

Glamorgan Botany Group

2016 Excursion Report

Our fourth excursion report describes the fruits of seven excursions, covering a range of habitats and locations through the vice-county. This year has proved particularly productive in terms of records, and (as ever) enjoyable for the opportunity to share notes on species identification. One unplanned highlight is that we found 25 of the 40 fern species known to occur in Glamorgan!

We hope you enjoyed these trips, and look forward to seeing you next year.

David Barden, Karen Wilkinson and Julian Woodman

Cwm Dare & Daren y Dimbath – Saturday 26 March

There are two species of filmy-fern in Glamorgan, *Hymenophyllum wilsonii* (Wilson’s filmy-fern) and *H. tunbrigense* (Tunbridge filmy-fern), and our aim on this excursion was to survey their populations at two sites – the first discovered in 2014 by Tim Rich, and the second known for about 100 years.

The recent site is in **Dare Valley Country Park**, so it was here that nine of us met on a cloudy and occasionally drizzly morning. After a brisk walk up through the park, Tim indicated to us the area high on the screes where four patches of *H. wilsonii* had been found in 2014 (see *Wild flowers of Dare Valley Country Park* by T. Rich and C. Gait).



Tackling the screes at Cwm Dare!



The delicate fronds of *Hymenophyllum wilsonii* at Cwm Dare.

Having listened to Tim describe what we were looking for, Caroline Langdon said “is this it?” and pointed down at the rocks in front of us, where to the astonishment of all some fronds were present! We quickly found lots more, giving us a total of 52 patches, even though we only covered about a third of the area of scree in the time available.

The initial idea had been to measure the size of every patch to assess the population dynamics (patches increase radially by about 1–2 cm a year). However, it was very hard to define an individual because the ferns crept through moss, plants and leaf litter between and around boulders, so a crude census was made by plotting GPS locations. Most patches were fertile, and ranged from dense mats on edges of exposed rocks with dwarf fronds 1–2 cm long, to more luxuriant plants with fronds 3–5 cm long in the deep

crevices. The patches ranged widely in size too, indicating a long-established and healthy population, and the largest known one in Glamorgan. Other interesting plants seen on the screes, also previously recorded by Tim, were *Dryopteris oreades* (Mountain Male-fern) and *Huperzia selago* (Fir Clubmoss).

Moving on to the well-known site at **Daren y Dimbath**, our group of eight botanists contended with some heavy rain to examine the populations of both species there. These appear to be doing well, with a combined total of 22 patches of *H. wilsonii* and 29 of *H. tunbrigense* being seen.

A range of sizes of plants were recorded, both species showing the classic exponential declines in numbers of patches with increasing size. However, one medium-sized patch of *H. wilsonii* and one huge patch of *H. tunbrigense* were peeling off the rocks under their own weight, leaving fragments of rhizome in crevices, which were then regrowing. As a result, small patches may not necessarily indicate regeneration from spores.

Also found on the rocks were the rare ferns *Dryopteris aemula* (Hay-scented Buckler Fern) and the gametophytes of *Trichomanes speciosum* (Killarney Fern) in dark shaded crevices.



Hymenophyllum tunbrigense at Daren y Dimbath (taken in October 2013).

David Barden (abridged from original report by Tim Rich)

Dyffryn Woodlands – Saturday 9 April

Thirteen of us gathered in the car-park of Dyffryn Gardens, having obtained permission to park there for the day. Early showers cleared after an hour or so, to give a rather chilly but mostly fine day. Our first aim was to investigate Coed Siôn Hywel to the north-west, so we set off through a pasture and entered the wood at its south-eastern corner.

Initial impressions were not particularly favourable, with large parts of the area being covered by clones of *Ribes rubrum* (Redcurrant) to the exclusion of much else. However, there was a scattering of typical woodland species, including small numbers



Ribes rubrum was dominant in part of Coed Siôn Hywel. Three clones (1-3) are visible here, with the leaves having emerged to different degrees.

of *Orchis mascula* (Early Purple Orchid). Further on, we compared *Polystichum aculeatum* (Hard Shield-Fern) with *P. setiferum* (Soft Shield Fern), although the differences were not as clear-cut as they often are.



The left specimen (showing pinnules with distinct stalks, an obtusely-pointed 'thumb', and bases $>90^\circ$) is clearly *Polystichum setiferum*. The right specimen (showing pinnules with less obvious stalks, a tapering thumb and bases $\leq 90^\circ$) is *P. aculeatum*, but the fronds are not nearly as glossy as normal.

Things improved as we moved towards the north-eastern boundary, where we found abundant *Galium odoratum* (Woodruff), about 14 emerging shoots of *Paris quadrifolia* (Herb Paris) amongst a thin scattering of *Adoxa moschatellina* (Moschatel), and a little *Ranunculus auricomus* (Goldilocks Buttercup).

Exiting the wood, we passed through a sheep-grazed rough pasture before re-entering the wood in the middle of the north-west facing edge. Beech was dominant here, and the ground flora was accordingly poor, but we did see a single rosette of *Platanthera chlorantha* (Greater Butterfly Orchid). The western arm of the wood had largely been replanted with *Larix* (Larch), though the exact taxon in question eluded us despite careful studying of the leaves. The ground here was sufficiently acid to allow *Oxalis acetosella* (Wood Sorrel) to flourish. After lunch, we headed back to our entrance point, finding on the way more *Paris quadrifolia* scattered on a damp slope.

On the second half of our excursion, we headed east to Coed Nant-brân, but before entering the wood we spent a while in a small pasture at the north-western end, previously known to some of the group for its reasonable calcareous flora. In nearby scrub, Linda Nottage found a couple of plants of *Primula veris* (Cowslip) × *P. vulgaris* (Primrose), with both parents in the vicinity.



Investigating the small pasture near Coed Nant-brân – here we found abundant *Poterium sanguisorba* (Salad Burnet) and a scattering of *Primula veris* (Cowslip).

the rest of the group had been heading down the Nant-brân, where damp streamside woodland and the steep (sometimes rocky) slopes above gave a reasonable list of species including more *Adoxa moschatellina*, but nothing remarkable. We then headed out of the wood, past the farm and round field margins on our way back to Dyffryn, where we added a few common arable weeds to our species list for the day.



The unfurling leaves of *Paris quadrifolia* caught our eye in damp ground.



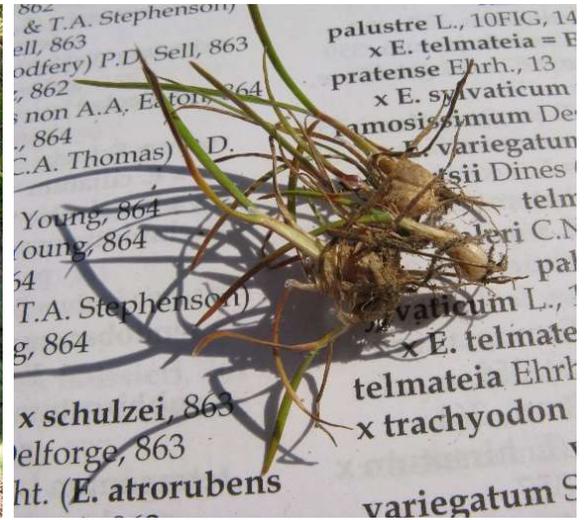
By the stile at the northern end, Karen spotted the easily-overlooked leaves of *Ranunculus auricomus*, with their deep lobing and kidney-shaped outline.

In Coed Nant-brân itself the group split, with David's group heading along the pleasant path along the northern boundary. This had a small number of vegetative *Orchis mascula*, abundant *Allium ursinum* (Ramsons) towards the eastern end, and some good Hazel coppice on the slopes below. Meanwhile,

Newton Burrows – Sunday 15 May

Fourteen enthusiastic botanists gathered in the car-park at Newton Burrows on a sunny but breezy day, and soon set about investigating the area of rough grassland to the immediate north, where according to online photos, large rocks for sea-defences had been stored in the not-too-distant past.

Trifolium scabrum (Rough Clover) was abundant here, and there was also a little *Trifolium arvense* (Hare's-foot Clover), *Fumaria bastardii* (Tall Fumitory) and *F. muralis* (Common Ramping Fumitory), but a greater prize awaited! A tufted grass with very diffuse panicles got the attention of Tim Rich, and realisation rapidly dawned that we were looking at *Poa bulbosa* (Bulbous Meadow-grass), previously known in Wales only from The Knap, Barry, and now on the verge of extinction there (see T. Rich, *BSBI Welsh Bulletin*, June 2012, 90: 15–17).



Quite possibly the find of the year! *Poa bulbosa* was frequent-abundant over a substantial area on sandy gravel near Newton Burrows car-park. Unusually for this species, none of the plants were producing plantlets within the spikelets (proliferation). The abundance of the plant meant that we had no qualms about detaching a few of the distinctive basal bulbils for examination.



***Senecio squalidus* (Oxford Ragwort), with its showier flowers than *S. jacobea* (Common Ragwort), was well-scattered over the dunes.**

Recovering from this excitement, we pressed eastward into SS84.77, where we planned to concentrate most of our recording effort. Substantial areas of the dunes were dominated by one or more of coarse grasses, *Rosa spinosissima* (Burnet Rose), *Hippophae rhamnoides* (Sea Buckthorn) or *Prunus spinosa* (Blackthorn), but there were enough areas of shorter turf to make for interesting botanising.

Diplotaxis tenuifolia (Perennial Wall Rocket) – familiar to some in the group from being the ‘wild rocket’ of garden-centre seed stands – was liberally distributed, and the pretty purple-pink flowers of *Vicia sativa* ssp. *nigra* (Common Vetch) were frequently encountered. Also found were *Saxifraga tridactylites* (Rue-leaved Saxifrage), *Briza media* (Quaking Grass) and *Rhinanthus minor* (Hayrattle) in small quantity.

Typical sand-dune species – all present only locally – were *Myosotis ramosissima* (Early Forget-me-not), *Echium vulgare* (Viper's Bugloss), *Phleum arenarium* (Sand Cat's-tail), *Arabis hirsuta* (Hairy Rock-cress). *Cerastium diffusum* (Sea Mouse-ear) and *C. semidecandrum* (Little Mouse-ear) were also found, with sand grains abundantly adhering to the sticky hairs of the former a helpful distinguishing feature, and more obvious than the completely green bracts!



An attractive colour-form of *Polygala vulgaris* (Common Milkwort) with purple-tipped white petals was found in several places over the dunes.

Our lunch stop – chosen for being sheltered from the wind – was not particularly species-rich, but Karen was astounded to find a detached spike of *Botrychium lunaria* (Moonwort), presumably ‘kicked off’ as we had walked in.



A young spike of *Botrychium lunaria* in short turf – we found several small colonies in total.

Short turf by a path was inspected closely for *Vicia lathyroides* (Spring Vetch) by David, who eventually found what he was looking for in two places! Although the plants had

finished flowering, the reticulate rather than smooth seeds provided confirmation of its identity. Further on, in a large area of short rabbit-grazed turf, we found the rosettes of *Spiranthes spiralis* (Autumn Ladies’-tresses), a small colony of *Botrychium* (which we took care to step around this time!), and *Stellaria pallida* (Lesser Chickweed).



***Adoxa moschatellina* (Moschatel) was remarkably abundant in woodland on the sandy soils.**

Now moving into SS8577, Karen took over the recording from David, and along with it a substantial change in habitat to areas of woodland. Climbing up to the top of the sand-submerged old cliff line, we were delighted to find a few small groups of *Anacamptis morio* (Green-winged Orchid) by the path along the top of the ridge (Rob & Linda Nottage, having already left us by this stage, found another population in the main area of dunes back near the coast).

After a descent through mostly uninteresting tussocky grassland, we had little energy left to undertake anything more than a quick inspection at the former gravel workings for the hoped-for annual clovers. However, the coastal shingle just landward of the dune edge provided easier botanising, with the highlight being *Valerianella locusta* var. *dunensis* (Common Cornsalad) to round off an enjoyable day.



Inspecting the short turf at the ridge-top, where we found *Anacamptis morio* (right) and more *Botrychium*.



Recorded for the first time in East Glamorgan, variety *dunensis* of *Valerianella locusta* was frequent-abundant over ~10m × 5m.

Morfa Ystradowen – Sunday 5 June

On a warm summer's day with light winds, our group of eight met to examine the western part of Morfa Ystradowen (a former SSSI), with the permission of the landowner at 'Vale Holiday Homes'. Almost immediately, we found *Trifolium micranthum* (Slender Trefoil) on a track, but we were forced to pick up speed through the fields to the north-east because of the presence of some rather curious horses!

Beyond the old railway, we saw *Verbena officinalis* (Vervain), a small amount of *Adoxa moschatellina* (Moschatel), and some typical woodland species, including a range of ferns that permitted a quick training session! Here too, Karen noticed the signs of Ash Dieback, which seems to have become considerably more frequent this year.



Dryopteris carthusiana on Morfa Ystradowen, showing the more erect habit that helps to distinguish it from the commoner *D. dilatata* (Broad Buckler Fern).



Dactylorhiza maculata (rather pale-flowered in this case) were a surprising find in a rather shady spot.

We then moved out onto the open part of the 'moor' west of the Nant Rhydhalog, and quickly found an abundance of *Dryopteris carthusiana* (Narrow Buckler Fern), which is rather local in the vice-county. Apart from this, however, the area yielded only a thin scattering of interesting species, being badly undergrazed, mostly rather dry underfoot, and characterised by abundant coarse grasses and *Filipendula ulmaria* (Meadowsweet). Sedges were also rather scarce, but we were able to compare *Carex riparia* and *acutiformis* (Greater and Lesser Pond Sedge). One area near a ditch had some indicators of damper ground – *Equisetum fluviatile* (Water Horsetail), *Hydrocotyle vulgaris* (Marsh Pennywort) and *Salix repens* (Creeping Willow).

Moving onto a muddy track back in the wood, we found abundant *Juncus bulbosus* (Bulbous Rush), along with *Viola palustris* (Marsh Violet). Right next to our lunch stop, six spikes of *Dactylorhiza maculata* (Heath Spotted Orchid) were found by Christian Owen in the shade of some fairly young trees, and we considered whether this might be a remnant from when the site was more open.

Next up was a four-sided field just east of the old railway, but apart from *Carex echinata* (Star Sedge) and more *Salix repens* there was not much of interest here.



One of the ferns we saw in the woodland near Morfa Ystradowen was this good specimen of *Dryopteris borrieri* (Borrer's Male Fern), with truncate ends to the parallel-sided pinnules.



The flowers of *Iris pseudacorus* (Yellow Flag) brighten up one corner of the rather grass-dominated Morfa Ystradowen.

The old railway itself was clearly regularly mown, affording a pleasantly shady walk. The wet woodland to the west looked promising (but, we reckoned, probably better in spring), while *Berula erecta* (Lesser Water Parsnip) was noticed in a ditch on the eastern side. Scrambling down the bank, we emerged into an area of very tussocky grassland that had been subject to a light burning, probably early in the year. *Dryopteris carthusiana* was again abundant here, but more interesting was plenty of *Ulex gallii* (Western Gorse), a 2m × 2m patch of *Comarum palustre* (Marsh Cinquefoil), and a tiny remnant of Sphagnum 'bog' with typical acid-loving species.



Comarum palustre (left) was a highlight in the 'burnt' field, while a tiny area of acid 'bog' (centre) yielded a little *Eriophorum vaginatum* (Hare's-tail Cotton-grass, circled), *Erica tetralix* (Cross-leaved Heath, right) and *Calluna vulgaris* (Heather).



More ferns! *Blechnum spicant* is common enough on banks on acid soils, but this variant with lobed pinnae was a new sight for even the experienced botanists in the group.

Moving off the old railway, a shady track took us through woodland back up to our starting point, where we came across a variant of *Blechnum spicant* (Hard Fern). Some of the group returned to their cars at this point, but the rest decided to finish off by examining a field adjacent to the main road. This had presumably been heavily grazed by sheep in the past, because the flora was rather poor and also remarkably uniform. However, *Rhinanthus minor* (Hayrattle) was abundant, while a few *Dactylorhiza fuchsii* (Common Spotted Orchid) were found, and the southern end held a population of *Myosotis discolor* (Changing Forget-me-not) amongst a stand of Bracken.

Cwmaman – Sunday 10 July

On a mixed day of sunshine and showers, our group of seven started off by examining an area of post-industrial scrubby grassland on the southern side of Glanamman Road. This was reasonably diverse, with over 80 species being noted, including fairly frequent *Carex spicata* (Spiked Sedge), a good scattering of *Vicia tetrasperma* (Smooth Tare), a small quantity of *Alopecurus geniculatus* (Marsh Foxtail), and a single bush of *Rosa rubiginosa* (Sweet Briar).

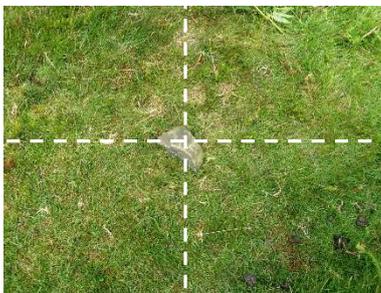
Moving up through terraced streets, we added a good number of species to our list from weed-edged roadsides, a steep grassy bank, and an abandoned building plot. Heading onto the access land of Craig Fforchaman, *Anagallis tenella* (Bog Pimpernel), *Wahlenbergia hederacea* (Ivy-leaved Bellflower) and *Lythrum portula* (Water Purslane) were all abundant in a damp flush.

Further up, we tested our ability to distinguish between the two native species of *Quercus* (Oaks), but although one was clearly *Q. robur* (Pedunculate Oak), the other was less clear, and may have been a hybrid. We then had lunch while David showed specimens of the dozen or so large ground-dwelling ferns to be found in Glamorgan.

Moving into our third hectad for the day in an intense but fortunately short-lived spell of rain, we encountered some good heathery ground, which graded into rather species-poor grassland as we ascended above the 300-metre mark.



A highlight of Cwmaman village was *Veronica agrestis* (Green Field Speedwell), which is rarely recorded for this part of the vice-county.



A rock marks the spot where squares SN, SO, SS and ST join... and where some entertainment was had by optimising the location of David's GPS.

In a brief diversion, some of us headed across-slope to the point where four 100km squares (decahils?) join, but we only managed to muster 15 species at the extreme south-west corner of square SO, which was uniformly sheep-grazed turf. The track back down to the village was better, with a few interesting plants (see photos below).

Back down in Cwmaman, Julian had been busy investigating a damp cattle-poached pasture by the Nant Aman Fach, with a good range of typical species, including abundant *Lythrum portula*, as well as *Mentha aquatica* × *arvensis* (Whorled Mint), *Hypericum elodes* (Bog St-John's-wort) and a white-flowered *Wahlenbergia hederacea*



This hairless *Calystegia* found in Cwmaman village appears to be *C. sepium* (Hedge Bindweed), but completely lacks a corolla.

amongst ordinary-coloured plants. Finally, a mysterious *Calystegia* (Bindweed) lacking a 'trumpet' to its flowers was spotted in an alleyway on the way back to the car, to complete an interesting day.



From left to right: A track running down the hillside yielded single plants of *Filago minima* (Small Cudweed) and *Genista anglica* (Petty Whin), while a hillside spring at the bottom produced this variant of *Athyrium filix-femina* (Lady Fern) with strongly divided pinnules.

Machen – Saturday 6 August

Eight botanists headed out on this excursion around the little-recorded area of Machen. The route largely followed the 'Machen Forge Trail' and took in a variety of habitats, including the disused railway line, scrub, woodland, grassland, ditches, the River Rhydney and rough ground.

The disused railway line was the first area to be explored, and whilst Caroline took over the recording, Karen was able to spend some time explaining key family characteristics to new members of the group. Despite extensive stands of *Impatiens glandulifera* (Himalayan Balsam) the woodland either side of the railway line was reasonably diverse, the highlight being a slightly precarious area of wet woodland supporting *Lythrum salicaria* (Purple Loosestrife), *Oenanthe crocata* (Hemlock Water-dropwort) and *Sparganium erectum* (Branched Bur-reed). Examination of the drier railway embankments sparked discussion on how to separate the *Arctium* (Burdock) group and *Dryopteris* hybrids (although our potential hybrid, studiously collected, pressed and sent off to the *Dryopteris* referee by Caroline, turned out to be the common *D. filix-mas* (Male Fern). Moving on through tall, flower-rich grassland, the group had superb views of a basking grass snake.

The trail clipped a number of small settlements and, as a result, garden escapees and non-natives featured highly on our recording card. The most impressive of these was a four-foot-high specimen of *Lilium martagon* (Martagon Lily), identified by Tim much to the delight of Kerry, who had been wondering what on earth this plant was for a good number of years!



The Roesel's Bush Cricket that was the highlight of the Machen excursion – thanks to Caroline Langdon for the photo.

On the roadside passing 'Cats Haven' we found *Jasione montana* (Sheep's-bit), not an uncommon species but not frequently recorded to date on the Group outings.

The best was yet to come... but unfortunately it wasn't botanical! The male Roesel's Bush Cricket initially gave itself away by its distinctive call; it was tracked to a stand of tall grassland on the edge of an improved, cattle-grazed pasture. This species was first recorded in Glamorgan in 2014, and this is now only the third county site (and only the fifth site in Wales). It is likely to be moving west, so is one to keep an eye (and ear) out for!

Karen Wilkinson

Merthyr Common – Sunday 18 September

Meeting at Morlais Top on a largely fine day, our group of eight headed briskly north along a rough track, in order to waste no time in getting to one of our target monads... but we had time enough to notice a clump of flowering *Sanguisorba officinalis* (Great Burnet) on a roadside, and a few ruderal/waste-heap weeds including *Brassica juncea* (Chinese Mustard) on the way through Pengarnddu.

Beyond this, the ditch on the eastern side of the track provided some good botanising, with plenty of *Triglochin palustris* (Marsh Arrow-grass). A stream feeding into this from the east yielded more marsh

plants, with highlights being a small quantity of *Veronica scutellata* (Marsh Speedwell) and more remarkably a population of *Persicaria minor* (Small Water-pepper).

We followed the track up as far as the Nant Morlais, then turned up into the ravine cut by this stream. The cliffs on the southern side looked promising at first, but there was only a very limited tall-herb community here, which included small quantities of *Valeriana officinalis* (Valerian) and *Succisa pratensis* (Devil's-bit Scabious) amongst abundant *Luzula sylvatica* (Great Wood-rush).

Our next stop was 'Pitwellt Pond', which contrary to what the OS map said, we knew to have been drained many years ago. Disappointingly, however, the whole area was a sea of *Juncus effusus* (Soft Rush), and so we did not spend any time here – instead, we headed west out onto the main area of Merthyr Common. Although not turning up much variety species-wise, this was pleasantly heathery, and in addition we were pleased to find *Empetrum nigrum* (Crowberry), previously recorded on the Common on just one occasion.



Mirroring our experience on the final excursion of 2015, by the track up to Merthyr Common we turned up a previously unknown population of the county rarity *Persicaria minor*.



The ravine cliffs of the Nant Morlais, though quite damp and well-vegetated, held nothing out of the ordinary.



Mostly on the rockier ground, we found numerous patches of the local Glamorgan shrub *Empetrum nigrum*... but we only saw one berry! Given that on this excursion we examined only a narrow strip of this extensive area, the population of this species on the Common as a whole might be quite significant.



By the sides of the Nant Tor-gwyn we found a few plants of *Drosera rotundifolia* (Round-leaved Sundew).



Over a matter of a few metres, the habitat changed from hard quartzy gritstone with *Calluna vulgaris* (Heather) and *Molinia caerulea* (Purple Moor Grass) to fine limestone turf with abundant *Thymus polytrichus* (Wild Thyme). Guess which the sheep prefer!

Having previously examined the geological map, we were expecting a transition in rock type as we headed northwest, and passing a couple of 'shake holes', it was clear that the limestone was not far below the surface. When it came, the change was remarkably abrupt (see photo), and we then spent some time examining the long-abandoned quarries of Twynau Gwynion. Here we found upland specialities including locally frequent *Saxifraga hypnoides* (Mossy Saxifrage), and smaller quantities of *Cystopteris fragilis* (Brittle Bladder Fern), *Asplenium viride* (Green Spleenwort), and *Galium sternerii* (Limestone Bedstraw).



One of the characteristic upland species we found in the quarries at Twynau Gwynion, and which is more-or-less confined to this part of Glamorgan, was *Saxifraga hypnoides* (Mossy Saxifrage). Jean Hamilton's description of the leaves being "shaped like a spork" is both accurate and more concise than many of the more 'botanically correct' descriptions in the floras!

As well as enjoying good views towards the Brecon Beacons, we found a range of calcareous species at Twynau Gwynion, including *Carlina vulgaris* (Carline Thistle).

Had time allowed, we would have spent longer here, as there was plenty of good habitat in these quarries and on the slopes down to the vice-county boundary. However, we had quite a long walk to get to our cars, so headed back south, crossing the limestone-gritstone boundary again. On the way, we came across a curiously small area of calcareous turf (with typical species) on an embankment next to the cutting of the old tramway that served the quarry. This resulted in the unusual sight of *Calluna vulgaris* and *Cirsium acaule* (Dwarf Thistle) growing side by side!

All in all, it was an enjoyable day, with a surprising variety of habitats and some interesting plants too – a good end to the botanical year!

David Barden