

BBS Spring Meeting 7–12 April 2011 Wharfedale, Yorkshire

◀ Kettlewell, Wharfedale, close to our base for the week at Scargill House. I. Atherton

Though well-recorded in the past, the Yorkshire Dales have been worked patchily in recent years. Gordon Haycock's suggestion that Scargill House in Wharfedale would make a good centre for a meeting was therefore timely, and it proved to be an excellent venue as **Tom Blockeel** reports.

Not only is it superbly situated, under wooded limestone crags with fine views across upper Wharfedale, but Scargill House provided flexible accommodation arrangements and the use of rooms for meetings and microscope work. The village of Kettlewell was only a short distance away, convenient for those who preferred to sample the local beers in the evening. Over 50 members attended all or part of the meeting, and we were very pleased to welcome two bryologists from further afield, Michael Lüth from Germany and Ben-Rong Zuo from Shanghai Normal University.

Excursions were arranged not just in Upper Wharfedale, where habitats are dominated by Carboniferous Limestone, but also in adjacent parts of Wensleydale, at Malham in Airedale, and on one occasion at Ribblesdale in Ribblesdale. Most localities visited were in v.-c. 64, but several were in v.-c. 65 and these are indicated in the following account. Excursions were organized around two or three principal venues each day, partly to minimize pressure on habitats, but also to increase coverage and offer variety and choice for members. The BBS last visited the area during the spring meeting in Ilkley in 1983, and we had several participants who

were 'senior' enough to have been present at the earlier meeting!

An asterisk (*) in the following account indicates a new or updated vice-county record.

THURSDAY 7 APRIL

One group visited two limestone gills near Yockenthwaite, at Hagg Beck and Boucher Gill. These provided an excellent introduction to the flora of wooded limestone gills, and many of the distinctive montane calcicoles were recorded, including *Cololejeunea calcarea*, *Leiocolea alpestris*, *Pedinophyllum interruptum* (fine and plentiful), *Seligeria*

donniana, *S. pusilla* and *Plagiopus oederianus*, as well as *Porella cordaeana*, *Preissia quad-rata*, *Scapania aspera*, *Loeskeobryum brevirostre*, *Plagiobryum zieri*, *Tritomaria quinque-dentata* and *Orthothecium intricatum*. In more open places *Lophozia excisa*, *Reboulia hemisphaerica*, *Riccia sorocarpa*, *Didymodon ferrugineus* and *Entosthodon muhlenbergii* were present on earth among rocks, and *Brachythecium glareosum*, *Breutelia chrysocoma*, *Climacium dendroides*, *Ditrichum gracile* and *Plagiomnium elatum* in grassy habitats and flushes. *Schistidium rivulare* and *S. platyphyllum* were on rocks by water and *Tritomaria*

exsectiformis was seen on rotten wood. Many of these species were seen frequently on subsequent days. Epiphytes included *Orthotrichum pulchellum* and *O. stramineum*, which after *O. affine* proved to be the two commonest corticolous species of the genus during the meeting. Higher up above the gills there is rough grassland and peaty moorland with a less calcareous flora. *Sphagnum russowii* and *S. girgensohnii* were recorded.

A second group visited the wooded banks of the River Wharfe near Bolton Abbey. Siliceous Millstone Grit is exposed along this part of the river, but the rocks close to the river are influenced by calcareous river water. The woods to the north of Cavendish Pavilion produced many common woodland species, as well as *Mnium marginatum* in riverside sand, *Didymodon spadiceus* and *Dichodontium flavescens* on riverside rocks, *Porella cordaeana* on a tree base, *Plagiochila britannica* on a mossy bank and *Microlejeunea ulicina* on bark. *Sanionia uncinata* was found growing as an epiphyte. Further north is the Strid, a place where the river flows through a very narrow and dangerous channel. There are greater exposures of rock in this area, with *Distichium capillaceum*, *Dialytrichia mucronata*, *Mnium thomsonii*, *Cololejeunea calcarea*, *C. rossettiana*, *Metzgeria pubescens* and *Pedinophyllum interruptum* in areas under calcareous influence, and *Amphidium mougeotii*, *Bartramia pomiformis*, *Pohlia cruda* and *Calypogeia integristipula* on acid gritstone. Jeff Duckett, who joined the group in mid-afternoon, observed that the riverside rocks at the Strid had deteriorated bryologically since he first knew them, now being dominated by coarse moss, presumably as a result of eutrophication. *Scapania cuspidulligera*, which has long been known here, could not be found. The wooded crags nearby are one of the few British sites for *Orthodontium gracile*. The old oak tree on which it was known to grow has now fallen and that particular population has been lost. However it is still likely to be present on the gritstone crags.

David Long, David Bell and Michael Lüth left Bolton Abbey early in search of *Orthotrichum*



△ At work on the first day, near Yockenthwaite. Jo Denyer

pallens at a known site further down the Wharfe near Addingham. They found *O. sprucei*, *O. stramineum* and *O. tenellum*, but not *O. pallens*.

FRIDAY 8 APRIL

The main venue this day was the Oughtershaw area towards the head of Wharfedale. The focal point was Nethergill Farm, which is worked sympathetically for wildlife by owners Chris and Fiona Clark. There was a wide range of calcareous and base-poor habitats. Nick Hodgetts found *Tortella bambergi** and *Entosthodon attenuatus* (the latter being the first vice-county record since 1930, but not collected). Other records included *Blepharostoma trichophyllum*, *Lophozia incisa*, *L. sudetica*, *Odontoschisma sphagni*, *Pedinophyllum interruptum*, *Ditrichum gracile*, *Polytrichastrum alpinum*, *Schistidium platyphyllum*, *S. rivulare*, *S. robustum*, *S. strictum*, *Mnium thomsonii*, *Seligeria recurvata* and *Thuidium assimile*.

Jeff Duckett took a group up to the high ground on Oughtershaw Side and over to Jeffery Pot. On Oughtershaw Side the highlight was *Amblyodon dealbatus*, found by Michael Lüth. The many other

records included *Metzgeria pubescens*, *Mylia taylorii*, *Tritomaria quinquedentata*, *Breutelia chrysocoma*, *Distichium capillaceum*, *Entodon concinnus*, *Orthothecium intricatum*, *Plagiobryum zieri*, *Scorpidium cossonii*, *Sphagnum quinquefarium*, *S. russowii*, *Splachnum sphaericum*, *Thuidium delicatulum*, and three lowland species growing at an unusually high altitude of 460m – *Orthotrichum pulchellum*, *Ulota phyllantha* and *Fissidens exilis*. Jeffery Pot is over the watershed from Wharfedale, just within v.-c. 65. There is an amphitheatre of limestone crags at an altitude of around 570m. Notable here was *Schistidium trichodon*, which was locally abundant, *Barbilophozia hatcheri*, *Anoetangium aestivum*, *Bryoerythrophyllum ferruginascens*, *Plagiopus oederianus*, *Seligeria acutifolia* and *S. donniana*, along with many of the species seen on Oughtershaw Side.

Various groups recorded other tetrads in Oughtershaw and Langstrothdale. Notable addi-

tions to species seen included *Barbilophozia barbata* and *Entosthodon obtusus* along the Dales Way up the valley from Nethergill (SD88L), and *Leiocolea bantriensis* in Langstrothdale (SD88V).

Further afield, Tom Blockeel led a small group to Raydale, a side valley of Wensleydale across the watershed in v.-c. 65. After some confusion over car-parking fees and an encounter with a confrontational local resident, the party made their way to the Yorkshire Wildlife Trust's reserve at Semer Water. The reserve consists of marsh and grassland at the head of a small natural lake of glacial origin. The marsh contained some large beds of *Calliergon cordifolium*, but lacked strongly calcareous influence. *Brachythecium mildeanum** was found on an old log in the marsh, *Sanionia uncinata* on willows, and a few riparian bryophytes, including *Orthotrichum rivulare*, on tree bases. A small limestone outcrop in a corner of the reserve was quite rich, with *Encalypta vulgaris*, *Bartramia*

▽ Epiphytic bryologists at Nethergill Farm. Oliver Moore



▽ Fertile shoots of *Thamnobryum alopecurum* near Bolton Abbey. Michael Lüth





Pen-y-ghent. From top to bottom, left to right:

- △ The approach to Pen-y-ghent (Jo Denyer); *Orthotrichum cupulatum* (Jo Denyer); *Zygodon gracilis* in a natural habitat on limestone rocks (Michael Lüth); *Distichium capillaceum* (Jo Denyer); *Reboulia hemisphaerica* on Pen-y-ghent (Michael Lüth); lunch on the slopes of Pen-y-ghent (Jo Denyer); *Porella arboris-vitae* (Jo Denyer).
- ▷ Opposite page: *Encalypta rhamnifera* s.l., possibly *E. trachymitria*. Michael Lüth



ithyphylla and *Pohlia cruda*, among others. After lunch the party moved on to Park Gill, a limestone gill with two high waterfalls. Limestone boulders had *Mnium thomsonii*, *Porella cordaeana* and very fine *Metzgeria pubescens*, while *Cololejeunea calcarea*, *Pedinophyllum interruptum*, *Seligeria pusilla* and *S. trifaria* s.l. were found on wet rocks; epiphytes included *Orthotrichum stramineum*. A limestone crag in adjacent pasture had some nice earthy ledges with *Entosthodon muhlenbergii** and *Bryoerythrophyllum ferruginascens*.

Another small group with Mark Pool visited Litton and Crystal Beck in Littondale, recording *Breutelia chrysocoma*, *Ditrichum gracile*, *Leucodon sciuroides*, *Rhynchostegiella teneriffae*, *Scorpidium cossonii*, *Schistidium platyphyllum*, *Seligeria pusilla* and *Cololejeunea calcarea*.

SATURDAY 9 APRIL

With over 50 members present for the weekend, there were various venues on offer for the Saturday excursions. Unsurprisingly, many members opted to visit Pen-y-ghent. One of the 'three Peaks' of the Yorkshire Dales, Pen-y-ghent rises to nearly 700 m and has exposed limestone crags at high altitude. En route, the party stopped to pay homage to the large population of *Zygodon gracilis* on the dry-stone walls at Giant's Grave, also noting *Grimmia dissimulata* there, and then walked via the Pennine Way onto Pen-y-ghent from Dale Head. Gordon Rothero led the long line of bryologists at his customary brisk pace to the base of the limestone cliffs on the east side of the hill. *Schistidium trichodon* was scattered on slabby rocks below the crags, *Antitrichia curti-*

pendula was on a boulder, *Entosthodon muhlenbergii* on open patches of soil, *Pseudeskeella catenulata* on exposed rocks and *Myurella julacea* very sparsely in rock crevices. A further population of *Zygodon gracilis* was pointed out by Alistair Headley on its only currently known locality on natural rock (limestone scree) in the British Isles. *Tortula lanceola* was noted on soil at 580 m, higher than its previous British limit. Other species on and below the crags were *Metzgeria pubescens*, *Porella arboris-vitae*, *Reboulia hemisphaerica*, *Didymodon ferrugineus*, *Distichium inclinatum*, *D. capillaceum*, *Orthothecium intricatum*, *Plagiobryum zieri*, *Tetraplodon mnioides* and *Tortella bambergeri*. *Encalypta rhamnifera* s.l. was also seen. Michael Lüth suggested that this population could belong to the segregate species *E. trachymitria*, but mature capsules would be needed to confirm this.

Siliceous Millstone Grit caps the summit of the hill and *Andreaea rothii* var. *falcata*, *A. rupestris* and *Lophozia sudetica* were recorded here.

Churn Milk Hole, a limestone sink-hole on the lower slopes was visited on the descent from the summit of Pen-y-ghent, and it proved to be interesting, with *Bryoerythrophyllum ferruginascens*, *Bryum elegans*, *Entodon concinnus*, *Schistidium elegantulum* and *Seligeria trifaria* s.l.



A group with Tom Blockeel visited the second of the day's venues, Cowside Beck near Arncliffe village. The Beck runs through a largely treeless limestone valley with north-facing slopes and crags. The route taken was from Arncliffe village, ascending along the Monks Road to the upper slopes, from where they worked two gills with waterfalls. On the ascent from Arncliffe they noted *Hymenostylium recurvirostrum* and *Scorpidium cossonii* in flushes.

The heads of the gills at Dew Bottoms and Yew Cogar produced *Jungermannia exsertifolia* subsp. *cordifolia* (in a runnel), *Grimmia dissimulata* (on limestone boulders), *Ditrichum flexicaule*, *Schistidium elegantulum* and *S. robustum*. The two gills had a good selection of montane calcicoles, the one near Yew Cogar being notable for some very fine patches of *Orthothecium rufescens* near the waterfall. Another group with Mark Pool walked up



◁ *Seligeria recurvata*, with its characteristically curved setae. Michael Lüth



◁ *Odontoschisma sphagni* on Grassington Mire. Michael Lüth

the nearby Darnbrook Valley, a moorland stream with a mix of calcareous and acid habitats, and returned with a very impressive list of 151 species. These included *Entodon concinnus*, *Entosthodon fascicularis*, *Plagiobryum zieri*, *Splachnum sphaericum* and *Thuidium assimile*.

Another venue for the day was Malham Tarn, and several different sites were inspected. This is a very well-known locality, so new records were not to be expected. With Mark Hill's expertise, Tarn Moss and the adjacent wetland produced 15 species of *Sphagnum*, including *S. contortum*, *S. magellanicum*, *S. teres* and *S. warnstorffii*. However, *S. riparium* was only just hanging on at its known site. Also noted at Tarn Moss were *Calliergon giganteum*, *Plagiomnium elatum* and *Rhizomnium pseudopunctatum* in calcareous mire, *Mylia anomala* and *Odontoschisma sphagni* on the Moss, and *Loeskeobryum brevirostre*, *Porella arboris-vitae* and *P. cordaeana*. The calcareous wetlands at Ha Mire and Great Close Mire

△ Darnbrook Gill. From top to bottom, left to right: the Gill; *Plagiopus oederianus*, *Bryum pallens* and *Polytrichastrum longisetum*. I. Atherton

produced some additional species – *Leiocolea bantriensis*, *Scorpidium cossonii*, *S. revolvens*, *S. scorpioides*, *Splachnum sphaericum* and *Thuidium delicatulum*. At Great Close Mire Nick Hodgetts also found *Schistidium strictum* and interestingly, on a dry stone wall, *Pseudeleskeella catenulata*.

SUNDAY 10 APRIL

The main venues on this day were in the Grassington area. Grass Wood, a Yorkshire Wildlife Trust Reserve, was visited in the morning. It is a large block of mixed deciduous woodland with much ash (*Fraxinus*) and a characteristic limestone flora. The more notable records, some of them new to the reserve, included *Porella arboris-vitae*, *Riccardia palmata*, *Loeskeobryum brevirostre*, *Leucodon*



△ *Orthotrichum rivulare* by the River Wharfe near Buckden. Michael Lüth

sciuroides, *Platydictya jungermannioides*, *Plasteurhynchium striatulum*, *Schistidium elegantulum* and *Thuidium delicatulum*. Grassington Mire, a small bog over limestone, was visited by two separate groups. The visit to the mire got a mention from the owner, Sue Woodcock, in her column in the *Yorkshire Post*, observing that the bryologists 'spent a sunny afternoon peering at tiny plants and mosses all over the mire'. What they peered at included 10 species of *Sphagnum*, *Lophozia incisa*, *Odontoschisma sphagni*, *Calliergon cordifolium* and *C. stramineum*.

The Grassington area was once mined extensively for lead, and there are old workings scattered over the terrain. David Long's group visited the old works at Yarnbury, finding *Cephaloziella rubella**, *Leptodontium flexifolium*, *Tetraplodon mnioides*, *Thuidium delicatulum*, *Weissia controversa* var. *densifolia* and *Warnstoria exannulata*. Meanwhile,



△ Crags and boulder fields at Penhill. Michael Lüth

another group with Mark Hill worked along the Hebden Beck north of Hebden village and made the notable discovery of *Ditrichum plumbicola** in two places on old spoil. They also recorded *Lophozia excisa* and *Sphagnum russowii*. Mark's party also visited two tetrads at Threshfield, recording *Brachythecium mildeanum** in the car park of a caravan site.

A small group with Tom Blockeel walked over to Ribblehead to visit the National Nature Reserve at Ling Gill. The walk in from Low Greenfield in Langstrothdale was long, but avoided driving many miles by road and provided the opportunity to see *Colura calyptrifolia*, which Tom had found during a previous exploratory visit in a spruce plantation near High Greenfield. It was refound by Nick Hodgetts on a spruce twig. During the search, Oliver Moore found *Ptilidium pulcherrimum* in the same habitat. Ling Gill is a beautiful limestone ravine.

The party entered at the lower end of the gill and worked along much of its length. Many montane calcicoles were present, including *Pedinophyllum interruptum* and *Seligeria trifaria* s.l. The gill was humid enough for *Plagiochila spinulosa* (seen on a boulder and on a sycamore trunk), and there was plentiful *Loeskeobryum brevirostre*. *Metzgeria conjugata* was exceptionally fine on the side of a boulder, and *Taxiphyllum wissgrillii* was present. A non-bryological bonus, fulfilling a life's ambition for Chris Preston, was a fine bush of *Daphne mezereum* in full flower. The party returned to Langstrothdale via High Birkwith. A grove of rowan trees by the forestry plantation en route produced a remarkable crop of epiphytes, including *Rhytidiadelphus squarrosus* high on a twig, *Orthotrichum striatum** and abundant *Orthotrichum pulchellum*.

MONDAY 11 APRIL

This was an informal day, intended for recording in under-worked squares. Most of the 10-km

squares (hectads) in the Upper Wharfedale area are well-recorded but, surprisingly, the Aysgarth square SE08 in Wensleydale (v.-c. 65) had only 60 species on the BBS database and was therefore our primary target. By the end of the day we had increased this number to 232 species. In the morning we recorded at Aysgarth Falls, mainly in Freeholders Wood and along the river banks, but also in the village, amassing a list of 127 mostly common woodland and limestone bryophytes, among them *Porella cordaeana*, *Schistidium platyphyllum*, *Seligeria donniana*, *Taxiphyllum wissgrillii* and 10 species of *Orthotrichum*. In the afternoon the party split into several groups. David Long's group visited Penhill Crags, a moorland area with north-facing gritstone crags and bouldery ground. Notable here was Michael Lüth's discovery of *Grimmia hartmanii**, and David Long's record of *Lophozia longidens*, both species with very few Pennine localities. They also recorded *Bazzania trilobata*, *Lophozia incisa*, *Scapania gracilis*, *S. umbrosa*, *Andreaea rupestris*, *Bartramia ithyphylla*, *Blindia acuta*, *Bryoerythrophyllum ferruginascens*, *Racomitrium heterostichum** (the form without a hair-point, sometimes recognised as *R. obtusum*) and *Plagiochloa zieri*. Tom Blockeel and Nick Law visited Carlton in Coverdale and found a form of *Syntrichia virescens* with gemmae on the leaf lamina. They also recorded *Leucodon sciuroides* and *Schistidium elegantulum* near the village, and *Lophozia excisa* on a bank in rough pasture near West Scafton. Another long list (131 taxa) was compiled by Mark Lawley and Oliver Moore in a gill near West Burton, with *Bartramia ithyphylla*, *Brachythecium glareosum*, *Orthothecium intri-catum*, *Plagiochloa zieri*, *Polytrichastrum longisetum*, *Metzgeria pubescens*, *Preissia quadrata* and *Tritomaria quinqueedentata*. Oliver collected *Platydictya jungermannioides*, and confirmed its distinctive trapezoidal gemmae under the microscope that evening.

Joan Bingley took a car load a little further afield, to Leyburn in SE19, also in v.-c. 65, and they recorded around the village and in the churchyard. *Bryum*

*radiculosum** was at the foot of the church wall. Richard Fisk and others used the day as an opportunity to visit Malham and recorded two tetrads around the village. Mary Ghullam found *Microlejeunea ulicina* on birch near Malham Tarn, apparently a new species for this well-recorded site.

TUESDAY 12 APRIL

As many members had by now left the meeting, we had only the one primary venue on this the final day. Contrary to its alarming name, the Valley of Desolation is a pleasant and partly wooded side valley running eastwards from Wharfedale, not far from Bolton Abbey Woods visited earlier in the meeting. The rock is siliceous Millstone Grit, and the flora is dominated by calcifuge species, including *Barbilophozia attenuata*, *B. atlantica*, *Cephalozia lunulifolia*, *Solenostoma sphaerocarpum*, *Scapania nemorea*, *Sphagnum quinquefarium*, *Dicranodontium denudatum*, *Dicranum fuscescens*, *Seligeria recurvata* and, on rocks by the stream,

Heterocladium heteropterum. A fine patch of *Lejeunea lamacerina* was noted on a rock face, and *Blindia acuta* on wet rocks by a large waterfall. Epiphytes included *Microlejeunea ulicina*, *Dicranum montanum* and *Orthotrichum stramineum*. Rotten logs had sparse *Riccardia palmata* and *Scapania umbrosa*, as well as plentiful *Nowellia curvifolia*. Unexpectedly, in a generally acid environment, *Aloina aloides* was found on bare clay exposed on a steep bank.

Rachel Carter and Robin Stevenson visited the Cray Gill area east of Hubberholme, recording *Pedinophyllum interruptum* and *Riccardia palmata*, before moving on to the watershed higher up towards Kidstones Fell, just within v.-c. 64. Here they found *Anomobryum julaceum*, *Distichium capillaceum*, *Entodon concinnus*, *Scorpidium cossonii*, *S. revolvens* and *Seligeria recurvata*.

Mark Pool, meanwhile, stayed behind at Scargill to record the grounds of the House, finding 100 species there.

▽ Gritstone rocks by the stream in the Valley of Desolation. Michael Lüth



△ *Hyocomium armoricum* in the Valley of Desolation. Michael Lüth

▷ An astonishing abundance of sporophytes on *Chiloscyphus polyanthos* in the Valley of Desolation. Oliver Moore



CONCLUSIONS

Most of the rare bryophytes of the Yorkshire Dales had already been discovered in Victorian times by bryologists such as John Nowell. It was not surprising therefore that we found only a few new vice-county records. *Ditrichum plumbicola* and *Grimmia hartmanii* were significant discoveries for the Yorkshire Dales, and the record of *Lophozia longidens*, though not new for the vice-county, is only the third for England. It was good to confirm many of the older records and to have updated lists for a large number of sites. It was also interesting to assess the distribution of newly recognized taxa. We found 8 species of *Schistidium*: *S. crassipilum* was predictably the commonest of the non-aquatic species, but *S. elegantulum* and *S. robustum* were widely recorded. Both *Ditrichum gracile* and *D. flexicaule* were present, but the former was the more common. *Grimmia dissimulata* was recorded twice, but is evidently rare. The identity of the Dales populations of the *Seligeria trifaria* aggregate is uncertain. They have small spores (around 15 µm) but there is some doubt whether they are correctly assigned to *S. patula*. Michael Lüth commented

that the stiff erect leaves without papillae rule out *S. patula* and that the spore size suggests *S. alpestris*, a segregate of the *S. trifaria* complex whose status is uncertain.

Not surprisingly, epiphytes, especially *Metzgeria violacea*, *Orthotrichum pulchellum* and *Ulota phyllantha*, are much commoner than they once were, sometimes occurring high up on the moors (the two latter at 460 m on Oughtershaw Side). In spite of its recent spread, *Colura calyptrifolia* was still a surprise in a plantation on open moorland at 370 m. *Riccardia palmata* is also increasing. It was unknown in the Dales (v.-c. 64 and 65) before 1990, but was seen three times during the meeting.

The number of taxa recorded during the meeting was 390, and lists of varying lengths were compiled for 47 tetrads. The number of individual records at the time of writing is 4,153. Our thanks go to Gordon Haycock for suggesting and arranging the venue at Scargill House, and to all the landowners who provided access to sites.

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