

UPDATE TO *THE MOSSES AND LIVERWORTS OF BRECKNOCK*

G S Motley, December 2014

The Mosses and Liverworts of Brecknock (Woods, 2006) is an essential read for anyone with an interest in the bryophytes of the county. At the time of writing it is still available from the supplier listed on the British Bryological Society web site: <http://rbg-web2.rbge.org.uk/bbs/Recording/vc42.htm>.

This short note updates Woods' Flora, describing those moss and liverwort species recorded new to Breconshire (V.-c 42) since its publication. Most records have been made by Sam Bosanquet (SDSB) and Graham Motley (GSM), with many arising from surveys of National Nature Reserves (NNR) and Sites of Special Scientific Interest (SSSI) (Bosanquet & Motley, 2008, 2009, 2013). Voucher specimens for many of these new records are held in the British Bryological Society Herbarium (Hb. BBSUK) and other herbaria.

Since 2006, a total of 28 species, sub-species and variety of bryophyte has been added to the county list, with one modern record of a species thought to be extinct, two species revised due to taxonomic changes and one species removed. Details on the occurrence of each of these species is provided in the accounts below, together with maps illustrating their distribution in the county. Species are listed in Census Catalogue order (Hill *et al.*, 2008).

Lists of bryophytes reliably recorded from Breconshire, but which have not had a voucher deposited in the BBSUK herbarium, are given in an Appendix. Hopefully visiting bryologists who see any of the species on the list will collect a small specimen and submit it to the BBS Moss and Liverwort Recorders.

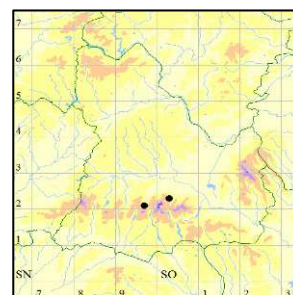
NEW ADDITIONS

LIVERWORTS

***Riccardia incurvata* Lindb. (Lesser Germanderwort)**

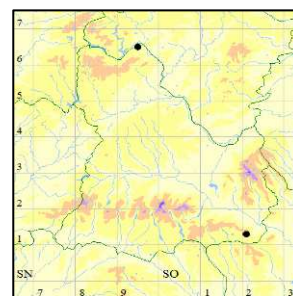
Recorded growing with *Haplomitrium hookeri* on a steep stream bank south of Craig y Fro (SN977203) near Storey Arms. It was also seen in streamside turf at Nant Sere (SO026231). Material likely to be this species has been noted in similar stream-side gravelly habitat at other sites in the Brecon Beacons National Park. Fruiting: both male and female plants present, sporophytes not seen. Altitude (range): 355-450 m.

First recorded: Craig y Fro, Bosanquet 2009 (Hb. BBSUK).



***Cololejeunea minutissima* (Sm.) Schiffn. (Minute Pouncewort)**

This diminutive species has only been recorded in the county near Cwm Carngafallt (SN954640), to the south-west of Rhayader, and at Blackrock (SO218127) on the southern side of Mynydd Llangattock. At the latter site it was abundant on two *Fraxinus* trunks in a humid section of a quarry. This is a mainly coastal and southern liverwort, but it has been spreading inland in recent decades, presumably in



response to changing climate or improving air quality. As it is similar in appearance to *Microlejeunea ulicina* it may be overlooked.

Fruiting: perianths consistently present.

Altitude (range): 240-250 m.

First recorded: Near Cwm Carngafallt, R Knight, M Lawley & RG Woods 2008.

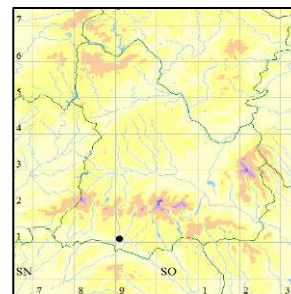
***Plagiochila bifaria* (Sw.) Lindenb. (Killarney Featherwort)**

The first record in the county came from near Pont Melin-fach (SN908106) in the humid valley of the Afon Nedd, where it was growing on a *Fraxinus* trunk in oak-dominated woodland. Since then the species has been found at other localities in the same tetrad. It should be present elsewhere in the county, in particular oak woodlands in the far north and north-west.

Fruiting: female plants present, sporophytes not recorded.

Altitude (range): 180-185 m.

First record: Pont Melin-fach, Bosanquet & Motley 2010 (Hb. BBSUK).



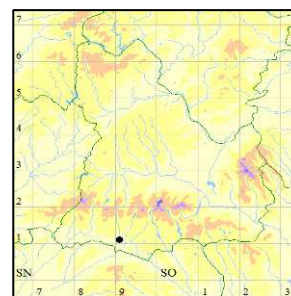
***Plagiochila exigua* Taylor (Petty Featherwort)**

The smallest and the most humidity-demanding member of this genus occurs at its most southerly British location in the valley of the Afon Nedd (SN912117) near Ystradfellte. Six patches grow on sandstone rocks with a calcareous element, where associates include *Neckera crispa* and *Tortella tortuosa*. It could also be present in woodlands in the far north-west of the county as it is known from sites in Carmarthenshire close to the Breconshire boundary.

Fruiting: sporophytes not recorded, male plants with abundant antheridia present.

Altitude (range): 220 m.

First record: above Pont Rhyd-y-cnau, Motley 2011 (Hb. BBSUK).



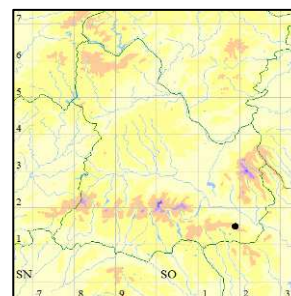
***Pedinophyllum interruptum* (Nees) Kaal (Craven Featherwort)**

The UK headquarters of this liverwort is the upland Carboniferous Limestone areas of northern England. If one was to have a guess at where the first Welsh record of this species might turn up, Craig y Cilau (SO189156), on the northern edge of Mynydd Llangattock, might have been near the top of the list of sites. It was recorded during a survey of the NNR, where it was found growing on a periodically wet limestone face below *Fagus*. Its presence here raises the possibility that a 1963 BBS record from limestone in the Nedd Valley near Ystradfellte may have been based on plants correctly identified in the field but then vouched with a specimen of *Plagiochila* (as it was determined by Jean Paton in 1965/66).

Fruiting: sporophytes not recorded.

Altitude (range): 400 m.

First recorded: Craig y Cilau, Bosanquet & Motley 2009 (Hb. BBSUK).



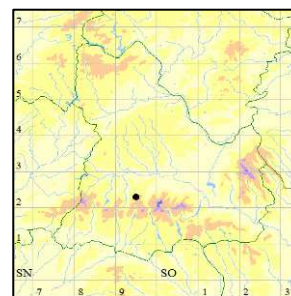
***Barbilophozia hatcheri* (A.Evans) Loeske (Hatcher's Pawwort)**

Although a rare species in Wales, the finding of this liverwort at Craig Cerrig-gleisiad NNR (SN959222) in the Brecon Beacons was not unexpected as it is known from sites just north of Builth Wells in Radnorshire. It was found growing on top of a large block of Old Red Sandstone situated in a boulder field in a landslip on the upper part of the slope at the western end of the corrie. The rocks in this part of the corrie appear to be more acid than over much of the rest of the site. The only associate was *Hypnum cupressiforme*. This represents the most southerly location for this species in Britain.

Fruiting: sporophytes not seen, abundant gemmae present.

Altitude (range): 575 m.

First recorded: Craig Cerrig-gleisiad, Motley 2012 (Hb. BBSUK).



MOSSES

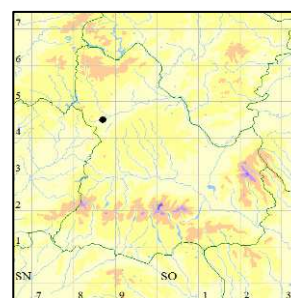
***Discelium nudum* (Dicks.) Brid. (Flag-moss)**

The only Breconshire record is from the banks of the Afon Cledan (SN879452) near Waen Rhydd, Llanwrtyd Wells, where it grows on sticky grey clay. It may well be present in similar habitat on the heavy soils of the Coal Measures in the south of the county.

Fruiting: sporophytes present.

Altitude (range): 200 m.

First record: by the Afon Cledan, Bosanquet 2012 (Hb. BBSUK).



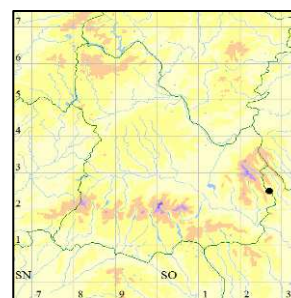
***Grimmia decipiens* (Schultz) Lindb. (Great Grimmia)**

Recorded during a 1999 BBS field excursion growing on mortar on the bridge over the Grywne Fawr at Coed-dias (SO273244). The bridge straddles the Breconshire – Monmouthshire boundary and the species is present in both counties. This is a rather shady damp valley, a rather unusual habitat for a species which likes the sun, and considering the taxonomic revisions that have occurred in the genus *Grimmia* over the past ten years, the specimen is probably worth re-checking.

Fruiting: not noted.

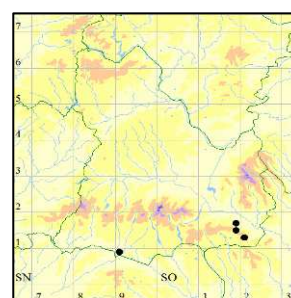
Altitude (range): 250 m.

First record: Coed-dias, NG Hodgetts 1999 (Hb. BBSUK).



***Seligeria donniana* Sm. (Donn's Rock-bristle)**

First seen in the county on a rather poorly vegetated, damp limestone rock face by the Afon Sychryd (SN916080) near Pontneddfechan in 2008. This river runs along the Breconshire-Glamorgan boundary and it is likely the species also occurs on the Glamorgan side of the river. It is also present nearby in the Mellte valley where it grows on a small limestone outcrop above the footpath by the river with *S. acutifolia* and also on limestone chippings on the woodland floor. *S. donniana* has also been found on a damp limestone cliff at the



northern end of Cwm Llam-march (SO2112) in Cwm Clydach NNR in 2012, where associates included *S. patula*, and at Chwar Mawr in Craig y Cilau NNR (SO194155) in 2008.

Fruiting: ripe sporophytes noted at all locations.

Altitude (range): 130-430 m.

First record: by the Afon Sychryd, Bosanquet & Motley 2008 (Hb. BBSUK).

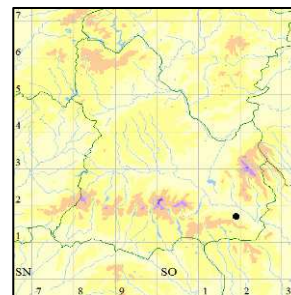
***Seligeria oelandica* C.E.O.Jenson & Medelius (Irish Rock-bristle)**

One of the most surprising bryological UK discoveries in 2009 was the finding of this species at Craig y Cilau NNR (SO11). It has a disjunct world distribution, with populations known in Europe only from NW Ireland, Norway, Sweden, Spitsbergen and Czechoslovakia and it is also found in Alaska. At Craig y Cilau the entire population consists of eight small patches growing amongst *S. patula* on a vertical limestone rock face, which is constantly irrigated with water. A few sporophytes with the distinctive thick seta were present. As it occurs only on this one area of cliff, the population is very vulnerable should there be a large rock fall. The population is extremely small and should not be collected under any circumstances.

Fruiting: mature sporophytes present.

Altitude (range): 380 m.

First record: Craig y Cilau, Bosanquet & Motley 2009 (Hb. BBSUK).



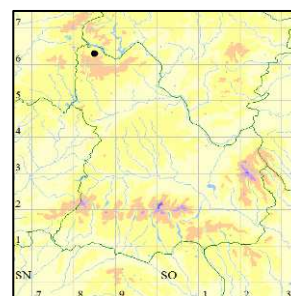
***Ditrichum lineare* (Sw.) Lindb. (Dark Ditrichum)**

Most Welsh records of this tiny moss are from central Wales and therefore the far north of the county seemed the most likely area where it would be found. It was noted on thin soil crust over a rock by the Afon Arban (SN849634) south of Claerwen reservoir. A species of bare acid soils, it is liable to disappear in drier parts of the year and it is possibly overlooked and may be found at other localities in the north of the county, where rocks types are generally more acid than in the south.

Fruiting: not noted.

Altitude (range): 375 m.

First record: by the Afon Arban, JW & JM Bates 2012 (Hb. BBSUK).



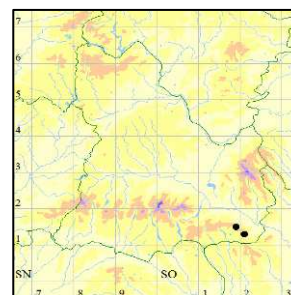
***Weissia controversa* var. *crispata* (Nees & Hornsch.) Nyholm (Crisped Stubble-moss)**

This variety occurs on the north-facing limestone crags at Craig y Cilau NNR (SO187157). It is also present on limestone ledges of the railway cutting at the north-east end of Cwm Llam-march (SO2112) and on mortar of a nearby retaining wall. Although this moss is only regarded as a variety in Britain, it is treated as a full species (*W. fallax*) in much of Europe. It is known from similar habitat in other south Wales counties and is likely to be present elsewhere along the limestone outcrop in southern Breconshire.

Fruiting: sporophytes present on all collections.

Altitude (range): 275-420 m.

First record: Craig y Cilau, Bosanquet & Motley 2009 (Hb. BBSUK).



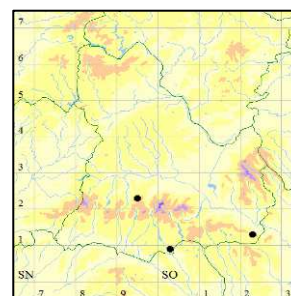
***Weissia brachycarpa* var. *obliqua* (Nees & Hornsch) M.O.Hill (Small-mouthed Beardless-moss)**

SDSB has recorded this variety in an eroding gully at Fan Frynach (SN955228), in calcareous turf at Danydarren (SO023093) and on thin soils over limestone at Ty-yn-y-coed (SO220130).

Fruiting: ripe or old sporophytes on all collections.

Altitude (range): 330-560 m.

First record: Fan Frynach, Bosanquet 2008.



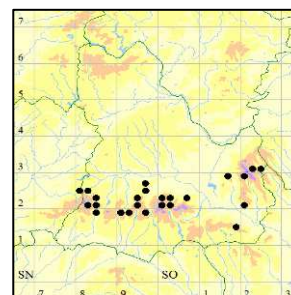
***Tortella bambergeri* (Schimp.) Broth. (Bamberger's Crisp-moss)**

Although this species does not appear in the *Mosses and Liverworts of Brecknock*, it has been known to be present in the county since 2004. During a revision of herbarium material by SDSB for his paper describing *T. bambergeri* as an addition to the British flora (Bosanquet, 2006), he uncovered earlier collections (as *T. tortuosa*) made by EW Jones from Cwm Du (SN9241) in 1937 and by EC Wallace from Tarren yr Esgob (SO23) in 1954. This moss is widespread across southern Breconshire, particularly on Mynydd Du, the Central Beacons and the Black Mountains, where it usually grows on insolated Old Red Sandstone boulders, often with *T. tortuosa* nearby. A few cushions on a coarse-grained limestone boulder at the north-east end of Chwar Mawr (SO196157) was unusual and represent the first occurrence of *T. bambergeri* away from Old Red Sandstone in south Wales.

Fruiting: sporophytes not recorded.

Altitude (range): 330-650 m.

First record: Cwm Du, Afon Senni, EW Jones 1937 (Hb. NMW).



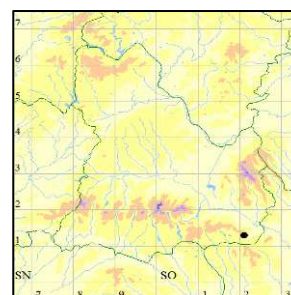
***Gymnostomum viridulum* Brid. (Luisier's Tufa-moss)**

This strong calcicole was recorded on damp soil over limestone on a northeast-facing bank in a small disused quarry at Blackrock (SO219128) on the southern slopes of Mynydd Llangattock. It is likely this small moss has been overlooked in similar calcareous habitat elsewhere in the county.

Fruiting: not recorded.

Altitude (range): 280 m.

First record: Blackrock, Bosanquet 2009 (Hb. BBSUK).



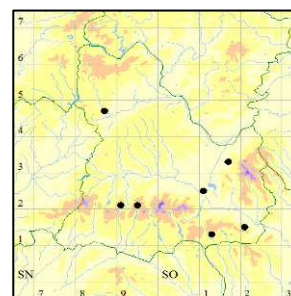
***Barbula convoluta* var. *sardoa* Schimp. (Lesser Bird's-claw Beard-moss)**

Woods (2006) did not split the two common varieties of this moss which are now generally regarded as separate species. Records that have been identified to variety, show var. *sardoa* to be scattered widely, but thinly, across the county.

Fruiting: not recorded.

Altitude (range): 110-530 m.

First record: Pwll-y-wrach (SO1632), HJB Birks 1968. Examination of old herbarium specimens of B. convoluta would no doubt reveal earlier records.



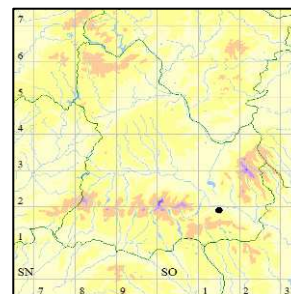
***Syntrichia papillosa* (Wilson) Jur. (Marble screw-moss)**

S. papillosa was reported from Breconshire in 2004 (Field Bryology 83), but the specimen was actually collected from Glamorgan. As this moss is present in all other counties in south Wales, it seemed only a matter of time before it was recorded in Breconshire. Known to be something of an urban species, GSM conducted a specific search of trees and shrubs around the village of Llangynidr (SO147198) in the Usk valley, which eventually resulted in the discovery of a small population of the moss on a branch of *Sambucus*. The main associate was *Orthotrichum affine*. It is likely to be present in lowland and urban areas elsewhere in the county.

Fruiting: not recorded, but gemmae abundant.

Altitude (range): 130 m.

First record: Llangynidr, Motley 2014 (Hb. BBSUK).



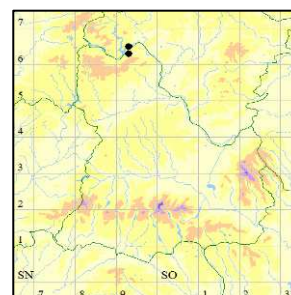
***Ulota drummondii* (Hook. & Grev.) Brid. (Drummond's Pincushion)**

In Britain, this species is most common in northern Scotland, but there is also a cluster of records in mid- and north-west Wales. In 2011 this moss was found growing on branches of a sessile oak in woodland at Allt Ddu (SN936651) near Elan Village and also nearby at Crwnnalt (SN932639). It will be interesting to see whether this species is responding to changing environmental factors and expanding its range in a similar manner to that of *U. calvescens* and some other epiphytes.

Fruiting: sporophytes present.

Altitude (range): 250 m.

First record: Allt Ddu, DA Callaghan 2011 (Hb. BBSUK).



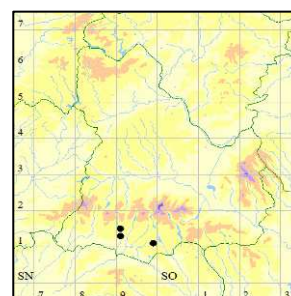
***Ulota calvescens* Wilson (Balding Pincushion)**

This moss appears to be spreading rapidly eastwards in Britain. It was unknown in south Wales before 2007, but has since been found in Pembrokeshire (2007), Carmarthenshire (2010) and Ceredigion (2012). The first record for Breconshire was made in 2012 and consisted of several patches growing with *U. crispa* on stunted *Sorbus aucuparia* at the edge of a conifer plantation at Coed Taf Fawr (SN991114) near Penderyn. Further specimens were found in 2014 on *Corylus avellana* and *Crataegus monogyna* in the upper Nedd valley (SN9113 & SN9114) north-west of Ystradfellte. The Breconshire specimens seem more stunted than material seen earlier by GSM in Ceredigion, perhaps indicating that environmental conditions in Breconshire are sub-optimal at present.

Fruiting: mature sporophytes present on all springtime collections.

Altitude (range): 300-380 m.

First record: near Coed Taf Mawr, Motley 2012 (HB. BBSUK).



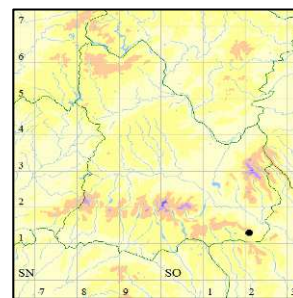
***Bryum donianum* Grev. (Don's Thread-moss)**

Several patches were recorded on an anthill by a path at Blackrock (SO219128) on the southern slopes of Mynydd Llangattock above the Clydach gorge, where the geology is Carboniferous Limestone. Also present on the anthill was *B. torquescens*. The only other Breconshire population was found on the opposite side of the Clydach valley, growing on mortar on the retaining wall of the railway line in Cwm Llam-march (SO218123). When moist it looks a lot like *B. capillare* and is no doubt present elsewhere in the county.

Fruiting: sporophytes not recorded.

Altitude (range): 275-280 m.

First record: Blackrock, Bosanquet 2009 (Hb. BBSUK).



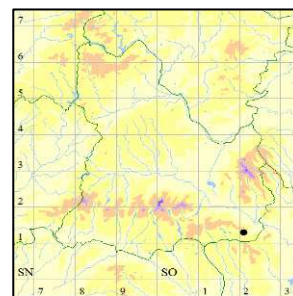
***Bryum torquescens* Bruch & Schimp. (Twisting Thread-moss)**

This species was recorded with *B. donianum* on an anthill on a track through quarries at Blackrock (SO219128), on the southern slopes of Mynydd Llangattock. This is another *B. capillare* look-alike and is probably present at other sites in Breconshire.

Fruiting: sporophytes present.

Altitude (range): 280 m.

First record: Blackrock, Bosanquet 2009 (Hb. BBSUK).



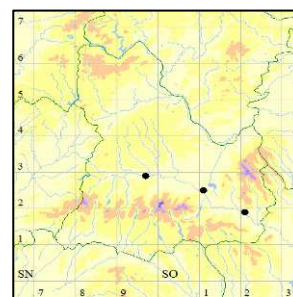
***Bryum gemmiferum* R. Wilczek & Demaret (Small-bud Bryum)**

This Bryum has undoubtedly been overlooked in Breconshire. Although it is not a strict riparian species, it is often very abundant on eroding river banks. It is particularly common on the banks of the River Usk around and downstream of Abergavenny, in neighbouring Monmouthshire, and is likely to be present at many locations along the Breconshire part of this river and possibly other rivers with sandy riverbanks. The only definite V.-c 42 records are from by the R. Usk at Crickhowell (SO213183), Pencelli (SO105243) and Sennybridge (SN92).

Fruiting: sporophytes not recorded.

Altitude (range): 110-200 m

First record: River Usk, Sennybridge, BBS 1984.



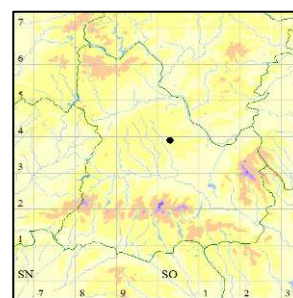
***Bryum tenuisetum* Limpr. (Yellow-tuber Thread-moss)**

A member of group of similar-looking *Bryum* species that form root tubers. During a recent revision of *Bryum* specimens by David Holyoak, he confirmed this species for the county from a collection made by G.W. Garlick in heathland near the Sennybridge Ranges (SO0338) north of Lower Chapel.

Fruiting: sporophytes not recorded, but the yellowish tubers presumably present.

Altitude (range): 320 m.

First record: north of Beili-griffith, Lower Chapel, GW Garlick 1980 (Hb. NMW).



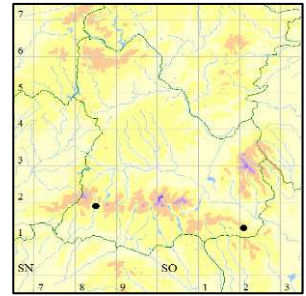
***Orthothecium rufescens* (Dicks. ex Brid.) Schimp. (Red Leskea)**

The finding of this strongly calcicolous and rather conspicuous species close to a small waterfall on cliffs in the upper Tawe valley (SN842180) was something of a surprise, as the next nearest Welsh site was on Cadair Idris. A 30x30 cm large bright red patch, was present on a damp Old Red Sandstone crag, with a few smaller satellite colonies nearby. In 2013 a further population, consisting of four patches, was located in the Clydach Gorge (SO2112) near Brynmawr, high up on limestone cliffs, mostly on the south side of the river. Two of the patches here were growing on permanently flushed limestone cliffs and another on a large tufa block.

Fruiting: sporophytes not recorded.

Altitude (range): 215-410 m.

First record: top crag above Cwm Tawe, Bosanquet 2006 (Hb. BBSUK).



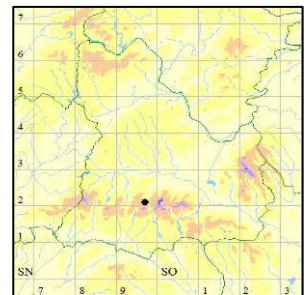
***Plagiothecium cavifolium* (Brid.) Z.Iwats (Round Silk-moss)**

Found beneath an overhang on the lower part of the Old Red Sandstone crags at Craig Cerrig-gleisiad NNR (SN967218). It may well be present on other crags in the central and western parts of the Brecon Beacons.

Fruiting: sporophytes not noted.

Altitude (range): 450 m.

First record: Craig Cerrig-gleisiad, Bosanquet 2013 (Hb. BBSUK).



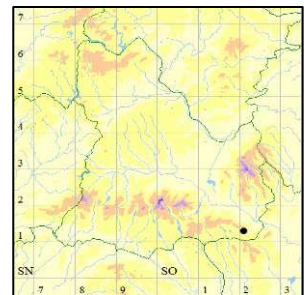
***Thamnobryum maderense* (Kindb.) Hedenas (a Feather-moss)**

A poorly understood species, which requires further detailed study. The second British record of *T. maderense* was discovered in a deep limestone gorge at Cwm Clydach (SO212123) near Brynmawr, where it occupies a wet limestone outcrop a few metres long at the base of a cliff and below a cave from which issues a stream. Most plants in the population appear to be constantly irrigated. A few small patches also occur on limestone blocks in the splash zone below the issuing stream. Between this area and the river, *T. maderense* is replaced by the common *T. alopecurum*.

Fruiting: sporophytes not recorded.

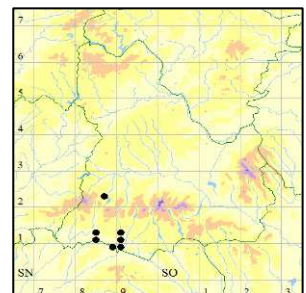
Altitude (range): 230 m.

First record: Coed Fedw-ddu, Cwm Clydach, Bosanquet 2013 (Hb. BBSUK).



***Rhytidiadelphus subpinnatus* (Lindb.) T.J.Kop. (Scarce Turf-moss)**

SDSB found the first modern south Wales record of this species in Carmarthenshire in 2005. Shortly afterwards GSM visited the site to learn the features of this rather subtle moss. Since then, SDSB and GSM have found populations of this species at several other locations in south Wales, adding it to the Breconshire, Glamorgan and Pembrokeshire county lists. The first Breconshire record came from Pont Melin-fach (SN910108) in the 'Neath Waterfalls' area north of Pontneddfechan, where it has subsequently been found to be



widespread in the valleys of the Afonydd Nedd, Nedd-fechan, Mellte and Pyrddin. It is locally abundant, mainly on the ground floor of humid *Quercus* woodland, but also in ash woodland over limestone in the upper Nedd-fechan valley. This area probably holds the strongest population of *R. subpinnatus* in the UK. Smaller populations have also been found in the county at Nant Llech (SN8419), another humid *Quercus* woodland site, and Cwm Padest, Crai (SN873226), a small woodland with an otherwise average bryophyte assemblage.

Fruiting: this species seems to be shy to fruit in Britain, but sporophytes have been seen on several occasions in the Neath Waterfalls area, perhaps indicating that the population is healthy there.

Altitude (range): 150-270 m.

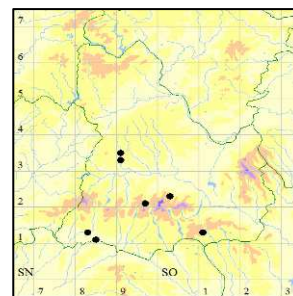
First record: Pont Melin-fach, Motley 2006 (Hb. BBSUK).

TAXONOMIC REVISIONS AND REDISCOVERED SPECIES

LIVERWORTS

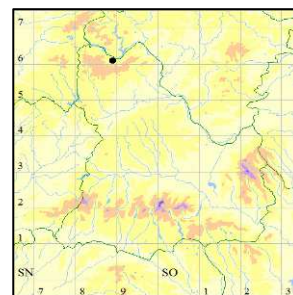
***Moerckia flotoviana* (Nees) Schiffn. (Irish Ruffwort)**

This species appears as *Moerckia hibernica* in Woods (2006). Recent studies have found that most British *M. hibernica* is the related *M. flotoviana*, with true *M. hibernica* confined to Scottish mountains.



***Bazzania tricrenata* (Wahlenb.) Lindb. (Lesser Whipwort)**

Woods (2006) reports that this species was last recorded in the county in 1927 by HH Knight and HA Hyde at Craig Cerrig-leisiad. As this liverwort also seems to have disappeared from other south Wales counties, there was good reason to suspect that it was extinct in south Wales and Breconshire (see Woods, 2006). However, in 2011 a population was rediscovered on a soil pocket beneath a rock near Claerwen Reservoir (SN893618) in the north of the county.



Fruiting: sporophytes not noted.

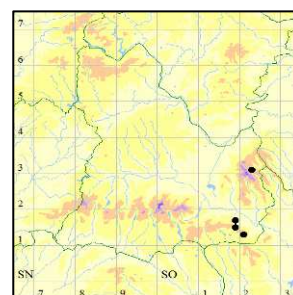
Altitude (range): 290 m.

First modern record: south of Claerwen, RV Lansdown 2011 (Hb. BBSUK).

MOSESSES

***Seligeria patula* (Lindb.) I.Hagen (Triangular Rock-bristle)**

S. patula was recently split from *S. trifaria*. *S. trifaria* s.s. appears to be confined to northern Scotland and all *S. trifaria* in southern Britain is likely to be *S. patula*. All Breconshire records appear under the name of *S. trifaria* in Woods (2006). At Craig y Cilau NNR, this tiny moss occurs at about nine localities on the tall west crag of the reserve (SO183165), more or less at every place where



there is significant seepage of water from above. It forms rather anonymous, dark green, often alga-impregnated patches that are appressed to rock faces. Three patches were also located on wet limestone above the tramroad to the east at Chwar Mawr (SO194157). A very small population is also present on a flushed, sloping limestone rockface on the west side of the mouth of Cwm Llam-march (SO21661251) in Cwm Clydach NNR. A massive tufa block below Tarren yr Esgob also supports *S. patula*, which was fruiting abundantly when visited by SDSB in 2013 – it was first recorded at this last locality (as *S. trifaria*) during a BBS excursion in 1965.

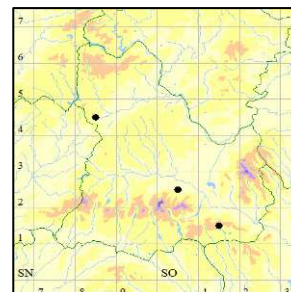
Fruiting: sporophytes frequent.

Altitude (range): 200-380 m.

First record: The first record collected as S. patula came from Craig y Cilau, Bosanquet 2009 (Hb. BBSUK), although a revision of herbarium specimens of S. trifaria would no doubt reveal earlier records.

***Bryum archangelicum* Bruch & Schimp. (Archangelic Thread-moss)**

This Bryum appears as *B. imbricatum* in Woods (2006). There are post 1960 records.



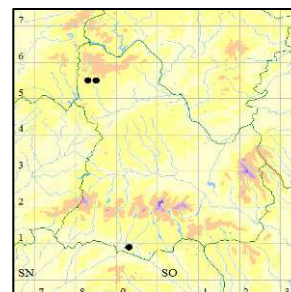
***Heterocladium wulfsbergii* I. Hagen (Wulfsberg's Tamarisk-moss)**

Woods (2006) mentions that Crundwell & Smith (2000) make reference to a Brecknock specimen, but he was unable to trace one in either the NMW or BBSUK herbariums. It appears though that the reference is to a specimen held at the British Museum (Hb. BM), collected by Rev. A. Ley from hills above Nant Gwyllt (SN96) in 1881; however, this stream lies just outside Breconshire and in neighbouring Radnorshire. This moss was recently reported from a cliff face by the Afon Mellte, in the south of the county in 2012 and at various locations along the Nant Irfon in the north of the County in 2013. Deliberate searching in rocky river gorges, would no doubt turn up more records.

Fruiting: sporophytes not noted.

Altitude (range): 160-310 m.

First record: by the Afon Mellte (SN924095), N.G. Hodgetts 2012 (Hb. BBSUK).



DELETIONS

***Schistidium papillosum* Culm. (Rough Grimmia)**

Although listed in Woods (2006), re-examination of the voucher material by SDSB has revealed it to be *S. strictum*. *S. papillosum* is therefore deleted from the county list.

ACKNOWLEDGEMENTS

Many thanks to Sam Bosanquet for adding extra detail to some of the species accounts and a big thank you to all those bryologists who have recorded in Breconshire and have passed on their records.

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APPENDIX

Species bracketed (i.e. with no post-1959 voucher) in the Census Catalogue (Hill *et al.* 2008). Some of the species listed below have been recorded post-1959 but no voucher submitted.

Bryum algovicum
Bryum archangelicum - modern records exist (as *B. imbricatum*)
Bryum creberrimum
Bryum turbinatum
Dicranella cerviculata – modern records exist
Enthostodon fascicularis
Frullania microphylla var. *microphylla*
Kurzia sylvatica – modern records exist
Marsupella emarginata var. *aquatica* – modern records exist
Marsupella emarginata var. *pearsonii* – modern records exist
Marsupella sphacelata
Mylia taylorii – modern records exist
Myrinia pulvinata
Oedipodium griffithianum
Oxyrrhynchium speciosum – modern records exist
Pterygynandrum filiforme
Racomitrium elongatum
Sphagnum compactum – modern records exist

Species reliably recorded in the county and appearing in Woods (2006) but with no voucher and therefore not listed for V.-c 42 in the Census Catalogue (Hill *et al.*, 2008)

Anthoceros punctatus
Dicranum tauricum
Diplophyllum obtusifolium
Fissidens gracillifolius
Harpanthus scutatus
Philonotis caespitosa
Plagiothecium laetum
Sphagnum girgensohnii

Honorary V.-c 42 species occurring as sub-fossils in peat and listed in Woods (2006)

Sphagnum austinii
Sphagnum magellanicum