Entosthodon obtusus*
Physcomitrium fascicularis Brid. = *Entosthodon fascicularis*
Physcomitrium templetoni Schwaegr. = *Entosthodon attenuatus*
Pilotrichum heteromallum var. *aquatile* Müll. Hal. = *Dendrocyphaea lamyana*
Plagiopus pomiformis A. Mach. = *Bartramia pomiformis*
Plagiopus strictus A. Mach. = *Bartramia stricta*
Plagiothecium elegans Bruch & Schimp. = *Pseudotaxiphyllum elegans*

- Plagiothecium roesianum* Bruch & Schimp. = *Plagiothecium cavifolium*
Plagiothecium sylvaticum (Brid.) Bruch & Schimp. = *Plagiothecium nemorale*
Plagiothecium undulatum (Hedw.) Bruch & Schimp. = *Buckiella undulata*
Plasteurhynchium duriaeicum (Mont.) Allorge = *Eurhynchium meridionale*
Plasteurhynchium meridionale (Schimp.) M. Fleisch. = *Eurhynchium meridionale*
Plathyhypnidium ripariooides (Hedw.) Dixon = *Rhynchostegium ripariooides*
Plathyhypnidium ripariooides fo. *complanatum* (H. Schultze) Podp. = *Rhynchostegium ripariooides*
Plathyhypnidium rusciforme var. *atlanticum* Brid. = *Rhynchostegium ripariooides*
Plathyhypnidium rusciforme var. *complanatum* Schultze = *Rhynchostegium ripariooides*
Plathyhypnidium rusciforme var. *lusitanicum* A. Mach. = *Plathyhypnidium lusitanicum*
Pleuridium alternifolium (Dicks. ex Hedw.) Brid. = *Pleuridium subulatum*
Pleuridium axilare Lindb. = *Pseudephemerum nitidum*
Pleuridium nitidum (Hedw.) Rabenh. = *Pseudephemerum nitidum*
Pogonatum aloides var. *dicksonii* Brid. = *Pogonatum aloides*
Pogonatum aloides var. *minimum* (Crome) Limpr. = *Pogonatum aloides*
Pogonatum mnioides (Neck.) Hagen = *Pogonatum aloides*
Pogonatum polytrichoides (Hedw.) Brockm. = *Pogonatum nanum*
Pogonatum subrotundum (Huds.) Lindb. = *Pogonatum nanum*
Pohlia acuminata Hornsch. = *Pohlia elongata* var. *acuminata*
Pohlia annotina (Hedw.) Loeske var. *decipiens* Loeske = *Pohlia prolifera*
Pohlia camptotricha (Renaud & Cardot) Broth. = *Pohlia annotina*
Pohlia delicatula (Hedw.) Grout = *Pohlia melanodon*
Pohlia polymorpha Hoppe & Hornsch. = *Pohlia elongata* var. *polymorpha*
Polytrichastrum alpinum (Hedw.) G.L. Smith = *Polytrichum alpinum*
Polytrichum attenuatum Menz. ex Brid. = *Polytrichum formosum*
Polytrichum commune var. *minus* Weiss. = *Polytrichum commune*
Porotrichum alopecurum Mitt. = *Thamnobryum alopecurum*
Pottia bryoides (Dicks.) Mitt. = *Protobryum bryoides*
Pottia caespitosa (Bruch ex Brid.) Müll. Hal. = *Pottiopsis caespitosa*
Pottia cuneifolia Solms ex Schimp. = *Pottia pallida*
Pottia davalliana subsp. *commutata* (Limpr.) Podp. = *Pottia commutata*
Pottia intermedia var. *littoralis* (Mitt.) Corb. = *Pottia intermedia*
Pottia littoralis Mitt. = *Pottia intermedia*
Pottia minutula (Schleich. ex Schwaegr.) Fürnr. ex Hampe. = *Pottia davalliana*
Pottia minutula var. *oblonga* Müll. Hal. = *Pottia davalliana*
Pottia minutula var. *rufescens* Schimp. = *Pottia davalliana*
Pottia sampiana A. Mach. = *Pterygoneurum sampianum*
Pottia starckeana subsp. *conica* (Schwaegr.) Chamb. = *Pottia davalliana*
Pottia truncata var. *intermedia* Bruch & Schimp. = *Pottia intermedia*
Pottia truncata var. *littoralis* (Mitt.) Warnst. = *Pottia intermedia*
Pottia viridifolia Mitt. = *Pottia crinita*
Pseudoleskea atrovirens Bruch & Schimp. = *Pseudoleskea incurvata*
Pseudoleskea filamentosa (Dicks.) Broth. = *Pseudoleskea incurvata*
Pseudoscleropodium purum (Hedw.) Limpr. = *Scleropodium purum*
Pterigynandrum filiforme var. *decipiens* (F. Web. & D. Mohr) Limpr. = *Pterigynandrum filiforme*
Pterigynandrum filiforme var. *majus* De Not. = *Pterigynandrum filiforme*

- Pterobryum muelleri* Mitt. = *Hypopterygium tamarisci*
Pterogonium ornithopodioides (F. Web. & D. Mohr) Lindb. = *Pterogonium gracile*
Pterogophyllum lucens (Hedw.) Brid. = *Hookeria lucens*
Ptychomitrium nigricans Schimp. = *Ptychomitrium nigrescens*
Racomitrium aciculare var. *radiculosum* A. Mach. = *Racomitrium aciculare*
Racomitrium dixoni A. Mach. = *Racomitrium lamprocarpum*
Racomitrium heterostichum var. *affine* (F. Weber & D. Mohr) Lesq. = *Racomitrium affine*
Racomitrium heterostichum var. *gracilescens* Bruch & Schimp. = *Racomitrium affine*
Racomitrium hypnoides (Hedw.) Lindb. = *Racomitrium lanuginosum*
Racomitrium levieri Kindb. = *Racomitrium lamprocarpum*
Racomitrium patens Huebener = *Grimmia curvata*
Racomitrium protensum (A. Braun.) Huebener = *Racomitrium aquaticum*
Racomitrium sudeticum var. *validius* Jur. = *Racomitrium sudeticum*
Raphydostegium welwitschii (Schimp.) Jaeger. = *Sematophyllum substrumulosum*
Rhabdoweisia striata (Schrad.) Kindb. = *Rhabdoweisia fugax*
Rhaphidostegium substrumulosum Hampe = *Sematophyllum substrumulosum*
Rhaphidostegium welwitschii Bott. = *Sematophyllum substrumulosum*
Rhynchostegiella algiriana (Brid.) Broth. = *Rhynchostegiella tenella*
Rhynchostegiella littorea (De Not.) Limpr. = *Rhynchostegiella tenella* var. *litorea*
Rhynchostegiella pumilla (Wilson) E. F. Warburg = *Eurhynchium pumilum*
Rhynchostegiella tenella (Dicks.) Limpr. var. *meridionalis* = *Rhynchostegiella tenella*
Rhynchostegium alopecuroides (Brid.) A. J. E. Sm. = *Platyhypnidium lusitanicum*
Rhynchostegium confertum var. *brevifolium* Milde = *Rhynchostegium confertum*
Rhynchostegium confertum var. *daldanianum* De Not. = *Rhynchostegium confertum*
Rhynchostegium confertum var. *hercynicum* Jaeger. = *Rhynchostegium confertum*
Rhynchostegium confertum var. *julaceum* A. Mach. = *Platyhypnidium lusitanicum*
Rhynchostegium curvisetum Schimp. = *Rhynchostegiella curviseta*
Rhynchostegium hercynicum var. *lusitanicum* A. Mach. & G. Roth. = *Rhynchostegium confertum*
Rhynchostegium rusciforme var. *inundatum* Bruch & Schimp. = *Rhynchostegium riparioides*
Rhynchostegium rusciforme var. *julaceum* Venturi = *Platyhypnidium lusitanicum*
Rhynchostegium rusciforme var. *lusitanicum* A. Mach. = *Platyhypnidium lusitanicum*
Rhynchostegium tenellum Bruch & Schimp. = *Rhynchostegiella tenella*
Rhynchostegium welwitschii Schimp. = *Sematophyllum substrumulosum*
Schistidium alpicola (Hedw.) Limpr. = *Schistidium agassizii*
Schistidium gracile G. Roth. = *Schistidium apocarpum*
Schistidium pulvinatum (Hedw.) Brid. = *Schistidium flaccidum*
Schistostega osmundacea (Dicks.) Mohr = *Schistostega pennata*
Scleropodium caespitosum (Wilson) Bruch & Schimp. = *Scleropodium ceaspitans*
Scleropodium illecebrum (Brid.) Schimp. = *Scleropodium touretii*
Sphaerangium muticum Schimp. = *Acaulon muticum*
Sphagnum acutifolium Ehrh. = *Sphagnum capillifolium*
Sphagnum amblyphyllum Russow var. *parvifolium* Warnst. = *Sphagnum angustifolium*
Sphagnum capillifolium (Ehrh.) Hedw. var. *rubellum* (Wilson) A. Eddy = *Sphagnum rubellum*
Sphagnum condensatum Schleich. = *Sphagnum compactum*
Sphagnum contortum Schultz var. *obesum* Wilson = *Sphagnum auriculatum*

- Sphagnum crassicladum* Warnst. var. *magnifolium* Warnst. = *Sphagnum auriculatum*
Sphagnum cymbifolium (Ehrh.) Russow = *Sphagnum palustre*
Sphagnum denticulatum Brid. = *Sphagnum auriculatum*
Sphagnum gravetii Russow = *Sphagnum auriculatum*
Sphagnum intermedium var. *parvifolium* (Warnst.) A. Mach. = *Sphagnum angustifolium*
Sphagnum inundatum fo. *falcatum* Schliep. = *Sphagnum subsecundum* subsp. *inundatum*
Sphagnum inundatum Warnst. = *Sphagnum subsecundum* subsp. *inundatum*
Sphagnum molluscum Bruch = *Sphagnum tenellum*
Sphagnum nemoreum Scop. = *Sphagnum capillifolium*
Sphagnum obesum Warnst. = *Sphagnum auriculatum*
Sphagnum palustre var. *centrale* (C. Jens.) A. Eddy = *Sphagnum centrale*
Sphagnum parvifolium Warnst. = *Sphagnum angustifolium*
Sphagnum plumulosum Roell. = *Sphagnum subnitens*
Sphagnum rigidum Schimp. = *Sphagnum compactum*
Sphagnum rigidum var. *compactum* DC. = *Sphagnum compactum*
Sphagnum rufescens (Nees & Hornsch.) Warnst. = *Sphagnum auriculatum*
Sphagnum subnitens var. *versicolor* Warnst. = *Sphagnum subnitens*
Sphagnum subsecundum var. *auriculatum* (Schimp.) Schliep. in Verh. = *Sphagnum auriculatum*
Sphagnum subsecundum var. *contortum* (Schultz) Huebener = *Sphagnum subsecundum*
Sphagnum subsecundum var. *macrophyllum* Roll. = *Sphagnum auriculatum*
Sphagnum subsecundum var. *obesum* (Wilson) Schimp. = *Sphagnum auriculatum*
Sphagnum turgidum Roll. = *Sphagnum auriculatum*
Stereodon cupressiforme Brid. ex Cout. = *Hypnum cupressiforme*
Stereodon cupressiformis var. *brevisetus* Schimp. = *Hypnum cupressiforme*
Stereodon cupressiformis var. *uncinatus* Bruch & Schimp. = *Hypnum cupressiforme*
Stereodon imponens (Hedw.) Brid. = *Hypnum imponens*
Systegium crispum Schimp. = *Astomum crispum*
Thamnium alopecurum (Hedw.) Bruch & Schimp. = *Thamnobryum alopecurum*
Thuidium algarvicum Kindb. = *Claopodium whippleanum*
Thuidium punctulatum Solms = *Claopodium whippleanum*
Thuidium tamariscifolium Lindb. = *Thuidium tamariscinum*
Timmella barbula (Schwaegr.) Limpr. = *Timmella barbuloides*
Tortella caespitosa (Schwaegr.) Limpr. = *Tortella humilis*
Tortella flavovirens var. *viridiflava* (De Not.) Casares-Gil = *Tortella flavovirens*
Tortella nitida var. *obtusum* (Boulay) Dixon = *Tortella nitida*
Tortella squarrosa (Brid.) Limpr. = *Pleurochaete squarrosa*
Tortula ericaefolia Lindb. = *Aloina ambigua*
Tortula intermedia (Brid.) De Not. = *Syntrichia montana*
Tortula laevipila (Brid.) De Not. = *Syntrichia laevipila*
Tortula laevipila var. *laevipilaformis* De Not. = *Syntrichia laevipila*
Tortula laevipila var. *meridionalis* Schimp. = *Syntrichia laevipila*
Tortula latifolia Bruch ex Hartm. = *Syntrichia latifolia*
Tortula montana (Nees.) Lindb. = *Syntrichia montana*
Tortula muelleri Wilson = *Syntrichia princeps*
Tortula muralis var. *incana* (Bruch & Schimp.) Limpr. = *Tortula muralis*
Tortula pagorum (Milde) De Not. = *Syntrichia laevipila*
Tortula pilosa Wilson = *Syntrichia papillosa*

- Tortula princeps* De Not. = *Syntrichia princeps*
Tortula ruraliformis Besch. = *Syntrichia ruralis* var. *ruraliformis*
Tortula ruralis (Hedw.) Gaertn., Mey. & Scherb. = *Syntrichia ruralis*
Tortula subulata var. *inermis* (Bruch & Schimp.) Wilson = *Tortula inermis*
Trichodon cylindricus (Hedw.) Schimp. = *Ditrichum cylindricum*
Trichostomopsis australasiae (Hook. & Grev.) Robins. = *Didymodon australasiae* var. *umbrosus*
Trichostomopsis umbrosa (Müll. Hal.) Robins. = *Didymodon australasiae* var. *umbrosus*
Trichostomum barbula Schwaegr. = *Timmiella barbuloides*
Trichostomum caespitosum (Bruch) Jur. = *Pottiopsis caespitosa*
Trichostomum crispulum var. *algarvicum* Schimp. = *Trichostomum crispulum*
Trichostomum crispulum var. *pseudoweisia* Schimp. = *Trichostomum crispulum*
Trichostomum flavovirens Bruch = *Tortella flavovirens*
Trichostomum flexipes Bruch & Schimp. = *Timmiella flexiseta*
Trichostomum inflexum Bruch = *Tortella inflexa*
Trichostomum littorale Mitt. = *Trichostomum brachydontium* Bruch. var. *littorale*
Trichostomum mutabile Bruch = *Trichostomum brachydontium*
Trichostomum mutabile var. *cophocarpum* Cout. = *Trichostomum brachydontium*
Trichostomum mutabile var. *cylindricum* Schimp. = *Trichostomum brachydontium* var. *cylindricum*
Trichostomum philibertii Schimp. = *Trichostomum triumphans*
Trichostomum strictum Bruch = *Cheilotrichia chloropus*
Trichostomum triumphans var. *azoricum* (Cardot) Podp. = *Trichostomum triumphans*
Trichostomum viridiflavum De Not. = *Tortella flavovirens*
Ulota americana (P. Beauv.) Limpr. ex Broth. = *Ulota hutchinsiae*
Ulota ulophylla (Ehrh.) Broth. = *Ulota crispa*
Ulota ulophylla var. *intermedia* Schimp. = *Ulota crispa*
Ulota vittata Mitt. = *Ulota calvenscens*
Webera acuminata (Hoppe) Hornsch. & Schimp. = *Pohlia elongata* var. *acuminata*
Webera annotina (Hedw.) Bruch = *Pohlia annotina*
Webera annotina var. *decipiens* Loeske = *Pohlia proligera*
Webera cruda (Hedw.) Bruch = *Pohlia cruda*
Webera decipiens Loeske = *Pohlia proligera*
Webera elongata Schwaegr. = *Polia elongata*
Webera longicollis Hedw. = *Pohlia longicollis*
Webera nutans (Schreb.) Hedw. = *Pohlia nutans*
Webera nutans var. *caespitosa* Huebener = *Pohlia nutans*
Webera polymorpha (Hoppe & Hornsch.) Schimp. = *Pohlia elongata* var. *polymorpha*
Webera polymorpha var. *pachycarpa* Schimp. = *Pohlia elongata* var. *polymorpha*
Webera proligera Bryhn. = *Pohlia proligera*
Webera sessilis Lindb. = *Diphyscium foliosum*
Webera tozeri Schimp. = *Epipterygium tozeri*
Weissia bruntonii De Not. = *Cynodontium bruntonii*
Weissia calcarea Müll. Hal. = *Gymnostomum calcareum*
Weissia cirrata Hedw. = *Dicranoweisia cirrata*
Weissia condensa (Voit) Lindb. = *Weissia condensa*
Weissia controversa Hedw. = *Weissia controversa*
Weissia crispata (Nees. & Hornsch.) Müll. Hal. = *Weissia controversa* var. *crispata*

- Weissia fallax* Sehlm. = *Weissia controversa* var. *crispata*
Weissia fugax Hedw. = *Rhabdoweisia fugax*
Weissia levieri (Limpr.) Kindb. = *Astomum levieri*
Weissia longifolia Mitt. = *Astomum crispum*
Weissia longifolia var. *angustifolia* (Baumgr.) Crundw. & Nyl. = *Astomum crispum*
Weissia microstoma Müll. Hal. = *Weissia brachycarpa*
Weissia papillossima Laz. = *Weissia condensa* var. *armata*
Weissia tortilis (Schwaegr.) Müll. Hal. = *Weissia condensa*
Weissia triumphans (De Not.) M. O. Hill = *Trichostomum triumphans*
Weissia verticillata Brid. = *Eucladium verticillatum*
Weissia viridula Hedw. ex Brid. = *Weissia condensa*
Weissia viridula var. *stenocarpa* Bruch & Schimp. = *Weissia controversa* var. *crispata*
Weissia welwitschii Schimp. = *Eucladium verticillatum*
Zygodon baumgartneri Malta = *Zygodon rupestris*
Zygodon viridissimus subsp. *baumgartneri* (Malta) Duell = *Zygodon rupestris*
Zygodon viridissimus var. *occidentalis* (Corr.) Malta = *Zygodon viridissimus*
Zygodon viridissimus var. *rupestris* (Lindb.) Hartm. = *Zygodon rupestris*
Zygodon viridissimus var. *vulgaris* Malta = *Zygodon rupestris*

PHYLUM: Marchantiophyta**Marchantiopsida****Targioniaceae Dumort.***Targionia* L.**Aytoniaceae Cavers***Plagiochasma* Lehm. & Lindberg*Reboulia* Raddi*Mannia* Opiz*Asterella* P. Beauv.**Conocephalaceae Müll. Frib. ex Grolle***Conocephalum* Hill**Lunulariaceae H. Klinggr.***Lunularia* Adans.**Cleveaceae Cavers***Athalamia* Falconer**Marchantiaceae (Bisch.) Lindl.***Preissia* Corda*Marchantia* L.*Dumontiera* Nees**Exormothecaceae Müll. Frib. ex Grolle***Exormotheca* Mitt.**Corsiniaceae Engler***Corsinia* Raddi**Oxymitraceae Müll. Frib. ex Grolle***Oxymitra* Bisch. ex Lindenb.**Ricciaceae Rchb.***Riccia* L.**Rielliaceae Engler***Riella* Mont.**Sphaeroarpaceae (Dumont.) Heeg***Sphaerocarpos* Boehm.**Metzgeriaceae H. Klinggr.***Metzgeria* Raddi**Aneuraceae H. Klinggr.***Aneura* Dumort.*Cryptothallus* Malmb.*Riccardia* Gray**Pelliaceae H. Klinggr.***Pellia* Raddi**Pallaviciniaceae Mig.***Pallavicinia* Gray**Blasiaceae H. Klinggr.***Blasia* L.**Fossumbroniaceae Hazslinszky***Fossumbronia* Raddi*Petalophyllum* (Wilson) Nees & Gottsche**Lophoziaeae Cavers***Barbilophozia* Loeske*Lophozia* (Dumont.) Dumort.*Leiocolea* (Müll Frib.) H. Buch*Gymnocolea* (Dumont.) Dumort.*Tritomaria* Schiffn. ex Loeske**Jungermanniaceae Rchb.***Jungermannia* L.*Nardia* Gray**Gymnomitriaceae H. Klinggr.***Marsupella* Dumort.*Gymnomitrion* Corda**Arnelliaceae Nakai***Southbya* Spruce*Gongylanthus* Nees**Plagiochilaceae (Jörg.) Müll. Frib.***Plagiochila* (Dumont.) Dumort.**Geocalycaceae H. Klinggr.***Lophocolea* (Dumont.) Dumort.*Chiloscyphus* Corda*Saccogyna* Dumort.**Scapaniaceae Mig.***Douinia* (C. E. O. Jensen) H. Buch*Diplophyllum* (Dumont.) Dumort.*Scapania* (Dumont.) Dumort.**Cephaloziellaceae Douin***Cephaloziella* (Spruce) Schiffn.**Cephaloziaceae Mig.***Cephalozia* (Dumont.) Dumort.**Lepidoziaceae Limpr.***Telaranea* Spruce ex Schiffn.*Kurzia* G. Martens*Lepidozia* (Dumont.) Dumort.*Bazzania* Gray**Calypogeiacae (Müll. Frib.) Arnell***Calypogeia* Raddi**Trichocoleaceae Nakai***Trichocolea* Dumort.**Radulaceae (Dumont.) Müll. Frib.***Radula* Dumort.**Porellaceae Cavers***Porella* L.**Frullaniaceae Lorch***Frullania* Raddi

Lejeuneaceae Casares-Gil

Marchesinia Gray
Drepanolejeunea (Spruce) Schiffn.
Harpalejeunea (Spruce) Schiffn.
Lejeunea Lib.
Microlejeunea Steph.

Cololejeunea (Spruce) Schiffn.

Antocerotopsida
Anthocerotaceae Dumort.

Anthoceros L.
Phaeoceros Prosk.

***Aneura pinguis* (L.) Dumort.**

- BA:** Sérgio *et al.*, 2001d.
BL: Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
DL: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
E: Mendes, 1948; Jovet-Ast & Bischler, 1976.
Mi: Welwitsch, 1872; Henriques, 1886; Sampaio, 1901-1902; Machado, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.
TM: Allorge & Allorge, 1949.
Pt: Brotero, 1804.

***Anthoceros agrestis* Paton**

- Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935.
TM: Sim-Sim, 1989.

The distribution of *A. agrestis* is probably not fully known, as it was only recognised in 1998 (Sim-Sim), after revision of *A. punctatus* from LISU collections: Algarve, Monchique, *leg.* P. Coutinho, 1929; Trás-os-Montes, Vimioso, *leg.* Romariz & Mendes, 1953; as well as from Algarve's material (CGE), *leg.* Nicholson. It is almost certainly under-recorded.

***Anthoceros caucasicus* Steph.**

- Wmap:** Sérgio, 1990; Sérgio & Draper, 2002a.
Eurmap: During *et al.*, 1996.
IPmap: Sérgio *et al.*, 1994c.
AAI: Sérgio *et al.*, 1994d.
BA: Sérgio, 1987a; Casas *et al.*, 1989; Sérgio, 1993b; Sérgio *et al.*, 1994d; Jansen & Sequeira, 1999.
E: Sérgio, 1987a; Casas *et al.*, 1989.
Pt: Müller, 1951-1958.

***Anthoceros punctatus* L.**

- AAI:** Sérgio, 1967; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.
Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Müller, 1951-1958; Jovet-Ast & Bischler, 1976.
BA: Henriques, 1883; Casares, 1919; Sérgio, 1967.
BAl: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976.
BB: Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

BL: Henriques, 1883; Henriques, 1886; Lindberg, 1887; Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1966; Sérgio, 1967; Jovet-Ast & Bischler, 1976; Sim-Sim, 1989.

DL: Henriques, 1886; Lindberg, 1887; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.

E: Nicholson, 1913; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a.

Mi: Machado, 1913; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1920a; Machado, 1920c; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.

TM: Sérgio, 1971a.

Pt: Müller, 1951-1958.

The conspecificity of *A. multilobulus* Lindenb. and *A. punctatus* has been pointed out by Sim-Sim (1989) after, studying material from COI (Alcarraques-Coimbra). According to Proskauer in Müller (1951-58) this plant is a diploid of *A. punctatus*. Also *A. constans* Lindenb. is a critical taxon and might be conspecific with *A. punctatus* (Sim-Sim, 1989). Some authors recognise *A. constans* as a synonym.

***Asterella africana* (Mont.) A. Evans.**

BA: Sérgio *et al.*, 2001d.

***Athalamia spathysii* (Lindenb.) S. Hatt.**

E: Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 2001e.

This species is certainly extinct (Sérgio *et al.*, 2001e).

***Barbilophozia barbata* (Schmidel ex Schreb.) Loeske**

BA: Allorge, 1931b; Sabino de Freitas, 1944a; Allorge, 1950; Sérgio & Séneca, 1994.

TM: Sérgio & Séneca, 1994.

Pt: Müller, 1951-1958.

***Barbilophozia floerkei* (F. Weber & D. Mohr) Loeske**

BA: Grolle, 1960; Sérgio *et al.*, 1994b; Jansen, 1998.

BA/BB: Greven & Melick, 1994.

***Barbilophozia hatcheri* (A. Evans) Loeske**

BA: Tavares & Tavares, 1950b; Müller, 1951-1958; Jansen, 1994.

BA/BB: Greven & Melick, 1994.

BB: Jansen, 1994.

TM: Sérgio & Schumacker, 1992.

***Barbilophozia lycopodioides* (Wallr.) Loeske**

BA: Jansen, 1994; Sérgio *et al.*, 1994.

BA/BB: Greven & Melick, 1994.

***Bazzania trilobata* (L.) Gray**

IPmap: Casas *et al.*, 1996.

E: Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sabino de Freitas, 1948; Casas *et al.*, 1996; Cros & Infante, 1999.

This species was not observed seen since 1908. It was gathered by Luisier (INA!) and the identification is clearly correct (Cros & Infante, 1999). It is almost certainly an extinct species that was, however, considered a vulnerable taxon by Sérgio *et al.* (1994).

***Blasia pusilla* L.**

Mi: Tavares & Tavares, 1955-1956.

In Portugal this species is known from a single site, and the material gathered by Tavares in 1955 (LISU!) was revised. It is almost certainly another Portuguese extinct liverwort.

***Calypogeia arguta* Nees & Mont.**

IPmap: Casas *et al.*, 1992.

AAl: Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992.

BA: Sérgio, 1967; Allorge, 1974; Casas *et al.*, 1992.

BAl: Casas *et al.*, 1992.

BB: Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

BL: Henriques, 1886; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Anónimo, 1967; Anónimo, 1969; Allorge, 1974; Casas *et al.*, 1992; Werner, 1997.

DL: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Casas *et al.*, 1992.

E: Mendes, 1948; Sérgio, 1966; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992.

Mi: Henriques, 1886; Machado, 1913; Casares, 1919; Machado, 1920c; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Tavares & Tavares, 1950a; Allorge, 1974; Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

TM: Casas *et al.*, 1992; Sérgio & Schumacker, 1992.

Pt: Müller, 1951-1958.

***Calypogeia azurea* Stotler & Crotz**

AAl: Sérgio *et al.*, 1997b.

BA: Sérgio *et al.*, 2001d.

Mi: Machado, 1913; Machado, 1920a; Machado, 1925; Sérgio & Schumacker, 1992.

The distribution of *C. azurea* is probably not fully known, as it was reported from others localities, mostly under its old name *C. trichomanis* aut. The species *C. trichomanis* (L.) Corda is synonym of *C. fissa*. Some material from Minho can be dubious, and further revision of herbarium material is need.

***Calypogeia fissa* (L.) Raddi**

AAl: Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Crundwell, 1956; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976.

BA: Tavares & Tavares, 1948; Sérgio, 1967; Sérgio, 1971a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

- BAI:** Jovet-Ast & Bischler, 1976.
BB: Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
BL: Henriques, 1886; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sérgio, 1966; Anónimo, 1969; Sérgio, 1971a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Werner, 1997.
DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.
E: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.
Mi: Buch, 1937; Allorge, 1941; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Sérgio, 1966; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.
R: Sérgio, 1971a.
TM: Ervideira, 1926; Sabino de Freitas, 1944a; Sérgio, 1967.
Pt: Müller, 1951-1958.

Calypogeia muelleriana (Schiffn.) Müll. Frib.

- Ag:** Müller, 1953.
BA: Sérgio & Séneca, 1994.
Mi: Mendes, 1950; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.
Pt: Müller, 1951-1958.

Calypogeia sphagnicola (Arnell & J. Perss.) Warnst. & Loeske

- BA:** Sérgio, 1966.
BL: Sérgio, 1966; Anónimo, 1967.
DL: Sérgio, 1967.

Calypogeia suecica (Arnell & J. Perss.) Müll. Frib.

- AAI:** Sérgio *et al.*, 1997b.
 Only reported from one site is a species almost certainly under-recorded.

Cephalozia bicuspidata (L.) Dumort.

- AAI:** Sérgio *et al.*, 1997b.
Ag: Nicholson, 1913; Machado, 1925; Sabino de Freitas, 1944a; Allorge, 1974; Jovet-Ast & Bischler, 1976.
BA: Machado, 1925; Tavares & Tavares, 1948.
BB: Sabino de Freitas, 1944a.
BL: Henriques, 1886; Anónimo, 1888; Anónimo, 1890; Sampaio, 1901-1902; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Anónimo, 1967; Anónimo, 1969; Allorge, 1974.
DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.
E: Jovet-Ast & Bischler, 1976.
Mi: Machado, 1913; Casares, 1919; Machado, 1920a; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.
R: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a.
TM: Ervideira, 1926; Sabino de Freitas, 1944a; Sérgio & Schumacker, 1992.

Cephalozia connivens (Dicks.) Lindb.

IPmap: Martinez-Abaigar & Ederra, 1992.
Ag: Crundwell, 1956; Jovet-Ast & Bischler, 1976.
BAl: Sérgio, 1997c.
BL: Sérgio, 1971a; Jovet-Ast & Bischler, 1976.
DL: Sérgio, 1997c.
Mi: Mendes, 1950; Tavares & Tavares, 1950a; Jovet-Ast & Bischler, 1976.

Cephalozia lunulifolia (Dumort.) Dumort.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a.
BL: Allorge, 1935; Sérgio, 1967.
E: Sá-Nogueira, 1958.
Pt: Müller, 1951-1958.

Cephaloziella baumgartneri Schiffn.

AAl: Allorge, 1974.
Ag: Allorge, 1931b; Allorge, 1935; Sabino de Freitas, 1944a; Müller, 1951-1958; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BA: Allorge, 1931b; Sabino de Freitas, 1944a; Allorge, 1974.
BAl: Sérgio *et al.*, 1999a.
BL: Allorge, 1931b; Allorge, 1935; Sabino de Freitas, 1944a; Müller, 1951-1958; Allorge, 1974; Sérgio *et al.*, 1988.
DL: Sabino de Freitas, 1948.
E: Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931a; Allorge, 1931b; Sabino de Freitas, 1944a; Müller, 1951-1958; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Allorge, 1931b; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Müller, 1951-1958; Allorge, 1974; Sérgio & Schumacker, 1992.
R: Sérgio, 1971a; Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

Cephaloziella calyculata (Durieu & Mont.) Müll. Frib.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Müller, 1951-1958.
BL: Sérgio *et al.*, 1988.
E: Sérgio, 1971a; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
R: Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

Cephaloziella divaricata (Sm.) Schiffn.

IPmap: Gil & Castro, 1987.
AAl: Sérgio *et al.*, 1997.
Ag: Crundwell, 1956; Jovet-Ast & Bischler, 1976.
BA: Jovet-Ast & Bischler, 1976; Jansen, 1994; Jansen, 1998; Jansen *et al.*, 2000.
BA/BB: Greven & Melick, 1994.
BB: Sérgio *et al.*, 2002c.

BAl: Sérgio, 1970-1971.

BB: Jansen, 1994; Jansen *et al.*, 1997.

BL: Allorge, 1935; Sérgio, 1966; Sérgio, 1967; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Werner, 1997.

E: Pereira-Coutinho, 1917a; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976.

Mi: Pereira-Coutinho, 1917a; Machado, 1918a; Machado, 1920a; Machado, 1920c; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988.

TM: Pereira-Coutinho, 1917a; Allorge, 1974; Sérgio & Schumacker, 1992.

Pt: Sérgio *et al.*, 1987a.

***Cephaloziella elachista* (J. B. Jack ex Gottsche & Rabenh.) Schiffn.**

BA: Sérgio *et al.*, 2001a.

***Cephaloziella massalongi* (Spruce) Müll. Frib.**

Ag: Nicholson, 1913; Casares, 1919; Douin, 1920; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Sérgio, 1970-1971.

Reported from two localities in the same mountain (Monchique), the specimens need to be examined, in order to clarify taxonomically the var. *algarvica* Douin (Schuster, 1980).

***Cephaloziella rubella* (Nees) Warnst.**

BA: Jansen & Sequeira, 1999.

Mi: Sérgio & Schumacker, 1992.

TM: Sérgio & Schumacker, 1992; Sérgio & Séneca, 1994.

***Cephaloziella stellulifera* (Taylor ex Spruce) Schiffn.**

AAI: Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.

Ag: Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Jovet-Ast & Bischler, 1976; Jansen & Sequeira, 1999.

BAL: Jovet-Ast & Bischler, 1976.

BB: Sérgio *et al.*, 2002c.

BL: Müller, 1951-1958; Sérgio *et al.*, 1988.

E: Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

R: Catarino *et al.*, 1987; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

***Cephaloziella turneri* (Hook.) Müll. Frib.**

AAI: Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1931a; Allorge, 1935; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Guerra *et al.*, 1981; Jiménez *et al.*, 2002.

- BA:** Tavares & Tavares, 1948; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAI: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1999a.
BL: Henriques, 1886; Anónimo, 1888; Anónimo, 1890; Sampaio, 1901-1902; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Anónimo, 1969; Allorge, 1974; Werner, 1997.
DL: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.
E: Allorge, 1931a; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.
Mi: Machado, 1920c; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.
R: Sérgio, 1971a.
Pt: Müller, 1951-1958.

Chiloscyphus pallescens (Ehrh. ex Hoffm.) Dumort.

- BA:** Sérgio, 1971a.
Mi: Machado, 1920b; Machado, 1925; Sabino de Freitas, 1944a; Sérgio & Schumacker, 1992.

Chiloscyphus polyanthus (L.) Corda

- AAL:** Sérgio *et al.*, 1997b.
Ag: Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1970-1971.
BA: Pereira-Coutinho, 1917a; Casares, 1919; Sabino de Freitas, 1944b; Sérgio, 1971a; Jovet-Ast & Bischler, 1976.
BB: Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
BL: Brotero, 1804; Sérgio, 1966; Sérgio *et al.*, 2001e.
DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
Mi: Henriques, 1886; Machado, 1913; Casares, 1919; Machado, 1920a; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.
TM: Allorge & Allorge, 1949; Sérgio & Schumacker, 1992.
Pt: Müller, 1951-1958.

The report by Brotero from Beira Litoral, sub *Jungermannia lanceolata* L., possibly corresponds to this species (Sérgio *et al.*, 2001), in fact the herbarium specimen could not be found. See note under *J. leiantha* Grolle.

Cololejeunea minutissima (Sm.) Schiffn.

- IPmap:** Casas *et al.*, 1985.
Ptmap: Sim-Sim & Sérgio, 1998.
Ag: Allorge, 1974; Casas *et al.*, 1985.
BAI: Casas *et al.*, 1985; Sérgio *et al.*, 2002d.
BL: Henriques, 1886; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Müller, 1951-1958; Anónimo, 1969; Allorge, 1974; Casas *et al.*, 1985; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.
DL: Casares, 1919; Sabino de Freitas, 1948; Müller, 1951-1958; Casas *et al.*, 1985.

E: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Müller, 1951-1958; Allorge, 1974; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Machado, 1920c; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Casas *et al.*, 1985; Sérgio & Schumacker, 1992.

R: Casas *et al.*, 1985; Sérgio *et al.*, 1988.

Pt: Buch, 1934; Sérgio *et al.*, 1987a.

***Cololejeunea rossettiana* (C. Massal.) Schiffn.**

IPmap: Casas *et al.*, 1996.

Ag: Sérgio, 1967; Allorge, 1974; Casas *et al.*, 1996.

BL: Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Müller, 1951-1958; Allorge, 1974; Sérgio *et al.*, 1988; Casas *et al.*, 1996.

E: Henriques, 1886; Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Allorge, 1974; Sérgio & Correia, 1981; Casas *et al.*, 1996.

Pt: Sérgio *et al.*, 1987a.

Among several authors, the specimen gathered by Welwitsch (LISU) in Sintra, under *Lejeunea calcarea*, corresponds to *C. rossettiana* (Sim-Sim, 1989).

***Conocephalum conicum* (L.) Dumort.**

AAI: Sérgio *et al.*, 1997b.

BA: Sérgio, 1966; Allorge, 1974; Sérgio *et al.*, 2001d.

BB: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a.

BL: Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1966; Anónimo, 1969; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

E: Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Barros, 1943; Sabino de Freitas, 1944a; Sá-Nogueira, 1950b; Jovet-Ast & Bischler, 1976.

Mi: Henriques, 1886; Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Barros, 1944b; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio, 1971a.

TM: Allorge, 1974.

Pt: Allorge, 1938; Müller, 1951-1958; Sérgio *et al.*, 1987a.

***Corsinia coriandrina* (Spreng.) Lindb.**

Wmap: Sérgio, 1990.

IPmap(Marocco): Allorge & Jovet-Ast, 1958.

IPmap: Casas *et al.*, 1992.

AAI: Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992, Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1992.

BA: Sérgio *et al.*, 2001d.

- BAI:** Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992, Sérgio *et al.*, 1999a.
BB: Sérgio, 1967; Casas *et al.*, 1992; Sérgio *et al.*, 2002c.
BL: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1966; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
E: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1966; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Casas *et al.*, 1992, Sérgio & Tauleigne Gomes, 2001.
Mi: Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992.
R: Sérgio, 1966; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
TM: Casas *et al.*, 1992.
Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a; Boisselier-Dubayle & Bischler, 1998.

Cryptothallus mirabilis Malmb.

- Ptmap:** Sérgio & Garcia, 1999.
AAI: Sérgio *et al.*, 1997b; Sérgio & Séneca, 1997; Sérgio & Garcia, 1999.
BA: Sérgio & Garcia, 1999.
BB: Sérgio & Garcia, 1999.
BL: Sérgio & Garcia, 1999.

Diphophyllum obtusifolium (Hook.) Dumort.

- [**BA:** Jansen, 1998].
Only reported from Serra da Estrela, Beira Alta, in phytosociological relevés. Not being confirmed by herbarium specimens is to be considered as an uncertain species.

Diplophyllum albicans (L.) Dumort.

- AAI/BAL:** Allorge, 1935; Jovet-Ast & Bischler, 1976.
Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
BA: Tavares & Tavares, 1948; Braun-Blanquet *et al.*, 1956; Allorge, 1974; Jovet-Ast & Bischler, 1976; Jansen, 1994; Jansen, 1998; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BL: Henriques, 1886; Anônimo, 1888; Anônimo, 1890; Warnstorff, 1899; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Allorge, 1931a; Allorge, 1935; Tavares & Tavares, 1948; Anônimo, 1967; Anônimo, 1969; Allorge, 1974; Jovet-Ast & Bischler, 1976; Werner, 1997.
DL: Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Werner, 1997.
E: Allorge, 1931a; Sabino de Freitas, 1948; Tavares & Tavares, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976.
Mi: Henriques, 1886; Sampaio, 1901-1902; Luisier, 1910b; Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Allorge, 1935; Buch, 1937; Barros, 1944b; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sabino de Freitas, 1948; Tavares & Tavares, 1948; Mendes, 1950; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.
R: Sá-Nogueira, 1958.
TM: Ervideira, 1926; Sabino de Freitas, 1944a; Sérgio & Schumacker, 1992.
Pt: Müller, 1951-1958.

Diplophyllum taxifolium (Wahlenb.) Dumort.

BA: Sérgio & Váňa, 1994.

Douinia ovata (Dicks.) H. Buch

Wmap: Sérgio, 1990.

IPmap: Casas *et al.*, 1985.

BA: Tavares & Tavares, 1948; Müller, 1951-1958; Casas *et al.*, 1985; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

DL: Sim-Sim, 1989.

Mi: Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Tavares & Tavares, 1950a; Casas *et al.*, 1985; Sérgio & Schumacker, 1992.

TM: Sérgio & Séneca, 1994.

Sim-Sim (1989) reported this species from Douro Litoral without any locality information. It actually corresponds to the herbarium specimen from Serra de Montemuro, Cinfães, 1985, leg. Sérgio 5629 (LISU!).

Drepanolejeunea hamatifolia (Hook.) Schiffn.

IPmap: Infante, 2000.

E: Tavares & Tavares, 1952; Infante, 2000.

Dumortiera hirsuta (Sw.) Nees

Eurmap: Müller, 1951-1958.

Medmap: Allorge, 1947; Allorge & Jovet-Ast, 1958.

IPmap: Casas *et al.*, 1989.

BL: Casas *et al.*, 1989.

[**E:** Allorge, 1931c; Sabino de Freitas, 1944b].

Mi: Mendes, 1950; Tavares & Tavares, 1950a; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

There is no herbarium material to back the reports for Estremadura, Sintra, and so the species has to be considered as uncertain in this region.

Exormotheca pustulosa Mitt.

Wmap: Sérgio, 1990; Bischler, 1976.

IPmap (and Mediterranean Area): Allorge & Jovet-Ast, 1958; Puche *et al.*, 1987.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Schiffner, 1942; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Müller, 1951-1958; Crundwell, 1956; Allorge & Jovet-Ast, 1958; Bischler, 1976; Jovet-Ast & Bischler, 1976; Puche *et al.*, 1987; Casas *et al.*, 1996.

E: Casas *et al.*, 1996.

Exormotheca welwitschii Steph.

IPmap: Puche *et al.*, 1987; Casas *et al.*, 1996.

Ag: Allorge, 1931a; Schiffner, 1942; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Müller, 1951-1958; Sérgio, 1970-1971; Puche *et al.*, 1987; Casas *et al.*, 1996.

BAI: Casas *et al.*, 1996.

E: Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Schiffner, 1942; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Müller, 1951-

1958; Allorge & Jovet-Ast, 1958; Puche *et al.*, 1987; Sérgio *et al.*, 1988; Perold, 1991; Casas *et al.*, 1996.

R: Puche *et al.*, 1987; Casas *et al.*, 1996.

Pt: Lindenberg, 1829; Stephani, 1898-1900 (*Orig. descrip.*), Goebel, 1905; Grolle, 1976.

As pointed out by Grolle (1976) the Lectotypus specimen is in (S).

***Fossombronia angulosa* (Dicks.) Raddi**

Ptmap: Sérgio, 1974 .

AAl: Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Chalaud, 1930; Allorge, 1931a; Allorge, 1935; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Guerra *et al.*, 1981; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Jiménez *et al.*, 2002.

BA: Sérgio, 1967; Allorge, 1974; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAl: Pereira-Coutinho, 1917a; Machado, 1925; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1999a.

BB: Sérgio, 1967.

BL: Henriques, 1886; Casares, 1919; Machado, 1925; Chalaud, 1930; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Allorge, 1974; Sérgio, 1974; Leitão *et al.*, 1996; Werner, 1997.

DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

E: Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Chalaud, 1930; Sabino de Freitas, 1944a; Mendes, 1948; Sabino de Freitas, 1948; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a.

Mi: Henriques, 1886; Machado, 1913; Casares, 1919; Machado, 1920a; Machado, 1925; Chalaud, 1930; Buch, 1937; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Sérgio, 1971a.

TM: Sérgio, 1967.

***Fossombronia caespitiformis* De Not. ex Rabenb.**

Ptmap: Sérgio, 1974.

AAl: Sérgio *et al.*, 1997b.

Ag: Allorge, 1935; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAl: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976.

BL: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio *et al.*, 1988.

DL: Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

E: Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Sérgio, 1970-1971; Sérgio, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

R: Sérgio, 1967; Sérgio *et al.*, 1988.

Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

Fossombronia crispa* Ness*E:** Sérgio, 1985f.

Some recent authors (Grolle & Long, 2000; Schumacker & Váña, 2002) follow Perold (1997), concluded that “The true *F. crispa* Ness, 1846 (= *F. zeyheri* Steph. 1900).....belongs to *F. foveolata* complex.”. Looking at Perold (1997) we could confirm the presence of this African species in Portugal (sub *F. zeyheri* Steph. sensu Sérgio 1985). This species that was considered by Grolle & Long (2000) and Söderström *et al.* (2002) as a possible synonym of *F. foveolata* Lindb, corresponds, in our opinion, to a different species, mainly based on the different ecological requirements and plant communities where these two species can be found. *F. foveolata* presents an Atlantic relationship, grows on wet peat and acid sandy or clay soils, and does not present a Mediterranean affinity to rather dry, exposed sunny sites, not being able to withstand long periods of drought, like *F. crispa* does. Perold (1997), also reported these two species from the same regions and considered *F. foveolata* and *F. crispa* as different taxa.

Fossombronia echinata* Macvicar*Ptmap:** Sérgio, 1974.**AAI/BAL:** Jovet-Ast & Bischler, 1976.**Ag:** Sérgio, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.**BAI:** Sérgio, 1974.**BL:** Sérgio *et al.*, 1988.**E:** Sérgio, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.**R:** Sérgio *et al.*, 1988.**Pt:** Sérgio *et al.*, 1987a.***Fossombronia foveolata* Lindb.****Ptmap:** Sérgio, 1974.**BL:** Sérgio & Séneca, 1994.**DL:** Sérgio, 1974.**E:** Sérgio, 1974.**Mi:** Sérgio, 1974.See note under *F. crispa* and *F. leucoxantha*.***Fossombronia husnotii* Corb.****IPmap:** Gil & Castro, 1987.**Ptmap:** Sérgio, 1974.**AAI:** Sérgio *et al.*, 1997b.**Ag:** Nicholson, 1913; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987^a.**BA:** Sérgio *et al.*, 2001d.**BAI:** Sérgio *et al.*, 1999a.**BB:** Sérgio *et al.*, 2002c.**BL:** Chalaud, 1930; Sérgio, 1967; Sérgio, 1974; Sérgio *et al.*, 1988.**E:** Chalaud, 1930; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.**Mi:** Chalaud, 1930.**R:** Sérgio, 1971a; Sérgio *et al.*, 1988.**Pt:** Sérgio *et al.*, 1987a.

Fossombronia leucoxantha* Lehm.*Ptmap:** Sérgio, 1974.**Ag:** Sérgio, 1974; Sérgio *et al.*, 1984; Sérgio, 1985f; Sérgio *et al.*, 1987a.**BL:** Sérgio *et al.*, 1988.**E:** Sérgio, 1974; Sérgio, 1985f; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.**R:** Sérgio *et al.*, 1988.**Pt:** Sérgio *et al.*, 1987a.

Studying Portuguese material reported sub *Fossombronia crispa* Nees sensu Sérgio (1985f) and according to Perold criterium (1997), we confirmed the presence of *F. leucoxantha* in Portugal. The plants are dioecious, present denticulate or incise dentate leaves and perianth border margins and spores with flattened papillae or cristate. The spore SEM micrographs were very similar to the ones of the Portuguese plants (Sérgio, 1985f). So, in Portugal, we recognise two different taxa, both from South Africa, Cape region: *F. leucoxantha* and *F. crispa*. However, the distribution of these poorly known taxa needs further study.

Fossombronia maritima* (Paton) Paton*Ag:** Sérgio, 2002a.**E:** Sérgio, 2002a.

Recently reported from Portugal, it is, however, a species more or less widespread in the Mediterranean area.

Fossombronia pusilla* (L.) Nees*Ptmap:** Sérgio, 1974.**AAI:** Sérgio *et al.*, 1997b.**Ag:** Casares, 1919; Machado, 1925; Chalaud, 1930; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.**BA:** Sérgio, 1974; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.**BB:** Sérgio *et al.*, 2002c.**BL:** Brotero, 1804; Nicholson, 1913; Casares, 1919; Machado, 1925; Chalaud, 1930; Sabino de Freitas, 1944a; Allorge, 1974; Jovet-Ast & Bischler, 1976.**DL:** Sabino de Freitas, 1948.**E:** Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Chalaud, 1930; Sabino de Freitas, 1944a; Sérgio, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981.**Mi:** Jovet-Ast & Bischler, 1976.**R:** Sérgio, 1974.**Pt:** Müller, 1951-1958.***Fossombronia wondraczekii* (Corda) Lindb.****IPmap:** Gil & Castro, 1984; Gil & Castro, 1987.**AAI:** Sérgio *et al.*, 1997b.**Ag:** Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1987a.**BA:** Sérgio, 1971a.**BA/BB:** Greven & Melick, 1994.**BB:** Sérgio, 1971a; Sérgio *et al.*, 2002c.**E:** Sérgio, 1966; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a.**R:** Sérgio, 1971a; Sérgio *et al.*, 1988.

Frullania azorica Sim-Sim *et al.*

BA/BB: Sérgio, 1985a; Sim-Sim, 1995; Casas *et al.*, 1989; Sim-Sim *et al.*, 1995.

[**Mi:** Sim-Sim, 1989].

Pt: Bisang *et al.*, 1989.

The report from Minho by Sim-Sim (1989) was excluded some years later by the same author (1995). The herbarium specimen (LISU!) corresponds to *Frullania dilatata*.

Frullania dilatata (L.) Dumort.

IPmap: Casas *et al.*, 1985.

Ptmap: Sim-Sim, 1995; Sim-Sim & *al.*, 1995.

AAl: Allorge, 1974; Casas *et al.*, 1985; Catarino *et al.*, 1987; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Sérgio *et al.*, 1997b; Sérgio *et al.*, 1998d; Jones, 1999.

Ag: Nicholson, 1913; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Casas *et al.*, 1985; Sérgio *et al.*, 1987a; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Jones, 1999.

BA: Pereira-Coutinho, 1917a; Machado, 1925; Casas *et al.*, 1985; Sim-Sim, 1999; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Jones, 1999; Albertos, 2001; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1985; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Jones, 1999; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

BB: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Casas *et al.*, 1985; Catarino *et al.*, 1987; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Sérgio *et al.*, 1998d; Calleja *et al.*, 2001.

BL: Brotero, 1804; Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931a; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1985; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Werner, 1997; Jones, 1999.

DL: Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1985; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Jones, 1999.

E: Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931a; Barros, 1943; Sabino de Freitas, 1944a; Mendes, 1948; Sabino de Freitas, 1948; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio, 1981b; Sérgio & Correia, 1981; Bento-Pereira & Sérgio, 1983; Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio, 1987b; Sérgio *et al.*, 1988; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Jones, 1999.

Mi: Henriques, 1886; Machado, 1913; Machado, 1920a; Machado, 1925; Barros, 1944b; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sabino de Freitas, 1948; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Allorge, 1974; Casas *et al.*, 1985; Casas *et al.*, 1989; Sérgio & Schumacker, 1992; Sérgio *et al.*, 1993b, Sim-Sim, 1995; Jones, 1999; Albertos, 2001; Calleja *et al.*, 2001.

R: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Casas *et al.*, 1985; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio *et al.*, 1993b, Sérgio & Sim-Sim, 1994; Sim-Sim, 1995; Sérgio *et al.*, 1998d; Jones, 1999.

TM: Casas *et al.*, 1985; Sérgio & Schumacker, 1992; Sérgio *et al.*, 1993b; Sim-Sim, 1995; Jones, 1999.

Pt: Sérgio *et al.*, 1987a.

Frullania fragilifolia* (Taylor) Gottsche *et al.

IPmap: Casas *et al.*, 1996; Sérgio & Draper 2002b.

Ptmap: Sim-Sim, 1995.

AAl: Casas *et al.*, 1996; Sérgio *et al.*, 1997b.

Ag: Sim-Sim, 1995; Casas *et al.*, 1996.

BA: Tavares & Tavares, 1946; Müller, 1951-1958; Sérgio, 1971a; Sim-Sim, 1995; Casas *et al.*, 1996; Sérgio *et al.*, 2001d.

BL: Sim-Sim, 1995; Casas *et al.*, 1996; Werner, 1997.

DL: Sim-Sim, 1999; Sim-Sim, 1995; Casas *et al.*, 1996.

E: Tavares & Tavares, 1948; Sim-Sim, 1995; Casas *et al.*, 1996.

Mi: Tavares & Tavares, 1946; Tavares & Tavares, 1950a; Müller, 1951-1958; Sérgio & Schumacker, 1992; Sim-Sim, 1995; Casas *et al.*, 1996; Albertos, 2001.

TM: Sérgio & Schumacker, 1992; Sim-Sim, 1995; Casas *et al.*, 1996.

Pt: Grolle, 1970.

***Frullania microphylla* (Gottsche) Pearson**

IPmap: Casas *et al.*, 1996.

Ptmap: Sim-Sim, 1995.

BL: Sabino de Freitas, 1948.

DL: Sim-Sim, 1995; Casas *et al.*, 1996.

E: Tavares & Tavares, 1946; Müller, 1951-1958; Bisang *et al.*, 1989; Sim-Sim, 1999; Sim-Sim, 1995; Casas *et al.*, 1996.

Mi: Albertos, 2001.

***Frullania oakesiana* Austin**

Ptmap: Sim-Sim, 1995.

Pt: Bisang *et al.*, 1989.

Mi: Sérgio, C., 1985a; Sérgio & Schumacker, 1992; Sim-Sim, 1995.

In Portugal, populations of *F. oakesiana* are thought to be restricted to Serra Peneda Gerês. However, this species was recently detected in a contiguous area in Galicia, Spain (Casas *et al.* 1999).

***Frullania tamarisci* (L.) Dumort.**

Ptmap: Sim-Sim, 1995; Sim-Sim & Sérgio, 1998.

AAl: Jovet-Ast & Bischler, 1976; Sim-Sim, 1995; Sérgio *et al.*, 1997b.

Ag: Estácio da Veiga, 1869; Henriques, 1886; Nicholson, 1913; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Müller, 1953; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Sim-Sim, 1995.

BA: Tavares & Tavares, 1948; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAl: Pereira-Coutinho, 1917a; Machado, 1925; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sim-Sim, 1995; Sérgio *et al.*, 1999a; Sérgio *et al.*, 2002d.

- BB:** Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sim-Sim, 1995; Calleja *et al.*, 2001.
- BL:** Brotero, 1804; Henriques, 1886; Anónimo, 1890; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Anónimo, 1967; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988; Sim-Sim, 1995.
- DL:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Sim-Sim, 1995.
- E:** Henriques, 1886; Anónimo, 1890; Sampaio, 1901-1902; Luisier, 1910a; Luisier, 1910b; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Sá-Nogueira, 1950b; Müller, 1951-1958; Müller, 1953; Grolle, 1970; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988; Sim-Sim, 1999; Sim-Sim, 1995.
- Mi:** Henriques, 1886; Sampaio, 1901-1902; Luisier, 1910b; Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Allorge, 1935; Barros, 1944b; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Mendes, 1950; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992; Sim-Sim, 1995; Albertos, 2001; Calleja *et al.*, 2001.
- R:** Sérgio & Sim-Sim, 1994; Sim-Sim, 1995; Sérgio *et al.*, 1998d.
- TM:** Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Allorge, 1974; Sérgio & Schumacker, 1992; Sim-Sim, 1995.
- Pt:** Hattori, 1972; Sérgio *et al.*, 1987a.

Frullania tamarisci* (L.) Dumort. var *mediterranea* (De Not.) Nees in Gottsche *et al.

- BA:** Sérgio *et al.*, 2001d.
- BB:** Catarino *et al.*, 1987.
- BL:** Catarino *et al.*, 1987; Sérgio *et al.*, 1988.
- E:** Sérgio & Sim-Sim, 1985a; Sim-Sim, 1999; Sérgio & Tauleigne Gomes, 2001.
- R:** Catarino *et al.*, 1987.
- Pt:** Sérgio *et al.*, 1987a.

***Frullania tamarisci* (L.) Dumort. var *sardoa* (De Not.) De Not**

- Ag:** Hattori, 1972.
- DL:** Sim-Sim, 1999.
- Mi:** Sérgio & Schumacker, 1992.

***Frullania tamarisci* (L.) Dumort. var *schiffnerii* Nichol.**

- E:** Sim-Sim, 1999.

***Frullania teneriffae* (F. Weber) Nees**

- Ptmap:** Sim-Sim, 1995.
- E:** Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Grolle, 1970; Schumacker *et al.*, 1988b; Sim-Sim, 1999; Sim-Sim, 1995.
- Pt:** Bisang *et al.*, 1989.

***Gongylanthus ericetorum* (Raddi) Nees**

- AAI:** Sérgio, 1967; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.
- Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984.

- BA:** Sérgio, 1971a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAI: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1999a.
BB: Braun-Blanquet *et al.*, 1964; Sérgio, 1971a; Sérgio *et al.*, 2002c.
BL: Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Allorge, 1974.
DL: Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.
E: Mendes, 1948; Sá-Nogueira, 1958; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976.
Mi: Tavares & Tavares, 1950a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.
R: Sérgio, 1971a.
Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

Gymnocolea inflata (Huds.) Dumort.

- IPmap:** Infante, 2000.
BA: Sérgio & Séneca, 1994; Jansen & Sequeira, 1999; Infante, 2000.
BL: Sérgio & Séneca, 1994; Infante, 2000.
TM: Sérgio & Schumacker, 1992; Infante, 2000.

Gymnomitrion crenulatum Gottsche ex Carrington

- IPmap:** Casas *et al.*, 1989.
Mi: Tavares & Tavares, 1948; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Müller, 1951-1958; Casas *et al.*, 1989; Reinoso *et al.*, 1990; Sérgio & Schumacker, 1992.

Gymnomitrion obtusum Lindb.

- IPmap:** Casas *et al.*, 1989.
Mi: Machado, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Tavares & Tavares, 1948; Tavares & Tavares, 1950a; Tavares & Tavares, 1950b; Müller, 1951-1958; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.
TM: Casas *et al.*, 1989; Sérgio & Schumacker, 1992.
According to K. Müller (1951-1958) the herbarium specimen (*leg.* Machado) from Serra do Gerês, sub *G. coralloides*, corresponds to *G. obtusum*.

Gymnomitrion varians Steph

[**Mi:** Machado, 1925].
This species should be excluded from Portugal, since Tavares & Tavares (1950a) verified that the specimens correspond to *Marsupella funckii*.

Harpalejeunea molleri (Steph.) Grolle

- Wmap:** Sérgio, 1990.
Eurmap: Bisang *et al.*, 1986; Lecointe *et al.*, 1988.
IPmap: Casas *et al.*, 1992.
BA: Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992.
Bl: Stephani in Henriques, 1886 (*Orig. descrip.*) ; Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Müller, 1951-1958; Allorge, 1974; Grolle, 1989; Casas *et al.*, 1992; Grolle & Reiner-Drehwald, 1999.

E: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Allorge, 1974; Jovet-Ast & Bischler, 1976; Bisang *et al.*, 1986; Casas *et al.*, 1992.

Mi: Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Müller, 1951-1958; Allorge, 1974; Casas *et al.*, 1992, Sérgio & Schumacker, 1992; Albertos, 2001; Calleja *et al.*, 2001.

Pt: Buch, 1934.

As pointed out by Grolle (1996) the Holotype specimen is in G (nº 23501).

***Jungermannia atrovirens* Dumort.**

DL: Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b.

Mi: Sérgio & Schumacker, 1992.

***Jungermannia gracillima* Sm.**

AAl: Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.

BA: Henriques, 1883; Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Tavares & Tavares, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BB: Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

BL: Henriques, 1886; Casares, 1919; Allorge, 1935; Sérgio, 1966; Anónimo, 1969; Allorge, 1974; Werner, 1997.

DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Werner, 1997.

E: Sérgio, 1966.

Mi: Henriques, 1886; Sampaio, 1901-1902; Machado, 1913; Casares, 1919; Machado, 1920a; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Mendes, 1950; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

R: Pereira-Coutinho, 1917a.

TM: Sérgio & Schumacker, 1992.

Pt: Müller, 1951-1958.

***Jungermannia hyalina* Lyell**

IPmap: Martinez-Abaigar & Ederra, 1992.

BA: Tavares & Tavares, 1948; Sérgio, 1971a; Jovet-Ast & Bischler, 1976.

DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.

Mi: Machado, 1920a; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Tavares & Tavares, 1950a; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

R: Pereira-Coutinho, 1917a.

TM: Sérgio & Schumacker, 1992.

Pt: Müller, 1951-1958.

Jungermannia leiantha Grolle

[BL: Brotero, 1804; Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b.

Pt: Vandelli 1788].

Only reported from Coimbra (BL) by Brotero (1804) sub *Jungermannia lanceolata*. As the herbarium specimen could not be found, is to be considered as an uncertain species. Moreover, the occurrence of an arctic-alpine species at low altitudes is particularly critical. Sérgio *et al.* (2001e) suggested that this liverwort can correspond to *Chiloscyphus polyanthus* (L.) Corda.

Jungermannia obovata Nees

[DL: Jovet-Ast & Bischler, 1976].

The species was only reported from one locality and not being confirmed by herbarium material (in PC), is to be considered as uncertain. On the other hand, in that region the more frequent species is *J. sphaerocarpa*, which can also present a carrot smell as typical as the one of *J. obovata*.

Jungermannia pumila With.

IPmap: Martinez-Abaigar & Ederra, 1992.

BA: Sérgio, 1971a; Jovet-Ast & Bischler, 1976.

Mi: Machado, 1920a; Machado, 1920b; Machado, 1920c; Machado, 1925; Barros, 1944b; Sabino de Freitas, 1944a; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

Jungermannia sphaerocarpa Hook.

BA: Henriques, 1883; Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Müller, 1951-1958.

BB: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a.

BL: Brotero, 1804.

DL: Sabino de Freitas, 1948; Werner, 1997.

Mi: Machado, 1925; Sabino de Freitas, 1944a; Sérgio & Schumacker, 1992.

Kurzia pauciflora (Dicks.) Grolle

IPmap: Infante, 2000.

BL: Sérgio, 1967; Anónimo, 1967; Anónimo, 1969; Sérgio, 1971a.

TM: Sérgio & Schumacker, 1992; Infante, 2000.

Kurzia trichoclados (Müll. Frib.) Grolle

IPmap: Infante, 2000.

[Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958, Jovet-Ast & Bischler, 1976; Infante, 2000].

The herbarium material, *leg.* Nicholson, Algarve: Serra de Monchique (CGE!) is sterile and has no ecological information, so the determination is almost certainly doubtful. Probably it can be *K. pauciflora* (Sim-Sim, 1989).

Leiocolea turbinata (Raddi) H. Buch

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAL: Sérgio *et al.*, 1999a, Sérgio & Garcia, 2001b.

- BL:** Sérgio, 1971a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988.
E: Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a.
Mi: Allorge, 1974.
R: Sérgio, 1971a.
Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

***Lejeunea cavifolia* (Ehrh.) Lindb.**

- AAl:** Sérgio *et al.*, 1997b.
Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976.
BA: Sérgio, 1971a; Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAl: Sérgio *et al.*, 1999a; Sérgio & Garcia, 2001b; Sérgio *et al.*, 2002d.
BB: Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
BL: Henriques, 1886; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sá-Nogueira, 1950a; Anónimo, 1967; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.
DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Buch, 1934; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
E: Henriques, 1886; Warnstorff, 1899; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Barros, 1943; Sabino de Freitas, 1944a; Mendes, 1948; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d; Sérgio *et al.*, 1988.
Mi: Henriques, 1886; Machado, 1913; Casares, 1919; Machado, 1920a; Machado, 1925; Buch, 1934; Barros, 1944b; Sabino de Freitas, 1944a; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.
R: Sérgio *et al.*, 1988.
TM: Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992.
Pt: Sérgio *et al.*, 1987a.

***Lejeunea eckloniana* Lindenb.**

- BA:** Sérgio *et al.*, 2001d.
BL: Sim-Sim, 1989.
Mi: Sim-Sim, 1989.

The nomenclature and taxonomy of *L. eckloniana*, which occurs in tropical Africa and Macaronesia, are complex. The British authors consider this species synonym of *L. holtii*. By now, we assume that the two taxa can be different. The populations from Macaronesia seem to present larger plants, so further investigation is needed to elucidate this issue.

***Lejeunea lamacerina* (Steph.) Schiffn.**

- Ag:** Crundwell, 1956.
BL: Sérgio, 1971a; Allorge, 1974; Jovet-Ast & Bischler, 1976.
E: Jovet-Ast & Bischler, 1976.
Mi: Sérgio & Schumacker, 1992; Albertos, 2001; Calleja *et al.*, 2001.

Lejeunea mandonii (Steph.) Müll. Frib.**Ag:** Sérgio, 1970-1971.**E:** Tavares & Tavares, 1946; Müller, 1951-1958; Jovet-Ast & Bischler, 1976.*Lejeunea patens* Lindb.**BL:** Allorge, 1935; Sabino de Freitas, 1944a; Allorge, 1974.**E:** Jovet-Ast & Bischler, 1976.**Mi:** Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.**Pt:** Buch, 1934; Müller, 1951-1958.*Lepidozia reptans* (L.) Dumort.**Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.**BL:** Warnstorff, 1899; Allorge, 1974.**Mi:** Allorge, 1935; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992.**Pt:** Müller, 1951-1958.*Lophocolea* (Dumort.) Dumort.

We did not consider the taxonomic criteria used by Schumacker & Váňa (2000) that included this genus in *Chiloscyphus* Corda. Our criteria is the same of the one used by Grolle & Long (2000).

Lophocolea bidentata (L.) Dumort.**Pt:** Müller, 1951-1958.**BA:** Henriques, 1883; Henriques, 1886; Casares, 1919; Machado, 1925; Sérgio, 1967; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BB:** Sabino de Freitas, 1944a.**BL:** Brotero, 1804; Henriques, 1886; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Müller, 1951-1958; Sérgio, 1966; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.**DL:** Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.**E:** Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Barros, 1943; Sabino de Freitas, 1944a; Sérgio & Mendes, 1971b; Jovet-Ast & Bischler, 1976.**Mi:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1913; Casares, 1919; Machado, 1920a; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.**TM:** Ervideira, 1926; Sabino de Freitas, 1944a; Allorge & Allorge, 1949; Allorge, 1974; Sérgio & Schumacker, 1992.**Pt:** Sérgio *et al.*, 1987a.*Lophocolea fragrans* (Moris & De Not.) Gottsche *et al.***Eurmap:** Schumacker *et al.*, 1988a.**IPmap:** Gil & Guerra, 1982.**Ag:** Crundwell, 1956.**BL:** Allorge, 1969; Allorge, 1974.

E: Jovet-Ast & Bischler, 1976.

***Lophocolea heterophylla* (Schrad.) Dumort.**

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Sérgio, 1970-1971.

BAL: Sérgio *et al.*, 1999^a; Sérgio & Garcia, 2001b.

BB: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.

BL: Allorge, 1935; Sabino de Freitas, 1944a; Anónimo, 1969; Sérgio, 1971a; Allorge, 1974; Sérgio & Sim-Sim, 1988.

DL: Sabino de Freitas, 1948.

E: Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.

Mi: Machado, 1914a; Casares, 1919; Machado, 1920c; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Müller, 1951-1958; Allorge, 1974.

***Lophocolea minor* Nees**

DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sabino de Freitas, 1948.

Pt: Müller, 1951-1958.

Only reported from two localities (Douro Litoral: Santo Tirso and Gaia), there is no notice of more finds since 1948. Moreover, the herbarium specimen could not be found, so it can be a dubious species or one that needs to be considered almost extinct.

***Lophozia birenata* (Schmidel ex Hoffm.) Dumort.**

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Müller, 1951-1958.

BA: Sérgio, 1971a; Jovet-Ast & Bischler, 1976; Jansen *et al.*, 2000.

BA/BB: Greven & Melick, 1994.

Mi: Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

***Lophozia excisa* (Dicks.) Dumort.**

AAl: Sérgio *et al.*, 1994a; Sérgio *et al.*, 1997b.

***Lophozia longiflora* (Nees) Schiffn.**

BA: Sérgio *et al.*, 2001a.

Mi: Sérgio & Schumacker, 1992.

***Lophozia sudetica* (Nees ex Huebener) Grolle**

BA: Henriques, 1883; Henriques, 1886; Casares, 1919; Machado, 1925; Jansen, 1998.

BB: Sabino de Freitas, 1944a.

Pt: Müller, 1951-1958.

***Lophozia ventricosa* (Dicks.) Dumort.**

BA: Jansen, 1998; Sérgio *et al.*, 2001d.

BL: Allorge, 1974.

TM: Ervideira, 1926; Sabino de Freitas, 1944a; Sérgio & Séneca, 1994.

Lophozia wenzelii (Nees) Steph.**IPmap:** Casas & Infante, 1998.**BA:** Tavares & Tavares, 1948; Müller, 1951-1958; Jansen, 1994; Casas & Infante, 1998.**BA/BB:** Greven & Melick, 1994; Casas & Infante, 1998.**BB:** Jansen, 1994.*Lunularia cruciata* (L.) Lindb.**Ptmap:** Sérgio & Viana, 1973.**AAI:** Sérgio & Viana, 1973; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.**Ag:** Estácio da Veiga, 1869; Nicholson, 1913; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Sérgio & Viana, 1973; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.**BA:** Pereira-Coutinho, 1917a; Machado, 1925; Sérgio & Viana, 1973; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BAL:** Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Sérgio & Viana, 1973; Jovet-Ast & Bischler, 1976; Boisselier-Dubayle *et al.*, 1995; Sérgio *et al.*, 1999a.**BB:** Sabino de Freitas, 1944a; Sérgio & Viana, 1973.**BL:** Brotero, 1804; Henriques, 1886; Warnstorff, 1899; Machado, 1925; Sabino de Freitas, 1944a; Anônimo, 1969; Sérgio & Viana, 1973; Allorge, 1974; Sérgio *et al.*, 1988; Werner, 1997.**DL:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sabino de Freitas, 1963; Sérgio & Viana, 1973.**E:** Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Sabino de Freitas, 1948; Sá-Nogueira, 1950b; Sérgio, 1970-1971; Sérgio & Viana, 1973; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Boisselier-Dubayle *et al.*, 1995.**Mi:** Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sabino de Freitas, 1948; Tavares & Tavares, 1950a; Sérgio & Viana, 1973; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.**R:** Sérgio & Viana, 1973; Sérgio *et al.*, 1988.**TM:** Sérgio & Viana, 1973.**Pt:** Sérgio *et al.*, 1987a; Perold, 1995.*Mannia androgyna* (L.) A. Evans**Eurmap:** Müller, 1951-1958.**IPmap:** Casas *et al.*, 1996.**AAI:** Casas *et al.*, 1996; Sérgio *et al.*, 1997b.**Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1996.**BA:** Casas *et al.*, 1996; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BAL:** Sérgio, 1970-1971; Casas *et al.*, 1996; Sérgio *et al.*, 1999a.**BB:** Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Sabino de Freitas, 1948; Casas *et al.*, 1996.

- BL:** Brotero, 1804; Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sérgio *et al.*, 1988; Casas *et al.*, 1996.
- DL:** Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Casas *et al.*, 1996.
- E:** Henriques, 1886; Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Casas *et al.*, 1996.
- Mi:** Machado, 1914a; Casares, 1919; Machado, 1920a; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Casas *et al.*, 1996.
- R:** Luisier, 1910b; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1971a; Casas *et al.*, 1996.
- TM:** Casas *et al.*, 1996.
- Pt:** Sérgio *et al.*, 1987a.

Marchantia paleacea Bertol.

- [**BA:** Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1938; Sabino de Freitas, 1944b.
- BB:** Sabino de Freitas, 1944a.
- DL:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a.
- Mi:** Allorge, 1938.
- Pt:** Müller, 1951-1958.]

The only known record from Beira Alta or Beira Baixa (Serra da Estrela, *leg. R. da Cunha, 1881, LISU!*), corresponds to *M. polymorpha* L. subsp. *ruderale* Bischl. et Boisselier. The reports from Minho and Douro Litoral are to be considered as uncertain, because there is no herbarium material to confirm them.

Marchantia polymorpha L.

- AAI:** Sérgio *et al.*, 1997b.
- BA:** Henriques, 1883; Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948.
- BB:** Pereira-Coutinho, 1917a; Allorge, 1938; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sérgio, 1966.
- BL:** Brotero, 1804; Henriques, 1883; Henriques, 1886; Anónimo, 1893; Sampaio, 1901-1902; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1938; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
- DL:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1925.
- Mi:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1913; Machado, 1920a; Machado, 1925; Allorge, 1938; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sabino de Freitas, 1948; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a.
- TM:** Pereira-Coutinho, 1917a; Sérgio, 1966; Allorge, 1974; Sérgio & Schumacker, 1992.
- Pt:** Vandelli 1788.

We assume that all reports correspond to subsp. *polymorpha*, excluding the specimen sub *M. paleacea* (Serra da Estrela, *leg. R. da Cunha, 1881, LISU!*) that corresponds to *M. polymorpha* L. subsp. *ruderale* Bischl. et Boisselier.

Marchantia polymorpha* L. subsp. *ruderale* Bischl. et Boisselier.*BA:** Pereira-Coutinho, 1917a.See note under *M. paleaceae*.***Marchesinia mackaii* (Hook.) Gray****IPmap:** Casas *et al.*, 1989.**E:** Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931a; Allorge, 1938; Sabino de Freitas, 1944a; Müller, 1951-1958; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1989.**[Mi:** Mendes, 1950; Sim-Sim, 1989].The Portuguese populations of *M. mackaii* are restricted to Estremadura, Serra de Sintra. Althought it was recorded also in Minho, Gerês, by Mendes (1950), there are no herbarium specimens to confirm it in this area.***Marsupella adusta* (Nees emend. Limpr.) Spruce****BA:** Sérgio & Váña, 1994.***Marsupella alpina* (Gottsche ex Husn.) Bernet****[BA/BB:** Müller, 1951-1958].

It was only recorded by Müller (1951-58), without locality or date, so not being supported by herbarium specimens, is to be considered an uncertain species in Portugal.

Marsupella emarginata* (Ehrh.) Dumort.*AAI:** Sérgio *et al.*, 1997b.**Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Guerra *et al.*, 1981.**BA:** Henriques, 1883; Henriques, 1886; Anónimo, 1901; Machado, 1925; Mendes, 1948; Tavares & Tavares, 1948; Müller, 1951-1958; Allorge, 1974; Jovet-Ast & Bischler, 1976; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BB:** Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.**BL:** Henriques, 1886; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Allorge, 1974; Jovet-Ast & Bischler, 1976.**DL:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sérgio, 1967; Jovet-Ast & Bischler, 1976; Werner, 1997.**Mi:** Brotero, 1804; Welwitsch, 1872; Henriques, 1886; Machado, 1913; Machado, 1917a; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Buch, 1937; Barros, 1944b; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sabino de Freitas, 1948; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.**TM:** Ervideira, 1926; Sabino de Freitas, 1944a; Sérgio & Schumacker, 1992.**Pt:** Müller, 1951-1958.We have included *Marsupella aquatica* in the broad sense of *M. emarginata*.***Marsupella funckii* (F. Weber & D. Mohr) Dumort.****BA:** Sérgio & Váña, 1994.

Mi: Machado, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Tavares & Tavares, 1950b; Sérgio & Schumacker, 1992.

TM: Sérgio & Schumacker, 1992.

Pt: Müller, 1951-1958.

***Marsupella profunda* Lindb.**

IPmap: Casas *et al.*, 1989; Sérgio & Draper 2002b.

Ptmap: Sérgio *et al.*, 1994c.

AAl: Sérgio *et al.*, 1997b; Sérgio & Pierrot, 1997.

BA: Sérgio, 1971b; Casas *et al.*, 1989; Sérgio & Pierrot, 1997.

DL: Sim-Sim & Sérgio, 1994.

Mi: Henriques, 1886; Lindberg, 1887 (*Orig. descrip.*), Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1971b; Grolle, 1976; Casas *et al.*, 1989.

TM: Sérgio & Schumacker, 1992.

Pt: Grolle, 1975; Paton, 1990; Church *et al.*, 2001.

As pointed out by Grolle (1976) the Holotypus specimen is in (H-SOL) and the Isotype in (COI!) by (Sérgio, 1971b).

***Marsupella sphacelata* (Gieseke ex Lindenb.) Dumort.**

Ag: Jovet-Ast & Bischler, 1976.

BA: Henriques, 1883; Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944b; Müller, 1951-1958; Jovet-Ast & Bischler, 1976; Jansen & Sequeira, 1999.

BA/BB: Greven & Melick, 1994.

BB: Casares, 1919; Sabino de Freitas, 1944a.

DL: Jovet-Ast & Bischler, 1976.

Mi: Tavares & Tavares, 1950a; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

TM: Ervideira, 1926; Sabino de Freitas, 1944a.

***Marsupella sprucei* (Limpr.) Bernet**

BA: Sérgio & Váňa, 1994.

***Metzgeria conjugata* Lindb.**

BL: Allorge, 1928a; Allorge, 1931a; Sabino de Freitas, 1944a; Müller, 1951-1958; Sérgio, 1966; Sérgio, 1971a; Allorge, 1974; Sérgio & Sim-Sim, 1988.

E: Buch, 1937; Sabino de Freitas, 1944a; Müller, 1951-1958; Sérgio, 1966.

Mi: Mendes, 1950; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.

***Metzgeria furcata* (L.) Dumort.**

AAl: Jones, 1999.

Ag: Nicholson, 1913; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Jones, 1999.

BA: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Calleja *et al.*, 2001.

BL: Brotero, 1804; Henriques, 1886; Sampaio, 1901-1902; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Sabino de Freitas, 1948;

Allorge, 1974; Jovet-Ast & Bischler, 1976; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Werner, 1997; Jones, 1999.

DL: Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

E: Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988; Jones, 1999.

Mi: Henriques, 1886; Sampaio, 1901-1902; Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1925; Buch, 1937; Barros, 1944b; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sabino de Freitas, 1948; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992; Jones, 1999; Albertos, 2001; Calleja *et al.*, 2001.

TM: Sérgio & Schumacker, 1992; Jones, 1999.

Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

Microlejeunea ulicina (Taylor) A. Evans

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958.

BB: Calleja *et al.*, 2001.

BL: Allorge, 1974.

E: Sá-Nogueira, 1950b; Jovet-Ast & Bischler, 1976.

Mi: Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1948; Tavares & Tavares, 1950a; Müller, 1951-1958; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos, 2001; Calleja *et al.*, 2001.

Pt: Buch, 1934.

Nardia compressa (Hook.) Gray

DL: Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Jovet-Ast & Bischler, 1976.

Mi: Pereira-Coutinho, 1917a; Machado, 1925; Barros, 1944b; Sabino de Freitas, 1944a; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Müller, 1951-1958; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

TM: Sérgio & Schumacker, 1992.

Nardia geoscyphus (De Not.) Lindb

Mi: Sérgio, 2001a.

Nardia scalaris Gray

AAl: Sérgio *et al.*, 1997b.

Ag: Crundwell, 1956.

BA: Sérgio, 1967; Jovet-Ast & Bischler, 1976.

BA/BB: Greven & Melick, 1994.

BL: Henriques, 1886; Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1974.

DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.

Mi: Machado, 1925; Sabino de Freitas, 1944a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

R: Sérgio, 1971a.

Pt: Allorge, 1938; Müller, 1951-1958.

Oxymitra incrassata (Brot.) Sérgio & Sim-Sim**Medmap:** Jovet-Ast *et al.*, 1976.**IPmap:** Casas *et al.*, 1989; Sérgio & Draper, 2002a.**AA:** Luisier, 1910b; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1989; Sérgio *et al.*, 1997b.**Ag:** Luisier, 1910b; Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1989.**BA:** Machado, 1925; Sabino de Freitas, 1944a; Casas *et al.*, 1989; Sérgio *et al.*, 2001d.**BAI:** Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1989; Sérgio *et al.*, 1999a.**BB:** Sérgio, 1967; Casas *et al.*, 1989.**BL:** Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Allorge, 1974; Sérgio *et al.*, 1988; Casas *et al.*, 1989.**E:** Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Casas *et al.*, 1989; Sérgio & Sim-Sim, 1989.**R:** Sérgio, 1966; Sérgio *et al.*, 1988; Casas *et al.*, 1989.**Pt:** Brotero, 1804 (*Orig. descrip.*), Lindenberg, 1829; Lindenberg, 1836; Müller, 1951-1958 Sérgio *et al.*, 1987a.

As pointed out by Sérgio & Sim-Sim (1989) the Neotype specimen is in (LISU!).

Pallavicinia lyellii (Hook.) Carruth**IPmap:** Elias, 1987; Gil & Castro, 1987.**Ag:** Henriques, 1886.**BA:** Sérgio, 2001a.**BL:** Machado, 1925; Sabino de Freitas, 1944a; Anônimo, 1967; Jovet-Ast & Bischler, 1976; Sérgio, 2001a.**DL:** Sabino de Freitas, 1948.**E:** Luisier, 1910b; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Müller, 1951-1958; Jovet-Ast & Bischler, 1976; Sérgio, 2001a.*Pellia endiviifolia* (Dicks.) Dumort.**Ag:** Nicholson, 1913; Machado, 1925; Sabino de Freitas, 1944a; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.**BA:** Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944b.**BB:** Sabino de Freitas, 1944a.**BL:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Allorge, 1974.**DL:** Luisier, 1910b; Sabino de Freitas, 1948.**Mi:** Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.**R:** Sérgio, 1971a; Sérgio *et al.*, 1988.**TM:** Allorge & Allorge, 1949.**Pt:** Müller, 1951-1958; Sérgio *et al.*, 1987a.

Pellia epiphylla (L.) Corda**AA:** Sérgio *et al.*, 1997b.**BA:** Sérgio, 1967; Sérgio *et al.*, 2001d.**BA/BB:** Greven & Melick, 1994.**BB:** Sérgio, 1966; Sérgio *et al.*, 2002c.**BL:** Brotero, 1804; Henriques, 1886; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sá-Nogueira, 1950a; Anónimo, 1967; Anónimo, 1969; Allorge, 1974; Leitão *et al.*, 1996.**DL:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Werner, 1997.**E:** Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.**Mi:** Luisier, 1910b; Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Allorge, 1935; Buch, 1937; Allorge, 1941; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992.**TM:** Sérgio & Schumacker, 1992.**Pt:** Müller, 1951-1958.*Pellia neesiana* (Gottsche) Limpr.**Mi:** Sérgio & Séneca, 1994.*Petalophyllum ralfsii* (Wilson) Nees & Gottsche**IPmap:** Sim-Sim *et al.*, 2000b.**Ag:** Sim-Sim *et al.*, 2000b; Sim-Sim *et al.*, 2000c.**E:** Sérgio, 2002d.*Phaeoceros bulbiculosus* (Brot.) Prosk.**IPmap:** Casas *et al.*, 1996.**AA:** Sérgio, 1967; Allorge, 1974; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996; Sérgio *et al.*, 1997b.**Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1931a; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Guerra *et al.*, 1981; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1996; Jiménez *et al.*, 2002.**BA:** Casas *et al.*, 1996; Sérgio *et al.*, 2001d.**BAI:** Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996; Sérgio *et al.*, 1999a.**BB:** Sérgio, 1966; Casas *et al.*, 1996; Sérgio *et al.*, 2002c.**BL:** Brotero, 1804 (*Orig. descrip.*), Henriques, 1886; Warnstorff, 1899; Sampaio, 1901-1902; Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Müller, 1951-1958; Proskauer, 1954; Allorge, 1974; Grolle, 1976; Sérgio *et al.*, 1988; Casas *et al.*, 1996.**DL:** Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Casas *et al.*, 1996.**E:** Barros, 1943; Sérgio & Correia, 1981; Sérgio *et al.*, 1988; Casas *et al.*, 1996.**Mi:** Henriques, 1886; Machado, 1920c; Machado, 1925; Sabino de Freitas, 1944a; Sérgio & Schumacker, 1992; Casas *et al.*, 1996.

R: Sérgio, 1971a; Casas *et al.*, 1996.

TM: Sérgio, 1966; Casas *et al.*, 1996.

Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

Proskauer (1954) selected the Neotype (UC 985943). The Isotype is in (COI!) according to Casas *et al.*, 1996.

***Phaeoceros carolinianus* (Michx.) Prosk.**

AAI: Sérgio *et al.*, 1997b.

BAL: Sim-Sim, 1989.

BL: Proskauer, 1959.

Mi: Sérgio & Schumacker, 1992.

Despite being considered as a subspecies or a variety of *P. laevis*, this taxon has received the status of distinct species. Consequently its total distribution is poorly known.

***Phaeoceros laevis* (L.) Prosk.**

Wmap: Sérgio, 1990.

AAI: Sérgio, 1967; Jovet-Ast & Bischler, 1976.

Ag: Allorge, 1931a; Sabino de Freitas, 1944a; Crundwell, 1956; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Sabino de Freitas, 1948; Sérgio, 1967.

BAL: Pereira-Coutinho, 1917a; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1999a.

BB: Sim-Sim, 1989.

BL: Brotero, 1804; Machado, 1925; Sabino de Freitas, 1944a; Proskauer, 1959; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

E: Brotero, 1804; Nicholson, 1913; Pereira-Coutinho, 1917a; Machado, 1925; Barros, 1943; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a.

Mi: Sampaio, 1901-1902; Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Mendes, 1950; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992.

R: Pereira-Coutinho, 1917a.

***Plagiochasma rupestre* (J. R. Forst. et G. Forst.) Steph.**

IPmap: Casas *et al.*, 1985.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Allorge & Jovet-Ast, 1958; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Casas *et al.*, 1985; Sérgio *et al.*, 1987a.

BA: Sérgio *et al.*, 2001d.

BB: Sérgio, 1967; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1985.

BL: Bischler, 1978.

DL: Bischler, 1978.

E: Casas *et al.*, 1985; Sérgio & Sim-Sim, 1985a.

Pt: Müller, 1951-1958.

Plagiochila asplenoides (L. emend. Taylor) Dumort.

All reports of its occurrence must be considered erroneous and may belong to *P. poreloides* (Sim-Sim, 1989). Further investigation is needed.

Plagiochila bifaria (Sw.) Lindbenb.

E: Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Grolle & Schumacker, 1982.

Pt: Müller, 1951-1958.

In Portugal it was only recorded in Estremadura, Serra de Sintra and Serra de Montejunto, and was published under different older names, being the latest *P. killarniensis*.

Plagiochila poreloides (Torrey ex Nees) Lindenb.

BA: Casares, 1919; Machado, 1925; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BB: Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976

DL: Casares, 1919; Jovet-Ast & Bischler, 1976.

E: Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.

Mi: Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

TM: Allorge & Allorge, 1949; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

Pt: Vandelli 1788; Müller, 1951-1958.

All reports sub *P. asplenoides*, must be included in *P. poreloides*, according to Söderström *et al.* (2002) who established the status of this complex in Europe.

Plagiochila punctata (Taylor) Taylor

IPmap: Infante, 2000.

[**E:** Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a].

Mi: Machado, 1920a; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992; Infante, 2000].

Pt: Müller, 1951-1958.

Based on some taxonomic revisions, we assume that the reports of this species from Estremadura correspond to *P. bifaria*. The Minho and Trás-os-Montes reports need further investigation. See note under *P. bifaria*.

Plagiochila spinulosa (Dicks.) Dumort.

[**Mi:** Machado, 1914a; Casares, 1919; Machado, 1920a; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a.

TM: Sim-Sim, 1989].

The different records need to be revised.

Porella arboris-vitae (With.) Grolle

Ag: Machado, 1925.

BA: Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944a.

BL: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.

DL: Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a.

E: Nicholson, 1913; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.

Mi: Henriques, 1886; Machado, 1913; Machado, 1925; Sabino de Freitas, 1944a; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a.

Pt: Müller, 1951-1958.

Porella arboris-vitae and *P. canariensis* are often confused, especially in older literature. This last species seems to have a more restricted distribution in Portugal, being confined perhaps only to Estremadura. Therefore we believe that all reports should be revised.

***Porella canariensis* (F. Weber) Underw.**

Ag: Müller, 1951-1958.

BL: Allorge, 1931a; Müller, 1951-1958; Allorge, 1974; Jovet-Ast & Bischler, 1976.

E: Machado, 1920b; Allorge, 1931a; Sabino de Freitas, 1944a; Sim-Sim, 1989.

Pt: Sérgio *et al.*, 1987a; Boisselier-Dubayle & Bischler, 1994.

See note for *Porella arboris-vitae* and *P. obtusata*.

***Porella cordaeana* (Huebener) Moore**

BA: Tavares & Tavares, 1950b; Sérgio, 1966; Jovet-Ast & Bischler, 1976;

BA/BB: Greven & Melick, 1994.

Mi: Sérgio & Schumacker, 1992.

TM: Sérgio & Schumacker, 1992.

Pt: Müller, 1951-1958.

***Porella obtusata* (Taylor) Trevis.**

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Sim-Sim, 1989.

BA: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sérgio *et al.*, 2001d.

BL: Henriques, 1886; Nicholson, 1913; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; , Sim-Sim, 1989; Werner, 1997.

DL: Henriques, 1886; Sampaio, 1901-1902; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

E: Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Sabino de Freitas, 1948; Sá-Nogueira, 1950b; Allorge, 1974; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Mi: Sampaio, 1901-1902; Luisier, 1910b; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Buch, 1934; Barros, 1944b; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sá-Nogueira, 1950c; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos, 2001; Calleja *et al.*, 2001.

TM: Ervideira, 1926; Sabino de Freitas, 1944a.

Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a; Boisselier-Dubayle & Bischler, 1994.

Several records of this species are now known to be based on erroneous determinations of *P. canariensis*, such as the specimen of Monchique, *leg.* Nicholson (see Sim-Sim, 1989).

Porella pinnata L.

Mi: Luisier, 1910b; Machado, 1913; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1920a; Machado, 1925; Allorge, 1938; Sabino de Freitas, 1944a; Müller, 1951-1958; Sérgio *et al.*, 2001e.

This species is certainly extinct (Sérgio *et al.*, 2001e).

Porella platyphylla (L.) Pfeiff.

BA/BB: Greven & Melick, 1994.

BB: Luisier, 1910b; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.

BL: Brotero, 1804; Henriques, 1886; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988.

DL: Sim-Sim, 1989.

E: Luisier, 1910b; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio *et al.*, 1988.

Mi: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

TM: Allorge, 1935; Allorge & Allorge, 1949; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

Pt: Sérgio *et al.*, 1987a.

Preissia quadrata (Scop.) Nees

IPmap: Casas *et al.*, 1992.

Mi: Buch, 1937; Allorge, 1938; Sabino de Freitas, 1944a; Casas *et al.*, 1992.

TM: Sérgio *et al.*, 1997a; Sérgio *et al.*, 2001e.

Pt: Müller, 1951-1958.

Radula aquilegia (Hook. f. & Taylor) Gottsche *et al.*

IPmap: Martinez-Abaigar & Ederra, 1992.

[BL: Henriques, 1886; Sampaio, 1901-1902; Sabino de Freitas, 1944a.

DL: Henriques, 1886; Machado, 1925.

Mi: Sérgio, 2001a].

Pt: Müller, 1951-1958.

After recent revision of the different herbarium specimens (*comm.* Luis, 2002) all Portuguese reports corresponds to *Radula complanata* or *R. lindenbergiana*. It seems that this species must be excluded.

Radula complanata (L.) Dumort.

AAl: Sérgio *et al.*, 1997b.

Ag: Estácio da Veiga, 1869; Nicholson, 1913; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931a; Allorge, 1935; Allorge, 1974; Jones, 1999.

BA: Pereira-Coutinho, 1917a; Machado, 1925; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAl: Sérgio *et al.*, 1999a, Sérgio & Garcia, 2001b.

BB: Sabino de Freitas, 1944a; Calleja *et al.*, 2001.

BL: Brotero, 1804; Henriques, 1886; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sá-Nogueira, 1950a; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988; Jones, 1999.

DL: Henriques, 1886; Sampaio, 1901-1902; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

E: Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931a; Barros, 1943; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sá-Nogueira, 1950b; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio *et al.*, 1988; Jones, 1999.

Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1920a; Machado, 1925; Barros, 1944b; Sabino de Freitas, 1944a; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992; Jones, 1999; Albertos, 2001; Calleja *et al.*, 2001.

R: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Jones, 1999.

TM: Allorge & Allorge, 1949.

Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

Included in the same complex, *R. complanata* and *R. lindenbergiana* were separated as varieties or subspecies by Schuster (1980). The distribution is unclear if based in old reports or sterile material. After recent revision of Portuguese collections (*comm.* Luis, 2002), it seems that *R. lindenbergiana* is the more frequent species.

Radula holtii Spruce

Eurmap: Allorge, 1931c.

IPmap: Allorge, 1947.

Mi: Machado, 1925; Allorge, 1931c; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Tavares & Tavares, 1950a; Castle, 1967; Sérgio & Schumacker, 1992; Sérgio *et al.*, 2001e.

Pt: Müller, 1951-1958.

This species is certainly extinct (Sérgio *et al.* 2001e).

Radula lindenbergiana Gottsche ex C. Hartm.

Ptmap: Sim-Sim & Sérgio, 1998.

AAl: Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976.

BA: Sérgio *et al.*, 2001d.

BAl: Sérgio *et al.*, 2002d.

BB: Catarino *et al.*, 1987.

BL: Henriques, 1886; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976; Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio & Sim-Sim, 1988.

DL: Henriques, 1886; Sabino de Freitas, 1948.

E: Henriques, 1886; Casares, 1919; Machado, 1925; Barros, 1943; Sabino de Freitas, 1944a; Mendes, 1948; Sabino de Freitas, 1948; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio, 1981; Sérgio & Sim-Sim, 1985a; Sérgio & Sim-Sim, 1985d, Sérgio *et al.*, 1988.

Mi: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992; Albertos, 2001.

R: Catarino *et al.*, 1987; Sérgio *et al.*, 1988; Sérgio *et al.*, 1998d.

Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

See note under *R. complanata*.

Reboulia hemisphaerica* (L.) Raddi*IPmap (Marocco):** Allorge & Jovet-Ast, 1958.**AAI:** Sérgio *et al.*, 1997b.**Ag:** Nicholson, 1913; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.**BA:** Sérgio, 1966; Sérgio, 1967; Sérgio *et al.*, 2001d.**BB:** Sabino de Freitas, 1948; Sérgio, 1967.**BA/BB:** Greven & Melick, 1994.**BL:** Brotero, 1804; Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988; Boisselier-Dubayle *et al.*, 1998.**DL:** Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.**E:** Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Sabino de Freitas, 1948; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Schuster, 1992, Boisselier-Dubayle *et al.*, 1998.**Mi:** Henriques, 1886; Machado, 1913; Machado, 1920a; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.**R:** Sérgio, 1971a; Sérgio *et al.*, 1988; Boisselier-Dubayle *et al.*, 1998.**TM:** Allorge, 1974.**Pt:** Vandelli 1788; Sérgio *et al.*, 1987a.

The subsp. *paradoxa* described by Schuster (1992) for Portugal, Sintra (Holotype, RMS 85-1242- Type), is not supported by cytological and isozyme evidences. According to Boisselier-Dubayle *et al.*, (1998) this taxon “belongs to *R. hemisphaerica* strict sense”.

Riccardia chamaedryfolia* (With.) Grolle*Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.**BL:** Sérgio, 1966; Allorge, 1974; Sérgio, 2001a.**E:** Sabino de Freitas, 1948; Sérgio, 1966.**Mi:** Machado, 1918a; Machado, 1920a; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.**TM:** Allorge, 1974.**Pt:** Müller, 1951-1958.***Riccardia latifrons* (Lindb.) Lindb.****[E:** Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Jovet-Ast & Bischler, 1976].**Mi:** Casares, 1919; Tavares & Tavares, 1950b; Jovet-Ast & Bischler, 1976], Sim-Sim 1989; Sérgio & Schumacker, 1992.

The herbarium specimen from Cabo da Roca, leg. Welwitsch (LISU) is the only report from Estremadura but corresponds to *Phaeoceros bulbiculosus*. The other report (Tavares & Tavares, 1950b) leg. Luisier in Minho, Serra do Gerês, is *R. multifida*. The only correct report corresponds to Gerês, leg. Larose (PO!) according to Sim-Sim (1989) and Sérgio & Schumacker (1992).

Riccardia multifida (L.) Gray

- BA:** Sabino de Freitas, 1948.
BB: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925.
BL: Sabino de Freitas, 1944a; Sérgio, 1971a.
DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
E: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Sim-Sim, 1989.
Mi: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.
Pt: Müller, 1951-1958.

Riccia atromarginata Levier

- Medmap:** Jovet-Ast *et al.*, 1976; Jovet-Ast, 1986.
Ag: Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
E: Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a.

Riccia beyrichiana Hampe ex Lehm.

- IPmap:** Jovet-Ast, 1986.
AAl: Jovet-Ast & Bischler, 1976.
Ag: Nicholson, 1913; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Allorge & Casas de Puig 1958; Jovet-Ast & Bischler, 1976; Sim-Sim, 1989.
BA: Jansen & Sequeira, 1999.
BAI: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1999a.
BL: Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988.
E: Sérgio, 1966; Jovet-Ast & Bischler, 1976.
Pt: Müller, 1951-1958; Allorge & Jovet-Ast, 1958; Sérgio *et al.*, 1987a.

Riccia bicarinata Lindb.

- IPmap:** Casas *et al.*, 1996.
IPmap (Marocco): Allorge & Jovet-Ast, 1958.
AAl: Sérgio, 1967; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996; Sérgio *et al.*, 1997b.
Ag: Müller, 1951-1958; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1996.
BAl: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996.
BB: Sérgio, 1967; Casas *et al.*, 1996.
BL: Levier, 1894; Casares, 1919; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988; Casas *et al.*, 1996.
DL: Machado, 1925.
E: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Müller, 1951-1958; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Casas *et al.*, 1996.
R: Sérgio, 1967; Casas *et al.*, 1996.
Pt: Sérgio *et al.*, 1987a.

Described and iconographied from Portugal by Levier (1894) as *R. henriquesii*, this taxon was subsequently considered as a synonym of *R. bicarinata* (Jovet-Ast, 1986).

Riccia bifurca Hoffm.

- AAL:** Sérgio *et al.*, 1997b.
Ag: Sérgio, 1970-1971; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BAL: Sérgio *et al.*, 1999a.
BB: Sérgio, 1967.
BL: Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a.
DL: Sabino de Freitas, 1948.
E: Sérgio & Correia, 1981.
R: Sérgio, 1971a.
Pt: Müller, 1951-1958.

Riccia canaliculata Hoffm.

- Mi:** Machado, 1925; Sabino de Freitas, 1944a; Sim-Sim, 1989.
Ag: Allorge & Jovet-Ast, 1958; Jovet-Ast & Bischler, 1976.
The herbarium specimen of *R. fluitans* fo. *terrestris* (PO!) gathered by Machado (Minho: Paredes de Coura, 1920), corresponds to *R. canaliculata*. On the other hand, the material from near Coimbra, *leg.* Pinheiro (COI!) is in fact *R. fluitans* (see Sim-Sim, 1989). The delimitation of these species remains an unsolved problem (Jovet-Ast, 1986).

Riccia cavernosa Hoffm.

- IPmap:** Infante, 2000.
BAL: Jovet-Ast & Bischler, 1976; Infante, 2000.

Riccia ciliata Hoffm.

- IPmap (Marocco):** Allorge & Jovet-Ast, 1958.
Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.
BAL: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976.
BB: Pereira-Coutinho, 1917a; Sérgio *et al.*, 2002c.
BL: Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1966; Sérgio *et al.*, 1988.
DL: Jovet-Ast & Bischler, 1976.
E: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Henriques, 1886; Machado, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

Riccia ciliifera Link ex Lindenb.

- Eurmap:** Müller, 1951-1958.
IPmap: Gil & Castro, 1987.
IPmap (Marocco): Allorge & Jovet-Ast, 1958.
AAL: Luisier, 1910b; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Allorge, 1974; Sérgio *et al.*, 1997b.
Ag: Allorge, 1974.
BA: Jovet-Ast & Bischler, 1976.
BA/BB: Greven & Melick, 1994.
BAL: Jovet-Ast & Bischler, 1976.

BB: Sérgio, 1967.

BL: Sabino de Freitas, 1948; Allorge, 1974; Sérgio *et al.*, 1988.

DL: Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944a.

E: Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Mendes, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988.

Mi: Sampaio, 1901-1902; Casares, 1919; Jovet-Ast & Bischler, 1976.

R: Sérgio, 1967.

TM: Lindberg, 1829 (*Orig. descrip.*), Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Allorge, 1974; Grolle, 1976, Jovet-Ast, 1986.

Pt: Sérgio *et al.*, 1987a.

As pointed out by Grolle (1976) and Jovet-Ast (1986) the specimen (Holotype W) corresponds to a gathering of Link in Trás-os-Montes, Fradizela.

Riccia crinita Taylor

IPmap: Gil & Castro, 1987.

AAI: Jovet-Ast & Bischler, 1976; Jovet-Ast, 1983; Sérgio *et al.*, 1997b.

BAL: Jovet-Ast & Bischler, 1976.

BB: Sérgio *et al.*, 2002c.

E: Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

R: Sérgio & Mendes, 1971a; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

Recently, Jovet-Ast (2000) synonymised *Riccia canescens* and *R. trichocarpa* to *R. crinita*.

Riccia crozalsii Levier

Ag: Nicholson, 1913; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Sim-Sim, 1989.

BA: Sérgio, 1967.

BAL: Jovet-Ast & Bischler, 1976.

BB: Sérgio *et al.*, 2002c.

BL: Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988.

E: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

See note under *R. ligula*.

Riccia crystallina L. emend. Raddi

AAI: Sérgio, 1967.

Ag: Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAL: Jovet-Ast & Bischler, 1976.

BL: Brotero, 1804; Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast, 1964; Sérgio, 1967; Jovet-Ast & Bischler, 1976.

DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

E: Sampaio, 1901-1902; Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976.

Mi: Sabino de Freitas, 1944a.

Pt: Müller, 1951-1958.

***Riccia duplex* Lorb.**

[**AAI:** Sim-Sim, 1989].

BAI: Jovet-Ast & Bischler, 1976.

The only report for Portugal (Jovet-Ast & Bischler, 1976) correspond to two localities in Baixo Alentejo. The indication for Alto Alentejo is considered to be uncertain.

***Riccia fluitans* L.**

Ag: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.

BL: Henriques, 1886; Sampaio, 1901-1902; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sim-Sim, 1989.

DL: Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.

E: Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.

Mi: Sampaio, 1901-1902; Machado, 1925.

R: Pereira-Coutinho, 1917a.

See note under *Riccia canaliculata*.

***Riccia glauca* L.**

Ag: Estácio da Veiga, 1869; Casares, 1919; Müller, 1951-1958.

BL: Brotero, 1804; Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Sérgio, 1967.

DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.

E: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.

Mi: Machado, 1914a; Machado, 1918a; Machado, 1920a; Machado, 1925; Sabino de Freitas, 1944a.

Schuster (1992) considered *R. minutissima* Steph. pro parte = *Riccia bifurca* and. pro parte = *Riccia glauca*. So it is probable that the material reported as *Riccia minutissima* Steph. (Beira Litoral: arredores de Coimbra, Moller) could belong to *R. glauca*.

***Riccia gougetiana* Durieu & Mont.**

Eurmap: Müller, 1951-1958.

IPmap (Marocco): Allorge & Jovet-Ast, 1958.

Ptmap: Sérgio & Mendes, 1971a.

AAI: Sérgio & Mendes, 1971a; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Machado, 1925; Sabino de Freitas, 1944a; Allorge & Jovet-Ast, 1958; Sérgio, 1970-1971; Sérgio & Mendes, 1971a; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BA: Allorge, 1974.

BAI: Sérgio, 1970-1971; Sérgio & Mendes, 1971a; Jovet-Ast & Bischler, 1976.

BB: Sérgio, 1967; Sérgio & Mendes, 1971a; Sérgio *et al.*, 2002c.

- BL:** Sérgio, 1966; Sérgio & Mendes, 1971a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988.
DL: Sérgio & Mendes, 1971a.
E: Pereira-Coutinho, 1917a; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Sérgio & Mendes, 1971a; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Jovet-Ast & Bischler, 1976.
R: Sérgio, 1966; Sérgio & Mendes, 1971a; Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

***Riccia huebeneriana* Lindenb.**

- BL:** Henriques, 1886; Casares, 1919; Machado, 1925; Anónimo, 1967; Sabino de Freitas, 1944a; Sérgio, 2002c.
Mi: Henriques, 1886; Machado, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
Pt: Müller, 1951-1958; Allorge & Jovet-Ast, 1958.

***Riccia lamellosa* Raddi**

- IPmap (Marocco):** Allorge & Jovet-Ast, 1958.
AAL: Jovet-Ast & Bischler, 1976.
Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BAI: Jovet-Ast & Bischler, 1976.
BL: Sérgio, 1971a.
DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
E: Henriques, 1886; Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
[Mi: Casares, 1919; Sim-Sim, 1989].
R: Sabino de Freitas, 1944a.
Pt: Sérgio *et al.*, 1987a.

The report of its occurrence in Minho by Casares (1919) and Sim-Sim (1989) could not be considered, because of the incorrect location of Porto city in Minho region by this author instead of Douro Litoral.

***Riccia ligula* Steph.**

- [Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b; Allorge & Jovet-Ast, 1958; Sim-Sim, 1989.
Pt: Müller, 1951-1958.]

The only Portuguese specimen, which was collected by Nicholson, in Algarve during 1911 (CGE), corresponds to a mixed material of *Riccia crozalsii* and *R. michelii* (see Sim-Sim, 1989).

***Riccia macrocarpa* Levier**

- Wmap:** Sérgio, 1992.
Medmap: Allorge & Jovet-Ast, 1958; Jovet-Ast *et al.*, 1976; Jovet-Ast, 1986.
IPmap: Sérgio, 1992; Casas *et al.*, 1992.

- AAI:** Allorge, 1974; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992, Sérgio, 1992; Sérgio *et al.*, 1997b.
Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Crundwell, 1960; Sérgio, 1970-1971; Allorge, 1974; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992.
BAL: Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992, Sérgio, 1992.
BB: Sérgio, 1971a; Casas *et al.*, 1992, Sérgio, 1992.
BL: Sérgio, 1971a; Allorge, 1974; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
E: Sérgio, 1971a; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Casas *et al.*, 1992, Sérgio, 1992.
Mi: Jovet-Ast & Bischler, 1976.
R: Sérgio *et al.*, 1988; Casas *et al.*, 1992.
TM: Casas *et al.*, 1992.
Pt: Sérgio *et al.*, 1987a.

Riccia michelii Raddi

- Ag:** Sim-Sim, 1989; Sérgio *et al.*, 1987a.
BA: Sérgio *et al.*, 2001d.
BL: Sérgio *et al.*, 1988.
E: Sérgio, 1971a; Jovet-Ast & Bischler, 1976.
Pt: Sérgio *et al.*, 1987a.

See note in *R. ligula*.

Riccia nigrella DC.

- IPmap:** Casas *et al.*, 1992.
AAI: Tavares & Tavares, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992; Sérgio *et al.*, 1997b.
Ag: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Casas *et al.*, 1992.
BA: Casas *et al.*, 1992, Sérgio *et al.*, 2001d.
BA/BB: Greven & Melick, 1994.
BAL: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992.
BB: Casas *et al.*, 1992.
BL: Machado, 1925; Sabino de Freitas, 1944a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1992.
E: Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Casas *et al.*, 1992.
R: Casas *et al.*, 1992.
TM: Allorge, 1974; Casas *et al.*, 1992.
Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a; Perold & Volk, 1988.

Riccia papillosa Moris

- IPmap:** Casas *et al.*, 1992, Sérgio *et al.*, 1994c.
AAI: Allorge, 1967; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996; Sérgio *et al.*, 1997b.
Ag: Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996.

BAl: Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996.

BB: Casas *et al.*, 1996.

***Riccia perennis* Steph.**

Medmap: Jovet-Ast & Bischler, 1970; Jovet-Ast *et al.*, 1976; Jovet-Ast, 1986.

IPmap: Casas *et al.*, 1996.

AAI: Sérgio *et al.*, 1994d; Casas *et al.*, 1996; Sérgio *et al.*, 1997b.

Ag: Allorge, 1931a; Allorge, 1930a; Sabino de Freitas, 1944b; Mendes, 1951; Jovet-Ast & Bischler, 1970; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996.

BAl: Jovet-Ast & Bischler, 1970; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1996.

BB: Sérgio *et al.*, 2001c; Sérgio *et al.*, 2002c.

R: Casas *et al.*, 1996.

***Riccia sommieri* Levier**

Medmap: Jovet-Ast *et al.*, 1976; Jovet-Ast, 1986.

Ptmap: Sérgio & Mendes, 1971a.

AAI: Allorge, 1967; Sérgio & Mendes, 1971a; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAl: Sérgio & Mendes, 1971a; Jovet-Ast & Bischler, 1976.

BB: Sérgio & Mendes, 1971a.

BL: Sérgio & Mendes, 1971a; Sérgio *et al.*, 1988.

E: Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.

Pt: Sérgio *et al.*, 1987a.

***Riccia sorocarpa* Bisch.**

IPmap (Marocco): Allorge & Jovet-Ast, 1958.

AAI: Sérgio, 1967; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BAl: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976.

BB: Sérgio *et al.*, 2002c.

BL: Henrques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1966; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988.

DL: Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.

E: Sabino de Freitas, 1944a; Sérgio, 1970-1971; Sérgio, 1971a; Jovet-Ast & Bischler, 1976; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Sérgio & Tauleigne Gomes, 2001.

Mi: Machado, 1920c; Machado, 1925; Sabino de Freitas, 1944a.

R: Sérgio, 1966; Sérgio, 1971a; Sérgio *et al.*, 1988.

Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

***Riccia subbfurca* Warnst. ex Croz.**

Ag: Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

***Riccia trabutiana* Steph.**

Medmap: Jovet-Ast *et al.*, 1976; Jovet-Ast, 1986.

Ag: Allorge, 1967; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BB: Sérgio, 1967.

BL: Sérgio *et al.*, 1988.

E: Allorge, 1967; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a.

Pt: Sérgio *et al.*, 1987a; Perold & Volk, 1988.

Riccia warnstorffii Limpr. ex Warnst.

Ag: Crundwell, 1956; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984.

BA: Sérgio *et al.*, 2001d.

BB: Sérgio *et al.*, 2002c.

BL: Sérgio, 1967; Jovet-Ast & Bischler, 1976.

Mi: Sérgio, 1971a; Jovet-Ast & Bischler, 1976.

Riella helicophylla (Bory & Mont.) Mont.

IPmap: Guerra *et al.*, 1986; Sim-Sim *et al.*, 2000b.

Ag: Tavares & Tavares, 1952; Guerra *et al.*, 1986; Sim-Sim *et al.*, 2000b.

Pt: Allorge & Jovet-Ast, 1958.

Riella notarisii (Mont.) Mont.

IPmap: Cogoni *et al.*, 1999; Sim-Sim *et al.*, 2000b.

Ag: Sim-Sim *et al.*, 2000b.

Saccogyna viticulosa (L.) Dumort.

IPmap: Casas *et al.*, 1985; Sérgio *et al.*, 1994c.

BA: Casas *et al.*, 1985; Sérgio *et al.*, 2001d.

BL: Henrques, 1886; Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1966; Casas *et al.*, 1985.

E: Luisier, 1910a; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Casas *et al.*, 1985.

Mi: Machado, 1917a; Casares, 1919; Machado, 1925; Barros, 1944b; Sabino de Freitas, 1944a; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Casas *et al.*, 1985; Sérgio & Schumacker, 1992.

Pt: Müller, 1951-1958.

Scapania aspera Bernet & M. Bernet

[**BA:** Sim-Sim, 1989; Casas *et al.*, 1992].

We were not able to study any Portuguese material, only E. C. Wallace (comm. pers.) informed us that he has collected this species in Celorico da Beira (Beira Alta). So this taxon is to be considered as uncertain.

Scapania compacta (A. Roth) Dumort.

AAI: Allorge, 1974; Sérgio *et al.*, 1997b.

Ag: Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Guerra *et al.*, 1981.

BA: Mendes, 1948; Sérgio, 1966; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 2001d.

- BB:** Luisier, 1910b; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
- BL:** Brotero, 1804; Henriques, 1886; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Allorge, 1931a; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Allorge, 1974; Jovet-Ast & Bischler, 1976; Werner, 1997.
- DL:** Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Werner, 1997.
- E:** Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a.
- Mi:** Luisier, 1910b; Machado, 1913; Machado, 1914a; Casares, 1919; Machado, 1920a; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Tavares & Tavares, 1950a; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.
- R:** Pereira-Coutinho, 1917a; Machado, 1925; Sabino de Freitas, 1944a.
- TM:** Ervideira, 1926; Sabino de Freitas, 1944a; Allorge, 1974; Sérgio & Schumacker, 1992.
- Pt:** Müller, 1951-1958.

Scapania curta (Mart.) Dumort.

- BA:** Sérgio *et al.*, 2001a.
- [DL:** Sabino de Freitas, 1948.
- E:** Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b.]
- TM:** Ervideira, 1926; Sabino de Freitas, 1944a; Sabino de Freitas, 1944b.
- The revision of the majority of herbarium specimens reported for Minho, Caldas da Saúde (INA!), and Estremadura, Sintra (LISU!), indicates that the material correspond to *S. nemoreae* (Sérgio *et al.*, 2001e). The material from Trás-os-Montes needs to be studied.

Scapania gracilis Lindb.

- BA:** Machado, 1925.
- BB:** Sabino de Freitas, 1944a.
- BL:** Allorge, 1935; Allorge, 1974; Jovet-Ast & Bischler, 1976; Werner, 1997.
- DL:** Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
- E:** Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
- Mi:** Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992.
- Pt:** Müller, 1951-1958.

Scapania nemoreae (L.) Grolle

- BA:** Sérgio, 1967.
- BL:** Brotero, 1804; Henriques, 1886; Allorge, 1931a; Allorge, 1935; Sérgio, 1966; Allorge, 1974; Jovet-Ast & Bischler, 1976.
- DL:** Henriques, 1886; Sampaio, 1901-1902; Luisier, 1910b; Machado, 1925; Sabino de Freitas, 1948; Sérgio *et al.*, 2001e.

E: Henriques, 1886; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio *et al.*, 2001e.

Mi: Sampaio, 1901-1902; Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Allorge, 1974; Sérgio & Schumacker, 1992; Sérgio *et al.*, 2001e.

TM: Sérgio & Schumacker, 1992.

Pt: Müller, 1951-1958.

Scapania scandica (Arnell et H. Buch) Macvicar

BA: Sérgio *et al.*, 2001a.

Scapania subalpina (Nees ex Lindenb.) Dumort.

BA: Henriques, 1883; Henriques, 1886; Machado, 1925; Mendes, 1948; Jansen, 1994; Jansen, 1998.

BA/BB: Greven & Melick, 1994.

BB: Pereira-Coutinho, 1917a; Sabino de Freitas, 1944a.

BL: Sérgio, 1966.

Mi: Sampaio, 1901-1902; Machado, 1913; Machado, 1925; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a.

Scapania undulata (L.) Dumort.

AAL: Sérgio *et al.*, 1997b.

BA: Henriques, 1883; Henriques, 1886; Machado, 1917a; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Mendes, 1948; Sabino de Freitas, 1948; Sérgio, 1966; Jansen & Sequeira, 1999; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

[BAI: Sim-Sim, 1989].

BB: Luisier, 1910b; Pereira-Coutinho, 1917a; Sabino de Freitas, 1944a.

BL: Sampaio, 1901-1902; Casares, 1919.

DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Werner, 1997.

E: Sabino de Freitas, 1944a; Mendes, 1948.

Mi: Henriques, 1886; Sampaio, 1901-1902; Machado, 1913; Machado, 1917a; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1920a; Machado, 1925; Buch, 1937; Barros, 1944b; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Mendes, 1950; Sá-Nogueira, 1950c; Tavares & Tavares, 1950a; Sérgio & Schumacker, 1992.

R: Sabino de Freitas, 1948; Sérgio, 1971a.

TM: Sérgio & Schumacker, 1992.

Pt: Müller, 1951-1958.

The report of its occurrence in Baixo Alentejo (Sim-Sim, 1989) must be considered erroneous.

Southbya nigrella (De Not.) Henriq.

AAL: Sérgio *et al.*, 1997b.

Ag: Allorge, 1931a; Allorge, 1935; Tavares & Tavares, 1948; Müller, 1951-1958; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.

BL: Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Allorge, 1974; Sérgio *et al.*, 1988.

- DL:** Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
E: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Allorge, 1931a; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Machado, 1920c; Machado, 1925; Sabino de Freitas, 1944a; Allorge, 1974.
R: Sérgio, 1971a; Sérgio *et al.*, 1988.
Pt: Sérgio *et al.*, 1987a.

***Southbya tophacea* (Spruce) Spruce**

- Ag:** Nicholson, 1913; Casares, 1919; Machado, 1925; Allorge, 1931a; Allorge, 1938; Sabino de Freitas, 1944a; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a.
BAI: Sim-Sim, 1989.
BL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Allorge, 1938; Sabino de Freitas, 1944a; Sérgio, 1966; Sérgio *et al.*, 1988.
DL: Henriques, 1886; Machado, 1925; Sabino de Freitas, 1944a.
E: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Allorge, 1938; Sabino de Freitas, 1944a; Jovet-Ast & Bischler, 1976; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988.
Mi: Allorge, 1938; Jovet-Ast & Bischler, 1976.
R: Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sérgio *et al.*, 1988.
TM: Sérgio, 1967.
Pt: Müller, 1951-1958; Sérgio *et al.*, 1987a.

***Sphaerocarpos michelii* Bellardi**

- Eurmap:** Müller, 1951-1958.
BL: Brotero, 1804; Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948.
DL: Henriques, 1886; Sampaio, 1901-1902; Casares, 1919; Sabino de Freitas, 1948.
E: Luisier, 1910b; Pereira-Coutinho, 1917a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a.
[R: Sim-Sim, 1989].
Pt: Lindenberg, 1836.

The report from Ribatejo is to be considered as uncertain in this region, there is no herbarium specimen to back it. However we consider that it can in fact occur there.

***Sphaerocarpos stipitatus* Bisch. ex Lindenb.**

BL: Sérgio & Sim-Sim, 1991.
This species was probably introduced from the South Hemisphere (Sérgio & Sim-Sim, 1991).

***Sphaerocarpos texanus* Austin**

- Eurmap:** Müller, 1951-1958.
AAL: Sérgio *et al.*, 1997b.
Ag: Sérgio, 1970-1971.
BA: Sim-Sim, 1989.
BAI: Sérgio, 1970-1971; Jovet-Ast & Bischler, 1976.
BB: Sérgio *et al.*, 2002c.

BL: Sérgio, 1966; Jovet-Ast & Bischler, 1976.

DL: Machado, 1925; Sabino de Freitas, 1944a; Sérgio, 1966.

E: Machado, 1918a; Casares, 1919; Machado, 1925; Sabino de Freitas, 1944a; Müller, 1951-1958; Sérgio, 1970-1971; Sérgio & Sim-Sim, 1985a.

Mi: Sabino de Freitas, 1944a.

R: Sérgio, 1971a.

Pt: Gil & Guerra, 1981.

Sim-Sim (1989) reported this taxon from Beira Alta without indication of locality, in fact this material corresponds to the herbarium specimen from Seia, *leg. C. Sérgio, 1977* (LISU).

***Targionia hypophylla* L.**

Ptmap: Sérgio & Queiroz Lopes, 1972.

AAI: Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1997b.

Ag: Estácio da Veiga, 1869; Nicholson, 1913; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sérgio, 1970-1971; Sérgio & Queiroz Lopes, 1972; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1984; Zamora *et al.*, 1990.

BA: Sérgio & Queiroz Lopes, 1972; Zamora *et al.*, 1990; Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

BAI: Sérgio, 1970-1971; Sérgio & Queiroz Lopes, 1972; Jovet-Ast & Bischler, 1976.

BB: Sabino de Freitas, 1948; Sérgio & Queiroz Lopes, 1972.

BL: Brotero, 1804; Henriques, 1886; Anónimo, 1893; Machado, 1925; Allorge, 1935; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Sérgio & Queiroz Lopes, 1972; Allorge, 1974; Jovet-Ast & Bischler, 1976; Sérgio *et al.*, 1988; Zamora *et al.*, 1990.

DL: Henriques, 1886; Sampaio, 1901-1902; Machado, 1925; Sabino de Freitas, 1944a; Sabino de Freitas, 1948; Jovet-Ast & Bischler, 1976.

E: Henriques, 1886; Luisier, 1910a; Luisier, 1910b; Pereira-Coutinho, 1917a; Machado, 1925; Barros, 1943; Sabino de Freitas, 1944a; Mendes, 1948; Sabino de Freitas, 1948; Sérgio & Queiroz Lopes, 1972; Jovet-Ast & Bischler, 1976.

Mi: Henriques, 1886; Sampaio, 1901-1902; Machado, 1913; Pereira-Coutinho, 1917a; Machado, 1920a; Machado, 1925; Buch, 1937; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Sérgio & Queiroz Lopes, 1972; Jovet-Ast & Bischler, 1976; Sérgio & Schumacker, 1992.

R: Sérgio *et al.*, 1988; Zamora *et al.*, 1990.

TM: Allorge & Allorge, 1949; Zamora *et al.*, 1990.

Pt: Sérgio *et al.*, 1987a; Boisselier-Dubayle *et al.*, 2002

***Targionia lorbeeriana* Müll. Frid.**

IPmap: Gil & Castro, 1987.

Ptmap: Sérgio & Queiroz Lopes, 1972.

AAI: Allorge & Jovet-Ast, 1956; Sérgio & Queiroz Lopes, 1972; Allorge, 1974; Sérgio *et al.*, 1997b; Boisselier-Dubayle & Bischler, 1999.

Ag: Allorge & Jovet-Ast, 1956; Crundwell, 1956; Sérgio, 1970-1971; Sérgio & Queiroz Lopes, 1972; Sérgio *et al.*, 1984; Sérgio *et al.*, 1987a; Zamora *et al.*, 1990.

BA: Sérgio & Queiroz Lopes, 1972; Allorge, 1974; Zamora *et al.*, 1990; Sérgio *et al.*, 2001d.

BAl: Sérgio, 1970-1971; Sérgio & Queiroz Lopes, 1972; Sérgio *et al.*, 1999a; Boisselier-Dubayle & Bischler, 1999.

BB: Sérgio & Queiroz Lopes, 1972.

BL: Allorge & Jovet-Ast, 1956; Sérgio & Queiroz Lopes, 1972; Allorge, 1974; Sérgio *et al.*, 1988; Zamora *et al.*, 1990; Boisselier-Dubayle & Bischler, 1999.

DL: Sérgio & Queiroz Lopes, 1972.

E: Müller, 1951-1958; Allorge & Jovet-Ast, 1956; Sérgio & Queiroz Lopes, 1972; Allorge, 1974; Sérgio & Correia, 1981; Sérgio & Sim-Sim, 1985a; Sérgio *et al.*, 1988; Zamora *et al.*, 1990; Boisselier-Dubayle & Bischler, 1999.

Mi: Sérgio & Queiroz Lopes, 1972; Allorge, 1974; Zamora *et al.*, 1990; Neves *et al.*, 1999.

R: Sérgio & Queiroz Lopes, 1972; Sérgio *et al.*, 1988; Zamora *et al.*, 1990; Boisselier-Dubayle & Bischler, 1999.

TM: Sérgio & Queiroz Lopes, 1972.

Pt: Sérgio *et al.*, 1987a; Perold, 1993.

Boisselier-Dubayle & Bischler (1999) based on electrophoretic data concluded that there are different origins of polyploids plants but all Portuguese colonies are triploids.

Telaranea nematodes (Gottsche ex Austin) M. Howe

Wmap: Sérgio, 1990.

IPmap: Infante, 2000.

Mi: Allorge, 1941; Allorge & Allorge, 1944; Tavares & Tavares, 1950a; Allorge & Richards, 1956; Sérgio & Schumacker, 1992; Infante, 2000; Sérgio *et al.*, 2001e.

Trichocolea tomentella (Ehrh.) Dumort.

Wmap: Müller, 1951-1958.

IPmap: Casas *et al.*, 1989; Sérgio *et al.*, 1994c.

Mi: Henriques, 1886; Pereira-Coutinho, 1917a; Machado, 1925; Allorge, 1931b; Sabino de Freitas, 1944a; Tavares & Tavares, 1950a; Casas, 1953; Casas *et al.*, 1989; Sérgio & Schumacker, 1992.

Tritomaria quinquedentata (Huds.) H. Buch

BA: Sérgio *et al.*, 2001d.

BA/BB: Greven & Melick, 1994.

Mi: Séneca & Vieira, 2002.

Liverworts to be excluded, uncertain occurrence on the Portuguese bryoflora, or taxa with taxonomic problems

Diphophyllum obtusifolium (Hook.) Dumort.

Jungermannia leiantha Grolle

Jungermannia obovata Nees

Kurzia trichoclados (Müll. Frib.) Grolle

Marchantia paleacea Bertol.

Marsupella alpina (Gottsche ex Husn.) Bernet

Plagiochila asplenoides (L. emend. Taylor) Dumort.

- Plagiochila punctata* (Taylor) Taylor
Plagiochila spinulosa (Dicks.) Dumort.
Radula aquilegia (Hook. f. & Taylor) Gottsche *et al.*
Riccia ligula Steph.
Scapania aspera Bernet & M. Bernet

Synonyms List

- Alicularia compressa* (Hook.) Nees = *Nardia compressa*
Alicularia scalaris Corda = *Nardia scalaris*
Aneura latifrons Lindb. = *Riccardia latifrons*
Aneura multifida (L.) Dumort. = *Riccardia multifida*
Aneura sinuata (Dicks.) Dumort. = *Riccardia chamaedryfolia*
Anthoceros bulbiculosus Brot. = *Phaeoceros bulbiculosus*
Anthoceros carolinianus Michx. = *Phaeoceros carolinianus*
Anthoceros constans Lindberg = *Anthoceros punctatus*
Anthoceros crispulus (Mont.) Douin *Anthoceros agrestis*
Anthoceros dichotomus Raddi = *Phaeoceros bulbiculosus*
Anthoceros dichotomus fo. *stricta* = *Phaeoceros bulbiculosus*
Anthoceros husnotii Steph. = *Anthoceros punctatus*
Anthoceros laevis L. = *Phaeoceros laevis*
Anthoceros mandonii Steph. = *Anthoceros caucasicus*
Anthoceros multilobulus Lindberg = *Anthoceros punctatus*
Anthoceros punctatus var. *cavernosus* auct. non (Nees) Gottsche, Lindenb. & Nees =
Anthoceros agrestis
Anthoceros punctatus var. *crispulus* auct. = *Anthoceros agrestis*
Aplozia crenulata (Sm.) Dumort. = *Jungermannia gracillima*
Aplozia crenulata var. *inundata* (Schiffn.) Macv. = *Jungermannia gracillima*
Aplozia hyalina (Lyell.) Dumort. = *Jungermannia hyalina*
Aplozia lanceolata (L.) Dumort. = *Jungermannia leiantha*
Aplozia nana (Nees) Boulay = *Jungermannia sphaerocarpa*
Aplozia pumilla (With.) Dumort. = *Jungermannia pumila*
Aplozia riparia (Tayl.) Dumort. = *Jungermannia pumila*
Aplozia rivularis Schiffn. = *Jungermannia pumila*
Aplozia sphaerocarpa (Hook.) Dumort. = *Jungermannia sphaerocarpa*
Aplozia sphaerocarpa var. *nana* Müll. Frib. = *Jungermannia sphaerocarpa*
Barbilophozia lycopodioides var. *hatcheri* (Evans) Schljak. = *Barbilophozia hatcheri*
Barbilophozia lycopodioides var. *paroifolia* Schiffn. = *Barbilophozia hatcheri*
Bellincinia laevigata (Schrad.) Kunze ex Schiffn. = *Porella arboris-vitae*
Bellincinia platyphylla (L.) Kunze ex Schiffn. = *Porella platyphylla*
Bellincinia porella Dicks. = *Porella pinnata*
Bellincinia thuya Dicks. = *Porella obtusata*
Blyttia lyellii Gottsche, Lindenb. & Nees = *Pallavicinia lyellii*
Calypogeia arguta subsp. *viridis* = *Calypogeia arguta*
Calypogeia muelleriana fo. *sphagnicola* (H. Arn. & J. Perss.) Schljak. = *Calypogeia sphagnicola*
Calypogeia neesiana var. *laxa* Meylan ex Müll. Frib. = *Calypogeia muelleriana*
Calypogeia trichomanis auct. = *Calypogeia azurea*

- Calypogeia trichomanis* var. *erecta* Müll. Frib. = *Calypogeia muelleriana*
Calypogeia trichomanis var. *fissa* (L.) Lindb. = *Calypogeia fissa*
Cephaloziella starkei (Funck.) Schiffn. = *Cephaloziella divaricata*
Cephaloziella dentata (Raddi) Müll. Frib. = *Cephaloziella turneri*
Cephalozia lammersiana (Huebener) Carrington = *Cephalozia bicuspidata*
Cephalozia media Lindb. = *Cephalozia lunulifolia*
Cephaloziella byssacea var. *asperifolia* Jens. = *Cephaloziella divaricata*
Cephaloziella byssacea sensu R. M. Schust. non (A. Roth) Warnst. = *Cephaloziella divaricata*
Cephaloziella divaricata var. *scabra* (M. Howe) S. Arn. = *Cephaloziella divaricata*
Cephaloziella gracillima Douin. = *Cephaloziella stellulifera*
Cephaloziella limprichtii Warnst. = *Cephaloziella stellulifera*
Cephaloziella limprichtii var. *stellulifera* Müll. Frib. = *Cephaloziella stellulifera*
Cephaloziella massalongi var. *algarvica* Douin. = *Cephaloziella massalongi*
Cephaloziella massalongi var. *compacta* Jörg. = *Cephaloziella massalongi*
Cephaloziella starkei (Funck.) Schiffn. = *Cephaloziella divaricata*
Cephaloziella starkei auct. = *Cephaloziella divaricata*
Cephaloziella starkei var. *papillosa* Douin = *Cephaloziella divaricata*
Cephaloziella starkei var. *scabra* (M. Howe) Frye et Clark = *Cephaloziella divaricata*
Cephaloziella vaucheroides P. Cout. = *Cephaloziella baumgartneri*
Chiloscyphus pallescens var. *fontana* Müll. Frib. = *Chiloscyphus pallescens*
Chiloscyphus pallescens var. *fragilis* (A. Roth) Müll. Frib. = *Chiloscyphus pallescens*
Chiloscyphus polyanthos var. *rivilais* (Schrad.) Nees = *Chiloscyphus polyanthos*
Chiloscyphus polyanthos var. *gracilescens* Boulay = *Chiloscyphus polyanthos*
Chiloscyphus polyanthos var. *pallescens* Lindb. = *Chiloscyphus pallescens*
Cincinulus argutus (Nees & Mont.) Dumort. = *Calypogeia arguta*
Cincinulus trichomanis Dumort. = *Calypogeia azurea*
Clevea spathysii (Lindenb.) Müll. Frib. = *Athalamia spathysii*
Conocephalus conicus Neck = *Conocephalum conicum*
Corbierella algeriensis (Schiffn.) Douin et Trabut = *Exormotheca welwitschii*
Corbierella welwitschii Douin & Trabut = *Exormotheca welwitschii*
Corsinia marchantioides Raddi = *Corsinia coriandrina*
Dichiton calyculatum (Durieu & Mont.) Schiffn. = *Cephaloziella calyculata*
Diplophyllum dicksoni (Hook.) Dumort. = *Douinia ovata*
Diplophyllum ovatum (Dicks.) Steph. = *Douinia ovata*
Eucalyx hyalinus (Lyell.) Carrington in Nees = *Jungermannia hyalina*
Eucalyx müllerianus Müll. Frib. = *Jungermannia hyalina*
Eucephalozia bicuspidata (L.) Schiffn. = *Cephalozia bicuspidata*
Eulejeunea cavifolia (Ehrh.) Lindb. = *Lejeunea cavifolia*
Eulejeunea serpyllifolia (Dicks.) Schiffn. = *Lejeunea cavifolia*
Eulejeunea serpyllifolia var. *cavifolia* = *Lejeunea cavifolia*
Eulejeunea serpyllifolia var. *patens* Lindb. = *Lejeunea patens*
Exormotheca bulbosa (Link ex Lindenb.) Müll. Frib. = *Exormotheca welwitschii*
Fegatella conica Corda = *Conocephalum conicum*
Fossombronia caespitiformis var. *husnotii* Corb. = *Fossombronia husnotii*
Fossombronia caespitiformis var. *subcristata* Schiffn. = *Fossombronia caespitiformis*
Fossombronia cristata Lindb. = *Fossombronia wondraczekii*
Fossombronia dumortieri (Hüb & Genth.) Lindb. = *Fossombronia foveolata*

- Fossombronia pusilla* var. *decipiens* Corb. = *Fossombronia pusilla*
Fossombronia wondraczekii var. *loitlesbergeri* (Schiffn.) Chalaud = *Fossombronia wondraczekii*
Frullania calcarifera Steph. = *Frullania tamarisci*
Frullania cesatiana De Not. var. *muscicola* (Steph.) Bisang et al. p.p. = *Frullania azorica*
Frullania dilatata var. *anomala* Corb. = *Frullania dilatata*
Frullania germana (Taylor) Gottsche, Lindenb. & Nees = *Frullania teneriffae*
Frullania microphylla var. *deciduifolia* Grolle = *Frullania microphylla*
Frullania nervosa Mont. = *Frullania tamarisci*
Frullania nervosa var. *microcellularis* Müll. Frib. = *Frullania tamarisci*
Frullania tamarisci var. *calcarifera* Steph. = *Frullania tamarisci*
Frullania tamarisci var. *microphylla* Gottsche = *Frullania microphylla*
Frullania trabutiana Steph. = *Frullania dilatata*
Grimaldia angustifolia (Neck.) Lindb. = *Mannia androgyna*
Grimaldia dichotoma Raddi = *Mannia androgyna*
Gymnomitrium coralliodes Nees. = *Gymnomitrium obtusum*
Haplozia crenulata (Sm.) Lindb. = *Jungermannia gracillima*
Haplozia hyalina (Lyell.) Dumort. = *Jungermannia hyalina*
Haplozia pumilla Dumort. = *Jungermannia pumila*
Haplozia rivularis Schiffn. = *Jungermannia pumila*
Harpalejeunea ovata sensu auct. non (Dicks.) Schiffn. = *Harpalejeunea molleri*
Homalolejeunea mackayi (Hook.) Gray = *Marchesinia mackaii*
Isopaches birenatus (Schmid.) H. Buch = *Lophozia birenata*
Jungermannia commutata Huebener = *Lophozia birenata*
Jungermannia albicans L. = *Diplophyllum albicans*
Jungermannia asplenoides L. = *Plagiochila asplenoides*
Jungermannia bidentata L. = *Lophocolea bidentata*
Jungermannia compacta A. Roth. = *Scapania compacta*
Jungermannia complanata L. = *Radula complanata*
Jungermannia cordifolia Brot. non Hook. = *Scapania compacta*
Jungermannia crenulata Sm. = *Jungermannia gracillima*
Jungermannia crispula Brot. = *Fossombronia pusilla*
Jungermannia dilatata L. = *Frullania dilatata*
Jungermannia emarginata Ehrh. = *Marsupella emarginata*
Jungermannia epiphylla L. = *Pellia epiphylla*
Jungermannia furcata L. = *Metzgeria furcata*
Jungermannia lanceolata L. = *Jungermannia atrovirens*
Jungermannia lanceolata Weiss. = *Jungermannia leiantha*
Jungermannia lurida Dumort. = *Jungermannia sphaerocarpa*
Jungermannia nana Nees & Esenbeck. = *Jungermannia sphaerocarpa*
Jungermannia nemorata L. = *Scapania nemorea*
Jungermannia pinguis L. = *Aneura pinguis*
Jungermannia platyphylla L. = *Porella platyphylla*
Jungermannia pumila var. *rivularis* Schiffn. = *Jungermannia pumila*
Jungermannia riparia Taylor = *Jungermannia atrovirens*
Jungermannia riparia var. *rotundifolia* Sampaio = *Jungermannia atrovirens*
Jungermannia tamarisci L. = *Frullania tamarisci*
Jungermannia tamariscifolia L. = *Frullania tamarisci*

- Jungermannia trichomanis* auct. = *Calypogeia azurea*
Jungermannia tristis Nees = *Jungermannia atrovirens*
Kantia calypogeia Lindb. = *Calypogeia fissa*
Kantia fissa Lindb. = *Calypogeia fissa*
Kantia trichomanis Gray = *Calypogeia azurea*
Lejeunea hamatifolia (Hook.) Dumort. = *Drepanolejeunea hamatifolia*
Lejeunea inconspicua (Raddi) De Not. ex Rabenh. = *Cololejeunea minutissima*
Lejeunea macvicari Pearson = *Lejeunea mandonii*
Lejeunea minutissima Dumort. = *Cololejeunea minutissima*
Lejeunea molleri Steph. = *Harpalejeunea molleri*
Lejeunea ovata Taylor = *Harpalejeunea molleri*
Lejeunea rossetiana C. Massall. = *Cololejeunea rossettiana*
Lejeunea serpyllifolia Libert. = *Lejeunea cavifolia*
Lejeunea ulicina (Taylor) Gottsche = *Microlejeunea ulicina*
Lepidozia setacea (Web.) Mitt. = *Kurzia pauciflora*
Lepidozia trichoclados (Müll. Frib.) Warnst. = *Kurzia trichoclados*
Lophocolea alata Mitt. ex Larter = *Lophocolea bidentata*
Lophocolea bidentata var. *latifolia* (Nees) Rabenh. = *Lophocolea bidentata*
Lophocolea cuspidata (Nees) Limpr. = *Lophocolea bidentata*
Lophocolea cuspidata Limpr. = *Lophocolea bidentata*
Lophocolea heterophylla Dumort. = *Lophocolea heterophylla*
Lophocolea heterophylla fo. *gemmaifera* Andres = *Lophocolea heterophylla*
Lophocolea hirticalyx Corb. & Steph. = *Lophocolea fragrans*
Lophozia alpestris (Schleich. ex Web.) Evans = *Lophozia sudetica*
Lophozia barbata (Schmid. ex Schreb.) Dumort. = *Barbilophozia barbata*
Lophozia turbinata (Raddi) Steph. = *Leiocolea turbinata*
Lophozia ventricosa var. *longiflora* (Nees) Macoun = *Lophozia longiflora*
Lunularia vulgaris P. Micheli = *Lunularia cruciata*
Madotheca canariensis (Web.) Nees = *Porella canariensis*
Madotheca canariensis var. *subsquarrosa* Schiffn. = *Porella canariensis*
Madotheca cordeana (Huebener) Dumort. = *Porella cordaeana*
Madotheca laevigata var. *killarniensis* Pearson = *Porella arboris-vitae*
Madotheca laevigata var. *obscura* Nees = *Porella obtusata*
Madotheca laevigata var. *subintegra* Kaal. = *Porella obtusata*
Madotheca platyphylla (L.) Dumort. = *Porella platyphylla*
Madotheca porella (Dicks.) Nees = *Porella pinnata*
Madotheca rivularis Nees = *Porella cordaeana*
Madotheca thuya auct. = *Porella obtusata*
Mannia dichotoma auct. = *Mannia androgyna*
Marchantia androgyna L. = *Mannia androgyna*
Marchantia conica L. = *Conocephalum conicum*
Marchantia cruciata L. = *Lunularia cruciata*
Marchantia emarginata Dumort. = *Marsupella emarginata*
Marchantia hemisphaerica L. = *Reboulia hemisphaerica*
Marchantia polymorpha var. *mamillata* Hag. = *Marchantia polymorpha*
Marsupella aquatica (Schrad.) Schiffn. = *Marsupella emarginata*
Marsupella sullivantii (De Not.) Evans = *Marsupella sphacelata*
Mastigobryum trilobatum (L.) Gottsche, Lindenb. & Nees = *Bazzania trilobata*

- Mesophylla crenulata* (Mitt.) Corb. = *Jungermannia gracillima*
Metzgeria conjugata fo. *subpinnata* Joerg. = *Metzgeria conjugata*
Microlepidozia setacea (Web.) Joerg. = *Kurzia pauciflora*
Microlepidozia trichoclados (Müll. Frib.) Joerg. = *Kurzia trichoclados*
Mnium fissum L. = *Calypogeia fissa*
Mnium trichomanis L. = *Calypogeia azurea* Müll. Frib.
Nardia compressa var. *rigida* Lindb. = *Nardia compressa*
Nardia crenulata (Mitt.) Lindb. = *Jungermannia gracillima*
Nardia crenulata var. *gracillima* Nees = *Jungermannia gracillima*
Nardia crenulata var. *inundata* Schiffn. = *Jungermannia gracillima*
Nardia hyalina (Lyell.) Lindb. = *Jungermannia hyalina*
Nardia hyalina var. *colorata* Sampaio 1901-1902 = ?? *Jungermannia hyalina*
Oxymitra paleacea Bisch. ex Lindenb. = *Oxymitra incrassata*
Oxymitra pyramidata (Dumort.) Bisch. = *Oxymitra incrassata*
Oxymitra pyramidata var. *linkii* Lindenb. = *Oxymitra incrassata*
Pellia calycina (Taylor) Nees = *Pellia endiviifolia*
Pellia fabbroniiana Raddi = *Pellia endiviifolia*
Pellia fabbroniiana fo. *furcigera* = *Pellia endiviifolia*
Phaeoceros laevis (L.) Prosk. = *Phaeoceros laevis*
Phaeoceros laevis subsp. *carolinianus* (Michx.) Prosk. = *Phaeoceros carolinianus*
Phragmicomia mackaii (Hook.) Dumort. = *Marchesinia mackaii*
Plagiochila asplenoides subsp. *poreloides* (Torrey ex Nees) R. M. Schust. = *Plagiochila poreloides*
Plagiochila major (Nees) S. Arn. = *Plagiochila asplenoides*
Plagiochila spinulosa var. *inermis* Carrington = *Plagiochila bifaria*
Plagiochila spinulosa var. *killarniensis* (Pearson) Macvic. = *Plagiochila bifaria*
Plagiochila spinulosa var. *punctata* Carrington = *Plagiochila punctata*
Plectocolea crenulata var. *gracillima* Sm. = *Jungermannia gracillima*
Plectocolea hyalina (Lyell.) Mitt. = *Jungermannia hyalina*
Plectocolea obovata (Nees) Mitt. = *Jungermannia obovata*
Pleuroschisma trilobatum (L.) Dumort. = *Bazzania trilobata*
Porella laevigata (Schrad.) Pfeiff. = *Porella arboris-vitae*
Porella laevigata var. *thuja* Nees = *Porella arboris-vitae*
Porella thuja auct. = *Porella obtusata*
Preissia commutata Nees. = *Preissia quadrata*
Radula complanata subsp. *lindenbergiana* (Gott sche) R. M. Schust. = *Radula lindenbergiana*
Radula ovata Jack in Steph. = *Radula lindenbergiana*
Radula physoloba Mont. = *Radula lindenbergiana*
Reboulia hemisphaerica subsp. *paradoxa* R. M. Schust. = *Reboulia hemisphaerica*
Riccardia palmata (Hedw.) Carrington = *Riccardia latifrons*
Riccardia pinguis Dumort. = *Aneura pinguis*
Riccardia sinuata (Hook.) Trevis. = *Riccardia chamaedryfolia*
Riccia atromarginata var. *glabra* Levier = *Riccia trabutiana*
Riccia bifurca fo. *subinermis* Müll. Frib. = *Riccia bifurca*
Riccia bifurca var. *subinermis* Heeg. = *Riccia bifurca*
Riccia bischoffii Huebener = *Riccia ciliifera*
Riccia bischoffii var. *ciliifera* (Link. ex Lindenb.) = *Riccia ciliifera*

- Riccia bulbosa* Link ex Lindenb. = *Exormotheca welwitschii*
Riccia cana Durieu ex Trab. = *Riccia crinita*
Riccia canescens Steph. = *Riccia crinita*
Riccia ciliata var. *epilosa* Warnst. = *Riccia ciliata*
Riccia ciliata var. *violacea* Kny = *Riccia ciliata*
Riccia crystalina var. *major* Lindb. = *Riccia crystallina*
Riccia crystallina auct. = *Riccia cavernosa*
Riccia crystallina var. *angustior* Nees = *Riccia crystallina*
Riccia glauca var. *subinervis* (Lindb.) Warnst. = *Riccia glauca*
Riccia gougetiana var. *armatissima* Levier ex Müll. Frib. = *Riccia gougetiana*
Riccia gougetiana var. *erinacea* Schiffn. = *Riccia gougetiana*
Riccia henriquesii Levier = *Riccia bicarinata*
Riccia incrassata Brot. = *Oxymitra incrassata*
Riccia insularis Levier ex Steph. = *Riccia sorocarpa*
Riccia intumescens (Bisch.) Heeg. = *Riccia ciliata*
Riccia intumescens Heeg = *Riccia ciliata* var. *intumescens*
Riccia levieri Schiffn. = *Riccia beyrichiana*
Riccia levieri var. *algarvica* Schiffn. = *Riccia beyrichiana*
Riccia linkii Lindenb. = *Oxymitra incrassata*
Riccia lusitanica Levier = *Riccia bicarinata*
Riccia major A. Roth. = *Riccia glauca*
Riccia minima L. pro parte = *Riccia nigrella*
Riccia minutissima Steph. pro parte = *Riccia glauca*
Riccia minutissima Steph. pro parte = *Riccia bifurca*
Riccia plana Taylor = *Riccia crystallina*
Riccia subciliata Trab. = *Riccia glauca*
Riccia subtumida Milde = *Riccia ciliata*
Riccia trichocarpa M. Howe = *Riccia crinita*
Riccia warnstorffii fo. *subinermis* Warnst. = *Riccia warnstorffii*
Ricciella crystalina (L.) Steph. = *Riccia crystallina*
Ricciella fluitans (L.) Braun = *Riccia fluitans*
Ricciella fluitans fo. *terrestris* = *Riccia fluitans*
Ricciella fluitans var. *canduliculata* (Hoffm.) C. Hartm. = *Riccia canaliculata*
Riccinia perennis (Steph.) Trab. = *Riccia perennis*
Scapania dentata Dumort. = *Scapania undulata*
Scapania gracilis var. *laxifolia* Carringt. = *Scapania gracilis*
Scapania gracilis var. *minor* Pearson = *Scapania gracilis*
Scapania resupinata Dumort. sensu A. Mach. (1925) = *Scapania gracilis*
Scapania resupinata L. = *Scapania undulata*
Scapania subalpina var. *undulifolia* Gottsche = *Scapania subalpina*
Scapania undulata var. *aequatiformis* (De Not.) C. Massal. & Carestia = *Scapania undulata*
Scapania undulata var. *integrifolia* = *Scapania undulata*
Scapania undulata var. *purpurea* Nees = *Scapania undulata*
Solenostoma crenulatum (Sm.) Mitt. = *Jungermannia gracillima*
Solenostoma hyalinum (Lyell.) R. M. Schust. = *Jungermannia hyalina*
Solenostoma pumillum (With.) Müll. Frib. = *Jungermannia pumila*
Solenostoma sphaerocarpum (Hook.) Steph. = *Jungermannia sphaerocarpa*

Southbya stillacidiorum (De Not.) Lindb. = *Southbya tophacea*
Sphaerocarpos sphaerocarpus (Dicks.) M. Howe nom. illeg. = *Sphaerocarpos michelii*
Sphaerocarpos terrestris (Mich.) Smith = *Sphaerocarpos michelii*
Sphaerocarpus californicus Austin = *Sphaerocarpos texanus*
Stephanina complanata (L.) Kunze ex Schiffn. = *Radula complanata*
Targionia sphaerocarpus Dicks. = *Sphaerocarpos michelii*
Telaranea sejuncta auct. = *Telaranea nematodes*
Telaranea setacea auct. = *Kurzia pauciflora*
Telaranea trichoclados (Müll. Frib.) Müll. Frib. = *Kurzia trichoclados*
Tesselina paleacea auct. = *Oxymitra incrassata*
Tesselina pyramidata Dumort. = *Oxymitra incrassata*
Tesselina pyramidata var. *paleacea* Lindb. = *Oxymitra incrassata*

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