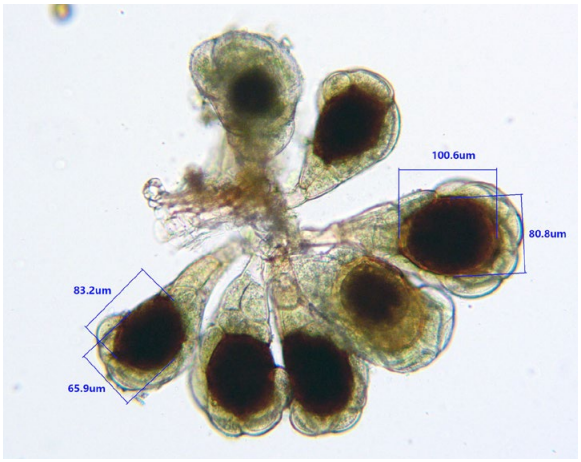
Bryophyte report for 2024

John Norton

Update on *Bryum dichotomum* from the Isle of Wight

In my last report (*Flora News* 66, February 2024) I recounted some highlights from a trip to the Isle of Wight in December 2023 with George Greiff where we found the rarely recorded form of *Bryum dichotomum* with stipitate (stalked) gemmae in the leaf axils. Subsequently, George started to think more about these plants and realised that the gemmae reminded him of structures he'd seen on another moss that are caused by a fungal parasite. After studying the specimens more closely he came to the conclusion that they are actually galls caused by a parasitic chytrid fungus. Opaque material inside the galls appears to be the multinucleate plasmodium (feeding) stage of the fungus. Possibly the structures do start off as gemmae or bulbils, which then become infected. Through a preliminary attempt at sequencing George has discovered that the fungus is a match for the genus *Synchytrium*. Further investigation remains to be carried out and it is hoped a paper will be published at some time in the future.

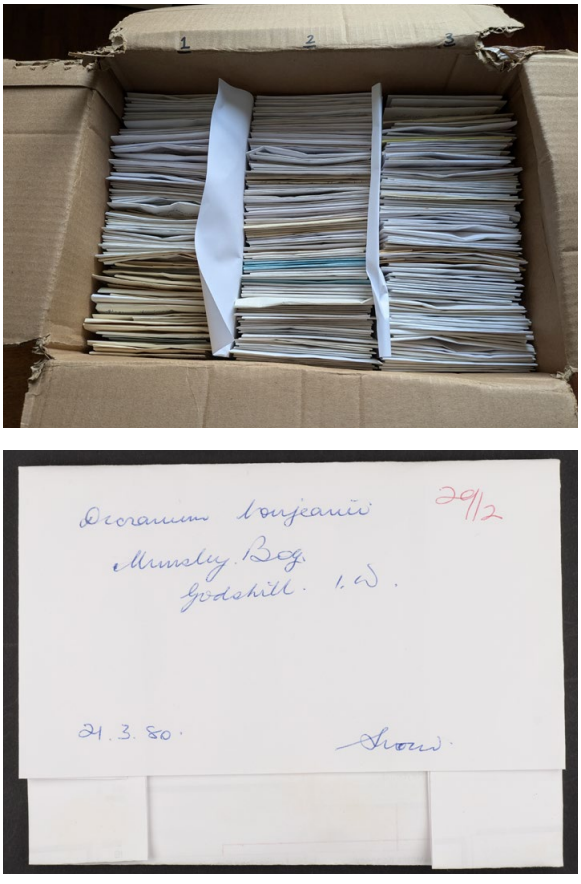


***Synchytrium* galls in bulbils of *Bryum dichotomum* from Isle of Wight.** *John Norton*

Lorna Snow's herbarium

In March 2024 I was finally able to take possession of the bryophyte herbarium of the late Lorna Snow, the former recorder for the Isle of Wight. This had been passed to her niece who first contacted me in December 2018 with a view to me arranging to deposit it with the Natural History Museum. The delay in collecting the herbarium from her niece's house on the Island was mainly due to the Covid pandemic halting any longer excursions there. The Museum has expressed an interest in adding the herbarium to their collection and I hope to send it to them later this year.

In the meantime I have begun transcribing the details on the packets so that I can submit the records to the British Bryological Society (BBS). In all there are 737 packets housed in two large cardboard boxes. Just over half (377) of the specimens were collected from the Isle of Wight and the others mainly from North Wales, Oxfordshire, West Sussex, France and Spain, including several sent to her presumably for use as reference material by other recorders. Transcribing the data from the packets will take me much longer than I initially thought, but I hope to complete it soon. Although many of the records are already in the BBS database, none of them are marked as having been collected as specimens, so adding this information will be useful. I also hope to examine some of the more interesting specimens, including those for taxa that have been more recently split to see if I can improve on 'sens. lat.' records.



One of two boxes of Lorna Snow's bryophyte herbarium and a packet containing a moss specimen (*Dicranum bonjeanii* collected from Munsley Bog, 21 March 1980). *John Norton*

Photographs of British bryophytes

I have included a few photographs to illustrate this report, and more can be found in the online reports on the BBS website (see Meetings Reports below). However, it is also worth mentioning that the website now has a large number of photographs of bryophytes of almost every British species, and these are constantly being added to, providing a fantastic resource for anyone trying to learn bryophytes. The photos include general shots of mosses in their habitat and close-ups, as well as micrographs showing the cell structure of leaves and other organs. The home page of the website (*www.britishbryologicalsociety.org.uk*) has a search bar which provides a quick and easy way of locating the species pages where the photos are displayed. Links are also given to the 2010 field guide accounts and the 2014 atlas maps for each species, which can be viewed on screen or saved as pdfs. A new edition of the field guide is currently in preparation and it is expected that it will be published later this year.

A tufa-forming moss

Didymodon is a difficult genus of small mosses which grow on walls and soil, but one of the more distinctive species is *D. tophaceus* which when growing on walls often accumulates a crust of calcium carbonate on its shoots – so as its name indicates is somewhat 'tufa-forming'. It is a fairly common and widespread species, and in Hampshire I have collected several specimens from walls and grassland in my local area and from further afield, particularly along the coastal estuaries. I was also familiar with a more luxuriant form which grows on constantly wet seepages on cliffs around the south coast of the Isle of Wight.

A taxon first described as *Didymodon sicculus* from south-east Spain in 1996 was later demoted to a subspecies of *D. tophaceus*. It has coastal tendencies and a degree of tolerance to dry and saline conditions. It had been found new to Britain on Lundy Island, where collected from a wall in April 2021. My specimens from Hampshire appeared to fit the morphology of this better than the nominate *D. tophaceus* subsp. *tophaceus*; however, one character (the presence of round cells instead of elongate cells covering the costa in mid-leaf) wasn't quite right (my specimens only had round cells in the upper 20–25% of the leaf).

Eventually, in February 2023, I found a specimen at the edge of the saltmarsh at Gilkicker Point, Gosport which was producing capsules, and sent a specimen to Tom Blockeel, one of the British experts in the genus. He passed it on to European *Didymodon* specialist Jan Kučera, who sequenced it and confirmed it was indeed *Didymodon tophaceus* subsp. *sicculus* (we only heard back from Jan in March 2024, by which time a second British record had also been confirmed). I now suspect that many of the plants I've been seeing in drier situations around the Solent estuaries are likely to be subsp. *sicculus*. The species is common on brick walls around my local roads where it grows in neat, rounded cushions, similar to that described for the Lundy plant. The leaves of these are consistently short and bluntly rounded, whereas those of subsp. *tophaceus* are longer and more pointed. Subsp. *tophaceus* also has a dark reddish-brown nerve, which is green or not as strongly coloured in subsp. *sicculus*. My Gilkicker specimen is probably only the second

Top: typical leaf of *Didymodon tophaceus* subsp. *sicculus* (c.1.1 mm long) from Gilkicker; centre: leaf of *D. tophaceus* subsp. *tophaceus* from Isle of Wight (1.6 mm long); bottom: fruiting plants of *Didymodon tophaceus* subsp. *sicculus* on a bank at Gilkicker, April 2024 (mixed with leaves of *Tortella flavovirens*. *John Norton*

to be collected in Europe with capsules and my preliminary observations indicate that these are distinctly smaller than those of the nominate subspecies (which fruits freely when growing on wet seepages).

The Gilkicker colony was growing on a dry soil embankment between the shingle beach and an area of saltmarsh, under cover of *Quercus ilex* trees. It was with abundant *Tortella flavovirens* (a saline-tolerant species also of walls and saltmarsh in coastal areas). Another habitat where I suspect subsp. *sicculus* may be common is salted road verges. It wouldn't surprise me if *D. tophaceus* subsp. *sicculus* will turn out to be the commoner form around the Hampshire coast, once the morphological characters become more widely understood. Interestingly, specimens I collected from intermittently damp sandy cliffs on the coast at Chilling (south of Warsash), appear also to be closer to subsp. *sicculus*.

Meetings Reports

Reports of meetings held in 2024 are available on the BBS website so I have only given brief details here and commented on a few of the more interesting records. To see the full reports follow the BBS website link given above and click on Events, Local, Southern Group. Future meetings are usually shown on my own website (*www.hantswightbryology.net*) but if you want to be notified of meetings please contact me (*john@hantswightbryology.net*) to be added to the Southern Group email list.

Town Common and St Catherine's Hill, Christchurch (VC12) 31 January 2024

Robert Sharp and I arranged this meeting at short notice to have a better look round his local area following a previous brief visit I had made with a few others in September 2022. He had recently found a candidate for *Calypogeia neesiana*, which had only been recorded in Hampshire once before at this site, in 1958 by Jean Paton. Robert's specimen looked convincing but it was subsequently not accepted by the referee and was probably just weakly growing *C. muelleriana*, a common species of acid woodland which we found again during the meeting. The site supports an interesting mix of pine woodland, heath and mire with some damp sandy areas which are rich in liverworts. Due to the way in which records were entered in the past, there were only 14 bryophyte records for this 5 × 5 km quadrant (SZ19NW) prior to the 2022 visit. On that visit we also updated Paton's 1958 records of the liverworts *Odontoschisma denudatum* and *Odontoschisma francisci*, and found the two increasing alien species *Lophocolea bispinosa* and *L. semiteres*. During the January 2024 visit we recorded around 60 taxa, including the heathland liverwort *Gymnocolea inflata* and the mosses *Plagiothecium denticulatum* and *Pohlia nutans*.

Pamber Forest (VC12) 10 February 2024

This meeting was organised by Jonathan Sleath (VC12 recorder). The site is a Hampshire & Isle of Wight Wildlife Trust nature reserve situated just south of the village of Pamber Heath, lying between the Tadley and Silchester on the Hampshire/Berkshire border. Most of the site lies within the 1 km squares SU6160 and SU6161. I didn't attend but those that went recorded 77 taxa including the second VC12 record for *Platygyrium repens*, the now uncommon *Dicranum tauricum*, plus *Homalia trichomanoides*, *Herzogiella seligeri* and *Ulota intermedia* (a recent split of *U. crispa* agg.). These are all epiphytes on standing or fallen trees. A specimen of *Conocephalum conicum* was collected, which was needed as a voucher for VC12 (see below) as none had been available when this was split from *C. salebrosum* several years ago (the latter is mainly a northern species and has not yet been recorded from Hampshire).

Shipton Bellinger (VC12) 6 April 2024

This meeting, also organised by Jonathan Sleath, was held in the area east of Salisbury Plain, south of Tidworth at SU2346 (VC12). We recorded 85 taxa including several characteristic species of chalk country, including *Abietinella abietina*, *Entodon concinnus* and both *Seligeria calcarea* and *S. calycina* (tiny mosses which grow on chalk rock). The highlight of the meeting was finding several colonies of *Campylophyllopsis calcarea* growing over the exposed roots at the base of Beech trees in a plantation, though this is also a species that will also grow on bare chalk. It is surprisingly rare in Hampshire, with the most recent records being from 1969, 1975 and 1990, also in VC12. It was only when I checked my photos later that I realised one colony was partially covered with orange discs of a bryophilous fungus, but I didn't have a specimen to check the spores. George Greiff told me that there are no species specifically associated with *Campylophyllopsis*, except possibly an unnamed taxon which has never been recorded in Britain, so it would be worth going back sometime to collect it. Another highlight was finding plentiful patches of the liverwort *Oleolophozia perssonii* (formerly *Lophozia perssonii*) on

chalk paths within the wood, this being the third VC12 and Hampshire record. We also recorded its associate *Mesoptychia badensis* (formerly *Leiocolea badensis*), although the usually more common *M. turbinata* was not seen.

***Campylophyllopsis calcarea* with an unknown bryophilous fungus, Shipton Bellinger, April 2024.** *John Norton*

Beacon Hill and Caesar's Camp (VC12) 4 May 2024

This was not an organised meeting but I joined Jonathan Sleath and Sharon Pilkington to have a look at the MoD area between Fleet and Aldershot, including part of Caesar's Camp. In woodland south of Beacon Hill we found *Scapania undulata* on a small watercourse and on rotting logs *Herzogiella seligeri*, *Cephalozia curvifolia* (formerly *Nowellia curvifolia*) and *Lepidozia reptans*. In a shingly area in the bottom of an old reservoir we found a small cushion of a puzzling moss which looked like a *Tortella*. After checking under a microscope Sharon later confirmed this as *Tortella fasciculata*, a new record for VC12 and Hampshire. This was previously known as *T. bambergeri*, before that was split into *T. fasciculata* and *T. pseudofragilis* in 2017. It was very surprising to find it in Hampshire, since it is predominantly an upland species and fairly rare except in Wales (most past records of *T. bambergeri* are presumed to be this taxon, though *T. pseudofragilis* has been recorded in two British vice-counties). Near Caesar's Camp we explored a small, narrow gully cut into the sand where we found some patches of a small liverwort, later confirmed by Sharon and the liverwort referee as *Sphenolobus minutus*; also new to VC12.

Burley Rocks and Mill Lawn (VC11) 3 November 2024

I had hoped to hold this meeting at Ashley Heath, west of Ringwood, and did a recce there with Graeme Smith on 17 September. However, this proved not to be ideal for several reasons (including ungrazed wet heath with *Molinia* tussocks impossible to walk through) so instead it was decided to hold it at the Mill Lawn and Burley Rocks area in the New Forest. The meeting was held during a period of miserable cloudy and drizzly weather, but there was a good turnout, with around 20 people for at least part of the meeting.

Burley Rock refers to a type of hard iron oxide ('ferricrete') which forms a plateau extending 2.5 km east from Burley village. It was used to build some of the houses in the area (see *burleyhistoricalsociety.weebly.com/burley-rock.html*). On the north side of the plateau there are a series of runnels and flushes draining from the rocks which support an extensive area of mire, much of which is mineral rich and neutral to base rich in character. The main area lies within the 1 km square SU2203, where the 2012 meeting took place; however, during the 2024 meeting we also managed to do some recording in SU2303. During the meeting we recorded 12 species of *Sphagnum* and brought the total for the area to 15. The most interesting of these was *S. contortum*, a base-demanding species known from only eight other localities in the New Forest and otherwise scattered and rare in southern England (it is mainly a species of western and northern Britain). The plants here were unusually strongly coloured (some becoming bright orange). This must be the largest colony now known in the New Forest – we found one population of 20+ cushions along one of the

***Sphagnum contortum*, Burley Rocks, November 2024.** *John Norton*

Bryologists at Burley Rocks, 3 November 2024. *John Norton*

runnels and plenty more in other areas that we didn't have time to record properly. It was also nice to see all three *Scorpidium* species: *S. cossonii*, *S. revolvens* and *S. scorpioides* (which are shades of green, red and purple respectively) – these being good indicators of base rich conditions and nice habitat generally.

We stopped for lunch in some willow carr at the edge of the mire where Sharon Pilkington spotted a thick carpet of green fuzz on the side of a fallen log. This was later confirmed as *Kurzia sylvatica*, a mainly northern and western species with only one previous Hampshire record in the New Forest, from Mark Ash Wood by Jean Paton in 1977. Coincidentally, Jonathan Sleath had also recorded this species ten days earlier during a visit to Eelmoor Marsh, which was a new VC12 record.

We finished the day by walking back along the Mill Lawn Brook. A very respectable total of 90 taxa was recorded during the meeting. One other observation of interest in the mire was a Harvest Mouse nest in a tussock of Common Cottongrass *Eriophorum angustifolium*, made of woven leaves of *Molinia*. We didn't disturb it in case there was an occupant inside!

Woolmer Forest (VC12) 30 November 2024

This meeting was organised by Jonathan Sleath with grateful help from two members of the Amphibian and Reptile Conservation Trust (ARC) who manage part of the site (notable for supporting all the British native species, including Natterjack Toad). They kindly arranged permission from the MoD and parking, and gave up their Saturday to guide us round the part of the site. This was the first (of two) locations in Britain for *Protolophozia herzogiana* (formerly *Lophozia herzogiana*), found first by Alan Crundwell in 1986, and later in 1997, but not seen since.

We looked at some mire and willow carr in SU7933, where progress was very slow due to the tall and dense *Molinia* tussocks interspersed with deep pools. There were a few common bog liverworts and *Sphagnum* species, in addition to plenty of *Aulacomnium palustre* and some patches of *Straminergon stramineum*. Interestingly *Microlejeunea ulicina* was much more common on willows in the carr than the recently increased *Myriocoleopsis minutissima*. Along the main perimeter track Pete Flood found *Anthoceros punctatus*, one of the four British hornworts, and a new record for VC12.

We moved into SU7932 where we spent some time looking at the rifle range, on an area of regularly mown wet heath and acid grassland. Species here included *Pohlia annotina*, *Pseudephemerum nitidum*, *Riccia sorocarpa*, *Scapania irrigua*, *Solenostoma gracillimum* and fertile *Cephaloziella hampeana*. *Lophozia excisa* grew in short eroded turf with tiny rosettes of an unidentifiable *Fossombronia*. We then headed north towards the site of

Protolophozia herzogiana but with fading daylight realised we didn't have enough time to get there. However, Jonathan and I diverted off the track to grab some samples from a tarmac path surrounding a military building and I noticed that one of my specimens was a *Syntrichia* with a yellow excurrent nerve rather than the usual long white hair-point. We later realised that this was *S. montana* subsp. *calva*, the third British record of this presumably frequently overlooked form. We stopped nearby to look at an area of boggy wet heath at Cranmer Bottom where Pete Flood found *Sphagnum medium*, which still needed a VC12 voucher since the split of this species in Europe a few years ago. Although common in the New Forest, *S. medium/magellanicum* had only been recorded in two 10 km squares previously in VC12 and only once in the last 60 years, at Hazeley Heath (SU75). Another good find here was *Calypogeia sphagnicola*, the first record for VC12 since 1975.

***Syntrichia montana* var. *calva*, Woolmer Forest, November 2024.** *John Norton*

We returned to look at an area of sandy acid grassland near to the perimeter track, which also had some small concrete-lined pools, where we added several more interesting species, including a rather stunted *Bryum alpinum*, which was only the second VC12 record since the 1950s. Jonathan had found *Fossombronia foveolata* in a couple of places here on his reconnaissance visit, a VC12 'debracketer' (see below) but we could not refind it during the meeting. This liverwort may have been recorded in the area historically (possibly in the 1950s) but the only other VC12 record was for VC85 in 1969.

Although we were only able to visit a small part of this fascinating site, it was a successful meeting with 92 taxa recorded, but we had to postpone the hunt for *Protolophozia* to another day.

New vice-county records

Details of new records and debracketers for the period November 2023 to December 2024 are given below (includes records not published in the last *Flora News* report). These are records for which vouchers have been or will be submitted to the national BBS herbarium in Cardiff and which are listed in annual reports in *Field Bryology*, the BBS magazine. Debracketers are species which have been seen for the first time since 1970 (by convention species which were last recorded prior to this date are listed in the vice-county census catalogues in parentheses).

Some of the records relate to taxonomic revisions which necessitated submitting new vouchers for the BBS herbarium. These include a couple of records mentioned earlier in this report and a record of *Trichostomum brachydontium* which has recently been split into four species, three of which occur in Britain and Ireland. Sharon Pilkington (who is the BBS national moss referee) checked a large number of herbarium specimens from public and private collections and drew up a list of verified vice-county records (*Field Bryology* 132, November 2024). In our area it is likely that *T. brachydontium* s. str. is the usual species and although previously recorded in all three vice-counties, a verified specimen was only available for VC10. A voucher that I collected recently from the New Forest was therefore submitted for VC11, but a specimen for VC12 is still required. One of the other taxa, *T. littorale*, has oceanic tendencies and there is therefore a chance it could be present on the Isle of Wight.

Liverworts

***Anthoceros punctatus*, VC12.** Woolmer Forest, SU7832, 30 November 2024. Verge of site perimeter track, in acid grassland. P. Flood, conf. N. Hodgetts. New to VC12.

***Conocephalum conicum*, VC12.** Pamber Forest, SU6161, 10 February 2024. Stream bank in woodland. S. Pilkington, conf. N. Hodgetts. First vouchered record for VC12 since taxonomic split from *C. salebrosum*.

***Fossombronia foveolata*, VC12.** Woolmer Forest, SU7890 3252, 11 October 2024. J. Sleath, conf. N. Hodgetts. VC12 debracketer.

***Riccia crystallina*, VC10.** Shanklin, SZ 5749 8201, 17 December 2023. Locally abundant on bare mineral soil on more recently used camping pitches, Lower Hyde Holiday Park. J. Norton, conf. N. Hodgetts. New to VC10.

***Sphenolobus minutus*, VC12.** Caesar's Camp, SU 8366 5026, 4 May 2024. S. Pilkington, conf. N. Hodgetts. New to VC12.

Mosses

***Bryum gemmilucens*, VC10.** Nodes Point Holiday Park, St Helens, SZ 6350 8960, 20 December 2023. Junction of tarmac road and concrete kerb. G Greiff & J. Norton, conf. S. Pilkington. New to VC10.

***Dicranella howei*, VC10.** St Catherine's Point, SZ 4944 7568, 2023. On calcareous soil with *Fissidens incurvus*. G. Greiff, conf. S. Pilkington. New to VC10 (since being recognised as occurring in Britain – see report in *Flora News* 61, Autumn 2021).

***Didymodon icmadophilus*, VC11.** Janesmoor Plain, Fritham, New Forest, SU 2449 1348, 21 October 2023. In well-grazed basic grassland of former runway. Coll. & conf. S. Pilkington. New to VC11 and Hampshire (records currently listed in the census catalogue for VC10-12 are in error for either *D. acutus* or its aggregate with *D. icmadophilus*).

***Didymodon tophaceus*, subsp. *sicculus*, VC11.** Gilkicker Point, Gosport, SU 60376 97706, 24 February 2023. On dry bank separating shingle beach from adjacent area of *Juncus maritimus* saltmarsh, under shade of *Quercus ilex* tree. Few small fruiting patches (2+ cm across) amongst much larger patch of *Tortella flavovirens*. Soil probably weakly saline. J. Norton, conf. J. Kučera through DNA sequencing. New to VC11 and Hampshire (second British record when collected).

***Ephemerum recurvifolium*, VC10.** Rowlands Lane, SZ 6006 8912, 18 December 2023. Ledge of chalk pit. G. Greiff & J. Norton, conf. S. Pilkington. VC10 debracketer (second record since first in 1926 at Whitecliff Bay, Bembridge).

***Kurzia sylvatica*, VC12.** Eelmoor Marsh, SU 8392 5303, 24 October 2024. On a peaty bank. J. Sleath, conf. N. Hodgetts. New to VC12.

***Microbryum davallianum* var. *conicum*, VC10.** Little Duxmore Farm, Havenstreet (HIWWT nature reserve), SZ557879, 18 December 2023. In calcareous substrate along farm track. G. Greiff & J. Norton, conf. S. Pilkington. New to VC10 (following recent re-assessment as a valid taxon).

***Plagiomnium cuspidatum*, VC11.** Janesmoor Plain, Fritham, New Forest, SU 24382 13162, 21 October 2023. Well grazed, weakly acidic grassland. R. Sharp, conf. S. Pilkington. New to VC11.

***Sphagnum medium*, VC12.** Woolmer Forest, SU794327, 30 November 2024. Acid bog. P. Flood, conf. S. Pilkington. VC12 debracketer.

***Syntrichia montana* var. *calva*, VC12.** Woolmer Forest, SU79333282, 30 November 2024. On tarmac path around military building. J. Norton, conf. S. Pilkington. New to VC12 and Hampshire (3rd British record).

***Tortella fasciculata*, VC12.** S of Beacon Hill, SU 8276 4993, 4 May 2024. Coll. & conf. S. Pilkington. On shingle in base of old reservoir. New to VC12 and Hampshire.

***Tortula atrovirens*, VC10.** Culver Cliff, Bembridge Down, SZ 62664 85523, 17 December 2023. On bare soil on lip of slumped area near top of cliff. G. Greiff & J. Norton, conf. S. Pilkington. VC10 debracketer (second record since first in 1930 near Newtown).

***Trichostomum brachydontium*, VC11.** Beaulieu Heath, New Forest, SU 3489 0136. Frequent small cushions in acid grassland with calcareous influence, along edge of tarmac roadway at N end of Beaulieu Heath. J. Norton & J. Sleath, conf. S. Pilkington. First vouchered record for VC11 since recent taxonomic split of this species.

***Ulota crispula*, VC12.** Basingstoke, SU 654523, 24 June 2023. Trunk of *Alnus glutinosa* in boggy woodland near River Loddon. P. Thompson, conf. T. Blockeel. First vouchered record for VC12 since taxonomic split from *Ulota crispa* agg.