

## Bryological Notes

### Lectotypification of *Bryum moravicum* Podp. (Bryopsida: Bryaceae)

*Bryum moravicum* was recently adopted (Holyoak, 2004) as the oldest name for the species named as *Bryum laevifilum* by Syed (1973), a European member of the *Bryum capillare* Hedw. complex with filiform axillary gemmae that commonly grows as an epiphyte on deciduous trees.

The same taxon has also been incorrectly referred to in recent literature as *B. flaccidum* Brid. or *B. subelegans* Kindb.

Josef Podpěra often labelled more than one specimen as type when he introduced a new name. In these cases it is

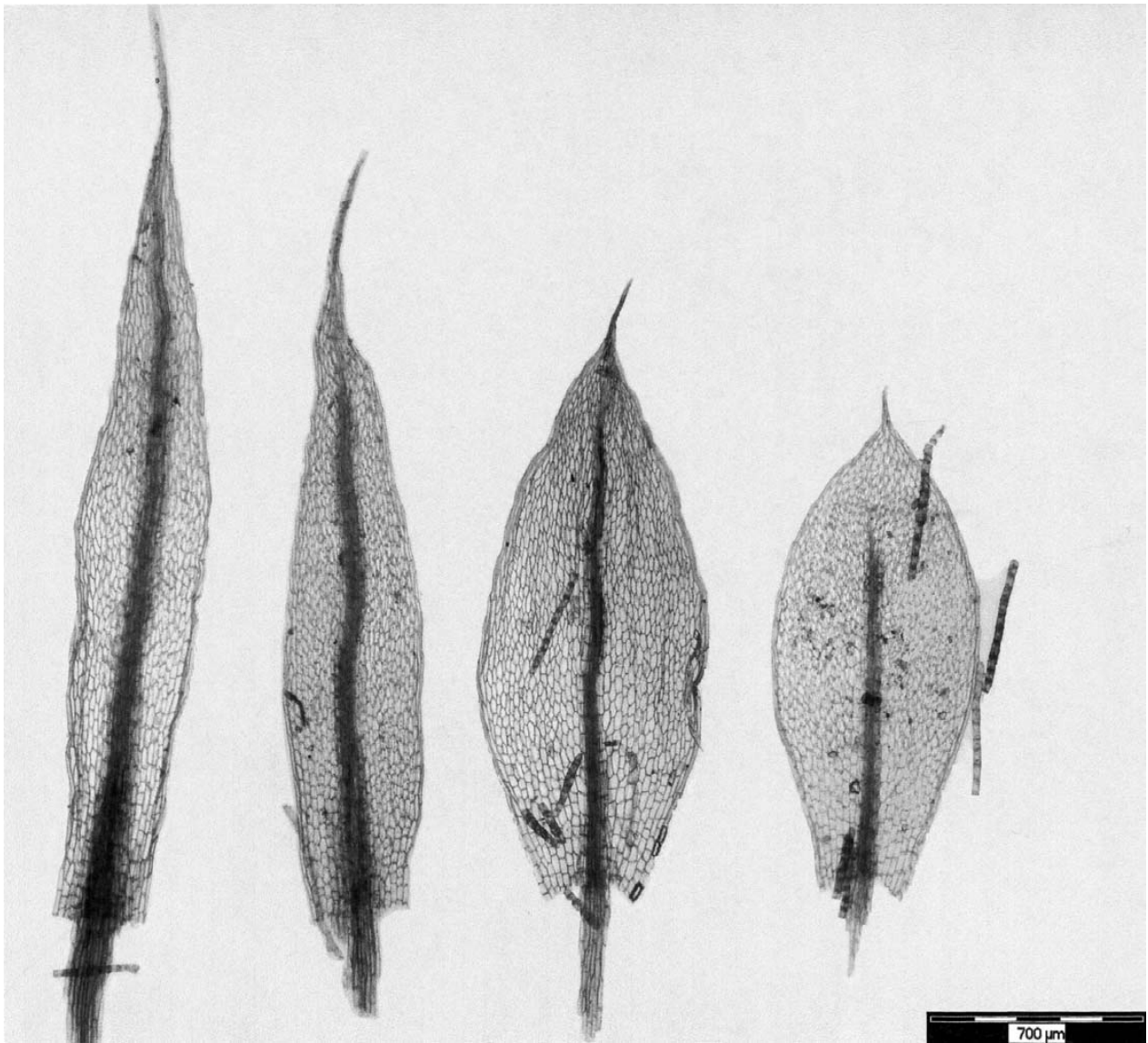


Figure 1. Four leaves from lectotype of *Bryum moravicum* Podp. to show variation in leaf shape. Note presence of filamentous gemmae.

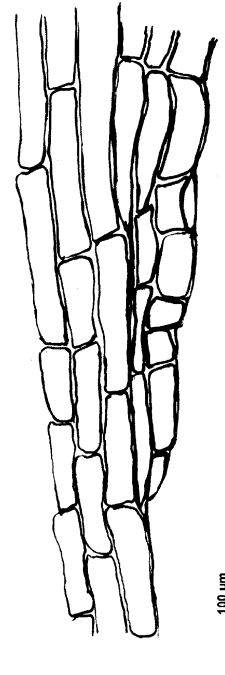
desirable to locate the relevant specimens, check their identification and designate a lectotype to ensure that the name is correctly applied. Both Syed (1973) and Holyoak (2004) studied a specimen labelled as a type of *Bryum moravicum* by Podpěra that is housed in the Stockholm herbarium (S). However, in the original description Podpěra (1906) stated that his newly described species grew 'in several places', so that it might be inferred that several type specimens existed in his herbarium. Such additional type material might show greater variability than the specimen in S or perhaps even belong to other taxa within the *Bryum capillare* complex. The present paper describes the additional type material of *Bryum moravicum* and designates a lectotype.

Most of Podpěra's original herbarium is now deposited in the Cryptogamic Herbarium of the Department of Botany, Charles University of Prague in the Czech Republic (PR), but his collection of *Bryum* remained in the Herbarium Musei Moraviae at Brno in the Czech Republic (BRNM). Search at BRNM yielded five specimens of *Bryum moravicum*, collected at the locality [now in the Czech Republic] described in the protologue by Podpěra (1906), which can be translated from Czech as 'Ivančice: on wet rocks of Permian conglomerates in front of Řeznovice on Oslava in several places'. There are four specimens (BRNM No. 163685, 163686, 163687, 163688), labelled '*Bryum moravicum* Podp. 05' with the locality: Ivančice: ad rupes, conglomerata permica pr. Řeznovice, c. 250 m, IV.1905 leg. J. Podpěra'. The specimens are pencil-marked in Podpěra's hand-writing I–IV, respectively, and were later annotated by him with '*B. capillare* L. var. *moravicum* Podp. 1912' (referring to his later combination of the taxon). A fifth specimen (BRNM No. 136384) was labelled by Podpěra '*Bryum capillare* var. *moravicum* Podp. 1912, Permkonglomerate im Iglawatale [=valley of Jihlávka] bei Eibenschitz [=Ivančice], 1905.IV. leg. J. Podpěra'. This specimen is marked in pencil with V; the locality might be identical to that of specimens I–IV since it is merely an inexact German translation.

The specimen at S has data almost identical to that of specimens I–IV at BRNM ('Flora moravica. Ivančice: ad rupes, conglomerata permica, pr. Řeznovice, c. 250 m, IV.1905 leg. J. Podpěra').

Specimens I–IV at BRNM appear completely identical and were probably portions taken from the same tuft. Specimen V at BRNM also shows identical characters. Our descriptions and measurements, and the drawings in Syed (1973) suggest the specimen at S is closely similar to material at BRNM and the virtually identical data suggest it may be another portion of the same tuft as BRNM specimens I–IV. The characters of all of this material conform closely with the protologue of *Bryum moravicum* Podp. (Podpěra, 1906).

All of the specimens include plants with remarkable narrow leaves like those figured by Syed (1973, p. 323, fig. 30a–d). However, as noted by Holyoak (2004) many of them have at least some broader lower leaves and some of



**Figure 2.** Decurrent leaf base of lectotype of *Bryum moravicum* Podp.

the plants show leaf characters typical of *B. laevifilum*. To illustrate the variability in leaf shape, Fig. 1 shows several leaves from one plant of the specimen annotated by Podpěra with 'I' [designated below as the lectotype of *B. moravicum*]. The decurrent leaf base is shown in Fig. 2. Characters of the additional material thus support adoption of the name *B. moravicum* Podp. [1906] in place of *B. laevifilum* Syed [1973].

In Britain *B. laevifilum* seems to be almost an 'obligate epiphyte' (in the sense of Smith, 1982) rather than merely a 'facultative epiphyte' like the closely allied and commoner *B. capillare*. Thus, Crundwell (1994, p. 102) noted that *B. laevifilum* grows mainly 'on trunks and branches of elder, ash, sycamore, maple and other trees' occurring 'more rarely on stumps, rotten logs, rocks or soil'. Nevertheless, the habitat of the types of *B. moravicum* on conglomerate rock need not imply it is a different species, since *B. laevifilum* has been reported (under various names) from rock substrata in, for example, Andorra (Townsend, 1999), Austria (Grims, 1999), Sweden (Syed, 1973; Weibull, 2001), the middle and northern Urals (Goldberg, 2002a, b), eastern Siberia (Ignatov *et al.*, 2001), the High Atlas of Morocco (Ros *et al.*, 2000) and the U.S.A. (Syed, 1973). The occurrence of *B. laevifilum* on stones and rocks (usually slightly basic and shaded) in the Czech Republic is not exceptional, although even here the species is principally epiphytic.

**Lectotype**, of *Bryum moravicum* Podp., *Věstník Klubu Přírodovědeckého v Prostějově* 8, p. 41, 1906, here designated: BRNM No. 136388 (Ivančice, ad rupes, conglomerata permica pr. Řeznovice, c. 250 m, IV.1905, leg. J. Podpěra).

The obvious duplicates of the lectotype specimen BRNM No. 136388 are regarded here as isolectotypes (BRNM No.

163685, 163686, 163687) as is the specimen with almost identical data at S. BRNM No. 136384 ('V' of Podpěra) is regarded as a syntype, although it might in fact be another duplicate of the original collection (the label is somewhat ambiguous).

The keeper of the BRNM herbarium is acknowledged for arranging a loan. A research visit enabling DTH to study *Bryum* at the Swedish Museum of Natural History (S) was funded by the HIGH LAT RESOURCE under the EC-funded IHP programme; thanks are due to Dr I. Bisang and Dr L. Hedenäs for help with this visit.

TAXONOMIC ADDITIONS AND CHANGES: *Bryum moravicum* Podp.: lectotype designated.

#### REFERENCES

- Crundwell AC. 1994.** Account of *Bryum subelegans*. In: Hill MO, Preston CD, Smith AJE. 1994. *Atlas of the bryophytes of Britain and Ireland. 3. Mosses (Diplolepidae)*. Colchester: Harley Books.
- Goldberg IL. 2002a.** The saxicolous moss flora of the Middle Urals. *Arctoa* **11**: 63–80.
- Goldberg IL. 2002b.** Contribution to the saxicolous moss flora of the Northern Urals. *Arctoa* **11**: 81–86.
- Grimm F. 1999.** *Die Laubmoose Österreichs. Catalogus Flora Austriae, II. Teil, Bryophyten (Moose), Heft. 1, Musci (Laubmoose)*. Wien: Austrian Academy of Sciences, Biosystematics and Ecology Series no. 15.
- Holyoak DT. 2004.** Taxonomic notes on some European species of *Bryum* (Bryopsida: Bryaceae). *Journal of Bryology* **26**: 247–264.
- Ignatov MS, Ivanova EI, Ignatova EA, Krivoschapkin KK. 2001.** On the moss flora of Ust-Maya District (Republic Sakha/Yakutia, East Siberia). *Arctoa* **10**: 165–184.
- Podpěra J. 1906.** Výsledky bryologického výzkumu Moravy za rok 1904–05. *Věstník klubu přírodovědeckého v Prostějově* **8**: 20–50.
- Ros RM, Cano MJ, Muñoz J, Guerra J. 2000.** Contribution to the bryophyte flora of Morocco: the Jbel Toubkal. *Journal of Bryology* **22**: 283–289.
- Smith AJE. 1982.** Epiphytes and epiliths. In: Smith AJE. (ed.) *Bryophyte ecology*. London: Chapman & Hall, pp. 191–227.
- Syed H. 1973.** A taxonomic study of *Bryum capillare* Hedw. and related species. *Journal of Bryology* **7**: 265–326.
- Townsend CC. 1999.** Some interesting mosses from Andorra. *Bulletin of the British Bryological Society* **73**: 26–32.
- Weibull H. 2001.** Influence of tree species on the epilithic bryophyte flora in deciduous forests of Sweden. *Journal of Bryology* **23**: 55–66.

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## The identity of *Isothecium marocanum* Thér. & Meyl.

Within a larger study of the genus *Isothecium*, a search for type material of *Isothecium marocanum* Thér. & Meyl. was performed. This taxon was described from Morocco in 1932 (Thériot & Meylan, 1932), but has not been further reported or revised. Type material was not found during a general search for all available Moroccan bryophyte material in Paris (PC; R. M. Ros and M. J. Cano, pers. comm.), where I. Thériot's original herbarium is located, but we traced an isotype in J. Braun-Blanquet's herbarium with the help of J. Mathez in Montpellier (MPU) and B. Toussaint in Bailleul (BAIL). Braun-Blanquet's bryophyte herbarium will soon be moved from BAIL to MPU, where the rest of his herbarium is already housed. The isotype is mixed with *Homalothecium sericeum* (Hedw.) Schimp., which was also noted on the envelope of the type, and a small piece of *Orthotrichum lyellii* Hook. & Taylor. Originally, Thériot had written an unpublished herbarium name on the specimen, but it undoubtedly belongs to the species we today call *Scorpiurium deflexifolium* (Solms) M.Fleisch. & Loeske. The type of *I. marocanum* agrees completely with the latter in leaf shape and areolation. The leaves are ovate, strongly narrowed towards their insertion, and gradually narrowed towards a broadly acute apex. The

single costa ends shortly below the leaf apex, and the margin is recurved in its lower part and plane and denticulate or strongly so above. The marginal cells are similar to those further in, whereas in *Isothecium* the marginal cells are frequently shorter than the lamina cells closer to the costa. The median leaf lamina cells are 15–40 × 5–9 µm and smooth, and the rectangular, quadrate or rhomboidal alar cells form a triangular or ovate, indistinctly delimited unistratose group that extends up along leaf margin 20–30% of the leaf length. In *Isothecium* the alar cells are usually partly bistratose near the leaf insertion, strongly incrassate, opaque and form indistinct, yellowish to brownish auricles. All the material of *Isothecium marocanum* is sterile, and sporophytes have not been described (Thériot & Meylan, 1932). While the holotype could potentially exist in Meylan's herbarium in Lausanne (LAU), we do not lectotypify the name, but make the following synonymization:

*Scorpiurium deflexifolium* (Solms) M. Fleisch. & Loeske

Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie 13: 22. 1907. Basionym: *Hypnum*

*deflexifolium* Solms, Tentamen Bryo-Geographiae Algarviae 40. 1868.

**Syn. nov.:** *Isothecium marocanum* Thér. & Meyl., Revue Bryologique et Lichénologique 5: 137. 1932. Type: [Morocco]. *Isothecium marocanum* Thér. & Meyl., nov. sp., Vallon derrière Zerekten, 1600 m, herb. J. Braun-Blanquet (BAIL, to be moved to MPU; isotype).

Note: In the description (Thériot & Meylan, 1932), the type locality was incorrectly spelled as 'Zerekken'.

We very much appreciate the help of J. Mathez, MPU, and B. Toussaint, BAIL, in locating the type material of *I. marocanum*. R. M. Ros and M. J. Cano in

Murcia University kindly informed us about the search in PC.

TAXONOMIC ADDITIONS AND CHANGES: *Scorpiurium deflexifolium* (Solms) M. Fleisch. & Loeske (syn. *Isothecium marocanum* Thér. & Meyl.).

#### REFERENCES

Thériot I, Meylan CH. 1932. Une nouvelle espèce d'*Isothecium*: *Isothecium marocanum* Thériot et Meylan. *Revue Bryologique et Lichénologique* 5: 137–139.

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## New national and regional bryophyte records, 11

Intending contributors to this column should consult the Instructions for Authors in part 1 of this volume, and should address their contributions to the column editor.

### 1. *Bryum stenophyllum* Dixon

**Contributor:** C. C. Townsend

**Kenya:** NORTH NYERI DISTRICT: on a rotting log in a shaded valley alongside the Sirimon Track, Mount Kenya, ca 0.04°S 37°16'E, ca 3030 m a.s.l., c.fr., 5 April 1975, leg. C.C. Townsend 75/821 (EAH, Priv. Herb. Townsend).

As far as I am aware this species has only been noted twice since the original gathering, and all three collections are from the Ruwenzori. It is a very distinctive little moss with narrow leaves and long cells which are narrower towards the margin, which may be plane (as described by Dixon) or narrowly recurved – even in the type. Ochi (1972) rightly observes that the leaf should be described as having no distinct border rather than a broad ill-defined one as Dixon describes it. The capsule is slender and narrow with a rather long, slender neck, resembling some *Pohlia* species but with well-developed appendiculate cilia. Neither Dixon nor Ochi mention the sexuality of the species, no doubt since the type material was too scanty to investigate. Finding a clump with so many fruit I had expected to find it synoicous or paroicous. However, I have searched in vain for antheridia among the numerous gynoecia, and equally vainly for androecia. On a nearby tree I had gathered a sterile mat of a moss which has leaves similar to those of 75/821 (Townsend 75/812), and I had hopes that this might produce the missing males; yet this too produced only gynoecia, in spite of bearing no fruit. One can only

conclude that the bare, hard bark of the standing tree was less conducive to producing capsules than the soft, rotting log. The species can thus only be considered as dioicous.

### 2. *Cirriphyllum cirrosom* (Schwägr.) Grout

**Contributor:** C. C. Townsend

**Argentina:** PROV. SANTA CRUZ: Parque Nacional Los Glaciares, in soggy mud among vegetation in a marsh along the Rio de las Vueltas ca 6 km N. of El Chalten, 49°17'S 73°05'W, ca 480 m a.s.l., 22 January 1997, leg. C.C. Townsend 97/277 (BA, Priv. Herb. Townsend).

This can be added to the growing list of 'bipolar' species. It has apparently not been previously found in the southern hemisphere. The habitat would be rather an unfamiliar one to western and central European bryologists, who are more accustomed to seeing it on damp rock ledges or rocky or stony grassy slopes. It agrees however remarkably well with that of a duplicate ex Copenhagen (C) in my herbarium from northernmost Greenland collected on the Danish Peary Land Expedition of 1947–50, Hellprin Land, Bronlund Fjord, 82°10'N 31°W, 100 m a.s.l., Holmen 6015, which was collected in a 'swamp at river'. The only moss accompanying my Argentine specimen was *Warnstorfia exannulata* (Schimp.) Loeske, well known from the Patagonian region.

### 3. *Didymodon brachyphyllus* (Sull.) R.H.Zander

**Contributor:** R. Ochyra

**South Georgia:** scree slope below Pirner Point, on south side of Whale Valley, 54°31'S, 36°04'W, ca 350 m a.s.l., rock crevice, 31 January 1972, leg. Bell 1160 (AAS, KRAM).

*Didymodon brachyphyllus* has long been considered as a poorly known North American species, until recently Zander & Ochyra (2001) and Ochyra & Zander (2002) confirmed its occurrence in the Antarctic. In the Northern Hemisphere it is arctic-alpine in distribution, with the main centre of distribution in western North America, from Oregon to Baja California Norte in Mexico east to Colorado and New Mexico, with some isolated stations in British Columbia and in S.W. Alaska on the Alaska Peninsula. Additionally, it is known from West Greenland in the Arctic (Mogensen & Zander, 1999), Iceland in Europe (Jóhannsson, 2003) and central Mexico (Zander, 1994). In the southern hemisphere, *D. brachyphyllus* is known only from the Antarctic where it has a wide pan-Antarctic range. It has maximum occurrence in the West Antarctic, ranging from the South Orkney Islands to Alexander Island and reaching its southernmost station at lat. 71°31'S. On the east coast of the Antarctic Peninsula the species is relatively frequent on James Ross Island, Vega Island and Cockburn Island and on the continent it occurs on Edward VII Land and Victoria Land where it reaches its southernmost occurrence at lat. ca 77°02'S at Cape Roberts. The present record extends the austral range of *D. brachyphyllus* to sub-Antarctic South Georgia and actually it represents the first discovery of the genus *Didymodon* in this biome.

4. *Marsupella alpina* (Gottsche ex Husn.) Bernet

**Contributors:** J. Vána, R. Ochyra & H. Bednarek-Ochyra

**Yukon Territory:** Itsi Range, Selwyn Mts, N. end of unnamed lake, S. of Fuller L., lat. 62°56'N. 130°09'W, 1600–1700 m a.s.l., damp cliff, 8 August 1978, *leg.* Schofield, Vitt & Horton 70083A (ALTA, KRAM, PRC).

*Marsupella alpina* is an alpine liverwort showing strong affinities to an oceanic climate. It has a wide but highly disjunct pan-Holarctic distribution, with a maximum occurrence in Europe. In mainland Europe it occurs in the Pyrenees (Spain, France), Alps (Switzerland, Austria, Italy, Germany), Giant Mts of the Czech Republic and the Western Carpathians of Poland and Slovakia, with an isolated station in the Stara Planina of Bulgaria (Ganeva & Duell, 1999). Additionally, it is scattered in Britain (Long, 1991) and in Norway in Scandinavia (Damsholt, 2002). Outside Europe, *M. alpina* is known from Nepal (Hattori, 1975; Kattel, 2002), the Khamar-Daban Mts in southern Siberia (Konstantinova, Potemkin & Shlyakov, 1992), China (Piippo, 1990) and Japan (Kitagawa, 1963) in Asia, as well as from western North America. In the latter area the species is very rare and so far it has been recorded from the Alexander Archipelago in south-western Alaska (Persson, 1950) and the Queen Charlotte Islands in British Columbia (Persson, 1958; Schofield, 1968). The present record represents a major range extension of *M. alpina* in North America and it is the fifth species of this genus in the Yukon Territory (Hong & Vitt, 1977; Vitt, Horton & Pickard, 1987). It was found as the only admixture of *Streptocolea atrata* (Hornsch.) Ochyra & Żarnowiec, a species recorded for the first time from

western North America (Ochyra & Bednarek-Ochyra, 2004). Apart from the Norwegian station in Nord-Trøndelag situated at lat. ca 64°N, it seems to be the second northernmost locality of *M. alpina* in its global geographical range.

5. *Oreoweisia erosa* (Müll.Hal.) Kindb.

**Contributor:** C.C. Townsend

**Tanzania:** IRINGA DISTRICT: Mt. Image, 7°30'S 36°10'E, 80 km. N.E. of Iringa, on rocks in montane grassland, mist zone, 2210 m a.s.l., March 1962, *leg.* R.M. Polhill & S. Paulo B816a (Priv. Herb. Townsend).

**Kenya:** ELGEYO DISTRICT: Cherangani Hills, rocks with thin earth cover about the summit ridge of Kaisungor, 1°03.5'N 35°24.5'E, ca 3100 m a.s.l., 6 February 1985, *leg.* C.C. Townsend 85/349 (Priv. Herb. Townsend), 85/352 (EAH, Priv. Herb. Townsend). Both c.fr.

Outside southern Africa and Madagascar, this species was hitherto only known from the Democratic Republic of Congo (Zaire), and there only from Mt Kahuzi and Mt Biega, in the Kivu region, at altitudes of 2750–2760 m. Thus the Kenyan locality is the furthest north in Africa, and the first north of the equator.

Both determinations were kindly performed by Philip Sollman, having been sent to him by erroneous visual sorting as Pottiaceous.

6. *Orthotrichum shawii* Wilson

**Contributors:** C. Garcia, C. Sérgio & M. Sim-Sim

**Portugal:** BEIRA ALTA: Serra da Estrela, Mondeguinho, Sumo do Mondego: epiphyte on *Betula celtiberica*, 1200 m a.s.l., 29TPE2075, 28 November 2000, *leg.* C. Garcia, *conf.* Vicente Mazimpaka 2000 (LISU 18686).

This population of *O. shawii* was found during a study of the bryological flora of the Natural Park of Serra da Estrela (PNSE) Portugal (Garcia, 2001). The PNSE (101 060 ha) is situated in the east-central part of Portugal, and comprises the highest mountain of mainland Portugal (1993 m a.s.l.). Within it are the sources of the rivers Mondego, Zêzere and Alva. The bedrock is mainly granite in the central part, and schists on the periphery, and many of the geomorphological structures have glacial and periglacial origins. The area lies at the meeting point of three climatic regions, Atlantic, Mediterranean and Continental, and includes at least 36 habitats of the 'Habitats Directive' (Jansen & Sequeira, 1999), where many species have their sole occurrence in Portugal.

Many recent authors (Mazimpaka *et al.*, 2000; Smith, 2004) consider *O. shawii* to be an independent species as described by Venturi (1884–90), although the latter author suggested that it might have a hybrid origin. Lewinsky (1993) and Smith (1972) included it as a synonym of *Orthotrichum striatum* Hedw. We support the view that it is an independent species, mainly because of its sporophyte characters: the capsule not or scarcely ribbed, the exothecial areolation with longitudinal bands, and the distinctive opaque exostome teeth with vestigial endostome segments (Mazimpaka *et al.*, 2000).

*Orthotrichum shawii* is considered a Mediterranean-oceanic species (Mazimpaka *et al.*, 2000). Until recently

considered a widespread but uncommon European endemic moss, it is now known also from Morocco (Garrileti *et al.*, 2002). It was described from Scotland (classic locality, where it was not found for more than a century), and has been indicated in France, Germany, Italy and Spain. The closest known population to Portugal is in Spain, but no new populations were found at this locality in a survey of more than 100 trees (Mazimpaka *et al.*, 2000). Recently it was found at a second Spanish locality, in the Occidental Pyrenees (Ederra, Huarte & Juaristi, 2003). In Portugal it has not been refound in the four years since the first observation, in spite of intensive surveys of the epiphytic cryptogamic flora. Garrileti *et al.* (2002) recently published preliminary data for a red list of the European species of the genus *Orthotrichum*; they include *O. shawii* as a rare taxon, which does not form large populations.

In Portugal a single tuft of *O. shawii* was discovered growing as an epiphyte in a natural birch forest in the middle belt zone of the Estrela Mts, in a very rich bryophyte community on *Betula celtiberica* Rothm. & Vasc. This is the region of Portugal where the majority of endemic taxa exist (Sérgio & Draper, 2001). The associated species were *Frullania dilatata* (L.) Dumort., *Aulacomnium androgynum* (Hedw.) Schwägr., *Dicranoweisia cirrata* (Hedw.) Lindb. ex Milde, *Eurhynchium pulchellum* (Hedw.) Jenn., *Homalothecium sericeum* (Hedw.) Schimp., *Hypnum cupressiforme* Hedw., *Orthotrichum acuminatum* H.Philib., *O. affine* Brid., *O. ibericum* F.Lara & Mazimpaka, *O. lyellii* Hook. & Taylor, *O. rupestre* Schwägr., *O. speciosum* Nees, *O. striatum* Hedw., *O. tenellum* Brid. and *Racomitrium heterostichum* (Hedw.) Brid.

#### 7. *Plagiothecium lamprostachys* (Hampe) A.Jaeger

**Contributors:** R. Ochyra & H. W. Matcham

**South Africa:** WESTERN CAPE PROVINCE: Toverkop (Toorkop on recent maps), Swartberge mountain range near Ladismith (quarter degree grid reference 3321 AC); rocky gully, S. side, alt. ca 2150 m a.s.l., 16 December 1956, leg. Esterhuysen 26828 (KRAM, PRE).

**Lesotho:** LERIBE DISTRICT: Mafika-Lisiu Pass, 7 km N.W. of Lejone, lat. 29°04'S, 28°25'E, alt. 3020 m a.s.l., soil between basalt rocks, 16 April 1997, leg. Matcham & Duckett 5017a (Priv. Herb. Matcham, KRAM).

*Plagiothecium lamprostachys* is an Australasian species, known from New Zealand and S.E. Australia and Tasmania where it has long been named *P. novae-seelandiae* Broth. (Ireland, 1992; Streimann & Klanzenga, 2002). However, Ochyra (2002) proved that this species was much earlier distinguished in Australia as *Hypnum lamprostachys* Hampe but this name had fallen into obsolescence. Taxonomically, *P. lamprostachys* still needs a critical assessment. It is closely related to the northern *P. denticulatum* (Hedw.) Schimp. and actually Dixon (1929) considered them conspecific. Even though *P. lamprostachys* is unlike the typical phenotypes of this species, it is very close or possibly identical to *P. denticulatum* var. *obtusifolium* (Turner) Moore with which it shares the overall appearance and imbricate, deeply concave and obtuse leaves. This variety has sometimes been

considered as a species in its own right, *P. donnianum* (Sm.) Mitt., and this name is probably the oldest available name for this taxon at the species level.

So far, no species of the *Plagiothecium denticulatum* group has been reported from southern Africa (Rooy, 2003) and the two specimens cited here from Lesotho and the Cape region perfectly agree with the type of *P. lamprostachys* and other Australasian non-type collections. In contrast to the plants from Lesotho, the Cape material is in fine fruiting condition. The discovery of *P. lamprostachys* in southern Africa is a major range extension for this species which has to be considered as a pan-south-temperate species. Actually, the material reported by Ochyra (2001) from Tierra del Fuego as *P. falklandicum* (Cardot & Broth.) M.E.Newton, as well as the type material of this species from the Falklands are inseparable from *P. lamprostachys* (Ochyra, unpublished). The same is also true with the specimens from sub-Antarctic South Georgia (Newton, 1983).

#### 8. *Pleuroidium nervosum* (Hook.) Mitt.

**Contributor:** C. C. Townsend

**Kenya:** MERU DISTRICT: on trodden ground by a track above the Urumandi Hut, 0°08.5'S 37°25'E, Mount Kenya, ca 3400 m a.s.l., c.fr., 17 January 1985, leg. C.C. Townsend 85/201 (EAH, Priv. Herb. Townsend).

Until collected by Georg & Sabina Miehe in the Bale Mountains of Ethiopia (Miehe & Miehe, 1994), this species was only known in Africa from South Africa, Lesotho and Madagascar. It occurs also in Australia and New Zealand.

The drier eastern side of Mount Kenya has been little explored bryologically, but this discovery indicates that it could be profitable. Search for material for the account of the Umbelliferae for Kew's *Flora of Tropical East Africa* left little time for serious 'bryologizing' and only the almost cosmopolitan *Grimmia laevigata* (Brid.) Brid. was seen on rock close to the above. Epiphytes on tree-heath nearby included *Neckera platyantha* (Müll.Hal.) Paris, *Brachythecium vellereum* (Mitt.) A.Jaeger, *Macrocoma abyssinica* (Müll.Hal.) Vitt and the rarer *Leptodontiopsis macrocarpa* Dixon, only seen elsewhere in the Aberdares. Close by was the endemic Kenyan umbellifer *Peucedanum englerianum* H.Wolff, originally described from the Aberdares Range and seen there on similar ground near Wanderi Camp, 0°20'S 36°40'E ; *Pleuroidium nervosum* might well be sought here also.

To judge from material in my herbarium and in BM, this species varies in the length of the acumen of the perichaetial leaves. Oliver 7242 from Khamiesberg, Cape Province, has these with a longer, more finely pointed apex. The Kenyan gathering has them with a shorter apex similar to Schelpe 7785 (BM), also from Cape Province (Namaqualand) and to the figure supplied by Magill (1981).

#### 9. *Pohlia nutans* (Hedw.) Lindb. subsp. *schimperi* (Müll.Hal.) Nyholm (*P. schimperi* (Müll.Hal.) Andrews)

**Contributor:** Adam Stebel

**Poland:** WESTERN CARPATHIANS: Beskid Wysoki Range, massif of Babia Góra, N slope, at the place called 'Zła Dolinka', 49°34'51"N, 19°33'23"E, 1465 m a.s.l., on thin

soil over sandstone boulder, 13 August 1998 and 3 September 1998, *leg.* A. Stebel (KRAM, SOSN No. 40516, 29407); 'Kościółek Zachodni', 49°34'33"N, 19°31'08"E, 1605–1610 m a.s.l., on sandstone boulder, 24 August 1999, *leg.* A. Stebel (KRAM, SOSN No. 29404, 29408, 40518); 'Kępa', 49°34'45"N, 19°33'09"E, 1520 m a.s.l., in crevices of sandstone block, 28 September 1997, *leg.* A. Stebel (KRAM, SOSN No. 45276).

*Pohlia nutans* subsp. *schimperi* is a poorly known and critical taxon. It is closely related to the common *P. nutans* (Hedw.) Lindb. and actually the only key character distinguishing it is colour, viz. deeply red in subsp. *schimperi* and green in the type. Nyholm (1993) treated it as a full species, although she had previously relegated it to a subspecies of *P. nutans* (Nyholm, 1958). It is generally considered to be a plant of the extreme north, scattered in the Nearctic (Andrews, 1935) and Arctic Russia (Afonina & Czernadjeva, 1995), occasionally extending to Japan (Ochi, 1959). In Europe it is known only from the mountains of Sweden and Norway in Scandinavia (Nyholm, 1993) and Spitsbergen (Frisvoll & Elvebakk, 1996). Recently, it has been reported from the Czech Republic (Kučera & Váňa, 2003) and Poland (Ochyra, Żarnowiec & Bednarek-Ochyra, 2003) in Central Europe and these discoveries established it as an arctic-alpine taxon in Europe. Because the Polish record has not been documented, the voucher specimens on which it is based are cited here. The taxon was found at three localities at altimontane elevations in the massif of Babia Góra in the Beskid Wysoki (=High Beskid) Range in the Western Carpathian Mountains. It grows in open sites on and amongst sandstone rocks in the subalpine belt. It is associated with some moss species common in this area, including *Bucklandiella microcarpa* (Hedw.) Bednarek-Ochyra & Ochyra, *Cynodontium polycarpon* (Hedw.) Schimp., *Dicranum scoparium* Hedw., as well as the type subspecies of *Pohlia nutans* (Hedw.) Lindb. It is interesting to note that *P. nutans* subsp. *schimperi* quite frequently produces sporophytes at these stations.

10. *Pyrrhobryum spiniforme* (Hedw.) Mitt.

**Contributor:** C. C. Townsend

**Cameroon:** SOUTH WEST PROVINCE: Kupe-Muanengeba Division, Mount Kupe, 4°47'N 9°43'E, on a rotting trunk, c.fr., 1960 m a.s.l., 6 June 1996, *leg.* L. Zapfack 724, det. Townsend (YA, Priv. Herb. Townsend).

Collected under the 'Conservation of the Plant Diversity of Western Cameroon' project involving the Royal Botanic Gardens, Kew and the Herbarium National du Cameroun, sponsored by the Darwin Initiative U.K. and Earthwatch. Filling a somewhat surprising gap in the distribution of this widespread species.

11. *Racopilum marginatum* Dixon

**Contributor:** C. C. Townsend

**Zambia:** NORTHERN REGION: Mbala District, on rock ledge near stream in riverine forest, N'tingila Ranch, on road from Mbala, 8°50'S 31°22'E, to Kasama, 8°48'S 31°28'E, ca 1500 m a.s.l., 8 June 1980, *leg.* C. C. Townsend 80/296, det. B.O. van Zanten (Priv. Herb. Townsend).

12. *Scopelophila cataractarum* (Mitt.) Broth.

**Contributor:** C. C. Townsend

**Democratic Republic of Congo (Zaire):** KATANGA: Lubumbashi District, on rock in the disused workings of 'Mine de l'Étoile' copper mine, 11 km from Lubumbashi, near Lukuni, 11°30'S 27°25'E, ca 1250 m a.s.l., 2 March 1975, *leg.* C.C. Townsend 75/226, det. P. Sollman (Priv. Herb. Townsend).

My colleague and co-expeditioner Sheila Hooper and I were taken to the above spot by Prof. F. Malaisse prior to our departure for Kundelungu Plateau, to the north.

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REFERENCES

- Afonina OM, Czernadjeva IV. 1995. Mosses of the Russian Arctic: check-list and bibliography. *Arctoa* 5: 99–142.
- Andrews AL. 1935. Bryaceae. In: Grout AJ, ed. *Mossflora of North America north of Mexico*. 2(3). Newfane, Vermont: privately published, 184–210 + pls 65–83.
- Damsholt K. 2002. *Illustrated flora of Nordic liverworts and hornworts*. Lund: Nordic Bryological Society.
- Dixon HN. 1929. Studies in the bryology of New Zealand, with special reference to the herbarium of Robert Brown. Part VI. *New Zealand Institute Bulletin* 3: 299–372.
- Ederra A, Huarte B, Juaristi R. 2003. Aportaciones al conocimiento de la Flora Muscinal del Pirineo Occidental. *Acta Botánica Barcinonensis* 49: 173–182.
- Frisvoll AA, Elvebakk A. 1996. Part 2. Bryophytes. In: Elvebakk A, Prestrud P, eds. A catalogue of Svalbard plants, fungi, algae and cyanobacteria. *Norsk Polarinstitutt Skrifter* 198: 57–172.
- Ganeva A, Duell R. 1999. Checklist of Bulgarian bryophytes. In: Duell R, Ganeva A, Martincic A, Pavletic Z. *Contributions to the bryoflora of former Yugoslavia and Bulgaria. Checklists of the bryophytes of former Yugoslavia and Bulgaria as well as the results of excursions*. Bad-Münstereifel: IDH-Verlag, 111–179.

- Garcia C. 2001.** *Flora Briológica do Parque Natural da Serra da Estrela. Biodiversidade e Conservação.* Museu Laboratório e Jardim Botânico da Universidade de Lisboa. Instituto da Conservação da Natureza. Parque Natural da Serra da Estrela.
- Garrileti R, Lara F, Belén A, Mazimpaka V. 2002.** Datos preliminares para una lista roja de las especies europeas del género *Orthotrichum* Hedw. (Musci). *Conservación Vegetal. Boletín de la Comisión de Flora de la Unión Mundial para la Naturaleza. Comité Español UICN* 7: 3–5.
- Hattori S. 1975.** Hepaticae. In: Ohashi H, Flora of eastern Himalaya. Third report. *Bulletin of the University Museum of the University Tokyo* 8: 206–242.
- Hong WS, Vitt DH. 1977.** Hepaticae of the Yukon Territory. *Bryologist* 80: 461–469.
- Ireland RR. 1992.** Studies of the genus *Plagiothecium* in Australasia. *Bryologist* 95: 221–224.
- Jansen J, Sequeira MPSM. 1999.** The vegetation of shallow waters and seasonally inundated habitats (Littorelletea and Isoeto-Nanojuncetea) in the higher parts of the Serra da Estrela, Portugal. *Mitteilungen des Badischen Landesvereins für Naturkunde und Naturschutz N.F.* 17: 457–470.
- Jóhannsson B. 2003.** Icelandic bryophytes. Lists and additions. *Fjölrit Náttúrufræðistofnunar* 44: 1–135 [In Icelandic with English summary].
- Kattel LP. 2002.** *Liverworts of Nepal (List and reference).* Kathmandu: Format Printing Press.
- Kitagawa N. 1963.** A revision of the family Marsupellaceae of Japan. *Journal of the Hattori Botanical Laboratory* 26: 76–118.
- Konstantinova NA, Potemkin AD, Shlyakov RN. 1992.** Check-list of the Hepaticae and Anthocerotae of the former USSR. *Arctoa* 1: 87–127.
- Kučera J, Váňa J. 2003.** Check- and Red List of bryophytes of the Czech Republic (2003). *Preslia* 75: 193–222.
- Lewinsky 1993.** A synopsis of the genus *Orthotrichum* Hedw. (Musci, Orthotrichaceae). *Bryobrothera* 2: 1–59.
- Long DG. 1991.** *Marsupella alpina* (Gott. ex Limpr.) H. Bern. In: Hill MO, Preston CD, Smith AJE, eds, *Atlas of the bryophytes of Britain and Ireland. Volume 1. Liverworts (Hepaticae and Anthocerotae).* Colchester: Harley Books, 175.
- Magill RE. 1981.** *Flora of Southern Africa - Bryophyta. Part 1. Mosses. Fascicle 1, Sphagnaceae-Grimmiaceae.* South Africa: Department of Agriculture and Fisheries.
- Mazimpaka V, Lara F, Garrileti R, Albertos B, Lo Giudice R. 2000.** *Orthotrichum shawii* Wilson, a distinct European species. *Journal of Bryology* 22: 183–192.
- Miehe G, Miehe S. 1994.** *Ericaceous forest and heathlands in the Bale Mountains of South Ethiopia. Ecology and man's impact.* Hamburg: Stiftung Walderhaltung in Afrika and Bundesforschungsanstalt für Forst- und Holzwirtschaft.
- Mogensen GS, Zander RH. 1999.** Four moss species new to Greenland: *Barbula amplexifolia*, *Didymodon brachyphyllus*, *D. michiganensis*, and *Gyroweisia tenuis* (Pottiaceae, Musci). *Lindbergia* 24: 77–83.
- Newton ME. 1983.** A new species of the moss genus *Plagiothecium* from South Georgia. *British Antarctic Survey Bulletin* 60: 63–67.
- Nyholm E. 1958.** *Illustrated moss flora of Fennoscandia. II Musci. Fasc. 3.* Lund: CWK Gleerup.
- Nyholm E. 1993.** *Illustrated flora of Nordic mosses. Fasc. 3. Bryaceae – Rhodobryaceae – Mniaceae – Cinclidiaceae – Plagiomniaceae.* Copenhagen and Lund: Nordic Bryological Society.
- Ochi H. 1959.** *A revision of the Bryaceae in Japan and the adjacent regions.* Tottori: The Biological Institute, Faculty of Liberal Arts, Tottori University.
- Ochi H. 1972.** A revision of African Bryoideae, Musci (First Part). *Journal of the Faculty of Education Tottori University, Natural Science* 23: 1–126.
- Ochyra R. 2001.** *Plagiothecium falklandicum* (Cardot & Broth.) M.E.Newton. Argentina: Tierra del Fuego. In: New national and regional bryophyte records, 4. *Journal of Bryology* 23: 150–151.
- Ochyra R. 2002.** *Plagiothecium lamprostachys* (Hampe) A. Jaeger, a forgotten name for an Australasian moss. *Journal of Bryology* 24: 85–86.
- Ochyra R, Bednarek-Ochyra H. 2004.** *Streptocolea atrata* (Bryophyta, Grimmiaceae), newly found in western North America, with a review of its global distribution. *Bryologist* 107: in press .
- Ochyra R, Zander RH. 2002.** The genera *Didymodon* and *Bryoerythrophyllum* (Pottiaceae) in Antarctica. *Journal of Bryology* 24: 33–44.
- Ochyra R, Żarnowiec J, Bednarek-Ochyra H. 2003.** *Census catalogue of Polish mosses.* Kraków: Polish Academy of Sciences, Institute of Botany.
- Persson H. 1950.** *Marsupella alpina* (G.) Bernet, a new member of the group of hyperoceanic bryophytes in North America. *Bryologist* 53: 172–174.
- Persson H. 1958.** The genus *Takakia* found in North America. *Bryologist* 61: 359–361.
- Piippo S. 1990.** Annotated catalogue of Chinese Hepaticae and Anthocerotae. *Journal of the Hattori Botanical Laboratory* 68: 1–192.
- Rooy J van. 2003.** Bryophyta. In: Germishuizen G, Meyer NL, eds. Plants of southern Africa: an annotated checklist. *Strelitzia* 14: 1–37.
- Schofield WB. 1968.** Bryophytes of British Columbia. II. Hepaticae of particular interest. *Journal of the Hattori Botanical Laboratory* 31: 265–282.
- Sérgio C, Draper D. 2001.** Bryophyte survey as a basis for the validity of the Mediterranean isoclimatic areas in Portugal. *Bocconea* 13: 89–99.
- Smith AJE. 1972.** Some Observations on *Orthotrichum shawii* Wils ex Schimp. *Journal of Bryology* 7: 21–22.
- Smith AJE. 2004.** *The moss flora of Britain and Ireland*, 2nd edn. Cambridge: Cambridge University Press.
- Streimann H, Klanzenga N. 2002.** Catalogue of Australian mosses. *Flora of Australia Supplementary Series* 17: 1–259.
- Venturi [G]. 1884-90.** *Orthotrichum* Hedw., Musci frond. In: Husnot T. *Muscologia gallica. Première Partie – Acrocarpes.* Orne: T. Husnot; Paris: F. Savy, 154–196.
- Vitt DH, Horton DG, Pickard J. 1987.** An annotated list and the phytogeography of the bryophytes of Keele Peak, Yukon – an isolated granitic mountain. *Memoirs of the New York Botanical Garden* 45: 198–210.
- Zander RH, Ochyra R. 2001.** *Didymodon tectorum* and *D. brachyphyllum* (Musci, Pottiaceae) in North America. *Bryologist* 104: 372–377.
- Zander RH. 1994.** *Didymodon.* In: The moss flora of Mexico. Part 1. Sphagnales to Bryales. *Memoirs of the New York Botanical Garden* 69: 299–319.

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