

BBS Spring Meeting 2016 Radnorshire

7-12 April 2016

△ Looking across Wye Valley from Gilfach Farm Nature Reserve. R. Hodd.

Mark Hill reports on this year's Spring Meeting held in Radnorshire VC43

The Spring Meeting 2016 was based in Llandrindod Wells, former county town of Radnorshire (vice-county 43) and now an administrative centre in Powys, Wales. The BBS last met here in 1965, and it was a pleasure to welcome back David Chamberlain, who had attended on the previous occasion. Our headquarters was the Glen Usk hotel in the centre of Llandrindod, but lab work and committee meetings took place at Llysdimam Field Centre, just across the River Wye near Newbridge. Some members also slept there. The meeting was well attended, with 43 bryologists and 3 spouses.

Radnorshire, with 26,000 inhabitants, is the least densely populated vice-county in southern Britain. Its most significant feature is the river

Wye, which enters from the north as little more than a brook, then heads south, curving round and growing into a wide lowland river as it leaves the county at Rhydspence near Hay-on-Wye. Most of the county lies to the east of the Wye and has a moderately oceanic climate with annual rainfall 900-1,000 mm. To the west of the Wye, the Elan Valley has a markedly oceanic climate, with average rainfall 1,800 mm. Most of the county lies above 300 m. There are no mountains, and the highest elevation, 660 m, is in Radnor Forest just 10 km from the English border.

Because of the large size of the party, we split into 3 groups on most days and into 4 groups on the Saturday and Monday. In addition, the



△Fig 1. *Riccia subbifurca* on disturbed ground by the upper Teme. P. Bowyer.

BRECOG recorders were active on the BBS fringe on most days. All excursions were in Radnorshire. Vice-county records are indicated thus *.

Thursday 7 April

Sharon Pilkington led a group to the gorge of the upper River Teme, in the north of the county. Here there were base-rich mudstones and calcareous springs. Tom Ottley collected *Polytrichum commune* var. *perigoniale** on a shaly bank by the road. The morning's foray down to the river produced about 100 species including *Leiocolea collaris*, *L. turbinata*, *Metzgeria conjugata*, *Aloina aloides*, *Diphyscium foliosum*, *Ditrichum gracile*, *Gymnostomum aeruginosum* and *Orthothecium intricatum*. An expanse of exciting-looking flushes and a small waterfall higher up the valley tempted a small splinter group (Sharon, Paul Bowyer and John Norton) away from the planned afternoon excursion and yielded many more species, including *Marchantia polymorpha* subsp. *polymorpha*, *Riccia subbifurca*, *Anomobryum julaceum* s.str., *Bryoerythrophyllum ferruginascens*, *Hymenostylium recurvirostrum*, *Orthotrichum rupestre*, *Philonotis calcarea*, *Plagiomnium elatum* and *Scorpidium revolvens*. Meanwhile, the main party made a village stop in Felindre producing *Bryum pallescens* but little else of note.

The second group started in Llanbister, where they found *Fissidens exilis* in the churchyard. They moved to Tylcau Hill RWT (Radnorshire Wildlife Trust) reserve, which featured a stream and wet alder woodland. Mark Pool found *Fissidens bryoides* var. *caespitans*; Nick Law found *Trichocolea tomentella*. They went on to the source of the river Lugg (wittily termed the Lugg Hole by one participant). The small gorge produced *Ditrichum gracile*, *Philonotis calcarea* and *Racomitrium elongatum*, but nothing like the riches of the upper Teme. The Lugg Hole itself proved to be acidic, with submerged *Sphagnum inundatum*, disproving the theory that all submerged Subsecunda are *S. denticulatum*.

The third group included Mark Lawley and Sam Bosanquet, and went to Maelienydd Common, one of Radnorshire's old commons, 'rough grazed' by sheep and wet in places, with plentiful sphagnum. Mark had previously found *Barbilophozia kunzeana* and *Hamatocaulis vernicosus*, which were duly refound. The *Barbilophozia* was noted in small quantity in three places, but *Hamatocaulis* grew in tens of thousands around a seasonal pool. *Cladopodiella fluitans* and *Scapania paludicola* were also seen growing in sphagnum mires, and Sam grabbed some *Syntrichia ruralis* var. *ruraliformis** from the roadside. In the afternoon they went to Camlo Hill, where an area of forestry produced

Diplophyllum obtusifolium, *Oligotrichum hercynicum* and *Plagiothecium curvifolium*. Sam found *Colura calyptrifolia** on *Salix*. It was later found in two other places but is clearly not common in Radnorshire.

Friday 8 April

Gordon Rothero led a group to Aberedw Hill, and was astonished by the farmer at Tremaen, who told him that he should ski in his spare time, not look at plants! The group found 116 species but rather little of note except *Aloina aloides*, *Dicranum bonjeanii* and *Bryoerythrophyllum ferruginascens*.

The second group was led by Tom Blockeel, and started in the valley of the Edw near Llanbadarn-y-garreg. Exposed and lightly shaded basic rocks in the valley near the car park produced some vigorous calcicoles, including *Reboulia hemisphaerica*, *Anomodon viticulosus* and *Neckera crispa*, and on a much smaller scale *Seligeria recurvata*. *Philonotis arnellii* was on soil on a rock ledge, and *Rhynchostegiella teneriffae* and *Trichostomum crispulum* on the banks of the stream. The group then went on a long trek up Cwmblaenerw, initially through woodland which lacked any significant exposures of rock but added *Jungermannia atrovirens*, *Riccardia palmata* and *Plagiothecium curvifolium*. Just before lunch, Mark Lawley called at Penberth Farm, to say that he had delivered a dead lamb to a sheep in distress; she was in a bad way and belonged to a neighbour. En route to the higher ground the group saw *Leucodon sciuroides* on several ash trees in pastures above the woodland. There was insufficient time on the high ground to explore the promising springs thoroughly but *Dicranum bonjeanii*, *Hamatocaulis vernicosus* and both *Scorpidium cossonii* and *S. revolvens* were present, the latter with sporophytes. Most of the group had to depart early because of committee

meetings back at base, but Mark and Sean O'Leary pressed on. One gently sloping flush sported numerous hummocks of sphagnum – just the habitat Mark was looking for, and indeed produced a few shoots of *Scapania paludicola*. A few metres further on, another sphagnum hummock contained the diminutive *Cephalozia pleniceps*. The final flush rewarded patient searching by revealing a few shoots of *Barbilophozia kunzeana*.

The third group started in Llandrindod itself at Rock Park, home of the bowls club. This produced 90 species, including *Orthotrichum rivulare*, *Schistidium rivulare* and *Syntrichia latifolia* by the River Ithon below the town. They went on to the Bower, an area of rocky pasture wood near Howey. *Riccardia latifrons* (freely fruiting on rotten wood), *Trichocolea tomentella*, *Loeskeobryum brevirostre* and *Plagiothecium latebricola* were in wet woodland near the stream. On a large open rock, a rather upright member of the Grimmiaceae deceived us in the field but proved to be only *Racomitrium fasciculare*. Finally the group went on to look at streams and low crags south of Gilwern Hill. *Pohlia elongata*, found by Liz Kungu, and *Blindia acuta*, found by Mark H, were not seen elsewhere during the meeting.

Saturday 9 April

Elan Valley ranger Rob Andrew drove an elite group comprising Paul Bowyer, Tim Kaye, Mark Lawley and Gordon Rothero to Claerwen at the western extremity of Radnorshire, close to the border with Ceredigion. The aim was to explore the Claerwen National Nature Reserve. Mark found *Atrichum crispum* on shingle by the Afon Claerwen. The rock and soil on the hill were for the most part unrelentingly acidic, but *Tortella bambergeri* turned up on two boulders, accompanied by *Amphidium mougeotii* and



△Fig 2. Claerwen NNR and desperate *Molinia* with Mark Lawley dutifully attending to bryophytes. G.P. Rothero.

Fissidens dubius; *Palustriella commutata* and *Campylium stellatum* grew in a couple of flushes. Around mid day, it snowed for an hour, and soon the scene was bryologically unfriendly. It was not a day for dawdling over nature's diminutive beauties, and the bryologists retreated to civilization as the weather closed in again.

Two groups met up at the car park by Nantgwyllt church to explore Cwm Coel (previously well explored) and Nant Methan (bryologically unknown). The Cwm Coel party had less far to go, and explored the trackside and damp ground, which produced *Sphagnum flexuosum* and *S. teres* (both squarrose and terete forms). Plentiful *Calliergonella lindbergii* was admired on the track near Cwm Coel, and Alan Rayner found *Diphyscium foliosum* on the bank. Cwm Coel itself produced *Campylopus atrovirens*, *Dicranodontium denudatum*, *Dicranum fuscescens* and *Leucobryum glaucum* (strangely, the *Leucobryum* was not seen elsewhere). Jeff and Joyce Bates, BRECOging, found *Rhabdoweisia fugax* nearby. Snow fell at lunch time but fairly soon melted. On moorland above the Cwm were *Sphagnum capillifolium* subsp. *capillifolium** and locally plentiful *Thuidium delicatulum*, but the

wet ground marked on the map as Cors Goch was disappointing.

Most of the same species were found in Nant Methan. Additions were *Anastrophyllum minutum* (wanted for Radnorshire, but not collected), found by Rory Hodd, *Saccogyna viticulosa* and *Grimmia ramondii*. *Polytrichastrum alpinum* and *Racomitrium elongatum* were found on quarry spoil. Nearby was *Plagiomnium cuspidatum*, on lime-enriched turf at base of an old quarry building. The party moved to Nant Brithgwm, where they found *Racomitrium heterostichum* (in the form often separated as *R. obtusum*) and *Sphagnum compactum*. Finally they went to Gwaelod-y-rhos, which produced *Colura calyptrifolia* (also on sallow in a conifer plantation), *Archidium alternifolium* and *Sphagnum russowii*.

The fourth group went to the River Wye at Rhayader and Marteg Bridge, recording *Fontinalis squamosa*, *Isoetecium holtii* and *Orthotrichum rivulare*. Then they went to the western part of Gilfach Farm nature reserve, where they found *Scapania scandica* and *Hedwigia stellata*. A subgroup went to Nant Gwynllyn, west of Rhayader. *Sphagnum contortum* grew in a base



△Fig 3. Gordon Rothero leads the BBS on a trolley jolly to Llandrindod Wells. C.F. Carter. From left to right: Bowyer, Powell, Meilleur, Tordoff, Morris, Carter, Hill, Bell, Ruffino, Quartly-Bishop, Kungu, Crittenden, Stribley, Chamberlain, Pescott, Baker, Rothero, Bates, Bates, Godfrey, Pilkington, Hodd, Kaye, Norton, Lawley, O'Leary, Jeffery, Pool, Graham, Burton, Law, Blockeel, Ghullam, Ellis, Rayner, Ottley.

rich flush near the bottom of the cascade, and *Heterocladium wulfsbergii* was plentiful in the cascade itself.

Sunday 10 April

Numbers were high on the Sunday morning, and Mark H found it hard to manoeuvre his unwieldy squad.

One group explored woods and fields along the western shore of the River Wye near Cwmcoch.

They found 111 species, including *Jungermannia atrovirens*, *J. pumila*, *Solenostoma paroicum*, *Dicranella rufescens* and *Oxystegus tenuirostris* s.l. Gordon pointed out *Dichodontium flavescens* on riverside rocks (not fruiting and therefore unacceptable as a vice-county record). They then went to continue the exploration of the Gilfach Farm nature reserve. Roy Jeffery and Mark Pool went south of the River Marteg, and found 68 species but none of special note except

▽Fig 4. Sheets of *Isoetecium holtii* by the River Wye. R.L. Hodd.





△Fig 6. *Bryum kunzei* was unexpectedly refound on Stanner Rocks. R.L. Hodd.

for *Bryum pallescens* under a galvanized crash barrier just outside the reserve. Jon Graham, Rory Hodd, Sean O’Leary and Gordon Rothero went to the main part of the reserve, where they recorded *Colura calyptrifolia* on gorse, and *Frullania fragilifolia*, *Polytrichastrum alpinum* and *Rhabdoweisia crispata*. Gordon found *Porella cordaeana* on steep wet crags on Yr Wylorn, well away from any river. Elsewhere, we found it in six places, but always in or by streams and rivers.

Mark Lawley led a dozen bryologists back to the River Edw, starting in the charming village of Cregrina. The village and river banks produced 78 species, including *Marchantia polymorpha* subsp. *polymorpha*, *Anomodon viticulosus*, *Cirriphyllum crassinervium*, *Hygroamblystegium tenax*, *Orthotrichum rivulare* and *Scleropodium cespitans*. The group then went to Glaschw Hill, hoping to refind *Hamatocaulis vernicosus*, which had been seen in Glasnant by John Port in 1998. On the way up Sychw, they noted *Marsupella emarginata* var. *aquatica* (George Tordoff), *Metzgeria conjugata* and *Jungermannia pumila*. Sharon refound *Hamatocaulis* in an extensive flush, and recorded *Plagiomnium elatum* and *Sphagnum contortum* nearby. Mark found

Cephalozia pleniceps growing among sphagnum. *Pseudephemerum nitidum*, found in this monad, was – rather amazingly – not seen anywhere else during the meeting. Elsewhere on the hill, Mark found *Cladopodiella fluitans*.

The third group, led by Tom Blockeel, started on the banks of the River Ithon in Dolau Jenkin Wood. This was the first locality for *Cololejeunea minutissima*, which was found only three times on the meeting. Other records included *Loeskeobryum brevirostre* and *Orthotrichum rivulare*. Proceeding to Water-break-its-neck, they found *Gymnostomum aeruginosum* and more *Cololejeunea*, but the best finds were made by Nick Law, who collected *Fissidens rivularis* and *Rhynchostegiella teneriffae* near the waterfall. They then went north through forestry to Davy Morgan’s Dingle, a sheltered open gully with calcareous shale rocks at about 450-530 m altitude. The rocks produced *Conocephalum salebrosum*, *Metzgeria conjugata*, *Plagiochila spinulosa*, *Campylopus fragilis*, *Seligeria recurvata* and *Zygodon rupestris*, but the most interesting find was Tom’s *Ulota calvescens** on rowan, here at a substantially higher altitude than its previous upper limit of 400 m.

Monday 11 April

Stanner Rocks is the most famous bryophyte site in Radnorshire, and Sam Bosanquet had promised to lead a group of 10 bryologists there to view the only extant British population of *Bartramia stricta* as well as a diverse array of *Grimmia* species and three uncommon *Riccia*. Generations of bryologists have visited Stanner since the 19th century, and recent surveys there have relocated all but two of the site's rare and scarce species. Sam led the group from one colony to another, and each species was admired, photographed and discussed; as always on sensitive sites, the BBS were very conservation-minded and there was no collecting of anything other than a couple of shoots from previously unknown *Grimmia* and *Schistidium* patches that needed microscope identification. The

bryologists proceeded past *Riccia beyrichiana*, *R. nigrella* and *R. subbifurca* on the quarry floor, and *Bartramia stricta*, *Grimmia ovalis* and *Schistidium pruinosum* on previously quarried rocks, before looking at *Grimmia laevigata*, *G. longirostris* and *Targionia hypophylla* in an unquarried area. The next rockface held a previously unknown patch of *B. stricta*, and then the group reached the famous gully where *B. stricta* reaches its greatest abundance. Examination of the adjacent parched slopes, sporting abundant Spiked Speedwell and Sticky Catchfly, revealed several photogenic patches of *R. nigrella*, previously unknown colonies of *R. subbifurca*, *S. pruinosum* and *G. laevigata* and, best of all, the first record of *Bryum kunzei** at Stanner for over 100 years, spotted by Tom Ottley and Sharon. The visit ended on the slopes above the quarry, where *Grimmia*

▽Fig 7. *Bartramia stricta* on Stanner Rocks. R.L. Hodd.





△Fig 8. *Riccia nigrella* on Stanner Rocks. B. Stewart.

*decipiens** (which was known but specimen wanted as a debracketer) grows alongside *G. lisae*, and where Tom Blockeel found a previously unknown colony of *Riccia nigrella* growing among *R. subbifurca*. The drizzly weather had made *Grimmia* identification rather a challenge, but was perfect for recording the *Riccia* species. After a successful morning on Stanner Rocks 9 bryologists walked to Hanter Hill, leaving Tom Ottley to search unsuccessfully for *Sematophyllum substrumulosum* in Worsell Wood. Increasingly heavy rain and impenetrable gorse hampered recording, and only the north-western quadrant of the hill was examined. Some of the lower outcrops showed hints of base enrichment, with *Ditrichum gracile* and *Tortella tortuosa* noted, but most rocks were base-poor and only 65 taxa were noted before the group gave up. Pete Martin disappeared into the rain, adding *Bryoerythrophyllum ferruginascens*, *Racomitrium affine* and *R. heterostichum* (*obtusum* form). A considerable area of Hanter Hill remains

bryologically unknown.

Another group went to Burfa Bog nature reserve, which is also close to the English border. Here they found *Epipterygium tozeri*, *Fissidens viridulus* and *Physcomitrium pyriforme*. They made a further list in Burfa Bank, but did not find anything of particular note. After the morning drizzle, steady rain set in, and they went to New Radnor, a substantial military garrison in the days of the Marcher Lords, now a village with *Pseudocrossidium revolutum*, which was otherwise only found in Llandrindod. *Leucodon sciurioides* was found on an enormous ash by the Castle Mound.

A third group went to the River Wye near Clyro. They hoped to refind *Myrinia pulvinata*, last seen on the day after the Ross-on-Wye BBS meeting in 1968, but had to content themselves with *Orthotrichum sprucei*. Jon Graham found *Epipterygium tozeri* and *Fossombronina pusilla*. They went on to Cwm Byddog nature reserve, where Mark Lawley found *Didymodon spadicceus*

and *Eucladium verticillatum*. This was the only site where *Syntrichia papillosa* was seen; an unexpectedly scarce species in Radnorshire.

The fourth group went to Pilleth and Whitton on the River Lugg. Both villages had *Syntrichia ruralis* var. *ruraliformis*, found new for the vice-county by Sam on the first day. *Brachythecium mildeanum* 'Car-park Moss' was seen in its eponymous habitat. An interesting find was *Plagiomnium cuspidatum* in close-cropped turf of low moorland on nearby Litton Hill. Here, an old bunker had been destroyed, increasing the base status, with the result that *P. cuspidatum* extended over several square metres.

Tuesday 12 April

The day started with an unpleasant task for Sharon, to collect *Marchantia polymorpha* subsp. *ruderalis** from among the dog turds of central Llandrindod. She did so dutifully.

One group stayed close to Llandrindod, calling first at Bailey-Einon Wood, a local nature reserve on the banks of the River Ithon. *Bryum moravicum* and *Neckera pumila* were found for the first time on the meeting, and *Cololejeunea minutissima* was seen again. Cefnlllys Castle produced *Dicranella rufescens* and *Schistostega pennata*; *Leucodon sciuroides* was found on ash in the cemetery near the river.

The second group went to Abbey Cwmhir, the ruins of a grandiose medieval church that was never completed. *Neckera pumila* grew on a fairly open sycamore, and the ruins supported the calcicoles *Porella platyphylla* and *Cirriphyllum crassinervium*. They moved to Tyfaenor Park, an area of pasture wood with rather even-aged oaks and a small plantation of conifers. John Norton found *Fissidens celticus* growing among *Calypogeia arguta* by the stream. He announced that he wanted to see *Schistostega*. Mary Ghullam told him to look in a rabbit hole, and there it was,

gleaming goblin gold in perfection! *Diplophyllum obtusifolium* was present in some quantity by a track at the top of the ridge, and *Fissidens bryoides* var. *caespitans* with good red rhizoids was seen by the stream in Cwm Cyncoed.

Nick Law and Mark Lawley went west to the uplands, to explore Craig Ddu, northwest of Rhayader. *Bartramia halleriana* (as well as *B. ithyphylla* and *B. pomiformis*) indicated slight base-influence in places, with colonies of *Rhabdoweisia crenulata* and *R. crispata* elsewhere on the crags. After a picnic in the sun they walked over to the upper part of Pant-y-llyn, where a slightly flushed mire yielded another colony of *Cephalozia pleniceps*, along with *Mylia anomala* and *Polytrichum strictum*.

Conclusion

So ended a convivial and busy week. We made 4268 card records of 352 species, which at the hectad scale amounted to 2,125 occurrences in 14 hectads – an average of 152 per hectad visited. On the 1965 meeting, visits were made to other vice-counties, notably Brecknock. In Radnorshire they made 1338 card records of 300 species, resulting in 996 occurrences in 10 hectads – an average of 100 species per hectad visited. They found 38 species not recorded by us, notably *Solenostoma caespiticium*, *Philonotis rigida* and *Bryum riparium*.

In the period 1973-1992, Ray Woods made detailed records of the bryophyte flora of the county, with contributions by John Port. This survey was published in 1993 as a component of Ray's excellent *Flora of Radnorshire*. Subsequent recording, mainly by Mark Lawley, but also by Ben Averis, Sam Bosanquet and Richard Lansdown resulted in 3760 hectad records of 481 species in 21 hectads – 179 per hectad. So with 152 species per hectad we did only moderately well. We completely missed



△Fig 9. *Schistostega pennata* in a rabbit hole, Tyfaenor Park. J. Norton.

Brachytheciastrum velutinum, *Leptodictyum riparium* and *Plagiomnium affine*, found since 1993 in at least 12 hectads. Eventually we added 192 hectad records of species, the most frequently added being the epiphytes *Cryphaea heteromalla*, *Orthotrichum striatum*, *Ulotrichum bruchii* and *Ulotrichum phyllantha*, the village plants *Bryum radiculosum*, *Didymodon nicholsonii* and *Pseudocrossidium hornscharianum*, and *Porella cordaeana* (streamsides) and *Racomitrium ericoides* (tracksides and scree).

In summary, recording in Radnorshire has reached a relatively mature state, where it is hard to make a new vice-county record, and only moderately easy to make new hectad records. Apart from Stanner Rocks, the county's most distinctive and unusual feature consists of the basic springs that are scattered over the southern and eastern uplands. These support not only *Hamatocaulis vernicosus* but also *Barbilophozia kunzeana*, *Cephalozia pleniceps*, *Scapania paludicola* and (not seen on the meeting) *Jamesoniella undulifolia*. These are rather diminutive 'hands and knees' hepatics that bryologists may pass by unnoticed if they do not get down to closely examine sphagnum hummocks. Flushes with *Campylium stellatum* and *Ctenidium molluscum* are too base-rich,

while blanket mires are too acidic. This is their subtle but well-defined habitat in the Marches.

According to Mark Lawley, both *B. kunzeana* and *S. paludicola* are slightly mysterious. Floras describe *B. kunzeana* as holding its underleaves away from the stem, making them easily visible, and with gemmae on the lateral leaves. Yet *B. kunzeana* in flushes in the Marches holds its underleaves closely appressed to the underside of the stem, making them very difficult to discern with a hand-lens. Moreover, none of these plants from flushes sport gemmae. So perhaps we are currently identifying more than one taxon as '*B. kunzeana*'. The mystery for *Scapania paludicola* is that most British records are Welsh, and that Scandinavian bryologists know a different-looking plant as *S. paludicola*. Here again there may be two taxa.

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