

BBS Summer meeting 2017: Week 2 Applecross, Scotland 22 July - 28 July

David Long reports on last year's Summer Meeting on the Applecross Peninsula

The Applecross Peninsula (v.-c. 105) is roughly triangular in shape and lies on the coast of Wester Ross opposite the islands of Raasay and Skye. One of its many charms is its relative isolation from the rest of the Highlands, due to the need to cross one of the highest road passes in Scotland, the Bealach na Ba (Pass of the Cattle) which rises to over 2000 feet in a series of very steep hairpin bends – a breathtaking journey from Kishorn, and from the pass revealing a magnificent panorama of the peninsula and views to the Inner Hebrides. Until a new coast road was opened in 1975 from Torridon to the north, the pass was the only way in to Applecross, which still retains its aura of secrecy and isolation, though the road is now creaking under the strains of tourist traffic. Previously only partly surveyed for bryophytes, and never visited by the BBS, the peninsula offered much scope for this meeting, with

△Fig. 1. Morning view of Skye from Bealach na Ba. M. Lüth.

coastal woodlands including Atlantic Hazel with their oceanic bryophytes, and several ravines, only two of which had been surveyed in detail (for their hydro-electric potential). Probably the icing on the cake would be the spectacular mountains and big corries, most easily accessed from the Bealach na Ba and also by a longer walk into Coire na Poite to see the special oceanic-montane liverworts.

Another attraction of Applecross for a field meeting is the large hostel, Hartfield House, offering reasonably priced shared accommodation in the annexe building and more comfortable rooms in the main house. It was good to have everyone staying in one place. We also had the use of the spacious 'studio' building where microscopes and books were set up for lab sessions. For breakfasts we self-



soon disrupted by the ravenous midges.

During the week we had possibly a record number (26) of attendees for a summer meeting in Scotland, most of whom stayed the whole week: David Bell, Neil Bell, Tom Blockeel, Agneta Burton, David Chamberlain, David Genney, Rory Hodd, Nick Hodgetts, Aline Horwath, Liz Kungu, Mark Lawley, David Long, Phil Lusby, Peter Martin, Sean O’Leary, Stan Phillips, Mark Pool, Chris Preston, Gordon Rothero, Jeff Scott, Julie Smith and Matt Stribley. We especially welcomed four overseas participants, Isuru Kuriyawasam from Sri Lanka, Thomas Kiebacher from Switzerland, Michael Lüth from Germany and Senta Stix from Austria. Most of the Applecross peninsula is a large estate of 26,000 hectares run by a charity, the Applecross Trust. The estate is managed for a range of activities including conservation and

catered in the annexe and main building and for evening meals the top destination soon became the excellent Walled Garden Restaurant in the grounds of Applecross House, though on some days a number of people self-catered and others made the longer walk to the Applecross Inn to eat outdoors while enjoying the splendid views, though it has to be said that those pleasures were

▽ Fig. 2. Bryologists at Hartfield House: 1, Phil Lusby; 2, Mark Pool; 3, Isuru Kuriyawasam; 4, Jeff Scott; 5, Chris Preston; 6, Liz Kungu; 7, Aline Horwath; 8, Gordon Rothero; 9, David Long; 10, Neil Bell; 11, David Chamberlain; 12, Sean O’Leary; 13, Matt Stribley; 14, Senta Stix; 15, David Bell; 16, Thomas Kiebacher; 17, Peter Martin; 18, Tom Blockeel; 19, Mark Lawley; 20, Agneta Burton; 21, Stan Phillips; 22, Rory Hodd; 23, Michael Lüth. Not included: David Genney, Nick Hodgetts, Julie Smith. Photo: M. Lüth.





△Fig. 3. Carnach Hazel Wood. D. Long.

public access and manages a network of public footpaths. Informative leaflets on walks and trails, geology, wildlife etc. are available locally. In the north of the estate are several large native woodland restoration projects. The estate was very welcoming and gave us unrestricted access throughout, a considerable bonus for the organiser!

* *Signifies new record for Wester Ross vc 105.*

Saturday 22 July. Arrival

Participants gradually arrived in Applecross during the afternoon and early evening, many crossing the Bealach na Ba for the first time, though the two with the longest journey, from Devon and Cornwall, had to do this in the dark as they suffered a breakdown on the way but thankfully arrived late at night safe and sound.

Sunday 23 July. The Applecross area

After long journeys a car-free day seemed appropriate, and for the morning excursion we stayed as one group with a leisurely walk round Applecross Bay to the village where we gave Carnach Hazelwood just behind the campsite a thorough examination. Because of too much disturbance by Red Deer the flora was limited,

though some fine cushions of *Antitrichia curtispindula* and *Loeskeobryum brevirostre* were notable, especially for those unfamiliar with the West Highlands. Other species included *Harpanthus scutatus* found by Mark Lawley, *Plagiochila spinulosa* and *P. bifaria*. Tom Blockeel looked carefully at the genus *Uloa* in the light of recent taxonomic revision, and concluded that apart from the common *U. bruchii*, **Uloa intermedia* (which he found here) was the most frequent member of the *Uloa crista* aggregate in Applecross. **Pseudephemerum nitidum* and **Fossombronina pusilla* were both found by Liz on damp disturbed soil. We took lunch by the restored Hebridean barns beside the woodland.

The afternoon set the pattern for the rest of the week, with division of recording effort into smaller groups, one led by David Long and the other by Gordon Rothero, though at times these groups subdivided further. David's group followed the Applecross River upstream from the Bay through the estate policies, then up the south bank of the Allt Beag before diverting back via the old kennels to the Walled Garden. A nice stand of *Anthoceros punctatus* near the river was much admired, while David Chamberlain first collected what turned out to be one of the best discoveries of the week,



△ Fig. 4. Julie Smith and Aline Horwath by Allt Coire na Poite. S. Phillips. ▽ Fig. 5. *Anastrophyllum donnianum* in Coire na Poite. R. Hoddd.

Hygrohypnum subeugyrium. This was found again in three more places later in the week and was identified by Thomas Kiebacher. Although never officially added to the British checklist, it had in fact been recorded from Sunart in vc 97 by the American bryologist David Jamieson in his monographic doctoral thesis in 1976. A full account of this moss in Britain will be published in *Journal of Bryology*. The moss is distinctive in its neat blackish patches on rocks in and beside streams. In the Allt Beag valley *Ulota intermedia* was again seen and *Campylopus subulatus* was found on a track by Nick Hodgetts, along with *Archidium alternifolium*, *Pohlia bulbifera* and *Trichodon cylindricus*. Matt added *Cololejeunea minutissima* as a new vice-county record, growing on *Ulex* stems. On the way back an area of bog contributed many novelties to the card, such as *Cephalozia pleniceps*, *Sphagnum affine* and *Scorpidium cossonii*. But a double treat was enjoyed in the Walled Garden itself - *Riccia glauca*, *R. sorocarpa* and *R. subbifurca* found together on disturbed soil behind the garden wall by Chris and Matt, then some unprogrammed refreshments in the restaurant.

Gordon's group explored the more promising-looking valley (but with no prospect of refreshments), the Allt Mor above Hartfield





△ Fig. 6 *Radula aquilegia* in Coire na Poite. S. Phillips.



△ (Left) Fig. 7. *Scapania nimbose*. M. Lüth. △ (right) Fig. 8. *Plagiochila carringtonii*. M. Lüth.

▽ Fig. 9. *Bazzania pearsonii* with *Pleurozia*. M. Lüth.



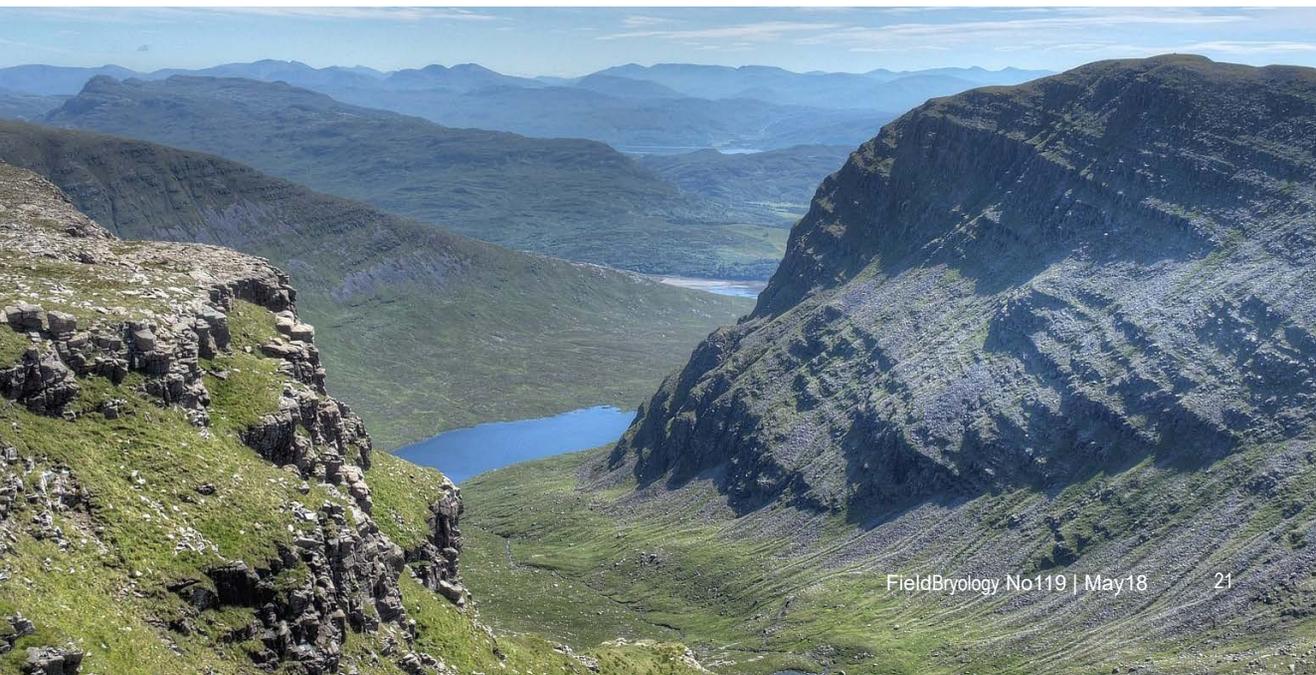
House, which included quite extensive native woodland yielding a good list of noteworthy bryophytes. Michael Lüth found *Bryum riparium* in rock crevices by the burn, while a fine representation of oceanic liverworts included *Anastrepta orcadensis*, *Aphanolejeunea microscopica*, *Bazzania tricrenata*, *Colura calyptrifolia*, *Drepanolejeunea hamatifolia*, *Frullania teneriffae*, *Herbertus hutchinsiae*, *Mylia taylorii* and *Pleurozia purpurea*. The mosses *Dicranum scottianum*, *Ulota hutchinsiae*, *Sphagnum contortum*, *S. teres* and *S. warnstorffii* added to an excellent species list. By the end of the week most of these specialities had been seen repeatedly and became familiar to all.

Monday 24 July. High ground - the Beinn Bhan range

Yesterday's good weather was set to continue so a mountain day was opportune, and Gordon's large group set off north from Drochaid Mor along a stalker's path, following the Allt Coire na Poite up to the lower Lochan Coire na Poite then to the upper ones of the same name, set

in a wonderful amphitheatre of crags below the summit of Beinn Bhan. Some of us had visited in 1988 and knew what to expect - a bryological feast, and perhaps even some additional records. Of greatest interest was a wealth of large liverworts - those extra to yesterday's were *Anastrophyllum donnianum*, *Bazzania pearsonii*, *Mastigophora woodsii*, *Plagiochila carringtonii*, *Scapania nimbosea*, *S. ornithopodioides* and the not-so-large *Sphenolobopsis pearsonii*. Rory was bowled over by the quantity of *S. nimbosea* in the coire, much more than he had ever seen elsewhere. *Racomitrium macounii* was abundant by the waterfalls on the way up. *Lophozia wenzelii* was found by Mark Lawley by one of the lochans, *Bryum muehlenbeckii* was found by Rory on a large rock by the outflow, and the oceanic-montane mosses *Arctoa fulvella*, *Dicranodontium asperulum* and *D. uncinatum*, *Herziogiella striatella*, *Isopterygiopsis muelleriana* and *I. pulchella*, *Paraleptodontium recurvifolium*, *Oxystegus hibernicus* were all impressive in the coire. *Molendoa warburgii* was duly refound, as were the flush species *Scapania uliginosa* and the

▽Fig. 10. Coire na Chaorachain from above. M. Lüth.





△Fig. 11. Searching for *Sphagnum beothuk* in the rain. S. Phillips. ▽Fig 12. *Sphagnum beothuk*. D. Long

elusive *Moerckia hibernica* found here in 2009 by Maren Flagmeier.

The smaller but equally enthusiastic group took advantage of a much shorter walk from the car park at 630 m just north-west of the Bealach na Ba, following the track up to the summit of Sgurr a' Chaorachain then traversing the plateau to a small lochan (where a dip was enjoyed by one German and one Scottish bryologist) before dropping down into the upper part of Coire nan Arr. The rock terraces and boulders near the track were surprisingly good, and we found many of the large oceanic liverworts seen by the others in Coire na Poite, but with the addition of *Haplomitrium hookeri* and *Moerckia blyttii* amongst boulders. *Marsupella sphacelata* and *Lophozia opacifolia* were conspicuous in a small runnel with *Campylopus gracilis*, *Arctoa fulvella* and a little *Hylocomiastrum umbratum* found by Nick nearby and on the upper slopes of Coire nan Arr *Mastigophora woodsii* and *Herbertus hutchinsiae* were very conspicuous. Finally, Nick added **Oxystegus daldinianus* to the list for vc 105 in a crevice on a dripping rock face. For many in both groups, today was perhaps the outstanding highlight of the week.

Tuesday 25 July. Toscaig coast and more high ground

Due to vehicle woes, Gordon was excused for the day, and Nick took over as leader of the 14



who opted for a lowland day exploring the rocky coast and woodland around Toscaig. It turned out to be hard work, with passage impeded by deer fences and other obstacles, but very respectable lists were nevertheless compiled, including *Schistidium maritimum*, *Dicranum scottianum*, proving to be locally common on coastal rocks, *Racomitrium affine*, and the liverworts *Cephalozia catenulata*, *C. leucantha* and *Cladopodiella fluitans* in wetter habitats. *Bazzania tricrenata* was found here at very low elevation. Nick found *Harpanthus scutatus*, and of course Tom more *Ulota intermedia* while Liz was thoroughly delighted to find *Haplomitrium hookeri*. In the car park by the pier Nick found *Campylopus subulatus* again.



△Fig. 13. Rory Hodd getting close to *Plagiobryum zieri* Slochd na Beinne. S. Phillips.

A smaller group led by David took advantage of the continuing good weather for another mountain day in the Beinn Bhan range, this time parking at Drochaid Coire nan Arr, then following the valley up to Loch Coire nan Arr, before heading up into Coire a' Chaorachain, to the lochan some of us had looked down on yesterday from above. In the lower part of the coire *Sphagnum molle* with its whitish tinged pink colour was much admired and photographed. We followed a lovely ravine up the slope with lots of wet rocks and crevices. Michael found *Bryum muehlenbeckii* in a typical habitat in a crevice in rocks by the burn, and soon after Rory and David found several cushions of what may be *Bryum dixonii*, but awaiting confirmation.

This specimen differs slightly from some other Scottish specimens and DNA sequencing is being used at RBG Edinburgh to see if two taxa are involved. Peter Martin had an excellent find of *Dicranum flexicaule*, later confirmed by Gordon. As we scrambled upwards, now-familiar oceanic liverworts came into view at eye level, particularly *Bazzania pearsonii*, *Mastigophora woodsii* and *Plagiochila carringtonii*. *Metzgeria leptoneura* was a good find in a wet rock crevice, and the tiny *Glyphomitrium daviesii* was both expected and located tucked away in a rock crevice.

In the upper coire we enjoyed lunch with a splendid panorama, then bryologists dispersed in all directions to study the upper slopes. Rory found *Orthotrichum cupulatum* on rocks by the

▽(Left) Fig. 14. *Douinia ovata* in Slochd na Beinne. R Hodd. ▽(Right) Fig. 15. *Dicranodontium uncinatum* and *Herbertus butchinsiae*. S. Phillips.





△Fig. 16. Searching for *Bryum marratii* at Meallabhan Bay. M. Lüth. △Fig. 17. *Bryum marratii*. M. Lüth.

lochans at 435 m, one of relatively few records of the genus during the week (to the disappointment of some of the *Orthotrichum* enthusiasts). On the higher slopes *Scapania nimbosa* and *S. ornithopodioides* were again conspicuous, and *Moerckia hibernica* was expertly detected in a flush at 465 m by Aline after considerable searching. *Oxystegus daldinianus* was found by Michael and *Isopterygiopsis muelleriana* by Rory.

Wednesday 26 July - free (and wet) day

Today had been designated a free day, and as the good weather had come to an end and more typical windy and rainy service had resumed, some elected to stay in the lab and catch up on identifications. Others made a late start and decided to explore the lower part of the broad valley leading up from Hartfield House - Strath Maolchalium - through which the River Applecross flows from the interior of the peninsula. The first port of call was a small disused limestone quarry on the edge of a coniferous plantation. Limestone is a rare commodity locally and careful scrutiny came up with a long list of calcicoles, many of which were not seen elsewhere during the week, for example *Bryoerythrophyllum ferruginascens*, *Didymodon spadiceus*, *Eucladium verticillatum*, *Gymnostomum aeruginosum*, *Hymenostylium recurvirostrum*, *Tortella tortuosa*,

Trichostomum crispulum and *Scapania aspera*. We then carried on a short distance up the track to an area of wet heath by the river where the star attraction was *Campylopus shawii*, in some quantity, seen here earlier by Gordon, as well as *C. brevipilus* and some very handsome stands of fruiting *Splachnum ampullaceum*. On the way back for an indoor lunch *Preissia quadrata* and **Marchantia polymorpha* subsp. *polymorpha* were picked up on a wet conglomerate outcrop by the river, and Liz found *Polytrichum commune* var. *perigoniale* on the track.

After lunch another short excursion was deemed possible in the wet weather, so we decided to try to re-find a *Sphagnum* species last seen here over 60 years ago in the big area of windswept bog and numerous lochans to the south of the road leading up to the Bealach. Somehow the miserable weather and eerie calls of Red-throated Divers suited the occasion in such a forlorn place. The *Sphagnum* in question, recently described from eastern North America, was *S. beothuk*, a segregate from its close ally *Sphagnum fuscum*, distinguished by several rather esoteric characters. Mark Hill had recently undertaken the noble task of checking all available herbarium material of *S. fuscum*, and had discovered many Scottish specimens of *S. beothuk* (the more oceanic of the two segregates)



△Fig. 18. Pete Martin and Sean O’Leary in Allt Tasabhaig ravine. G. Rothero.

including one from Applecross collected near Loch an Eilean in 1952. After much searching the bedraggled group finally struck gold and quite a number of hummocks of our quarry were eventually detected, a new species for most of us. Several fine hummocks of *Sphagnum austinii* were also seen.

Over the years Gordon seems to have quite often arranged his birthday to happen during a BBS summer meeting, so today ended on a very bright and convivial note with a splendid birthday dinner (and magnificent cake made by the chef) in the Walled Garden restaurant, which accommodated our large group very comfortably.

Thursday 27 July. Two ravines and a venture into the interior

We chose two ravines for the penultimate day, the first, chosen by Gordon’s group, was the River Toscaig ravine, surveyed in 1989 by Ben Averis, who recorded the oceanic *Radula*

aquilegia. Unfortunately, yesterday’s wet weather had caused the river to rise considerably, making access very problematic, and the rain had still not stopped. They managed to get into the ravine at the bottom end, and later half-way up, near the dramatic right-angle bend. However, though the list of recorded species was shorter than it would have been under better conditions, the discovery of *Hygrohypnum subeugyrium* by Thomas more than made up for this. Other good finds were Gordon’s *Andreaea megistospora* and Peter’s *Grimmia decipiens*. A good selection of oceanic ravine liverworts was seen, notably *Lepidozia cupressina*, *Drepanolejeunea hamatifolia*, *Metzgeria conjugata*, *Plagiochila punctata* and *Radula aquilegia*. At their second attempt, further up the ravine, *Glyphomitrium daviesii* and *Kiaeria blyttii* were added, but when they decided to move to the more accessible open bog to the south of the ravine they were rewarded with a second Applecross site for *Sphagnum beothuk*

as well as *S. austinii*, *Campylopus brevipilus*, *C. shawii*, *Cladopodiella fluitans* and *Odontoschisma elongatum*.

The second group, led by David, visited another ravine called Slochd na Beinne, running along a fault line parallel to, but north of the Toscaig ravine, reaching the coast at Culduie. This was unknown bryologically but remarkably it produced the highest number of taxa (164) of all the week's sites. As it was a smaller stream than Toscaig, access was less daunting but the continuing rain and a lot of splashing meant that we all got a thorough soaking. But it turned out to be a wonderful site, for oceanic species in particular but also for a number of calcicoles on the calcareous seepage on rock outcrops.

Before diving (almost literally) into the ravine, Rory picked up **Sphagnum subnitens* subsp. *ferrugineum*, a plant he is familiar with in Ireland,

and the ravine itself proved excellent from the word go, with *Radula aquilegia* and *Plagiochila exigua* on the wet rock faces in the burn along with a feast of Lejeuneaceae: *Aphanolejeunea microscopica*, *Colura calyptrifolia*, *Drepanolejeunea hamatifolia*, *Harpalejeunea molleri*, *Lejeunea lamacerina* and *L. patens*. Yet again, Tom found *Ulota intermedia* on the trees. Further up, crags above the stream added another member of the Lejeuneaceae, *Marchesinia mackaii*, the only place it was seen during the week. In places basic seepage supported a number of calcicoles, including *Anoetangium aestivum*, *Gymnostomum aeruginosum*, *Orthothecium intricatum* and *Oxystegus daldinianus* along with *Herbertus hutchinsiae* and *Rhabdoweisia crispata*. Higher up the valley opened out into moorland and no fewer than 16 species of *Sphagnum* were recorded, including, in a more acidic expanse of mire, *S.*

▽Fig. 19. Fearnmore coast with *Dicranum scottianum*. M. Lüth.





△Fig. 20. *Campylopus shawii* near Hartfield House. M. Lüth.

austinii and *S. beothuk*.

The third group, led by Liz, decided that ravines were not for them, so they chose to undertake a very long walk up the Applecross River into a new hectad, reaching as far as Lochan na h-Airige Riabhaich. There is a very large area of ‘interior’ Applecross and this was the only group to begin to explore it. Needless to say, they got just as good a soaking as the ravers, but recorded a very creditable 96 species for their pains. The highlight was the find by Liz of a third site for *Hygrohypnum subeugyrium*, on rocks in the river. *Sphagnum molle* was found in wet heath by Mark Pool, while on boulders by the lochan he found the rare and recently distinguished *Hedwigia striata*, the second record for Wester Ross. Nearby were the other boulder-loving species *Antitrichia curtipendula*, *Grimmia hartmanii*, *Orthotrichum rupestre* and *Ulota hutchinsiae*. *Leiocolea bantriensis* was recorded in a flush, *Conocephalum salebrosum* by the river and *Oxystegus tenuirostris* var. *holtii* on wet rocks.

Friday 28 July. North coast

Because up to now we had ignored the long stretch of coastline in the northern half of Applecross, today we attempted to remedy this by splitting into four groups to cover as much ground as possible. The largest group, led by

David, first made for the sandy Meallabhan Bay which offered coastal heath, sand dunes, saltmarsh and Torridonian sandstone crags infiltrated by wind-blown sand up the slope. We started in the small area of salt marsh, where Thomas promptly found *Bryum marratii*, and when the rest of us got our ‘eyes in’ it turned out to be quite abundant, a welcome novelty for our overseas guests. In the same area *Archidium alternifolium* was seen. On the wind-blown sand we saw *Syntrichia ruraliformis*, *Encalypta streptocarpa* and *Bryum archangelicum*, and in a rock cleft on the crags was a small colony of *Reboulia hemisphaerica*, a rare plant in the West Highlands.

Meanwhile, Gordon, Mark Lawley, Sean and Peter were tempted by a nearby ravine, the Allt Tasabhaig, which had been surveyed previously by Gordon. He reported later that in spite of his immunity to midges from living in Argyll, the Tasabhaig variety were the worst he had ever encountered. In spite of this, all the expected tiny ravine Lejeuneaceae were seen (except for *Jubula hutchinsiae*, recorded here in 2012), along with *Radula aquilegia*, *Anastrophyllum minutum*, *Isoetecium holtii*, *Herbertus hutchinsiae* and *H. stramineus* and a fine stand of *Paraleptodontium recurvifolium*, of which Mark Lawley was especially thrilled to see such a magnificent carpet.

The double-act of Peter and Sean collected both *Hygrohypnum eugyrium* and *H. subeugyrium*, the fourth Applecross site for the latter. After leaving the ravine (and the midges), they continued east into the next hectad at Loch nan Eun, where their best find was *Porella obtusata* on rocks on the loch margin at 315 m altitude; they also recorded *Sphagnum austinii* and *Tetraplodon mnioides* in a mire, and *Odontoschisma elongatum* on the flushed loch margin.

The third group, Stan, Rory and Aline, had spotted a number of sea-caves marked on the map so decided on a day of speleo-bryology, in the hope of finding some cave-loving species. Their main focus was on the coast and sea cave just north of the crofting settlement of Cuaig. The best cave-dwelling species they found was *Lophocolea fragans*, new to Applecross. Other noteworthy species recorded in the area were *Amblystegium serpens* var. *salinum*, *Dicranum bonjeanii*, *Drepanocladus polygamus* and *Tortella flavovirens*. Later they moved to the far north-west of Applecross at Creag na h-Uamha (Crag of the Cave) and found *Radula aquilegia* growing on coastal rocks and in damp turf.

David's group followed the same coast road north, stopping for lunch by Loch Fada, where Mark Pool picked up *Fossombronia foveolata*, then walking from Fearnmore out towards the northern tip of Applecross at Rubha na Fearnna. Crossing an area of wet heath, *Campylopus brevipilus* was abundant and Liz picked up *Sphagnum angustifolium* and Michael *S. subnitens* subsp. *ferrugineum* (the second record). We reached an attractive rocky coast with crags and steep gullies. As expected, *Dicranum scottianum* was seen again, along with *Lepidozia cupressina*, *Plagiochila bifaria* and *P. punctata*.

The fourth group, Tom Blockeel and David Chamberlain, spent a very worthwhile day in

three bryologically unknown areas further along the north coast of Applecross. They began with a short foray to Loch na Creige, hoping to find some good epiphytes on the sheltered shores of the loch, shown on the map as being surrounded by conifer plantation. After some initial confusion they realised that the huge area of forest on the map was a figment of the cartographer's imagination. Abandoning this place, they found *Pohlia flexuosa* on a roadside bank at Arrina, and *Harpanthus scutatus* on wooded coastal slopes. In the bay at Camas Ban they recorded *Ulota intermedia* on *Salix* and *Lepidozia cupressina* and *Kurzia sylvatica* on coastal rocks.

Thanks to the hard work of all the participants, the meeting was a great success, combining visits to some well-known sites where we enjoyed some of the West Highland specialities which many had made the long journey to see, along with a good number of 'new' sites, some of which (particularly the Slochd na Beinne ravine) turned out to be of great interest. The discovery of *Hygrohypnum subeugyrium* in four places was very significant, and of the few new vice-county records, that of the rare *Bryum marratii* was especially welcome. I would like to thank all the participants for attending the meeting and their patience and good humour, also those who assisted by leading excursions, and all who sent in their records and a very large number of excellent images, only a tiny fraction of which could be used. The Applecross Estate, particularly Michael Summers, is thanked for granting us unlimited access, and local botanist Gill Fairweather for helping in many ways, not least in the Walled Garden restaurant.

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