

## PERTHSHIRE SOCIETY OF NATURAL SCIENCE

### BOTANICAL SECTION

#### BULLETIN NO. 39 – 2016

#### Reports from 2016 Field Meetings, including Field Identification Excursions

##### 1. Perth urban habitats around the River Tay

Saturday, 19<sup>th</sup> March

Within the first minute of Brian Ballinger and I meeting David Chamberlain at Perth Bus Station, David identified our first moss, *Syntrichia ruralis* (Great Hairy Screw-moss), which had tumbled out of a gutter on to the pavement below. David had arrived from Edinburgh to identify bryophytes for us as part of the Botanical Society of Scotland's [Urban Flora of Scotland](#) project. Thirteen of us gathered in the South Inch Car Park, where we soon got to work on a fine sunny day. In a neglected bed we saw a spreading mat of *Funaria hygrometrica* (Common Cord-moss) with a mass of capsules and compact tufts of silvery shoots of the aptly named *Bryum argenteum* (Silver-moss).

Venturing a little farther we found *S. ruralis* in a situation similar to the bus station. Perhaps they had been turned out by blackbirds or members of the crow family in search of food or lining for nests. Bare soil, grass and the base of a tree at the edge of the car park provided a number of common acrocarps and pleurocarps.

The cope of the wall leading to the railway bridge at the River Tay provided a number of interesting colonisers on the damper section. This provided three species of *Orthotrichum* and two species of *Didymodon*; *O. cupulatum* (Hooded Bristle-moss), *O. anomalum* (Anomalous Bristle-moss), *O. affine* (Wood Bristle-moss), *D. insulanus* (Cylindric Beard-moss) and *D. tophaceus* (Olive Beard-moss). *O. anomalum* was easier to separate from its relatives by the longer setae, which hold the capsules clear of the leaves. David said that it is found on the mortar of walls and not on acid rock.

Also present on the wall were *Schistidium crassipilum* (Thickpoint Grimmia) and the common, but beautiful golden locks of *Homalothecium sericeum* (Silky Wall Feather-moss).

We ventured behind the wall and on to a viewing area and then down to a sandy riverbank carpeted by bryophytes. David was very impressed by this habitat and we found a number of unusual species. Shoots of *Climacium dendroides* (Tree-moss) punctuated the wet sand above the water and in the damp sand above were *Homalia trichomanoides* (Blunt Feather-moss), *Rhizomnium punctatum*



River Tay bank, Shore Road, Perth, 19 March 2016

© Brian Ballinger

(Dotted Thyme-moss), mats of *Plagiomnium elatum* (Tall Thyme-moss), *P. rostratum* (Long-beaked Thyme-moss), *Thamnobryum alopecurum* (Fox-tail Feather-moss), *Oxyrrhynchium hians* (Swartz's Feather-moss) and the liverworts *Chiloscyphus polyanthus* (St Winifrid's Moss), *Lunularia cruciata* (Crescent-cup Liverwort) and *Pellia endiviifolia* (Endive Pellia). Growing in the shallows were *Brachythecium rivulare* (River Feather-moss), *Cinclidotus fontinaloides* (Smaller Lattice-moss) *Fontinalis antipyretica* (Greater Water-moss) and *Dichodontium pellucidum* (Transparent Fork-moss).

*Orthotrichum rivulare* (River Bristle-moss) was abundant on the bole and main branches of a tree at the edge of the river and *Anomodon viticulosus* (Rambling Tail-moss) was growing on the river side of the wall, which is part of Perth's flood defences.

We headed a little farther along to a slipway that provides access to the river for craft. We were looking at bryophytes on a damp wall and in wet sand when our activity attracted the attention of a watchful lady. She was in a party that was waiting for the river level to rise with the tide and offered to remove moss from the bridge piers for our identification with their jet-ski. Our activity attracted friendly attention throughout the day and we politely declined this kind offer.

Growing among the cobbles of the slipway was *Pseudocrossidium hornschuchianum* (Hornschuch's Beard-moss), a somewhat daunting pronunciation for the student of bryology.

On entering Greyfriars' Cemetery we saw *Marchantia polymorpha* subsp. *ruderalis* (Common Liverwort) at the base of a wall. The female receptacles which had borne the sporophylls had withered and their remains were like the spokes of tiny umbrellas sticking out above the broad, thallose mats of the plants. On separate plants, the male receptacles were starting to mature, which were like little green studs on stalks.

The bryophyte cover was generally poor with commoner species we had seen, such as *Bryum dichotomum* (Bicoloured Bryum) in the soil, but we added a few more species to our list: *Bryum sardoa* (Bird's-claw Beard-moss), *Didymodon rigidulus* (Rigid Beard-moss), *Plagiomnium undulatum* (Hart's-tongue Thyme-moss) and *Lophocolea bidentata* (Bifid Crestwort).

Our next stop was Moncreiffe Island and we added more to our list, the most interesting being tree epiphytes; either on branches over the water, on roots or the base of trees at water-level. Additions were: *Leskea polycarpa* (Many-fruited Leskea), *Schistidium rivulare* (River Grimmia), *Metzgeria violacea* (Bluish Veilwort), *Cirriphyllum piliferum* (Hair-pointed Feather-moss), *Orthotrichum pulchellum* (Elegant Bristle-moss) and *Ulota crispa* (Crisped Pincushion).

Our exploration of the island was broken by lunch, which was preceded by the most widely animated discussion of the day; not on identification, but where to sit and eat, and so our party broke in diverging ambulatory exploration for repose and repast.

We completed our exploration on the east bank of the Tay, which proved to be as interesting as the west bank. Added to our list were the following; *Scapania undulata* (Water Earwort), *Platyhypnidium riparioides* (Long-beaked Water Feather-moss), the more thread-like *Thamnobryum alopecurum* (Fox-tail Feather-moss) growing next to the already seen *Isoetecium alopecuroides* (Larger Mouse-tail Moss), *Fissidens taxifolius* (Common Pocket-moss), *F. bryoides* (Lesser Pocket-moss) and *Orthotrichum lyellii* (Lyell's Bristle-moss) covered in gemmae.

The fine shoots of *Eurhynchium pumilum* were spotted growing over damp, fine calcareous soil under trees. On a sycamore by the river were two uncommon species, *Orthotrichum tenellum* (Slender Bristle-moss) and *Syntrichia papillosa* (Marble Screw-moss). The latter has gemmae on the midlines of the leaves, which have revolute margins and the nerves of the leaves have excurrent, straightish tips. The find of the day was *Myrnia pulvinata* (Flood-moss), a rare moss in Scotland, which David found on the silted bole of a tree. The previous record for this species was made 55 years ago for the East Perthshire bank of the River Tay. This record is useful confirmation that the species is still present.

We could not have asked for a better day and our knowledge of bryophytes and habitats were enhanced considerably by David's expertise. For the Urban Flora project, the silt-laden margins of Perth's River Tay have considerable value.

Alistair Godfrey & David Chamberlain

## 2. River Almond banks & woodland

Sunday, 3<sup>rd</sup> April

This was a joint BSBI/PSNS meeting. Nine of us had gathered at the appointed meeting place at a car park at Inveralmond to discover parking notices had been erected which would have resulted in us having to pay charges for the length of time our cars would have been parked there. While businesses are entitled to protect parking for their customers, the offensive wording on flourishing numbers of notices by faceless organisations is unjustified. There would have been sufficient parking on this day for everyone. Having explained our difficulty to a gateman at a nearby business, he agreed we could make use of the spare parking capacity outside the premises. We are pleased to thank and recognise the ABP Food Group in assisting our excursion to proceed.

We began by looking at wayside plants from the industrial estate, then followed the River Almond, crossing it by the old bridge and on to the River Tay. We recorded plants at different stages of development – there was not much in flower – a mix of planted specimens, naturalised plants of cultivated origin and natives. We recorded 82 taxa in 33 families. Grouping plants by family, genus, species and hybrid is an aid to identification; the hierarchy of similar features helps to create a mental picture for future reference.

The silty edges of the pavements of the industrial estate provide a good medium for annuals where there is reduced competition from other species. Annuals complete their development early in the season, including flowering and setting seed. Members of the Brassicaceae family produce a rosette of basal leaves, a solitary flowering stem from the base and flowers with four petals in a cross-shape, hence the previous name of Cruciferae.

Basal leaves come in different shapes, which aid identification. *Cochlearia danica* (Danish Scurvygrass), which is tolerant of salt-spray, has leaves with extended petioles (stalks) ending in a succulent, spade-like blade. *Cardamine hirsuta* (Hairy Bitter-cress) has pinnate basal leaves, where the leaf is divided into opposed leaflets from a single petiole. This feature is shared by two perennials in the same genus from different habitats that we saw; *C. pratensis* (Cuckooflower) and *C. amara* (Large Bitter-cress). The smallest and earliest members of the family likely to be seen are in the genus *Erophila* (Whitlowgrass). Their leaves have a short petiole, the blade widening gradually towards the apex and often toothed above. The result is a small, neat, basal rosette. *Arabidopsis thaliana* (Thale Cress) may be small to start with, but in comparison it has longer petioles and leaves with an elliptic outline forming a less neat rosette. Fruits are long, narrow and cylindrical, whereas *Erophila* fruit are much shorter and flattened.

Sheila and Howard Sadd helped us to identify shrubs which had been included in landscaping and other plants of cultivated origin, which had arisen from naturally-dispersed seeds. The large Asparagaceae family may be subdivided, and within one division we saw *Hyacinthoides non-scripta*, our native Bluebell, and *Ornithogalum umbellatum* (Star-of-Bethlehem), a white-flowered plant of which two subspecies are recognised. One may be native to Britain, but in Perthshire either is a recent arrival. Within this group we also identified and recorded three species of *Scilla*. Changes in taxonomy in this group have taken place over many years. The recent move of *Chionodoxa* to *Scilla* may be difficult to appreciate when the flowers of each look quite different as demonstrated in the photograph below. The plant whose flower is held above had been placed in the genus *Chionodoxa* and the lower flower belongs to a plant that has had longer recognition within the genus *Scilla*. This is *Scilla siberica* (Siberian Squill): it too was formerly placed in a different genus. But the most-travelled taxonomically of this group appears



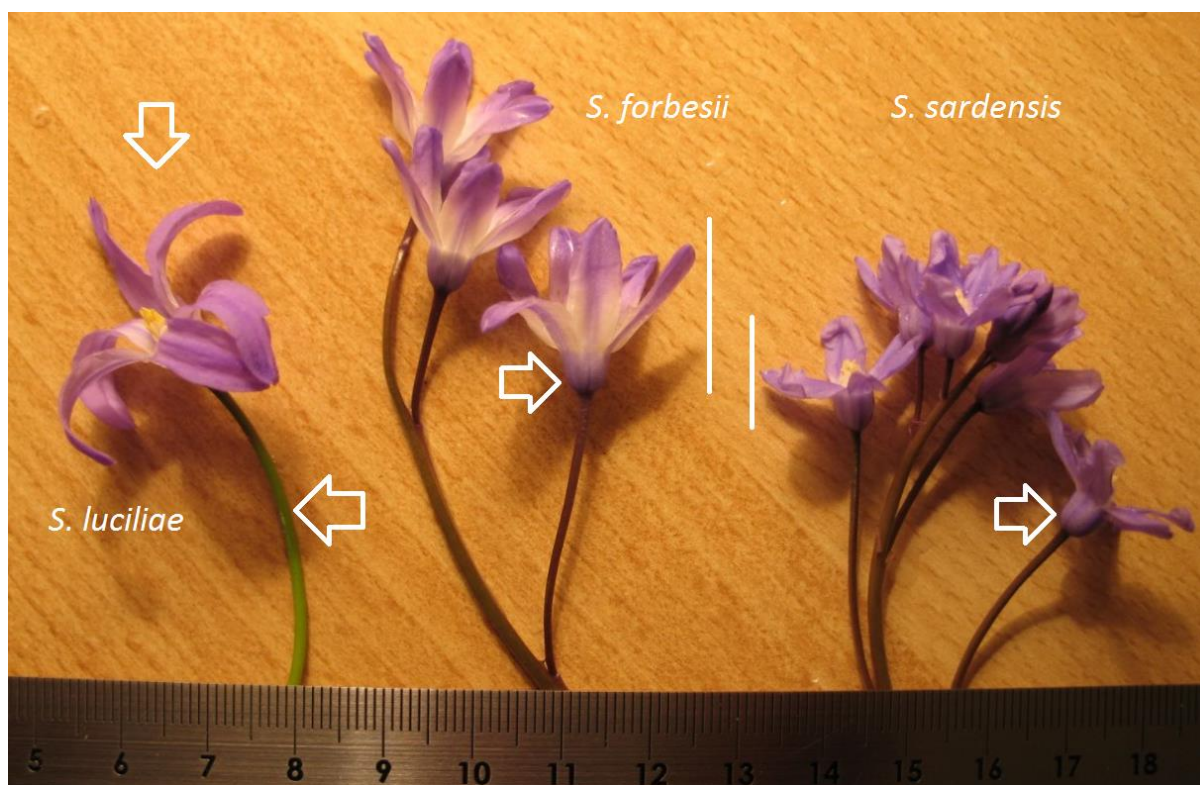
to be our native Bluebell, which has been in several genera with different specific names and is referred to as *Scilla festalis* in the *Flora of Perthshire*. Taxonomy should be treated like good driving advice: “always expect the unexpected”.

This Bulletin will be published when plants we saw will be in flower again. I thought a guide to identifying the three species formerly known as *Chionodoxa* would be useful, since they are becoming more widespread. The following photograph was taken under artificial light which has affected the colours. All I need say is, compare flower size and number and branching of the stem. They are, from left to right: *Scilla luciliae* (Boissier’s Glory-of-the-snow) and the two we saw; *S. forbesii* (Glory-of-the-snow) and *S. sardensis* (Lesser Glory-of-the-snow).

Alistair Godfrey



*Scilla* (formerly *Chionodoxa*) sp. flower (above); *Scilla siberica* (Siberian Squill) flower (below)  
© S. & H. Sadd



L–R: Flowers of *Scilla luciliae* (Boissier’s Glory-of-the-snow); *S. forbesii* (Glory-of-the-snow); *S. sardensis* (Lesser Glory-of-the-snow)

© Alistair Godfrey

**3. Scone Den – Wild plants in maintained woodland**

**Wednesday, 20<sup>th</sup> April**

Never having visited this site before, I was interested to read several lengthy accounts online. *The Scotsman* even featured it as a [Walk of the Week](#); the following paragraph is my digest:

Arthur Kinmond Bell played a key role in the history of Perth, and of Scotland as a whole. His efforts to produce one of the best-known blended whisky brands brought big profits, but he was also a keen philanthropist. Among other projects he bought Scone Den, also known as Quarrymill, which had been the site of quarries, mills and woodland since the 14<sup>th</sup> century; to be developed into a 27-acre woodland park. The Gannochy Trust was set up in 1937 to care for the estate and woodland, work that has continued to the present. Woodlands are often shunned by walkers – you can't see the views for the trees – but it makes for a perfect winter walk when the lack of leaves opens a wood up to the low sun. With the Annaty Burn to follow, and its surrounds packed with bird and plantlife (some rare), there is even a sense of purpose.

The dozen or so PSNS members who assembled in the car park by Scone Old Church enjoyed an evening of fine weather for their walk. Occasional halts to peer over the wooden railings into the rocky sides of the watercourse, or make short forays into the more accessible parts of the woodland, enabled us to identify a good number of the plants which were already on record in the BSBI database. Considering that most of these dated from Nick Stewart's visit in 1981, or even earlier, it was clearly time for a reappraisal of the situation.

It should be noted that a visit like ours, early in the season, may be expected to encounter a different scene from that in late spring or early summer when botanical recording is usually undertaken. Thus, many of the larger and showier flowering plants were still barely discernible as shoots: *Arum maculatum* (Cuckoo Pint), *Hyacinthoides non-scripta* (Bluebell) and *Lilium martagon* (Martagon Lily), for example. *Galanthus nivalis* (Snowdrop) and *Narcissus pseudonarcissus* (Daffodil) were evident neophytes; presumably planted or escapes from cultivation, but not unbearably out of place.

A few wild green plants specialise in making an early show of recognisable characters before the woodland leaf canopy develops. Here, a luxuriant display of ferns in the steep sides of the watercourse was apparent: *Asplenium scolopendrium* (Hart's-tongue) abounds; *Athyrium filix-femina* (Lady-fern), *Blechnum spicant* (Hard-fern), *Dryopteris dilatata* (Broad Buckler-fern), *D. filix-mas* (Male-fern), *Polystichum aculeatum* (Hard Shield-fern) appear more scattered.

In some fertile but unmanaged spots, particularly where occasional floodwaters spread silt on the burnside banks, a few small wild flowers were also beginning to make an appearance: *Prunella vulgaris* (Selfheal) probably the commonest; *Adoxa moschatellina* (Moschatel, Town-hall Clock) perhaps the rarest and hardest-to-spot.

Some previously unrecorded 'difficult' genera, whose specific taxonomy taxes the most determined botanists, were also evident. In the damp soil along the watercourse *Salix* (Willow) trees clearly thrive, and are being tended as part of its visual amenity. With only a few old fallen leaves underneath, we considered the evidence of bark and skin colour, bud shapes, and a few catkins; accordingly, *SS cinerea* subsp. *oleifolia* [*S. atrocinerea*], *caprea*, *euxina*, *myrsinifolia* and *viminalis* (Rusty, Goat, Crack, Dark, and Osier Willows) were newly identified for the records.

Most challenging of all to identify specifically, but worth recording as vital early providers of nectar and pollen for our bees and other threatened insects, were the *Taraxacum* (Dandelion) plants beginning to flower along our route. The fertile margin of the arable field at the beginning of our walk displays numerous of the more robust-growing section Ruderalia (Weeds), of which the only one named so far is *T. piceatum* (Pitch-marked Dandelion). A few more appeared on a sheltered damp bank where a local farm track crosses the burn in the middle of the wood; here section Celtica (Western Dandelions), like *TT duplidentifrons* and *gelertii* (Double-toothed and Gelert's Dandelions) predominated. Typical of the woodland margin habitat further along were members of section Hamata (Hook-lobed Dandelions) some of which could be more confidently diagnosed as *TT boekmanii*, *pseudohamatum*, etc., (Bökman's, False-Hooked, and other Dandelions).

Clearly this is a Woodland Park not just convenient for a pleasant stroll but also offering opportunities for further botanical studies.

Leslie Tucker

#### 4. Water of Ruchill, Comrie

Wednesdays, 27<sup>th</sup> April & 8<sup>th</sup> June

The first meeting took place on 27<sup>th</sup> April and was very popular, but some couldn't make this date and others were keen to see what differences there would be later in the year. A second excursion was run on 8<sup>th</sup> June and in all 15 different members attended over the two days.

The main object of the first visit was to identify spring woodland flora. There were some familiar like *Allium ursinum* (Ramsons), *Anemone nemorosa* (Wood Anemone), *Glechoma hederacea* (Ground-ivy), *Mercurialis perennis* (Dog's Mercury), *Potentilla sterilis* (Barren Strawberry) and *Primula vulgaris* (Primrose). *Sanicula europaea* (Sanicle) was an attractive addition; an umbellifer with shiny, palmate leaves. The white flowers of the starry-eyed *Stellaria nemorum* (Wood Stitchwort) were just coming into flower.

The glory of the woods was *Lathraea squamaria* (Toothwort). It is parasitic and lacking chlorophyll, hence its white fleshy leaves looking like teeth! The riverbanks here provide the largest populations in Mid-Perthshire. The banks of the River Almond near Perth have a good number of records too, but only one is recent.

We separated the three species of *Prunus*; *P. avium* (Wild Cherry or Gean) with its white flowers in spreading umbels, *P. padus* (Bird Cherry) with its emerging flowers in a tighter arrangement of pendent racemes, and *P. spinosa* (Blackthorn) with flowers on clusters of young shoots which appear before the leaves. There are also its omnipresent thorns.

All the species in the field layer except Ground-ivy can be considered ancient woodland indicators at this location, to which Bird Cherry can be added. Other indicators are also present.

The power of water was all too apparent at a bend in the Ruchill where large amounts of sand and gravel have been washed away during floods. Flood schemes have been put in place at different times and have had to adapt to the changing course of the river.

On our second visit we saw plants we had seen on our earlier visit, but which had not been in flower. Vegetational differences are very useful for identification when plants are not in flower, as demonstrated by Sheila and Howard Sadd in their selection of photographs of *Veronica* (Speedwells).



L–R: *Veronica montana* (Wood Speedwell); *V. chamaedrys* (Germander Speedwell);  
*V. hederifolia* (Ivy-leaved Speedwell), Water of Ruchill, Comrie, 8 June 2016

© S. & H. Sadd



The even distribution of hairs round the main stem in the first image is quite different to the strongly two-sided arrangement of hairs in the second. Looking at the teeth of leaf margins, they are regular and pointed in the first image; irregular and rounded in the second; and in the third, the lobes give the plant its name.

On our second visit we also saw two other speedwells, *V. serpyllifolia* (Thyme-leaved Speedwell) and *V. officinalis* (Heath Speedwell). The leaf shape and name of the first again need no further explanation; the second has finely-toothed, ovate-elliptic leaves which are hairy and arise in opposite pairs up the main stem where the inflorescence appears as a branched pair. The flowers of all five species are similar in shape, with solitary style and stigma and usually two stamens. Petal colour varies between species of Speedwell from different hues of blue to lilac, and some species have distinct patterns of colour from pale to dark.



Right: *Veronica officinalis* (Heath Speedwell), Beinn nan Oighreag, 31 August 2015 (© Alistair Godfrey)

Over both days 155 taxa were recorded in total. Comparison between late spring and early summer was useful to catch up on what had been seen during the first visit, but was not in flower until the second, and to see a different range of plants in flower at the start of the summer. By June the Toothwort had disappeared under other vegetation, showing why some plants need visits at certain times of the year to be seen.

Alistair Godfrey

## 5. Silver Glen (Ochils), Alva

Saturday, 14<sup>th</sup> May

Nine of us gathered at Alva Woodland Park car park on a bright morning with a cold biting wind more reminiscent of January than May. We wandered up through spring-green woodland full of birdsong and stopped off to look at the fenced-off Silver Mine shaft before emerging on to the open hillside where we stopped for lunch. By midday the wind had dropped and the sun shone warmly. We then followed a relatively new track zigzagging up the very steep south scarp of the Ochil Hills; the hillside here is grazed shorter than 5 cm by sheep. In the afternoon we were joined by Zoe Gardner who managed to locate us after a steep scramble across Silver Glen Burn. At the top of the zigzags a few ventured down the steep slope to the edge of the burn while the rest of us walked on to record farther up the track on the eastern side of The Nebit in monad NS8998.

Of particular note in the deciduous woodland were abundant clumps of *Brachypodium sylvaticum* (False-brome), frequent patches of *Circaea lutetiana* (Enchanter's-nightshade), a few large bushes of *Buxus sempervirens* (Box) planted a long time ago, scattered tufts of *Carex sylvatica* (Wood-sedge) and a few plants of *Moehringia trinervia* (Three-nerved Sandwort). *Mercurialis perennis* (Dog's Mercury) and *Oxalis acetosella* (Wood-sorrel) with various ferns predominated in the woodland field layer.

Of note on the open hillside were tiny plants of *Ornithopus perpusillus* (Bird's-foot, NS 89126 97695) near our lunch spot, *Pimpinella saxifraga* (Burnet-saxifrage, NS 891 977) beside the track and white flowers of *Sagina subulata* (Heath Pearlwort, NS 89035 97823) on a rocky outcrop. The find of the day was made by Jane Jones and intrepid followers who ventured down to the Silver Glen Burn where they found 17 flowering spikes of *Orchis mascula* (Early-purple Orchid, NS 89175 98312) in a new site for Clackmannanshire, growing among rocks

protecting them from sheep grazing. They also found *Origanum vulgare* (Wild Marjoram, NS 89172 98428) and *Asplenium adiantum-nigrum* (Black Spleenwort, NS 89175 98312) growing beside the burn. A total of 138 species were recorded for NS8997 (woodland and open hill) and 92 for NS8998 (hill track and Silver Glen Burn). Our thanks go to everyone who made this a very enjoyable and successful recording day.

Liz Lavery

## 6. Blairgowrie

Wednesday, 15<sup>th</sup> June

This was a joint meeting with the Botanical Society of Scotland, for their Urban Plants Project. Ten of us met at the riverside parking area in Blairgowrie on what can only be described as an appallingly wet day – the sort of day when none of us would have gone there individually to record plants but were happy to do so in good company in the name of a worthwhile project. John Grace had recce'd the town and decided the streets might not have a lot to offer, so we decided on a riverside circuit. The western side of the River Ericht north of the Blairgowrie road bridge has been well-covered in the past but on this occasion Brian Ballinger recorded it in the Urban Plants Project format, whilst we also recorded monads for the BSBI Atlas 2020. We walked northwards up the riverside path, examining first of all the grassy area adjoining the car park, where the yellow *Amsinckia micrantha* (Common Fiddleneck) was found in disturbed ground. Although this alien arable weed hardly deserves mention, it always creates interest with visitors to this area, as it is not so common everywhere. There has been quite a lot of amenity planting over the years along here, and Sheila and Howard Sadd put names to *Fraxinus angustifolia* (Narrow-leaved Ash) and *Carpinus betulus* (Hornbeam) 'Fastigiata' for us. Shrubs included *Cornus sanguinea* (Dogwood), but I noticed that the *Cotoneaster salicifolius* (Willow-leaved Cotoneaster), that used to grow where the path crossed over the burn, had disappeared owing to reengineering of the path.

The woodland down this burn is thick with ferns, including the locally rare *Polystichum setiferum* (Soft Shield-fern), but on this rainy day the steep-sided den wasn't so enticing. We did, however, see plenty of *P. aculeatum* (Hard Shield-fern), *Dryopteris borreri* (Borrer's Male-fern) and *D. dilatata* (Broad Buckler-fern) beside the track.

A good variety of common native and naturalised species were seen along this route, choicest among which were species indicative of the fact that this river side has been wooded for a long time, such as *Festuca altissima* (Wood Fescue), growing in conspicuous clumps, *Sanicula europaea* (Sanicle), *Carex sylvatica* (Wood Sedge) and *Veronica montana* (Wood Speedwell). *Trollius europaeus* (Globeflower) was spotted on rocks down at the riverside.

Just before the path descended to the Keathbank Mill footbridge a few small plants of *Asplenium scolopendrium* (Hart's-tongue Fern) were growing on a steep bank, slightly distant outliers of a colony that exists on the walls of the lade a bit downstream. It was another closely-related fern that provided one of the best records of the day, *Ceterach officinarum* [*Asplenium ceterach*] (Rustyback), four plants of which were growing on a high roadside wall as we returned down the eastern side of the river, following the A93 at this point. This bit of wall, which was in effect the outside of someone's garden wall, also yielded *A. ruta-muraria* (Wall-rue) and *A. trichomanes* (Maidenhair Spleenwort), but perhaps best of all was the *Poa compressa* (Flattened Meadow-grass) that grew near and on the top of it.

A grassy area produced our only orchid, *Dactylorhiza purpurella* (Northern Marsh-orchid), not particularly enjoying the frequent mowing. We tried to keep as close to the river as possible and at one point a flight of steps led right down to it, just at the point where flat rocks extend out into the river. Here we sat in the pouring rain eating our lunch, in full view of anyone crossing the main bridge, any thoughts of trying to keep dry long-gone. Just upstream from this lunch-spot was a scattered colony of *Lilium martagon* (Martagon Lily), rather striking with its well-spaced,



many-leaved whorls of oblanceolate leaves, even though it wasn't in flower. Another good plant down here was the handsome *Trifolium medium* (Zigzag Clover), and *Elymus caninus* (Bearded Couch) added a nice touch of woodland quality.

We completed our circuit back over the road bridge, having seen a very good range of common naturalised plants, as you would expect in this setting, with some nice woodland axiophytes thrown in. Time then to peel apart the soggy recording cards and notebooks and to make sense of our day's findings. In three monads we made 315 records of 177 taxa.

Martin Robinson

## 7. Cleish Lochs

Wednesday, 22<sup>nd</sup> June

The field meeting at Dow Loch and Lurg Loch was chosen because a previous [BSBI visit to the nearby Loch Glow in September 2015](#) had provided a wealth of freshwater flora: five *Potamogeton* spp. (Pondweeds), *Isoetes lacustris* (Quillwort), *Sparganium* spp. (Burr-reed) *Limosella aquatica* (Mudwort), *Callitriche* spp. (Water-starwort) and many others, and these two Lochs are only a short distance away, as is Black Loch, which also has a healthy flora.

Five of us explored these two neighbouring small lochs, and after extensive grappling etc. we found a single *Limosella aquatica* and a small patch of *Nuphar x sperriana* (Hybrid Yellow Water-Lily).

Loch Glow is a well-managed and busy fishing loch stocked with four trout species. This must result in plenty of nutrients in the water, though not enough to cause algal bloom. However, Dow and Lurg Lochs have only a few coarse fish and no angling, and the water is, presumably, almost completely devoid of nutrients and will just be pure acidic water. This no doubt explains the absence of plant life.

This is a good example of the value of negative results. We obviously know why plants occur where they do, but why plants are *not* where they are expected provides equally valuable and interesting data.

Sandy Edwards

## 8. River Tay bank at Murthly

Wednesday, 29<sup>th</sup> June

Ten of us gathered outside the east gates of Murthly Castle in an area the estate has provided for parking as a very thoughtful gesture. We found three casuals in this vicinity: *Linaria purpurea* (Purple Toadflax), *Pentaglottis sempervirens* (Green Alkanet) and *Polemonium caeruleum* (Jacob's-ladder).

Having Les Tucker in our company, we were able to appreciate four different kinds of Dandelion: *Taraxacum lacistophyllum*; another was probably *T. lamprophyllum* and another we were able to place in Section *Naevosa* by the spotting on its leaves. This is a critical genus whose members are not easy to identify, many of which are closely-related.

*T. lacistophyllum* is a small member of the genus, with very finely-divided leaves and



Les Tucker identifying plants of interest for our group,  
Murthly, 29 June 2016  
© F.M. Tulley

found on bareish, dry, neutral to calcareous soils. *T. boekmanii* was another Les identified for us, found on a grassy bank by the Caputh Bridge. The red colouring on the midrib of this species is distinctive and spreads out into the primary veins, reminiscent of *Beta vulgaris* subsp. *cicla* var. *flavescens* (Swiss Chard).

The riverbank was our main focus. *Anthyllis vulneraria* (Kidney Vetch), *Astrantia major* subsp. *major* (*Astrantia*) and *Galium boreale* (Northern Bedstraw) are representatives of plants of free-draining soils. *Astrantia* is naturalised; it has palmate leaves divided into five or more lobes and has white-coloured, spreading bractioles that look like petals. *G. boreale* occurs in the mountains and down the banks of the River Tay to Perth. The leaves are narrow and cross-shaped, with a deeply recessed midrib and one prominent vein on each side, which are diagnostic.

A specialist of the drier neutral to calcareous soils of the riverbanks of Perthshire is *Thalictrum minus* (Lesser Meadow-rue). Its name derives from the shape of its leaves and its flowers arise in spreading panicles, coloured yellow by their anthers, having no petals.

We identified three species of *Hypericum* in dry soil and another in permanently moist to wet soil. Taking the first three, the most distinctive leaf character belongs to *H. hirsutum* (Hairy St John's-wort) which has distinctly hairy leaves. The one taking its name from the character of its leaf is *H. perforatum* (Perforate St John's-wort), due to the presence of translucent glands, but all four species identified have translucent glands to varying degrees. *H. pulchrum* (Slender St John's-wort) is a smaller plant, more erect throughout and with neat, sessile, ovate leaves at each node. Perforate St John's-wort has much longer leaves, which are elliptic in shape with a short, but obvious petiole. *H. tetrapterum* (Square-stalked St John's-wort) is the species of wetter soils. Its main stem is angular with ridged margins and different from other species in the genus which have rounded, or at most raised, edges on the stem, but not ridges.

In other damp soils we identified *Dactylorhiza fuchsii* (Common Spotted-orchid) flowering in an opening of the adjacent wood and we counted 88 *Dactylorhiza x venusta* nearby, the hybrid with *D. purpurella* (Northern Marsh-orchid). In wetter soil on open ground we added *Veronica scutellata* (Marsh Speedwell), another in the genus to add to the list made at Comrie. The diagnostic feature of this member is having only one inflorescence at a node that is present in a leaf axil.

Alistair Godfrey

## 9. Wood of Doune (BSBI excursion)

Saturday 9<sup>th</sup> July 2016

This excursion in the BSBI summer programme was also advertised to PSNS members. A brave or perhaps foolhardy twelve met on an extremely wet morning at Doune Ponds car park and decided to head for the woods where we might find a little shelter. The object of the meeting was to record for the next BSBI Atlas spanning the years 2000–2020. We targeted monads with few or no records since 2000. The area immediately around Doune Ponds had been surveyed by the PSNS Botanical Section in 2015 but the rest of the area had not been explored recently.

We began the day recording in two monads within Wood of Doune, NN7201 and NN7101. Although new houses had been built at the edge of the wood we still managed to record 88 species within a small part of the wood in NN7201. Of note here were the woodland sedge *Carex remota* (Remote Sedge) and *Ceratocarpus claviculata* (Climbing Corydalis) sprawling through the undergrowth. Wood of Doune is very varied with mixed oak–birch woodland and planted conifers and we recorded a grand total of 168 species in monad NN7101.

On the edge of a drainage ditch Theo Loizou identified *Carex laevigata* (Smooth-stalked Sedge) which is locally scarce in VC87. It was growing beside *Carex binervis* (Green-ribbed Sedge) with which it is easily confused. The two species are seldom seen together so this was an excellent chance to compare them, the utricle shape, leaf cross-section and ligule shape.

Zoe Gardener discovered a clump of *Anaphalis margaritacea* (Pearly Everlasting); extraordinarily, this very unusual introduced garden species had been recorded from the Wood of Doune in 1970. There are no other records for it in VC87. I surmise this is the same plant or a direct descendant.

Beside the path on the edge of the woodland was a lovely display of orchids, both *Dactylorhiza purpurella* (Northern Marsh-orchid) and *Dactylorhiza fuchsii* (Common Spotted-orchid) and one or two magnificent giant purple spikes of the hybrid *D. x venusta* (*D. fuchsii* x *purpurella*).

After a convivial lunch stop under cover in the wood we ventured westwards along the grassy north bank of the River Teith as far as the ruins of St Aedh's Church, recording 60 species in NN7102 and 47 species in NN7002. The most unusual find of the day were two or three plants of *Sedum spurium* (Caucasian Stonecrop) established on top of an old wall near the ruined church. We returned to the car park rather damp but happy, having had a very successful day's recording in very good company.

Liz Lavery

## 10. East Haven, nr. Carnoustie

Saturday, 23<sup>rd</sup> July

Despite a favourable weather forecast, only four members turned up for an enjoyable day at East Haven. Perhaps the prospect of traffic jams due to the UK Seniors Golf Tournament at Carnoustie on the same day put people off.

We were met by Wendy and Anne from the local Biodiversity Community Group, who welcomed us to their 'patch' and we discussed their forthcoming BioBlitz.

Our initial foray was to the west, where we hoped to find the local rarity *Rhinanthus angustifolius* (Greater Yellow-Rattle). The SSSI between the houses and the shore was in full bloom. Particularly noticeable was *Knautia arvensis* (Field Scabious) which we tried to turn into previously reported *Scabiosa columbaria* (Small Scabious) without success. Several garden escapes were evident in the tall grass which dominated the area. Towards the end of the houses we finally found a couple of slightly damaged specimens of *Rhinanthus* which were probably *R. angustifolius*, but despite further searching we could find no more. Instead, there was plenty of *Thalictrum minus* (Meadow Rue) in full flower, and some *Allium oleraceum* (Field Leek) with its characteristic half-round leaves and twin bracts.

After a pleasant and very civilised lunch on a picnic table by the car-park, we headed east along the dunes towards Arbroath. Our first find keyed out as *Malva neglecta* (Dwarf Mallow). We then moved down onto the sands to find sheets of seeding *Honckenya peploides* (Sea Sandwort), *Cakile maritima* (Sea Rocket) and two species of *Atriplex*: *A. laciniata* (Frosted Orache) and *A. glabriuscula* (Babington's Orache). The dunes were very attractive, with masses of sky-blue *Campanula rotundifolia* (Bluebell/Harebell) alternating with the lilac/purple Scabious and the yellow heads of *Senecio jacobaea* (Common Ragwort). *Tragopogon pratensis* (Goat's-Beard) seed-heads were much in evidence as was *Ononis repens* (Common Restharrow) with its sticky, scented leaves. We skirted past a large clump of deadly *Conium maculatum* (Hemlock) with its spotted stems, and the somewhat similar *Smyrniolus olusatrum* (Alexanders) which is reputedly edible, but why risk a mistake?

Our turning-point was the meadow in which *Anacamptis pyramidalis* (Pyramidal Orchid) has been found in the past. Today there was just a herd of cattle in the distance, and some smaller plants enjoying the base-rich soil. These included *Briza minor* (Quaking Grass), *Thymus polytrichus* (Wild Thyme) and *Euphrasia* sp. (Eyebright). As we made our way back, we stopped by a small geranium with small lilac flowers, hoping it might be a new species for the day. Examining the seeds under a hand-lens showed a magnificent set of swirling ridges covering the surface. It was just a pale form of *Geranium molle* (Dove's-foot Cranesbill), yet in the seeds we had observed yet another small miracle of nature for the first time.





(L) *Atriplex laciniata* (Frosted Orache); (R) *Atriplex glabriuscula* (Babington's Orache),  
 East Haven, 23 July 2016  
 © F.M. Tulley



Botanising in the dunes, East Haven, 23 July 2016  
 © F.M. Tulley

Mark Tulley

**11. Taymount Wood & King's Myre**

**Wednesday, 3<sup>rd</sup> August**

Seven of us assembled at the start of Taymount Wood to look along the verges leading to King's Myre. Verges in plantation forestry can have a surprising variety of plants, often offering dry and wet habitats and a chance to compare species within the same genus occupying different habitats such as *Achillea millefolium* (Yarrow) and *Achillea ptarmica* (Sneezewort).

There are usually a few surprises to be found and an opportunity to observe less common species which were present before woodland was planted or have colonised since then. *Rorippa microphylla* [*Nasturtium microphyllum*] (Narrow-fruited Water-cress) found in a ditch near the start demonstrated the fine patterning of its seed coat. Elsewhere, two species of starwort were observed; *Callitriche stagnalis* (Common Water-starwort) of muddy puddles and *C. brutia* subsp. (var.) *brutia* (Pedunculate Water-starwort) which has peduncles longer than 2 mm.

On drier disturbed ground there was a small patch of the transient perennial *Hypericum humifusum* (Trailing St John's-wort) with its small yellow flowers and spreading habit. Another small spreading plant seen with very small flowers was *Ornithopus perpusillus* (Bird's-foot) which has pinnate leaves and fruit like birds' toes. The seeds are carried and dispersed by the tyres of forestry vehicles. Two other members of the same family were *Trifolium campestre* (Hop Trefoil) and *T. arvense* (Hare's-foot Clover).

*Gnaphalium sylvaticum* (Heath Cudweed) was found in similar habitat. This has a disjunct distribution in Britain, having disappeared from many of its scattered sites in the English Midlands, retaining only a small foothold in Wales, retaining strongholds to the south-east and south-west of London and also having been lost across much of Scotland, especially the south and west. Its greatest recorded stronghold is north-east Scotland.

We had lunch by the fishing hut. Chat ranged over a number of subjects and touched on a Shakespearean theme. From there Bert Barnett gave us a fine rendition of Adam McNaughtan's song 'Oor Hamlet'. This is a cleverly written song and its shifting rhythms aren't easy to sing: Bert performed wonderfully.

The most unusual sighting we had was a band of *Daucus carota* (Carrot) in flower along the edge of a field before reaching King's Myre. This wasn't a full crop and may have arisen from self-sown seed from the previous year's crop.

Patches of *Pyrola minor* (Common Wintergreen) were in flower under the shade of trees at the start of King's Myre. Another attraction was *Corallorhiza trifida* (Coralroot Orchid) which favours fluctuating water levels between winter and summer, especially under willows.

Between tree cover and open water lies an area of fen, which is botanically rich as a habitat. This series of transition has been designated a Site of Special Scientific Interest. One of the plants seen at the water's edge is *Cicuta virosa* (Cowbane) which is a highly toxic umbellifer, hence its name. Another plant of the margin was *Ranunculus lingua* (Greater Spearwort) which is essentially a large buttercup with broad leaves.

Aquatics included *Hippuris vulgaris* (Mare's-tail), *Menyanthes trifoliata* (Bogbean) and *Potamogeton natans* (Broad-leaved Pondweed). Most of the open water was filled with *Elodea canadensis* (Canadian Waterweed) giving a distinct impression that the water chemistry had been affected by nutrients and was highly eutrophic.

213 different taxa were recorded from both sites in total: an excellent area to learn id.

Alistair Godfrey





(L) *Gnaphalium sylvaticum* (Heath Cudweed), Taymount; (R) *Ranunculus lingua* (Greater Spearwort), King’s Myre, 3 August 2016  
© F.M. Tulley

**12. Kinnoull Hill, Perth**

**Wednesday, 7<sup>th</sup> September**

Seven of us were fortunate to have the expert guidance of Richard Brinklow for this excursion on learning how to identify lichens. This was a joint excursion between the PSNS and the Botanical Society of Scotland as part of the Urban Flora of Scotland project. We would have met in Perth itself rather than the slopes of Kinnoull Hill were it not for the lack of lichens in the Fair City. The cleaner and moist air surrounding the hill and different range of habitats there provided a better teaching experience.

Richard showed us the different forms of lichen and told us what to look for to tell species apart. I wrote three sheets of A4 notes on identification with records of lichens that had been identified for us. Brian Ballinger and I collated the records and Richard corrected these later and added a few others: these are all set out below. This is not an exhaustive list as Richard avoided showing us species that are difficult to identify, therefore this is a student’s list. Hopefully, those who might be encouraged to take up identification of lichens might follow our route with a reliable identification book and visit the same spots we did with the help of the GPS references.

<b>NO 1354 2353,</b> <i>Evernia prunastri</i> <i>Lepraria</i> sp <i>Parmelia sulcata</i> <i>Lecanora chlarotera</i> <i>Usnea subfloridana</i> <i>Ramalina farinacea</i>	<b>dead Whitebeam <i>Sorbus aria</i>, bottom of Corsiehill</b> <i>Xanthoria parietina</i> <i>Melanelixia fuliginosa</i> subsp. <i>glabratula</i> <i>Hypogymnia physodes</i> <i>Phlyctis argena</i> <i>Cladonia coniocraea</i> <i>Cladonia fimbriata</i>
<b>NO 1349 2340,</b> <i>Hypogymnia tubulosa</i> <i>Pseudevernia furfuracea</i> s. <i>lat.</i>	<b>on branches of Sloe <i>Prunus spinosa</i>, edge of ‘sledge run’</b> <i>Fuscidea lightfootii</i> <i>Tuckermannopsis chlorophylla</i>
<b>NO 1349 2340,</b> <i>Platismatia glauca</i>	<b>on birch <i>Betula</i> sp. nearby</b> <i>Trentepohlia</i> (alga)
<b>NO 1364 2338,</b> <i>Usnea dasypoga</i> (Syn. <i>U. filipendula</i> ) <i>Usnea subfloridana</i>	<b>on Oak <i>Quercus</i> sp., above quarry</b> <i>Bryoria fuscescens</i> <i>Chaenotheca ferruginea</i>
<b>NO 1365 2328,</b> <i>Usnea hirta</i>	<b>on Scots Pine branch <i>Pinus sylvestris</i> by path</b>
<b>NO 1365 2328,</b> <i>Hypogymnia physodes</i>	<b>on Rowan <i>Sorbus aucuparia</i> nearby</b> <i>Usnea subfloridana</i>



<i>Parmelia sulcata</i>	<i>Pseudevernia furfuracea s. lat.</i>
<i>Platismatia glauca</i>	<i>Melanelixia subaurifera</i>
<b>NO 1367 2325,</b> <i>Arthonia radiata</i>	<b>on Rowan S. <i>aucuparia</i></b> <i>Physcia aipolia</i>
<b>NO 1373 2291,</b> <i>Cladonia diversa</i> <i>Cladonia rangiformis</i>	<b>rock exposure</b> <i>Peltigera hymenina</i> <i>Amandinea punctata</i>
<b>NO 1369 2284</b> <i>Lecanora carpinea</i>	
<b>NO 1367 2280,</b> <i>Lecanora intricata</i> <i>Buellia sp.</i> <i>Rhizocarpon reductum</i> <i>Caloplaca citrina s. lat.</i>	<b>on history cairn at summit</b> <i>Lecanora polytropa</i> <i>Lecanora dispersa</i> <i>Caloplaca holocarpa s. lat.</i>
<b>NO 1366 2280,</b> <i>Caloplaca saxicola</i> <i>Caloplaca holocarpa s. lat.</i>	<b>indicator cairn at summit</b> <i>Caloplaca citrina s. lat.</i>
<b>NO 1364 2277,</b> <i>Parmelia saxatilis</i> <i>Lecanora polytropa</i> <i>Lecidea sp</i>	<b>rock exposure south-west of summit</b> <i>Physcia tenella</i> <i>Lecanora gangaleoides</i> <i>Cladonia pyxidata</i>
<b>NO 1364 2277,</b> <i>Xanthoria parietina</i>	<b>on Elder <i>Sambucus nigra</i></b>
<b>NO 1365 2274,</b> <i>Physconia distorta</i> <i>Lecanora expallens</i>	<b>on Ash <i>Fraxinus excelsior</i></b> <i>Phaeophyscia orbicularis</i> <i>Lecidella elaeochroma</i>
<b>NO 1365 2270,</b> <i>Caloplaca citrina s. lat.</i>	<b>on stone viewpoint 'seat'</b> <i>Ochrolechia parella</i>
<b>NO 1391 2272</b> <i>Lecanora albescens</i> <i>Protoblastenia rupestris</i>	<b>at Tower</b> <i>Verrucaria nigrescens</i>
<b>NO 1397 2308</b> <i>Cladonia polydactyla</i> <i>Hypocenomyce scalaris</i>	<b>on Scots Pine <i>P. sylvestris</i>, next to clear-fell</b> <i>Chrysothrix candelaris</i> <i>Trentepohlia (alga)</i>
<b>NO 1360 2350,</b> <i>Xanthoparmelia conspersa</i> <i>Rhizocarpon geographicum</i>	<b>rock outcrop at Corsiehill</b> <i>Candelariella vitellina</i> <i>Collema sp</i>
<b>NO 1352 2345,</b> <i>Caloplaca sp.</i> <i>Peltigera praetextata</i>	<b>Corsiehill Quarry</b> <i>Opegrapha gyrocarpa</i>
<b>Rocks at edge of road</b> <i>Psilolechia lucida</i> <i>Physcia caesia</i>	<i>Acarospora fuscata</i>
<b>Rock at car park</b> <i>Lecanora muralis</i>	

Alistair Godfrey



Examining bark for different kinds of lichen, Kinnoull Hill, 7 September 2016  
© Brian Ballinger



*Xanthoria parietina* on Elder *Sambucus nigra*, Kinnoull Hill, 7 September 2016  
© Alistair Godfrey



***Pseudorchis albida* (Small-white Orchid) discovered in West Perth (v.c.87)**

John Snodin and Roy Sexton found six flowering spikes of *Pseudorchis albida* (Small-white Orchid) growing beside the footpath to Callander Craig, Braeleny above Callander village on 11 June 2016. This is the first confirmed record for this species in West Perth since the 1970s. The tiny plants, 5-8 cm high, were growing in herb-rich grassland with other orchids *Gymnadenia borealis* (Heath Fragrant-orchid) and *Platanthera chlorantha* (Greater Butterfly-orchid), *Succisa pratensis* (Devil's-bit Scabious), *Carex flacca* (Glaucous Sedge), *Potentilla erecta* (Tormentil), *Anthoxanthum odoratum* (Sweet Vernal-grass), *Festuca ovina* (Sheep's-fescue) and the heaths *Calluna vulgaris* (Heather) and *Vaccinium myrtillus* (Bilberry) nearby. Base-enriched areas on the west side of the road in the area known as 'the Commonty' on Braeleny Farm are rich in orchid species (MG5, MG3, M10). *Trollius europaeus* (Globeflower), *Orchis mascula* (Early-purple Orchid), *Neottia ovata* (Common Twayblade) and *Ranunculus auricomus* (Goldilocks Buttercup) are present in unusually high numbers. *Cirsium heterophyllum* (Melancholy Thistle) is also there, though under threat from grazing by cattle. It is an outstanding site, probably the best site for orchid species in West Perth, but has never been adopted as an SSSI. The discovery of *P. albida* makes it exceptional.

Liz Lavery



*Pseudorchis albida* (Small-white Orchid) growing beside the footpath,  
Callander Craig, 11 June 2016  
© Roy Sexton; John Snodin



### Observing early wild flowers in sheltered locations

In February 2016, on travelling from Dundee’s West End to the PSNS Botanical Section committee meeting, I remarked that a few *Taraxacum* (Dandelion) flowers were already out on sunny south-facing banks around Invergowrie Bay, whereas none were evident on the north side of the Sidlaws. As this was noted in the minutes, I followed up in 2017; showing the committee a photo of one from Kingoodie. In the landscape photo, you can pick out a splash of yellow on the snow-dusted bank.

Taraxacology is not for the faint-hearted; so, I was delighted to hear two of the BSBI Vice-county Recorders present promptly giving identifications as *T. polyodon* (Many-toothed Dandelion), confirming my own.



The close-up photo shows some distinguishing features of this robust herb of *Ruderalia* (Marginal Weeds) section, as abstracted from Dudham & Richards’ BSBI Dandelion Handbook No. 9: “lateral lobes strongly dentate (with teeth black-tipped) – appropriate to its specific name; terminal lobe on early (outer rosette) leaves small and triangular with apex subacute, on later (inner) leaves much larger, dentate and divided – affiliating to *Ekmania* (Heterophyllous) group; exterior flower bracts claw-shaped, spreading to recurved, green suffused with purple; &c.”

It is proposed to hold an early spring meeting in 2017 to visit the woods and shoreline at Kingoodie, so it may encourage prospective attendees to learn that there are several other rarer and distinctly different species thereabouts. My next photo shows a few plants even flourishing along the sea-wall.







The next close-up, photographed on 1<sup>st</sup> April 2016, allows us to identify a species which had previously only been recorded south of the Forth. Could seeds have arrived here with ballast dumped by boats returning from carrying Kingoodie flagstones for the streets of London and elsewhere?

Note some of the details which particularly distinguish *T. fusciflorum* (Brown-flowered Dandelion): “in the composite flower head, densely-marked stripes on the back of the outermost florets’ ligulate petals are pedagogically appropriate to its specific epithet; throughout the clump, shapes of dissected leaves indicate a

well-developed member of *Hamata* (Hook-lobed) section”.

Let’s see if we can find more in this favoured environment on the Perthshire Riviera!

Leslie Tucker

### Botanical books available to borrow

The Section has a number of books for plant identification, which were bought from Section funds and were held at the A.K. Bell Library for borrowing by members. This arrangement was made with the best of intentions, but hasn’t worked. Identification books need to be used in the field or at home with collected specimens. They have now been removed from the Library and will be available for borrowing at the Section’s AGM, excursions and winter talks.

I will bring all of the books to the AGM, and any member may borrow a book that has not been reserved by another member. Books may be borrowed at any time if members let me know in advance in order that I can bring the required book to an indoor meeting or excursion, or hand it over to another person if I am not able to. I will bring any book likely to be useful to an excursion if it is available. A book may be borrowed for a maximum period of 6 weeks depending on demand. I will keep a note of who has borrowed each book and when it is to be returned.

I will be keeping these books at my home, which will be of no particular benefit to me as I have personal copies of most of them. If this arrangement does not work the only alternative will be to sell the books and deposit the proceeds in the Section’s bank account. Hopefully, this will not be necessary and we will enjoy the use of these books and increase our knowledge of plants.

Books available are on the following list:

Fitter, R. & Fitter, A.	<i>Collins guide to grasses, sedges rushes &amp; ferns</i>
Jermy, A.C. <i>et al.</i>	<i>BSBI Handbook No 1 – Sedges</i> 2 <sup>nd</sup> edition 1982
Tutin, T.G.	<i>BSBI Handbook No 2 – Umbellifers</i> 1 <sup>st</sup> edition 1980
Lousley, T.E. & Kent, D. H.	<i>BSBI Handbook No 3 – Docks and knotweeds</i>
Meikle, R.D.	<i>BSBI Handbook No 4 – Willows &amp; poplars</i>
Moore, J.A.	<i>BSBI Handbook No 5 – Charophytes</i>
Rich, T.C.G	<i>BSBI Handbook No 6 – Crucifers of Great Britain &amp; Ireland</i>

- Graham, G.G. & Primavesi, A.L. *BSBI Handbook No 7 – Roses of Great Britain & Ireland*  
Preston, C.D. *BSBI Handbook No 8 – Pondweeds of Great Britain & Ireland*
- Dudman, A. A. & Richards, A.J. *BSBI Handbook No 9 – Dandelions of Great Britain & Ireland*
- Rich, T.C.G. & Rich, M.D.B. *Plant crib 1988*  
Rich TCG *et al.* *Plant crib 1998*
- Rose, F *The Wild flower key: British Isles & north-west Europe*

Alistair Godfrey

### Section Bulletin

The 39 Bulletins which the Botanical Section has published since 1978 include accounts of over 370 excursions (including one or two PSNS Parent Body excursions), mostly in Perthshire but also visits to most neighbouring vice counties. To help find reports for particular locations, I have prepared a spreadsheet index of all excursion locations reported, with the relevant vice county number(s) added and links to the online archive of Bulletins. If anyone would like a copy, please [email](#) me.

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