

The moss year – 2018

There were 211 additions and amendments to the Census Catalogue in 2018, excluding revisions of *Hygrohypnum subeugyrium* and *Orthotrichum pumilum*. The numbers are lower than in 2017 but the numbers for that year (260) were inflated by the large number of entries for the newly recognised segregates of the *Ulota crispa* group. There were fewer of those in 2018 (25 against 54), and the reduction in numbers between the two years is not as serious as it first appears. The figures for the two years are summarised in Table 1.

Excluding records for the *Ulota crispa* group, the numbers of updates from England and Wales were significantly lower, but those for Scotland and Ireland somewhat higher, in spite of the absence of a BBS meeting in Ireland. Of course these figures partly reflect the activities of individual recorders and the locations of BBS meetings, but inevitably it is becoming

increasingly difficult to add new records in the well-recorded counties of England and Wales. In addition, the impact of the expansion of epiphytic bryophytes that began in the 1990s is perhaps now beginning to tail off.

Additions and amendments to the British and Irish list

The discovery of *Hygrohypnum subeugyrium* (Renauld & Cardot) Broth. at Applecross was mentioned in the report of the BBS summer meeting in 2017 by David Long (2018), and a formal account of its occurrence in Britain has now been published in the *Journal of Bryology* (Blockeel *et al.*, 2019). It is not yet known in Ireland but is likely to be found there. It had already been reported from Scotland in a revision of the genus *Hygrohypnum* in a doctoral thesis by Jamieson (1976), but it was not described by Smith (2004) in the second edition of his *Moss Flora* and was neglected for many years until

Table 1. Analysis of amendments to the Census Catalogue for 2018. Records for the Channel Islands are included in the column for England.

| | 2018 | | | | 2017 | | | |
|---------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|
| | England | Wales | Scotland | Ireland | England | Wales | Scotland | Ireland |
| New entries | 61 | 27 | 51 | 19 | 99 | 47 | 56 | 8 |
| Debrackets* | 21 | 3 | 14 | 8 | 24 | 7 | 14 | 3 |
| Reinstated | – | – | – | – | – | – | – | – |
| Bracketings* | – | – | – | – | – | – | – | – |
| Deletions | 4 | 1 | 1 | 1 | 2 | – | – | – |
| Totals | 86 | 31 | 66 | 28 | 125 | 54 | 70 | 11 |

(*Debrackets are existing vice-county entries for which a post-1960 record has been vouched. Bracketings are existing entries for which the post-1960 records are unconfirmed or erroneous but older record(s) are known or thought to be valid.)

Thomas Kiebach recognized it in his collections from the Applecross meeting. It has proved to be widespread in western Scotland, with a few sites in Wales and NW England, and surely many more remain to be discovered. *H. subeugyrium* seems to be a rare species in Europe as a whole. It is currently known only from Norway and Sweden, and in the Ural mountains in Russia.

Syntrichia ruralis var. *epilosa* (Venturi) J.J. Amann lacks a hyaline hair-point and bears the same relationship to *S. ruralis* as var. *calva* does to *S. montana*. Gallego *et al.* (2018) recently resurrected the variety and provided a full description and figures. Sean O'Leary and Richard Fisk re-examined specimens that they had collected in Buckinghamshire and Suffolk respectively, and found that they belonged to the new variety, which is therefore new to Britain (O'Leary & Fisk, 2019).

In the report for 2017, I mentioned that Köckinger & Hedenäs (2017) had investigated the moss previously known as *Tortella bambergeri* and found that it actually consisted of two species, for which the correct names are *Tortella fasciculata* (Culm.) Culm. and *T. pseudofragilis* (Thér.) Köckinger & Hedenäs. Following a review of British and Irish material by Tom Ottley it was clear that most of our material belonged to *T. fasciculata*. Since then further study has confirmed that *T. pseudofragilis* occurs at two sites in Scotland (Ottley & Blockeel, 2019). It is a boreo-montane species and it is likely to be a rare species here, confined to high-altitude calcareous sites.

It is now generally recognised that *Orthotrichum pumilum* Sw. and *O. schimperi* Hammar are distinct species, although they can be difficult to separate. There have been very few British records over the years, though a number of new collections have been made during the

past decade. A revision of the British material (no collections are known yet from Ireland) has shown that both species are equally represented here, but both are rare (Blockeel, 2019). Most of the occurrences are probably the result of random colonisations.

During the *Didymodon* Workshop in Leicester in October 2018, the current status of the genus in Britain and Ireland was discussed. The occurrence of *Didymodon australasiae* (Hook. & Grev.) R.H. Zander in Britain was mentioned some years ago by David Holyoak in his Cornish Flora (Holyoak, 2012), and a new record was made by Barry Stewart in Carmarthenshire (vc 44) in 2018. These records have been confirmed by Jan Kučera using molecular data. *D. australasiae* can therefore be added to the British list, though its taxonomy still needs further study (Blockeel & Kučera, 2019). The status of *Didymodon acutus* has also been problematic in recent years. Jan Kučera's work has shown that *D. acutus* s.str. is very rare in NW Europe and most of our records of *D. acutus* belong to *D. icmadophilus*. As a first step in tidying up our data, the existing vc entries for *D. acutus* are being transferred to *D. icmadophilus*, with the exception of vc 11 (South Hampshire). The recent voucher from vc 11 belongs to *D. acutus* s.str., and there is also a confirmed record of the latter from vc 6 (North Somerset).

The moss year 2018

One of the highlights of 2018 was the discovery of *Campylophyllum calcareum* in Ireland by Sharon Pilkington during a recording weekend in Co Wicklow in April. There have been earlier reports from Ireland, but none could be confirmed during preparation of the Irish Red Data Book (Lockhart *et al.*, 2012), so Sharon's find is effectively new to Ireland. Its habitat was



△Fig. 1. Habitat of *Campylophyllum calcareum*, Co Wicklow. S.L. Pilkington

on an old stone wall (Figs 1, 2). Also of special note in Ireland is Fred Rumsey's discovery of a third Irish site for *Fissidens serrulatus* on wet rocks at Mill Cove in West Cork (vc H3). As this species has apparently not been refound recently in Co Mayo, the new site is one of only two known to be extant in Ireland. Nick Hodgetts found *Hylocomiastrum umbratum* on boulders on a steep wooded slope by the upper lake at Glendalough, the first record for eastern Ireland. *Fissidens fontanus* is another moss with very few Irish localities. Diane Dobson found it at two new sites in Co Cavan (vc H30) during surveys of Irish rivers, suggesting that it might be under-recorded.

The highlight in England in 2018 was Sean O'Leary's discovery of *Grimmia crinita* on a church wall at Swanbourne in Buckinghamshire (vc 24) (Figs 3, 4). This is only the second British record since the turn of the century, and only the second extant site, along with Howard Wallis' 2013 record from Surrey. The population that was discovered in Cornwall in 1999 has not been refound (Holyoak, 2012) and has presumably gone. An equally exciting record was Anthony Gregory's discovery of *Daltonia splachnoides* in South Lancashire (vc 59), its second English vice-county. Interestingly Anthony found his material, which was fertile, in late December, and it had therefore survived the long summer

drought of 2018. He found it growing on a log in woodland.

One consequence of the drought of 2018 was low water-levels in many of our reservoirs. Rather surprisingly, however, there were no new county records for the specialist reservoir mosses during the year, unlike some liverworts, although additional

sites were found for species within their existing ranges. Perhaps our reservoirs are now well recorded. However stony ground by a flooded gravel pit in NW Yorkshire (vc 65) produced *Bryum knowltonii* during a meeting of Yorkshire Naturalists in October. This rare and decreasing species had only been found in coastal habitats in recent years in Britain, though a number of its old localities were in inland pits. There were nice records of *Ephemerum sessile* in Suffolk (vc 26) by Richard Fisk and of *E. serratum* on the Isle of Wight (vc 11) by George Greiff, but both growing on woodland paths and rides rather than by water.

Notable among other records in southern England was a new site for *Ditrichum subulatum* in the Tavy estuary in South Devon (vc 3) by Roy Jeffery. Though close to localities for this species across the Tamar estuary in East Cornwall, the new site is very welcome as the first post-1990 record in this area. The rediscovery of *Campylostelium saxicola* at York's Hill in West Kent (vc 16) by Stephen Lemon is also very pleasing. This scarce moss of siliceous boulders can be very elusive, but it is easily overlooked, especially in the absence of capsules. John Norton found *Dialytrichia saxicola* in a driveway in South Hampshire (vc 11), suggesting that it may turn up increasingly in ruderal habitats, like *D. mucronata*.

During the spring meeting in Swaledale (vc 65), the rare and threatened *Anomodon longifolius* was found by Matt Stribley near Richmond, a particularly gratifying record as this was a long-lost 19th century site. *Plasteurhynchium striatulum* at the same locality was a northwards extension of its range in England (in Scotland it has just a single locality on the island of Lismore). On the other hand the new record from North Devon (vc 4) was more in keeping with its southern distribution. The Swaledale meeting also produced records of *Encalypta pilifera*, *Weissia longifolia* var. *longifolia* and *Amblystegium confervoides*. The last species was refound in Herefordshire (vc 36) at Great Doward by Ian Draycott. Also in the Welsh Border region, Mark Lawley's *Grimmia ovalis* from a porch roof in Worcestershire (vc 37) added to the conspicuous cluster of records already known in that region, many of them from roof tiles. Two good records from Cumbria (vc 70) were *Sphagnum platyphyllum* at Tarn Moss near Troutbeck by Ian Diack, and *Rhytidiadelphus subpinnatus* on periodically irrigated ground adjacent to a rocky stream at Lyne Woods by Andy McLay.

Recording on the Isle of Man has been

▽ Fig. 2. *Campylophyllum calcareum* (slender shoots) with *Homalothecium sericeum*, Co Wicklow. S.L. Pilkington



sporadic in the past, and the first week of the summer meeting was an opportunity to update the records there. The 10 new or updated moss vouchers were mostly of widespread species, and on an island dominated by acidic rocks *Sphagnum teres* was perhaps the most noteworthy.

Most of the activity in Wales was concentrated in the south. Tom Ottley has continued to fill gaps in Cardiganshire (vc 46), the pick of the bunch being *Entosthodon mouretii* (a few shoots only) on a garden bank in Goginan and *Antitrichia curtispindula* on a dry-stone wall at Cwm Mwyro. Sue Rubinstein chipped in with *Tortula atrovirens* on Constitution Hill, Aberystwyth. George Tordoff also had a new site for *Antitrichia curtispindula*, in the Black Mountains in Monmouthshire (vc 35), and this population was likewise on a dry-stone wall. Sam Bosanquet made several new records in Monmouthshire, including *Sphagnum platyphyllum* and *Grimmia hartmanii*. In Breconshire (vc 42) Sharon Pilkington found *Racomitrium canescens* in a limestone quarry at Mynydd Llangatwg, and Claire Halpin detected *Bryum elegans* nearby. Both of these calcicole mosses have very few Welsh records. Further north in Montgomeryshire (vc 47), Des Callaghan's work on the cleistocarpous species of *Weissia* revealed that the Welsh voucher of *W. sterilis* from Roundton Hill in 1975 actually belonged to *W. levieri*, which was thereby new to Wales. Sam Bosanquet followed this up with a visit to the site in April 2018 and confirmed that the population was still extant there but was threatened by scrub invasion. Meanwhile, and also in Montgomeryshire, Mark Lawley recorded *Weissia longifolia* var. *longifolia* in a cemetery at Kerry.

Many of the Scottish records this year are from the south of the country. Liz Kungu's

record of *Fissidens monguillonii* at Kenmure Holms in New Galloway (Kirkcudbrightshire, vc 73) is particularly noteworthy, as the first for Scotland. Liz also recorded *Bryum riparium* in the Whitehope area of Dumfriesshire (vc 72), and David Long collected *Bryum mildeanum* by a tributary of the Hermitage Water in Roxburghshire (vc 80), new for southern Scotland. This rare species has very few recent records anywhere in Britain and Ireland. Rory Whytock's recording in Ayrshire has produced some good records, including *Sphagnum platyphyllum*, *Grimmia laevigata* and *Oxystegus daldinianus*. His discovery of the rare *Tortella inclinata* on Waterside Bing is of special note, as it occurred inland in a secondary habitat, on mine spoil. All of its other Scottish records are coastal. Rory also found a new site for *Trichostomum hibernicum* (*Oxystegus hibernicus*) on Craignelder (Kirkcubrightshire, vc 73) at the southern edge of its Scottish range.

Liz Kungu and David Chamberlain found a population of *Tortula freibergii* on soft sandstone at Dalmeny Park, West Lothian (vc 84). The new site is very much in keeping with its earlier localities in Fife (vc 85) on the other side of the Firth of Forth. Another good find in central Scotland was Rory Whytock's *Grimmia decipiens* in the Fintry Hills in Stirlingshire (vc 86). New records of *Buxbaumia viridis* have almost become a regular fixture in the moss year report, and this year is no exception. Julie Smith spotted it on a rotten birch log in the Leven Valley just inside Main Argyll (vc 98), which becomes its westernmost locality in Britain.

From the Highlands there is a footnote to the 2017 meeting in Applecross. David Long collected probable *Bryum dixonii* during the meeting but, because of taxonomic problems with this species, it was not reported as new in last year's report. However the identification has



△Fig. 3. Habitat of *Grimmia crinita* at Swanbourne, Buckinghamshire. S.V. O'Leary

now been confirmed by DNA sequencing, and it is new to West Ross (vc 105). The 2018 summer meeting on the Isle of Arran (vc 100) produced a good number (18) of new and updated records, mainly of widespread species, but including *Grimmia ramondii*, *Racomitrium ellipticum*, *Rhabdoweisia fugax* and *Tortella nitida*.

It was a fairly quiet year for epiphytes in 2018. There was a steady flow of records for the new segregates of the *Ulota crispa* group, as expected. Three of the four new records for *U. calvescens* were in oceanic counties, but its occurrence not far from the coast of Northumberland extends its wider distribution considerably further to the north-east. New records of *Orthotrichum stramineum* are no surprise in England but it is a rare moss in Ireland, only nine recent records being known in the Irish Red Data Book (Lockhart *et al.*, 2012). Jo Denyer has now found it in Co Dublin. New records of *Habrodon*

perpusillus are always welcome because of its near-catastrophic past decline. Sharon Pilkington has re-found it in North Somerset, only the second recent record in the south-west of England. *Pylaisia polyantha* continues to spread, with new records from South Wiltshire (vc 8) and South Lincolnshire (vc 53), and *Leucodon sciuroides* was found on an ash tree in an urban part of South Lancashire (vc 59).

Finally, it seems that *Leptobarbula berica* is over-recorded in Britain. It is primarily a Mediterranean species and is easily identified when capsules are present because of its well-developed peristome. However, without capsules and when poorly grown it can be difficult to separate from *Gyroweisia tenuis*. Tom Ottley examined a number of voucher specimens from SW England and found three that were incorrectly named. It is likely that other records will prove to be errors, too.

I'd like to thank all recorders for their contributions, with special thanks to Tom Ottley for his help with revisions of *Tortella* and *Leptobarbula* specimens, and to Jo Denyer, Sean O'Leary, Sharon Pilkington and Julie Smith for sending photographs for inclusion in the report. I'd also like to thank Jan Kučera for his continuing help with *Didymodon*.

▽Fig. 4. *Grimmia crinita* in situ at Swanbourne, Buckinghamshire. S.V. O'Leary



New vice-county records and amendments

Vouchers are deposited in the BBS herbarium (BBSUK) unless otherwise stated. Other herbarium abbreviations are **CGE** = Cambridge University; **DBN** = National Botanic Garden, Glasnevin, Dublin; **E** = Royal Botanic Garden, Edinburgh; **NMW** = National Museum of Wales, Cardiff. The symbol † indicates a species considered to be a persisting introduction at its recorded site. Records were made in 2018 unless indicated otherwise.

- 1.7. *Sphagnum teres*. 71:** fen, more open ground among *Salix cinerea* carr, 12 m alt., Ballaugh Curragh, Isle of Man, SC36399511, E.M. Kungu & C.D. Preston; **H18:** *Schoenus* fen, one small hummock, Fin Lough, N0310129699, G.F. Smith 1804001 (DBN); **H20:** transition mire, Carrigower Bog, O225074, M. Eakin (DBN); **H26:** transition mire, 95 m alt., Loughanboy, M5400982249, N. Lockhart *et al.* 2018/04a (DBN).
- 1.10. *Sphagnum russowii*. 41:** north-facing slopes with *Calluna* and *Vaccinium* near waterfall, 400 m alt., on Nant Melyn stream, near Blaenrhondda, SN917016, K. Wilkinson.
- 1.13.a. *Sphagnum capillifolium* subsp. *capillifolium*. 100:** wet heath on N-facing hillside, 440 m alt., Glen Cloy, Cnoc Dubh, Isle of Arran, NR97833424, N.G. Hodgetts 10275.
- 1.14B. *Sphagnum beothuk*. H22:** raised bog, frequent in wetter areas, Girley Bog, N70516997, 2017, J. Denyer (DBN).
- 1.15.a. *Sphagnum subnitens* var. *subnitens*. 31:** damp acid peat in open area, Holme Fen, TL19958950, J.J. Graham, *conf.* M.O. Hill.
- 1.19. *Sphagnum compactum*. 57:** on disturbed peaty soil on ride in mixed plantation, 290 m alt., Farley Moor, near Matlock, SK30276379,



◁Fig. 5. Voucher photograph of *Buxbaumia viridis* at Allt Coire Mhorair, Main Argyll. J. Smith

▽Fig. 6. Habitat of *Buxbaumia viridis* at Allt Coire Mhorair, Main Argyll. J. Smith

T.L. Blockeel 47/169; **H20**: on peat in north-facing degraded wet heath, Wicklow Gap, T08559891, G.F. Smith (DBN).

1.21. *Sphagnum inundatum*. H24: cut-over bog, Ardagullion Bog, Edgeworthstown, N3121875637, 2016, G.F. Smith & W Crowley 1615062 (DBN).

1.23. *Sphagnum contortum*. 75: in base-rich flush, 169 m alt., Docherniel Burn, NX2324488234, R.T. Whytock.

1.24. *Sphagnum platyphyllum*. 35: *Montia-Ranunculus* spring, 590 m alt., Hatterall Ridge, above Trevelog, SO28712973, S.D.S. Bosanquet, *conf.* M.O. Hill; **70**: in base-rich soak under *Carex lasiocarpa*, 270 m alt., Tarn Moss, Troutbeck, NY3990227515, I.A. Diack, *conf.* M.O. Hill; **75**: base-rich flush, 400 m alt., Cornish Loch, NX4073694025, R.T. Whytock.

1.32. *Sphagnum angustifolium*. 100: flush by coastal path, Cock of Arran, Isle of Arran, NR9600851907, S.V. O'Leary.

7.2. *Polytrichastrum longisetum*. 68: stump of *Carex paniculata* beside boardwalk through fen, Newham Bog NNR, NU1690829499, D.A. Callaghan 81561.

8.1.b. *Polytrichum commune* var. *perigoniale*. 47: edge of track in forestry plantation, Pwll-y-wrach-isaf, near Llanwddyn, SJ057205, M. Lawley.

11.2. *Buxbaumia viridis*. 98: two capsules

on narrow well-rotted birch log raised off the ground, within 15 m of the burn, 76 m alt., Allt Coire Mhorair (Leven Valley SSSI), NN1981761250, 2017, J. Smith, record vouched by photograph (Fig. 5).

14.4B. *Encalypta pilifera*. 65: limestone rock ledge, lower part of Gunnerside Gill, Swaledale, SD9598, P. Bowyer.

16.3. *Entosthodon attenuatus*. 35: stream bank by cascades, 440 m alt., Cwm Celyn, SO20990974, S.D.S. Bosanquet.

16.4A. *Entosthodon mouretii*. 46: on shaley soil on S-facing bank in garden, 90 m alt., Goginan, SN68798166, T.W. Ottley 18041801.

17.1. *Physcomitrium pyriforme*. H20: on mud thrown from ditch, 4 m alt., near Blackditch Farm, Newcastle, O308034, M.O. Hill.

21.5. *Schistidium apocarpum*. 4: on riverside boulders, 60 m alt., East Lyn River, Lynmouth,



- SS727492, S.L. Pilkington; **100**: bare stony patch on ridge, Glen Ormidale, Isle of Arran, NR9834935022, S.V. O’Leary; **100**: boulders above HWM on NW-facing coast, 5 m alt., Cock of Arran, Ossian’s Cave area, Isle of Arran, NR96395161, N.G. Hodgetts 10283.
- 21.9. *Schistidium strictum*. 100**: dry rocks on hillside, 360 m alt., Glen Cloy, Muileann Gaoithe, Isle of Arran, NR98373501, N.G. Hodgetts 10278.
- 21.17. *Schistidium elegantulum*. 46**: on masonry of footbridge over Afon Rheidol, 270 m alt., Aberpeithnant, N of Ponterwyd, SN75238426, T.W. Ottley 18040601; **H35**: on limestone block, St John’s Point, G7057969034, S.V. O’Leary.
- 22.2. *Grimmia crinita*. 24**: about 1 m from base, on south-facing limey buttress on south face of church, Swanbourne Church, SP8011527283, S.V. O’Leary.
- 22.3. *Grimmia laevigata*. 75**: slightly base-rich rocks, 20 m alt., Ballantrae Castle, NX0866382377, R.T. Whytock.
- 22.12. *Grimmia ovalis*. 37**: on a stone tile, porch roof, Kyre Park, SO626635, M. Lawley.
- 22.24. *Grimmia hartmanii*. 35**: three loose cushions on Old Red Sandstone block, 200 m alt., ca 60 m NNW of car park, Cwn Coed-y-Cerrig, SO292211, S.D.S. Bosanquet.
- 22.25. *Grimmia decipiens*. 86**: on small crags, 350 m alt., above Loch Walton, Fintry Hills, NS6558987286, R.T. Whytock.
- 22.27. *Grimmia ramondii*. 100**: several cushions on large boulder in ravine, 250 m alt., west of Brodick, Isle of Arran, NR94853489, O. Moore (E); **100**: boulder by loch, Coire Fhionn Lochan, Isle of Arran, NR8993546003, S.V. O’Leary & P.G. Martin.
- 23.1. *Racomitrium ellipticum*. 100**: on boulders in ravine, 330 m alt., Torr Maol, Isle of Arran, NR9820234773, R.T. Whytock; **100**: rock face, Coire Fhionn Lochan, Isle of Arran, NR9058945954, S.V. O’Leary.
- 23.4. *Racomitrium fasciculare*. 6**: on horizontal sandstone tombstone, 80 m alt., West Harptree churchyard, ST56015690, S.L. Pilkington; **55**: small patch on dry-stone wall, Altar Stones Nature Reserve, Charnwood Forest, SK4851410900, U. Hamzaoui.
- 23.5. *Racomitrium macounii*. 46**: on top of several huge boulders in edge of river, 150 m alt., Afon Tywi below Craig Clungwyn, SN77924683, T.W. Ottley 18101902.
- 23.7. *Racomitrium affine*. 87**: on rocks above burn, 220 m alt., Daiglen Burn, Tillicoultry, NS90959850, E.M. Kungu *et al.* (E).
- 23.11. *Racomitrium ericoides*. 8**: small number of plants on sandstone boulder imported for landscaping around a pool on a business park, 45 m alt., Trowbridge, ST85885589, S.L. Pilkington; **74**: edge of forestry track, 90 m alt., Corse Malzie Forest, west of Wigtown, NX3402753608, R.T. Whytock.
- 23.12. *Racomitrium elongatum*. 87**: in steep, flushed rocky grassland below crag, 545 m alt., Coire Ceothach, upper Glen Finglas, NN491139, G.P. Rothero & J. Smith 2018063.
- 23.13. *Racomitrium canescens*. 42**: low spoil mound on floor of disused limestone quarry, 400 m alt., Mynydd Llangatwg, Darren Cilau, SO20241554, S.L. Pilkington.
- 25.1. *Campylostelium saxicola*. 16**: sandstone (Hassock) rock near base of steep escarpment in shade of hazel/sycamore, Brockhill Wood, York’s Hill, TQ5033451650, S. Lemon.
- 28.6. *Seligeria recurvata*. 73**: on edge of large boulder, 340 m alt., Craig of Knock Gray, NX5717594367, 2013, R.T. Whytock.
- 30.1. *Fissidens viridulus*. 87**: disturbed soil over

- calcareous rock on SW-facing side of valley, 230 m alt., Daiglen Burn, NW of Tillicoultry, NS91149833, C.D. Preston.
- 30.4. *Fissidens gracilifolius*. 65:** limestone crags, set back from river, 120 m alt., south bank of R. Swale, north of Billy Bank Woods, Richmond, NZ163007, E.M. Kungu (E).
- 30.5. *Fissidens incurvus*. 46:** lane bank, 10 m alt., Llechryd, SN216437, T.W. Ottley 18020101; **65:** shaded soil at base of limestone crag, 450 m alt., Oxnop Scar, Swaledale, SD93769470, C.D. Preston, BBS meeting.
- 30.6.b. *Fissidens bryoides* var. *caespitans*. 96:** on bank at edge of river, 96 m alt., north bank of R. Ness at Whin Park, NH6592243345, M. Nicolson & H. Ferguson (E); **H35:** River Owentocleer, Ardara, G732906, D. Dobson (DBN).
- 30.8. *Fissidens monguillonii*. 73:** on mud bank at west side of ditch, 45 m alt., Kenmure Holms RSPB Reserve, New Galloway, NX6374077114, E.M. Kungu *et al.* (E).
- 30.11. *Fissidens exilis*. 80:** on soil bank, open broad-leaved wooded slope, 120 m alt., SW of Abbotsford House, NT50543401, D.G. Long 45471 (E).
- 30.18. *Fissidens serrulatus*. H3:** on shaded wet rocks in the spray of waterfall, 25 m alt., Mill Cove, V7063846669, F.J. Rumsey, M. Jannink & A. McVeigh.
- 30.20. *Fissidens fontanus*. H30:** River Erne, near Foalies Bridge, H361169, D. Dobson (DBN); **H30:** River Blackwater, Virginia, N604871, D. Dobson (DBN).
- 31.2. *Pleuridium subulatum*. 54:** vertical ditch bank adjacent to path, Snipe Dales Nature Reserve, TF3260268598, S.J. Heathcote *et al.*
- 34.3. *Ditrichum lineare*.** Delete **2**, the voucher in BBSUK (N of Minions, *leg.* D.T. Holyoak, 1998) is *Dicranella* cf. *varia*, confirmed by molecular sequencing, *comm.* D.A. Callaghan; delete **H3**, the voucher in BBSUK (Allihies, *leg.* D.G. Long, 1999) is *Dicranella* cf. *varia*, confirmed by molecular sequencing, *comm.* D.A. Callaghan.
- 34.7. *Ditrichum subulatum*. 3:** on damp clay, face of a river cliff, above estuary of R. Tavy, 30 m alt., Warleigh Wood NR, Tamerton Foliot, near Plymouth, SX44906127, F.R. Jeffery.
- 34.9. *Ditrichum gracile*. 11:** chalky soil on low bank next to path in open chalk grassland, 86 m alt., to W of Fort Widley, Portsdown Hill, SU65170647, 2014, J.A. Norton B1023.
- 42.1. *Rhabdoweisia fugax*. 100:** rocky outcrop, Glen Ormidale, Isle of Arran, NR9837335024, S.V. O'Leary; **100:** rock crevice in SE-facing cliff, 360 m alt., Glen Cloy, Muileann Gaoithe, Isle of Arran, NR98373502, N.G. Hodgetts 10276.
- 45.2. *Dichodontium flavescens*. 71:** on rocks at edge of river, 150 m alt., Tholt-e-Will Glen, Isle of Man, SC378892, E.M. Kungu *et al.*
- 56.10b. *Campylopus atrovirens* var. *falcatus*. 100:** on large granite boulder by the Sannox Burn, 145 m alt., Glen Sannox, Isle of Arran, NR98624389, G.P. Rothero 2018047.
- 57.2. *Leucobryum juniperoideum*. H20:** on bank by rock outcrop in wood, Rosahane Wood, T0793983844, E.M. Kungu (E).
- 59.1. *Eucladium verticillatum*. 73:** on sandstone cliff, with dripping water and tufa deposits, 10 m alt., south-west bank of Cluden Water, NX9422079089, E.M. Kungu *et al.* (E).
- 60.2. *Weissia perssonii*. 6:** Uphill, Weston-super-Mare, ST315584, P. Bowyer.
- 60.3. *Weissia rutilans*. 65:** wet soil on open bank of gill, 475 m alt., Cliff Beck, near Buttertubs, Swaledale, SD87469604, T.L. Blockeel 47/154.

- 60.5.b. *Weissia brachycarpa* var. *obliqua*.** **46:** on small rock in sloping grassland, by footpath, 135 m alt., Pontgarreg, SN332545, T.W. Ottley 18021601.
- 60.10. *Weissia sterilis*.** Delete **47**, the voucher (Roundton Hill SO2995: BBSUK C.2001.019.267) belongs to *W. levieri*, det. D.A. Callaghan.
- 60.11. *Weissia levieri*.** **47:** S-facing slope of dolerite hill, Roundton, nr Church Stoke, SO2995, 1975, M.O. Hill, det. D.A. Callaghan (BBSUK C.2001.019.267).
- 60.12.a. *Weissia longifolia* var. *longifolia*.** **47:** on soil in cemetery, Kerry, SO147901, M. Lawley, *conf.* D.A. Callaghan; **65:** bare soil, especially on old anthills, 210 m alt., below Whitcliffe Scar, near Richmond, NZ13780188 and NZ13870187, T.L. Blockeel & C. Halpin 47/162.
- 61.2.** Rename this entry *Tortella fasciculata* (Ottley & Blockeel, 2019). **75:** on slightly base-rich rock, 319 m alt., Loch Bradan, NX4296, R.T. Whytock; **89:** on sunny south-facing limestone outcrop, Glen Brerachan, east of Ben Vrackie, NN97766300, 2003, R.D. Porley, det. T.W. Ottley (BBSUK C.2004.007.207), replaces the previous voucher (Gleann Beag, S.D.S. Bosanquet, 2003) which is *Tortella pseudofragilis*; **100:** boulders above HWM on NW-facing coast, 5 m alt., Cock of Arran, Ossian's Cave area, Isle of Arran, NR96395161, N.G. Hodgetts 10284.
- 61.2A. *Tortella pseudofragilis*.** **88:** east-facing mica-schist rocks in small crags, 990 m alt., Ben Lawers, Meall Corranaich, NN61564156, 2005, N.G. Hodgetts 6191, *conf.* H. Köckinger (BBSUK C.2006.003.178); **89:** top of limestone block below crag, west side of Gleann Beag, NO130755, 2003, S.D.S. Bosanquet. See Ottley & Blockeel (2019).
- 61.5. *Tortella nitida*.** **55†:** on limestone boulder in rockery, Botanic Garden, Leicester, SK616015, U. Hamzaoui & T.L. Blockeel 47/163, thought to have been imported with Westmorland limestone and therefore treated as a persisting introduction; **100:** in crevice of conglomerate boulder, rocky coastal heath, 5 m alt., coast west of Cock of Arran, Isle of Arran, NR95135232, D.G. Long 45612 (E); **100:** boulders above HWM on NW-facing coast, 5 m alt., Cock of Arran, Rubh Creagan Dubha, Isle of Arran, NR93525199, N.G. Hodgetts 10287.
- 61.7. *Tortella inclinata*.** **75:** on mine spoil, 165 m alt., Waterside Bing, Dunaskin, NS4308, R.T. Whytock (immature capsules present).
- 62.3.a. *Trichostomum tenuirostre* var. *tenuirostre*.** **80:** on shady vertical rock face, wooded ravine, 190 m alt., lower Braidley Burn, Gorrenberry, NY47409708, D.G. Long 45652 (E); **87:** on rocks above path by burn, 160 m alt., Mill Burn, Tillicoultry, NS91219790, E.M. Kungu (E) *et al.*
- 62.3.b. *Trichostomum tenuirostre* var. *holtii*.** **97:** rocks at edge of river, with *Sciuro-hypnum plumosum*, 70 m alt., R Garry, upstream of Whitebridge, NH2806501547, 2017, J. McDonald & M. Nicolson (E).
- 62.3A. *Oxystegus daldinianus*.** **75:** exposed bank by stream, 83 m alt., Currarie Glen, NX0778, R.T. Whytock.
- 62.4. *Trichostomum hibernicum*.** **73:** on base-rich seepage at bottom of crag, 500 m alt., Craignelder, NX5105589062, R.T. Whytock.
- 68.1. *Gymnostomum viridulum*.** **12:** near top of E-facing bank of old chalk spoil mound, 125 m alt., Micheldever Spoil Heaps, SU5192244488, J.A. Norton, *conf.* J. Kučera.
- 70.1. *Leptobarbula berica*.** Delete **2**, the

- voucher in BBSUK (Calstock, D.T. Holyoak, 4 Oct 1997) is *Gymnostomum aeruginosum*, det. T.W. Ottley, *conf.* T.L. Blockeel; Delete **3**, the voucher in BBSUK (Torquay, M. Pool, 7 April 2002) is *Gyroweisia tenuis*, det. T.W. Ottley, *conf.* T.L. Blockeel; Delete **5**, the voucher in BBSUK (Hamdon Hill Country Park, A. Branson, 26 Feb 2010) is *Gyroweisia tenuis*, det. T.W. Ottley, *conf.* T.L. Blockeel.
- 72.2. *Ephemerum sessile*. 26:** damp woodland path, Wolves Wood, Hadleigh, TM05194408, R.J. Fisk, *conf.* D.T. Holyoak.
- 72.6. *Ephemerum serratum*. 10:** on muddy woodland ride, Mark's Corner, Parkhurst Forest, Isle of Wight, SZ47759184, G.R.L. Greiff.
- 74.1. *Dialytrichia mucronata*. 46:** on pavement, 55 m alt., along Church Road, New Quay, SN38595985, T.W. Ottley 18010902.
- 74.2. *Dialytrichia saxicola*. 11:** mixed stand with *D. mucronata* on lightly shaded driveway, just east of entrance to St Edmunds churchyard, Lychgate Green, Stubbington, SU55140413, J.A. Norton; **34:** on boughs of sprawling *Salix fragilis* on northern riverbank, 10 m alt., River Avon, Swineford, ST68576888, S.L. Pilkington.
- 76.2. *Bryoerythrophyllum ferruginascens*. H20:** among trampled road chippings at side of minor road, 200 m alt., west of Ballinaclash, T15688434, S.L. Pilkington (DBN).
- 78.1.b. *Barbula convoluta* var. *sardoa*. 81:** on stonework of wall by road, damp *Betula* woodland, 215 m alt., Blaeberry Plantation, Marchmont Estate, NT73444967, D.G. Long & P. Lusby 45843 (E); **100:** boulders by path, Thundergay, Isle of Arran, NR886468, S.V. O'Leary.
- 79.1. *Didymodon acutus* s.str.** Almost all British and Irish records of this species are thought to belong to *D. icmadophilus* and all existing entries except vc **11** should be transferred to that species. Replace the entry for **6** with: short turf, edge of golf course, between castle and road, Clevedon, ST415727, 1991, P.G. Martin & R.D. Porley, det. J. Kučera. See Blockeel & Kučera (2019).
- 79.2. *Didymodon icmadophilus*.** Transfer all existing entries of *D. acutus* to this species (Blockeel & Kučera, 2019). The new distribution is: 1–3, (4), 6–10, 12–14, 16, 17, 20, 22–25, 29–31, 33, 34, 36, 37, 39–41, 44, 45, 47, 49, 50, 52, 53, (54), 57–61, 63, 64, 69, 70, 80, 88–90, (93), 94, 104, 108. H6, (8), 9, 28, 31. (C).
- 79.6A. *Didymodon australasiae*. 1:** forming mat over gravel and low rocks at base of N-facing wall of ruin, almost unshaded, Harry's Walls, near Hugh Town, St Mary's, Isles of Scilly, SV90951092, 2003, D.T. Holyoak 03-71, det. J. Kučera, confirmed by molecular sequencing; **1:** unshaded open sandy ground with patchy short vegetation by path near cliff top, 15 m alt., Gwithian Towans, SW57904155, 2004, D.T. Holyoak 04-481, det. J. Kučera, confirmed by molecular sequencing; **44:** dirt zone of roadside verge, Dafen, Llanelli, SN53100107, B. Stewart, det. J. Kučera, confirmed by molecular sequencing. See Blockeel & Kučera (2019).
- 79.13. *Didymodon spadiceus*. 71:** damp coastal cliffs, with some slumping, 2 m alt., Port Grenaugh, Isle of Man, SC315704, E.M. Kungu *et al.*
- 83.4. *Tortula freibergii*. 84:** on damp, sloping, soft sandstone, overhung by rocks forming low cliff, 2 m alt., Forth Estuary, Dalmeny Park coastal walk, coastal rock outcrop north of Midlothian Clump, NT1634379012, E.M. Kungu & D.F. Chamberlain (E).

- 83.12. *Tortula atrovirens*. 46:** on thin layer of soil over damp rocks, 35 m alt., Constitution Hill, Aberystwyth, SN58338259, S. Rubinstein.
- 86.2. *Hennediella macrophylla*. 25:** bare mud, on bank of R. Gipping, Sproughton, near Ipswich, TM126458, R.J. Fisk; **32:** on path which circumnavigates the reservoir, lightly shaded, 95 m alt., Pitsford Water Nature Reserve, SP77557156, R.H. Carter.
- 89.1.b. *Syntrichia ruralis* var. *ruraliformis*. 24:** edge of road (A412), by entrance to Langley Park, Slough, TQ009824, 2017, R. Lister.
- 89.1.c. *Syntrichia ruralis* var. *epilosa*. 24:** footpath by R. Thames, near Marlow Bridge, SU850861, 2011, S.V. O’Leary, *conf.* M. Gallego, new to Britain; **25:** crevice in concrete surface of grave in small burial ground, Aldringham, TM45686091, R.J. Fisk, *conf.* M.T. Gallego. See O’Leary & Fisk (2019).
- 89.5. *Syntrichia virescens*. 41:** epiphyte on street tree (*Tilia* sp.), 35 m alt., Llanishen, Cardiff, ST187811, G.M. Tordoff; **47:** on tarmac path, Kerry cemetery, SO147901, M. Lawley.
- 98.1. *Leptobryum pyriforme*. 71:** with *Riccia cavernosa* and *Bryum klinggraeffii* in seasonally flooded hollow in sand dunes, Ayres NNR, Isle of Man, NX42820303, E.M. Kungu & C.D. Preston.
- 99.1.b. *Zygodon viridissimus* var. *stirtonii*. 46:** low sea cliffs, 2 m alt., New Quay, SN390598, T.W. Ottley 18010901; **87:** on basalt ledge, steep-sided stream valley, 220 m alt., Daiglen Burn above Tillicoultry, NS91149834, D.G. Long 45834 (E).
- 100.2. *Orthotrichum striatum*. 68:** on young *Fraxinus* by stream, wooded valley, 95 m alt., below Hethpool Linn, College Valley, NT90412858, D.G. Long 45534 (E).
- 100.6. *Orthotrichum rupestre*. 75:** on basic rock, 20 m alt., Ballantrae Castle, NX0869482380, R.T. Whytock.
- 100.13. *Orthotrichum stramineum*. H21:** horse chestnut tree in NE of site at edge of meadow, 150 m alt., Fernhill House and Gardens, Dun Laoghaire-Rathdown, O1853924660, J. Denyer (DBN).
- 100.14. *Orthotrichum tenellum*. 86:** on tree, 39 m alt., Kings Park, Stirling, NS7894892772, R.T. Whytock.
- 100.16. *Orthotrichum pumilum* s.str. 26, 28, 35, 57, 65, 66, 78** (replaces the existing entry for *Orthotrichum pumilum* s.lat., see Blockeel, 2019).
- 100.16B. *Orthotrichum schimperi*. 20, (26), 29, 35, (62), 90, 91** (Blockeel, 2019).
- 101.3A. *Ulota crispa* s.str. 1:** on gorse amongst scrub, Tolgus Tin Works, SW6877944821, D.A. Callaghan; **6:** on *Salix cinerea* in wet woodland, 60 m alt., Herriotts Mill Pond, North Widcombe, ST571577, S.L. Pilkington; **10:** on *Acer* sp., 36 m alt., Ramcroft Wood, Havenstreet, SZ552891, G.R.L. Greiff; **11:** on branch of *Salix cinerea* subsp. *oleifolia* in wet woodland, 40 m alt., near Dockens Water, Digden Bottom, SU17340901, S.L. Pilkington; **32:** on hazel, 110 m alt., Sane Copse, Yardley Chase, SP85305394, R.H. Carter; **36:** on hazel, Wigmore Rolls, SO398689, M. Lawley; **54:** on *Salix* in wet woodland, Snipe Dales, Winceby, TF33066857, T.L. Blockeel 47/406; **64:** epiphyte, Lower Knotts, Tosside, SD7754, M.P. Wilcox; **85:** on *Salix* at edge of B996 road, 110 m alt., Kinross, NO11660148, E.M. Kungu, D.F. Chamberlain *et al.* (E); **100:** on *Fraxinus*, wooded hillside with old quarries and crags, 30 m alt., near High Corrie, Isle of

- Arran, NS02384355, D.G. Long 45627 (E).
- 101.3B. *Ulota crispula*. 10:** epiphytic, 43 m alt., Golden Hill Fort Wood, Norton Green, SZ337878, G.R.L. Greiff; **11:** on hazel at edge of alder/willow carr, Kite's Croft, Titchfield Common, SU52860653, J.A. Norton; **26:** branch of oak tree, Knettishall Heath, TL95038061, R.J. Fisk; **71:** on sycamore, Glen Auldyn, Isle of Man, SC42599247, C.D. Preston *et al.*; **H21:** horse chestnut tree in NE of site at edge of meadow, 150 m alt., Fernhill House and Gardens, Dun Laoghaire-Rathdown, O1853924660, J. Denyer (DBN).
- 101.3C. *Ulota intermedia*. 10:** on willow in swamp, 25 m alt., Kennerley Marsh, Godshill, Isle of Wight, SZ523831, G.R.L. Greiff; **11:** on fallen birch, recently thinned wet woodland, Dockens Water, Rockford Common, SU17290895, J.A. Norton; **15:** on stunted *Prunus spinosa*, 5 m alt., south of Lade Gravel Pits, Dungeness, TR07882089, S. Lemon; **16:** on a tree, near the Manor House, Scadbury Park, TQ459700, J.I. Hendey; **26:** branch of oak tree, Knettishall Heath, TL94998060, R.J. Fisk; **46:** one large cushion on willow by river, 110 m alt., Lampeter, SN57724757, T.W. Ottley 18080701; **48:** on hazel in oak woodland, 270 m alt., Coed y Rhygen NNR, SH6807136773, D.A. Callaghan; **68:** on willow in carr woodland, Newham Bog NNR, NU1701829459, D.A. Callaghan 81557; **71:** on *Salix* by river, Glen Auldyn, Isle of Man, SC42519244, C.D. Preston *et al.*; **100:** on ash tree, 15 m alt., Cock of Arran, Isle of Arran, NR9651, R.T. Whytock.
- 101.5. *Ulota calvescens*. 68:** on willow in carr woodland, Newham Bog NNR, NU1701729456, D.A. Callaghan 81556; **73:** on *Salix* sp., 117 m alt., Glen Trool, NX3606079403, R.T. Whytock; **74:** on willow tree, 82 m alt., Glenrazie Wood, NX3694468960, R.T. Whytock; **100:** on *Sorbus aucuparia*, Glen Ormidale, Isle of Arran, NR9850034300, S.V. O'Leary.
- 102.2. *Hedwigia stellata*. 12:** on horizontal bough of old apple tree, Brandy Mount, Alresford, SU589326, J.D. Sleath.
- 107.4. *Philonotis caespitosa*. 105:** loch side rock, Lochan Coire na Poite, Beinn Bhan, NG8088945079, 2017, P.G. Martin.
- 110.1. *Anomobryum julaceum*. 46:** rocks upstream from footbridge, 55 m alt., Rheidol Falls, SN709788, T.W. Ottley 18020501.
- 111.13. *Bryum knowltonii*. 65:** among stones at margin of lake in old gravel/sand pit, 40 m alt., Nosterfield Nature Reserve, SE27698089, T.L. Blockeel & Yorkshire Naturalists Union 47/386, *conf.* D.T. Holyoak.
- 111.18. *Bryum elegans*. 42:** thin soil in rock crevice, on rock among fallen boulders at base of cliff, Llangattock Quarry, SO20491535, C. Halpin.
- 111.19. *Bryum moravicum*. 45:** fallen ash trunk across stream, Ford's Lake, Kilgetty, SN130080, M.D. Sutton.
- 111.23. *Bryum pallescens*. 71:** wall by dam, Glen Roy, Isle of Man, SC40408337, C.D. Preston *et al.*
- 111.24.a. *Bryum pseudotriquetrum* var. *pseudotriquetrum*. 71:** on cliff, normally wet but currently dry, Glen Auldyn, Isle of Man, SC42459234, C.D. Preston.
- 111.28. *Bryum dixonii*. 105:** on slab of Torridonian Sandstone below cascade, rocky montane valley, 230 m alt., Coire a'Chaorachain, Applecross, NG80114254, 2017, D.G. Long 44940 (E), confirmed by DNA sequencing.
- 111.29. *Bryum gemmiferum*. 75:** on sandy river bank, 5 m alt., Ballantrae Bridge,

- NX0887282315, R.T. Whytock.
- 111.35. *Bryum violaceum*. 79:** on clay soil bank at edge of ditch by new access track, 215 m alt., Broadmeadows, Yarrowford, NT413304, E.M. Kungu (E).
- 111.36. *Bryum klingraeffii*. 71:** with *Dicranella staphylina* on rutted mud at edge of track, Glen Auldyn, Isle of Man, SC42679256, C.D. Preston; **79:** on clay soil bank at edge of ditch by new access track, 215 m alt., Broadmeadows, Yarrowford, NT413304, E.M. Kungu (E).
- 111.39. *Bryum tenuisetum*. 75:** on sandy track on heathland, 210 m alt., Penwhapple Marsh, NX257965, R.T. Whytock.
- 111.41. *Bryum bornholmense*. 29:** on disturbed acid soil, Gamlingay Heath Plantation, TL223513, M.O. Hill.
- 111.43. *Bryum riparium*. 72:** on stones among seepage on bank above stream, 450 m alt., Corehead Border Forest Trust Reserve, west bank of tributary to Whitehope Burn, NT090132, E.M. Kungu *et al.* (E).
- 111.44. *Bryum mildeanum*. 80:** in crevice of low rock outcrop in stream, 195 m alt., Dinley Burn, Hermitage Water, NY47609634, D.G. Long & R.V. Lansdown 45576, *conf.* D.T. Holyoak (E).
- 114.6. *Poblia drummondii*. 100:** on gravelly soil along steep slope near mountain top, North Glen Sannox, Isle of Arran, NR9746, G.R.L. Greiff.
- 114.19.c. *Poblia wahlenbergii* var. *calcareo*. 14 in ():** steep chalk bank, above Offham, TQ31, 1924, W.E. Nicholson (CGE, additional packets also present, dated Sept 1924 and Jan 1925, the latter with immature sporophytes).
- 116.6. *Mnium stellare*. 53:** limestone boulders in deep shade, Morkery Wood, SK9505619090, S.J. Heathcote.



△Fig. 7. Anthony Gregory's specimen of *Daltonia splachnoides* from South Lancashire, showing dark capsule and fringed calyptra. T.L. Blockeel

- 118.3. *Rhizomnium pseudopunctatum*. H26:** transition mire, 95 m alt., Loughanboy, M5400982249, N. Lockhart *et al.* 2018/06a (DBN).
- 119.5. *Plagiomnium ellipticum*. 100:** flush in wet coastal grassland, 5 m alt., Cock of Arran, Ossian's Cave area, Isle of Arran, NR96035184, N.G. Hodgetts 10285.
- 127.1. *Daltonia splachnoides*. 59:** on side of large decaying tree trunk at bottom of north-facing slope in woodland, 80 m alt., Causeway Farm, Riley Green, near Feniscowles, SD632255, A. Gregory.
- 132.2. *Palustriella falcata*. 46:** small flush near stream, 430 m alt., Claerddu, SN79226874, T.W. Ottley 18042303.
- 134.2. *Campylium protensum*. 71:** edge of fen, 12 m alt., Ballaugh Curragh, Isle of Man, SC363951, E.M. Kungu & C.D. Preston.
- 136.3. *Amblystegium confervoides*. 36:** on roadside bank by a track, Great Doward, SO551160, I. Draycott; **65:** on small stone on ground in limestone woodland, 240 m alt., Whitcliffe Wood, near Richmond,

- NZ14270179, J.J. Graham.
- 137.1. *Hygroamblystegium fluviatile*. H30:** River Erne, Belturbet, H3610016983, D. Dobson (DBN).
- 137.3. *Hygroamblystegium varium*. 49:** in wet soil, reed bed, Lon Cob Bach, Pwllhelli, SH375348, M. Lawley.
- 137.4. *Hygroamblystegium humile*. 10:** banks of filled ditches and canals in meadows, 1 m alt., Sandown Levels, SZ60688526, G.R.L. Greiff; **47:** on a soil bank, edge of R Dyfi north of Dovey Junction Station, SN694987, M. Lawley.
- 140.1. *Drepanocladus polygamus*. H20:** sandy coast, Ardmore Point, T330882, C.D. Preston.
- 140.2. *Drepanocladus aduncus*. H18:** fen-reeds swamp transition, Fin Lough, N0329, G.F. Smith 1804014 (DBN).
- 142.1. *Sanionia uncinata*. 24:** a few shoots among *Hypnum cupressiforme* on horizontal young *Fraxinus* ca 1m off ground, near muddy pool in wet woodland, Cowcroft Wood, Ley Hill, SP9840101789, S.V. O’Leary.
- 143.5. *Hygrohypnum eugyrium*.** Delete **101**, the voucher in BBSUK (Lothead, L. Caolisport, *leg.* M.F.V. Corley, 1967) is *H. subeugyrium*.
- 143.5B. *Hygrohypnum subeugyrium*.** 36, (48), 49, 70, (72), 73, 87, 96, 97, 98, 99, 101, 103, 104, 105, 108. New to Britain (for details of records, see Blockeel *et al.*, 2019).
- 145.1. *Warnstorfia fluitans*. H10:** in cut-over bog pools within open willow/birch carr, 60 m alt., Walshpark, Birr, M98860389, M. Eakin (DBN).
- 147.1. *Straminergon stramineum*. H26:** transition mire, 95 m alt., Loughanboy, M5400982249, N. Lockhart *et al.* 2018/05a (DBN).
- 161.2. *Plasteurhynchium striatulum*. 4:** on base-rich woodland crag, 75 m alt., Wester Wood, Lynmouth, SS73234891, S.L. Pilkington; **65:** on south-facing limestone crag shaded by yew, 270 m alt., Whitcliffe Wood, near Richmond, NZ19280184, T.L. Blockeel 47/151.
- 163.2. *Platyhypnidium lusitanicum*. H19:** River Liffey, Kilcullen, N841096, D. Dobson (DBN).
- 164.1. *Rhynchostegium murale*. H20:** on concrete kerb by grave, 250 m alt., Rosahane, T084835, M.O. Hill.
- 167.1. *Oxyrrhynchium pumilum*. 73:** on low bank, near to shore, 1 m alt., Bathinghouse Bay, NX67464620, E.M. Kungu *et al.* (E); **H21:** bank by stream in plantation woodland, 200 m alt., Jamestown, O125237, N.G. Hodgetts 10260.
- 167.4. *Oxyrrhynchium speciosum*. 47:** over stone, at side of Montgomery Canal, Llanymynech and Carreghofa Locks, SJ266209 & SJ254203, M. Lawley.
- 170.5. *Brachythecium mildeanum*. 85:** damp gravel and soil, abandoned ground, on former railway land, 115 m alt., Kinross, NO11660148, E.M. Kungu, D.F. Chamberlain *et al.* (E); **100:** coastal grassland, 10 m alt., Arran Sills, Isle of Arran, NS0021, R.T. Whytock.
- 171.1. *Scleropodium cespitans*. 73:** near edge of ditch, under *Salix* carr, 45 m alt., Kenmure Holms RSPB Reserve, New Galloway, NX6376, E.M. Kungu *et al.* (E).
- 173.1. *Brachytheciastrum velutinum*. 73:** on elder, 10 m alt., west bank of Cluden Water, NX9418479140, E.M. Kungu *et al.* (E).
- 176.1. *Campylophyllum calcareum*. H20:** with other calcicoles on a shaded wall opposite house, 125 m alt., Greenane, Ballinacor Estate, T1354488312, S.L. Pilkington (DBN). New

- to Ireland.
- 177.2. *Calliergonella lindbergii*. 75:** on forest track side, 130 m alt., Daljarrock Wood, NX1988, R.T. Whytock.
- 179.1. *Pylaisia polyantha*. 8:** on sprawling *Salix* x *fragilis* in woodland between two flooded gravel pits, 65 m alt., Langford Lakes Nature Reserve, SU04223695, S.L. Pilkington; **53:** trunk of large sycamore beside large fenland drain, South Forty Foot Drain, Hubbert's Bridge, east of Boston, TF26994363, J.J. Graham.
- 185.1. *Habrodon perpusillus*. 6:** several patches on lower trunk of sycamore near edge of woodland, 185 m alt., Hurdlestone Wood, Leigh-on-Mendip, ST67924797, S.L. Pilkington.
- 186.1.a. *Heterocladium heteropterum* var. *heteropterum*. H21:** bank by stream in plantation woodland, 200 m alt., Jamestown, O12522367, N.G. Hodgetts 10259.
- 186.1.b. *Heterocladium heteropterum* var. *flaccidum*. 89:** on base-rich rocks, Craighall Gorge, NO173476, A.J. Hodgson.
- 189.3. *Rhytidiadelphus subpinnatus*. 70:** on periodically irrigated ground adjacent to rocky stream, Shank Wood, Lyne Woods SSSI, NY4675970410, A. McLay.
- 189.4. *Rhytidiadelphus loreus*. 10:** on fallen trees in inter-war plantation woodland, Brighstone Down, SZ432847, G.R.L. Greiff.
- 191.2. *Hylocomiastrum umbratum*. H20:** on boulders on wooded steep slope, by upper lake, Glendalough, T1079296091, N.G. Hodgetts (DBN).
- 200.2. *Herzogiella seligeri*. 9:** felled wood in beech plantation, 160 m alt., Fontmell Wood, Ashmore, ST89291721, S.L. Pilkington.
- 207.1.a. *Leucodon sciuroides* var. *sciuroides*. 59:** on lower trunk of ash at side of road, 25 m alt., The Avenue, Leigh, SD664010, A. Gregory.
- ▽ Fig. 8. *Anomodon longifolius* (left) and *A. viticulosus* (right) at Whitcliffe Wood, North-west Yorkshire. T.L. Blockeel



- 208.1. *Antitrichia curtipendula*. 35:** 50 cm patch on top of dry-stone wall, 410 m alt., Cefn-coed, Black Mountains, SO26052710, 2017, G.M. Tordoff; **46:** on a dry-stone wall, 290 m alt., Cwm Mwyro, SN77666497, T.W. Ottley 18042601.
- 210.2. *Neckera crispa*. 100:** on ash tree, 60 m alt., Glenashdale, Isle of Arran, NS0338325099, R.T. Whytock.
- 216.1. *Anomodon longifolius*. 65:** on side of limestone boulder with *A. viticulosus*, *Neckera crispa*, etc., on open slope in woodland, Whitcliffe Wood, near Richmond, NZ14260175, M. Sibley.
- 216.3. *Anomodon viticulosus*. 73:** covering the rock outcrop below the ‘castle’ to the south, 50 m alt., Kenmure Castle, New Galloway, NX6353076349, E.M. Kungu *et al.* (E).

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