

PERTSHIRE SOCIETY OF NATURAL SCIENCE

BOTANICAL SECTION

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Editorial

The internet is the place where nowadays everyone goes for information. I am still totally amazed at the coverage and speed of web browsers; it seems you can type in a request for information to a program like Google on no matter how obscure a topic, and within seconds you can access pages and pages of, usually, reliable information. The PSNS has now realised the potential this has for publicising the Society and its Sections. It has commissioned a Perth College student to design its website, and a demonstration of an initial draft by the student was well received at the recent Members' evening. This Section's entry had information on meetings and excursions, together with some attractive flower pictures and information and references to bodies similar to our own. The Section's committee has asked Liz Lavery to act as our co-ordinator to develop and, most importantly, maintain our site - I am sure she will welcome ideas and help in due course.

With digital photographs now overtaking colour slides as the preferred means of flower photography, even if technically they still have some distance to go, this bulletin will have to turn its mind to including attractive examples to accompany these reports. On grounds of cost however, we think that will mean only black-and-white reproduction in the first instance. I have every confidence (I hope!) that it won't take long to learn how with Microsoft Word. So maybe our interesting set of summer excursions will be your opportunity.

A short while ago, the sad news was received of the death on 3rd March 2007 of Prof. Clem Jones, a former member; after retiring from Imperial College, London, he was active in this Section between the 1980s until 2001 and will have been known to those of us who were members then.

I should like to thank sincerely all the contributors of Field Meeting reports - without you the Bulletin would not exist.

19.3.07

Richard Thomas - Editor

Reports from 2006 Field meetings

1. Spring flowers by the River Tay at Dalguise

Sunday, May 14th

We had fine weather and a good turn-out on our first excursion of the season. Our day started at the Dalguise Beats and we were able to use the car park there thanks to the assistance of the ghillie for that beat, Stan Pelc. We were also assisted by another local resident, who is also one of our members, Faith Anstey. Faith was able to guide us with her local knowledge and was keen to see what other members would find in her local patch.

The group split in two to cover two tetrads (a tetrad is a recording area of 2km x 2km). By mid-day one party had succeeded only in travelling about 300 metres from

the car park; the other group went further to explore the outward extent of "Dowelly Island" as it is described on Ordnance Survey maps. One reason for the slow progress was the variety of the flora we found, the other was due to a lot of head-scratching in trying to identify plants where the characters for identification were immature, or had not formed. That being said, our identification skills were given a good airing from the previous year and made us think more about what we were looking at. The species we found were typical of free-draining soils that are enriched by base elements: *Galium boreale* (Northern Bedstraw), *Anthyllis vulneraria* (Kidney Vetch), *Cerastium arvense* (Field Mouse-ear), *Hypericum hirsutum* (Hairy St. John's-wort) and *Lepidium heterophyllum* (Smith's Pepperwort). As on many of our river systems, the banks had been invaded by *Fallopia japonica* (Japanese Knotweed) and the immature leaves of *Impatiens glandulifera* (Himalayan Balsam) were common in the damp hollows.

In the afternoon we moved upstream to Lamb Island. We improved on our maximum catch of 130 records for a tetrad to 150 records. Among the plants of interest were *Adoxa moschatellina* (Town-hall Clock), the perennial spring-time favourite, *Alisma plantago-aquatica* (Common Water-plantain), six species of sedge including *Carex vesicaria* (Bladder-sedge), *Pimpinella saxifraga* (Burnet-saxifrage), *Teesdalia nudicaulis* (Shepherd's Cress), and a much admired and photographed specimen of *Primula x polyantha* (*P. veris x vulgaris*) (False Oxlip). Two less common species were *Thalictrum minus* (Lesser Meadow-rue) and *Vicia lathyroides* (Spring Vetch), the latter being spotted growing on a track by Lynne Farrell.

Alistair Godfrey

2. Willows and other encounters, Haugh of Kercock and the Bloody Inches Wednesday, 24th May

We parked along the track by the fishermen's hut on the NW corner of Bloody Inches, on the south bank of the Tay. From there the group ambled slowly along the main channel, towards the NE corner. The evening was fine and clear.

The leader's main objective was to focus the caucus's attentions on Willows, *Salix* spp., growing abundantly on the shingle and sandbanks beside the shallower inner flood-channels. In Britain, *S. viminalis* (Common Osier) is considered to be an archaeophyte of E. European origin and usually encountered as cultivated mono-clonal single-sex plantations. However, along the Tay and its tributaries it forms well-naturalised, vigorously reproducing, mixed colonies. Among the hundreds of 'pure' *S. viminalis* seedlings growing here, we also discerned hybrids with *S. purpurea* (\times *rubra*), *caprea* (\times *smithiana*), *cinerea* (\times *holosericea*), & *myrsinifolia* (\times *seminigrans*).

Of course there were distractions for the less salicologically-enthralled. *Primula veris* (Cowslips) and *Ononis repens* (Rest Harrow) were flowering profusely in the lightly-grazed grassland, and a few rarer plants were also noted.

Orchids, especially *Dactylorhiza fuchsii* and *D. purpurella*, known to give a good flower display here later, were only evident as old seed heads with leaf-tips just appearing below.

Daffodils, *Narcissus* spp. *pseudonarcissus* & *poeticus*, doubtless originating as garden bulbs or seeds carried here in spates, were now forming patches of vegetatively-splitting clumps and setting seed.

On the wet shingle a flood-battered tuft of reed-grass, tentatively considered as *Calamagrostis purpurea*, was sampled for propagation and confirmation later. *Filipendula vulgaris* (Dropwort), known to be established on the field embankment, was showing only a few leaves as yet.

Les Tucker

3. Sidlaw's blooming meadows, Beal Hill, Rait

Wednesday, 31st May

About a dozen PSNS members met at Rait, then proceeded about a kilometre N up the road to park at the pass over the Sidlaws. We were joined later by the farmer's wife, keen to learn about the flora of their land.

The damp and shady roadside banks here have a good population of *Saxifraga granulata* (Meadow Saxifrage) and *Anemone nemorosa* (Wood Anemone) with pink flowers. *Orchis mascula* (Early Purple Orchids) here was still only in bud. Catkins on a few trees of *Salix caprea* (Goat Willow) were almost over. Just over the pass, a spring area seeping downhill NW supported a large patch of *Carex disticha* (Brown Sedge)

We walked S up the track towards the ancient Beeches (*Fagus sylvatica*) and Scots Pines (*Pinus sylvestris*) on the steep N- and E-facing slopes and low cliffs of Beal Hill. Plants here showed the more calcareous nature of the crumbling igneous rock: *Sanguisorba minor* (Salad Burnet), *Koeleria macrantha* (Crested Hair Grass) and Stonecrops (*Sedum album* and *S. fosterianum*). On the edge of the cliff a couple of plants of *Orchis mascula* (Early Purple Orchid) were in full flower.

On the flattened hilltop grassland the dark blue flowers of *Viola lutea* (Mountain Pansy) were very photogenic. A few plants of *Antennaria dioica* (Mountain Everlasting) and *Gymnadenia borealis* (Fragrant Orchid) have been seen here previously but were not evident on our visit.

Springs on the SE side of the hill provided interest on the descent. We were particularly intrigued by a plant which the BSBI Atlas indicates (without a distribution map) is found in fenland: *Urtica galeopsifolia* (Stingless Nettle). Martin Robinson demonstrated its characteristics to the sceptical; some similar-looking plants proved not so stingless though – hybrids perhaps? Docks, *Rumex crispus* and *R. obtusifolius*, here may also have produced a hybrid, but seed study later in the year is required.

Les Tucker

4. Mud, mud... Seggieden, Insherrit Island and the Tay Estuary

Sunday, June, 11th

Ten of us gathered in Glencarse on a fine morning and transferred to Seggieden, the base of David Clarke who owns Tay Salmon Fisheries Co. Ltd, which includes the ownership of a considerable length of the river bank on the upper Firth of Tay. This extremely interesting area, the old home and stamping-ground of Col. Henry Maurice Drummond-Hay, is unique in Perthshire for its mixture of natives and aliens, lying immediately downstream of Perth as it does. Naturalised species such as *Rudbeckia laciniata* (Coneflower) are so well established here on the side of the Tay that the vegetation has a distinctly foreign look in places.

We split into two groups. One was guided out to Insherrit Island by Dave Gardiner, who was a netsman on the Tay for 20 years and is now employed by David Clarke. The other group worked their way eastwards from the railway crossing towards the Fluckie Fishing Station 'Bothy' and beyond. The first group worked its way along the railway line, finding two plants of *Epipactis helleborine* (Broad-leaved Helleborine) in the woodland edge before cutting across through the carr to the island and seeing *Lysichiton americanus* (American Skunk-cabbage) and lots of *Stellaria nemorum* (Wood Stitchwort) among the more usual marsh plants on the way. Insherrit Island, a kilometre-long wooded finger of land running parallel to the shore is mostly marsh, but the edges have been built up, and there are many signs of its fishing history. Areas of mud kept bare for the hauling-in of nets had much *Juncus tenuis* (Slender Rush) and the strange, flattened form of *Juncus articulatus* (Jointed Rush) among the abundant *Persicaria hydropiper* (Water-pepper). There was *Campanula lactiflora* (Milky Bellflower), *Leucojum aestivum* (Summer Snowflake) and *Ornithogalum angustifolium* (Star-of-Bethlehem), all adding to the gaiety of nations.

From the tip of the 'island' we were ferried across to the 'Bothy', which most people would regard as a very comfortable house. Lunch and welcome hot drinks were taken inside. Back outside we were following in the footsteps of the other group, but were equally able to enjoy finding the *Oenanthe fistulosa* (Tubular Water-dropwort) growing in a grassy area in front of the building. There was also a single *Dactylorhiza* (Marsh orchid) hybrid there, partly *purpurella* (Northern Marsh) but lacking any other visible parent. The Alliums presented a problem in the whole area. Being not yet in flower they were tentatively identified as *Allium vineale* (Wild Onion), but a visit later in the summer confirmed that there was certainly *A. carinatum* (Keeled Garlic) by the railway line. Similarly a long-leaved dock coming up near the Seggieden barn was later identified as *Rumex hydrolapathum* (Great Water Dock).

With Les present we managed a fairly comprehensive willow survey, finding *Salix alba* (White Willow), *S. caprea* (Goat Willow), *S. cinerea* ssp. *oleifolia* (Grey Willow), *S. fragilis* var. *decipiens* (Crack-willow), *S. purpurea* (Purple Willow), *S. triandra* (Almond Willow) and *S. viminalis* (Osier), but there was a verdict that this was not really a willow hot-spot.

Orange-tip butterflies brightened the scene occasionally and a sparrowhawk was disturbed from the island. The lasting impression was of a place where virtually any plant could turn up and where first impressions needed more careful consideration. Whether the presence of so many naturalised species is a good thing one could argue either way, but there is no denying that it made an extremely interesting day's botanising. We were grateful to David Clarke for his welcome and his help, especially in providing a guide and in making the bothy available to us.

Martin Robinson

5. Among Breadalbane's finest mountain flora - Stuchd an Lochain Saturday, June 24th

My intention for this day was not the brightest idea I have ever had, and some members of the party had their own ideas, which I think was just as well. The area had been visited by a large, joint party of the BSBI and PSNS in 1990. That party had subdivided and covered a wide area, and I remember quartering the ground with Neale Taylor where the slopes were clothed in *Carex saxatilis* (Russet Sedge) and *Bartsia*

alpina (Alpine Bartsia).

My intention on this later visit was to re-record part of the area in the recording format that is now preferred by the BSBI. Perthshire recorders formerly recorded in "quadrants", which are areas measuring 5km x 5km. The preferred recording units are now 1km x 1km or 2km x 2km (tetrad). I have decided that a tetrad is the more practical unit for recording in Mid-Perthshire. Overall, the main recording unit for the BSBI is an area 10km x 10km (hectad), which is the area of measurement to be found in the plant *Atlas*. While quadrants and tetrads fit into hectads, tetrads don't fit into quadrants. I chose a new area for recording around the lochan and sub-divided the tetrad into north and south; these equated to two different quadrants that overlapped within the tetrad. By recording the two halves of the tetrad separately I was able to produce lists that related completely to the tetrad while also providing a comparison to previous recording efforts in the quadrants. I can assure everyone who accompanied me that the results of my indulgence were very worth while.

Our walk to the tetrad was interesting, but involved a fairly long walk. Members of the Botanical Society of Scotland from Edinburgh were in our company on this joint excursion. We explored the ground below the lochan, then circumnavigated it in part, and explored the lower crags. We had to search hard to find interesting plants below the lochan, but the searching in the runnels of wet ground and at the sides of the burn was good fun. Surprisingly, *Coeloglossum viride* (Frog Orchid) was frequent among the turf in places, which probably reflects winter flushing. Montane species present included *Antennaria dioica* (Mountain Everlasting), *Armeria maritima* (Thrift), *Diphasiastrum alpinum* (Alpine Club-moss), *Gnaphalium supinum* (Dwarf Cudweed), *Juncus trifidis* (Three-leaved Rush), *J. triglumis* (Three-flowered Rush), *Oxyria digyna* (Mountain Sorrel), *Polystichum lonchitis* (Holly-fern), *Loiseleuria procumbens* (Creeping Azalea), *Saxifraga aizoides* (Yellow Saxifrage), *S. oppositifolia* (Purple Saxifrage), *S. stellaris* (Starry Saxifrage), *Silene acaulis* (Moss Campion) and *Thalictrum alpinum* (Alpine meadow-rue). Less expected was *Adoxa moschatellina* (Moschatel).

The parties met up at different times and exchanged information. Professor Roy Watling had been searching with his son for a fungal associate of *Salix herbacea* (Dwarf Willow), and their search provided other fungi. I lost count of the number of times David Merrie was up and down the hill. I had given David a lift in the morning and I had completely underestimated the time for the excursion. I took David back to his car in Birnam and reassured him that he could blame his late arrival on me when he got home. I think he made no hesitation in doing so.

You may wonder where I get the ideas for the titles for the excursions. This one was suggested by the hymn tune, *From Greenland's Icy Mountains*. This is a beautiful tune and was used by Charles Ives in his first string quartet and his fourth symphony. If you like botany you will enjoy Ives in his quiet contemplative moods.

Alistair Godfrey

6. Sand dunes, slacks and shore, Earlshall (VC85)

Sunday 9th July

Seven of us gathered at Kinshaldy car park and set off down to the beach along the burn. Gordon and Ros, in her motorised sand mobile, having cleverly negotiated the awkward wooden stakes across the path to stop joy riders, led the way accompanied by the Thomas's dog Jeannie. The following list of goodies is based on the list Ros made

for us. At the burn mouth were a lovely clump of *Veronica anagallis-aquatica* (Blue Water Speedwell) and a few plants of *Bolboschoenus maritimus* (Sea Club-rush) and several plants of *Erigeron acer* (Blue Fleabane) in the dunes. Going south along the beach Bill Hay spotted many tiny (less than 10cm high), bright yellow flowers of *Hypochaeris glabra* (Smooth Cat's-ear), confusingly growing with a very similar plant *Crepis capillaris* (Smooth Hawksbeard) in the first grey fixed dune among copious rabbit droppings. The flowers of Smooth Cat's-ear only open properly in full sun. It is very rare in VC 85, first seen at Tentsmuir in the 1930s and not refound until 1997. Delights found just above high water mark were *Honckenya peploides* (Sea Sandwort) and the very prickly *Salsola kali* (Saltwort); we did not look too closely at the *Atriplex* species preferring to push onwards towards the area of the Goosepools, a series of three or four freshwater pools on the landward side of an amazing area of salt marsh formed in the last ten years or so.

For me the loveliest sight of the day was, as we approached the Goosepools, thousands of little, deep pink clusters of the rare *Centaurium littorale* (Seaside Centaury) , at one point growing with a group of the much larger and paler pink *Centaurium erythraea* (Common Centaury). Pink seemed to be the colour of the day in the salt marsh with many tiny flowers of *Glaux maritima* (Sea Milkwort) and a scattering of *Spergularia media* (Greater Sea Spurrey). Later on in the year the salt marsh will be a sea of blue *Aster tripolium* (Sea Aster). In the grassier areas near the pools a mass of *Dactylorhiza purpurella* were just waning and many hundreds of thousand of plants of *Parnassia palustris* (Grass-of-Parnassus) just beginning to bud on the path and in the dune slacks to the north of the 'Goosepools'. A huge bed of *Bolboschoenus maritimus* (Sea Club-rush) stretches south beyond the Goosepools past Reres Wood for at least 400 metres. At the first of the pools was a small area of *Typha latifolia* (Bulrush) but more spectacular were several huge plants of the magnificent and rare *Rumex hydrolapathum* (Water Dock) which appears to be thriving here. Another very interesting rarity filling the first two of the pools was *Berula erecta* (Lesser Water Parsnip) with its strange little opposite leaves and umbelliferous flower.

There were several seaside sedges for Bill in the salt marsh: robust clumps of *Carex otrubae* (False Fox Sedge), a few pale green fronds of *Carex extensa* (Long-bracted Sedge) and several plants of *Carex distans* (Distant Sedge). Inland on Earlshall Muir the dominant plant over many acres is *Carex arenaria* (Sand sedge). *Carex disticha* (Brown Sedge) was growing along a wet ditch running through the dunes; here Liz found an odd looking Crowfoot which she very much hoped might be *Ranunculus baudotii* (Brackish Water-crowfoot) extinct in Fife since 1909 but remains a mystery plant to be revisited in 2007 since it could not be properly identified from specimens and photographs sent to the BSBI referee, Nigel Holmes.

This list could go on and on with orchid hybrids and several willow species found by Les in his rambling through the dunes behind the beach, and one dune bank with several plants of *Cynoglossum officinale* (Hounds-tongue). On a subsequent visit Bill and Liz failed to re-find *Chenopodium glaucum* (Oak-leaved Goosefoot) monitored by Liz along the shoreline opposite Reres wood in 2003.

In total we found over 120 species in this wonderfully botanically rich area.

Liz Lavery

7. Drumochter's sentinel, Sow of Atholl

Saturday, 22nd July

The objective of this excursion was to look for *Phyllodoce caerulea* (Blue Heath) in areas to the west of the Sow of Atholl where it was recorded by one observer but never re-found. But first we needed to get our eye in by visiting a known colony. Six of us met in a lay-by near the county boundary on a fine dry morning, crossed the railway line and headed towards the steep eastern face of the Sow. Interest came almost immediately in the form of a colony of *Drosera longifolia* (Great Sundew) in an acid mire channel at the base of the hill, with *Carex pauciflora* (Few-flowered Sedge) alongside.

Struggling up the steep slope through the *Cornus suecica* (Dwarf Cornel) that is so abundant here we managed to navigate straight to what is probably the most northerly colony of *Phyllodoce* on the Sow's eastern face. The visit had been well timed and we were delighted to find that 17 clumps around the top of a narrow gully contained several flowers. Contouring southwards along the face we found three more colonies, all containing flowering plants, together with seven colonies of *Lycopodium annotinum* (Interrupted Club-moss), three colonies each of *Sibbaldia procumbens* (Sibbaldia) and *Carex capillaris* (Hair Sedge), some *Oxyria digyna* (Mountain Sorrel), *Luzula spicata* (Spiked Wood-rush), *Gnaphalium supinum* (Dwarf Cudweed), *Saxifraga oppositifolia* (Purple Saxifrage), *Juncus trifidus* (Three-leaved Rush), *Cryptogramma crispa* (Parsley Fern) and *Loiseluria procumbens* (Trailing Azalea). This hill is an excellent site for *Vaccinium uliginosum* (Bog Bilberry) and there was plenty of opportunity to compare the two crowberries *Empetrum nigrum* and *E. hermaphroditum*.

We then cut up over the summit ridge and down to the little saddle that connects the Sow to the next hill to the west. On broken, eroded rock in the ravine between the two hills were two colonies of *Cerastium alpinum* (Alpine Mouse-ear), quite a rare plant in East Perthshire, and a plant of *Botrychium lunaria* (Moonwort), with *Sedum roseum* (Roseroot) clinging to a small vertical bluff. *Phyllodoce*, however, if it was there, managed to keep a very low profile. It did not seem beyond the realms of possibility that its sites could have slipped away in this eroded environment, but also a species so inconspicuous in the vegetative state should perhaps never be discounted and may yet turn up there. We continued northwards along this ridge and then skirted back round the northern side of the Sow. By the Coire Dhomhain track Lynne demonstrated the *ssp. sylvatica* of *Pedicularis sylvatica* (Lousewort).

Although we did not succeed in re-tracing these old records of *Phyllodoce*, we were able to GPS the known colonies and to see and photograph the plant in fine flower. We saw a lot of very nice other species and made records in four different tetrads. So it was a very successful day that we all enjoyed.

Martin Robinson

8. Deeside's treasures - Morrone Birch Wood, Braemar Sunday 6th August

Morrone Birkwood, just outside Braemar, may be over the hills and far away but it is well worth a visit on a fine day. From the car park by the duck pond a good

path provides a low-level circuit from which to enjoy excellent views of the high Cairngorms from Derry Cairngorm to Beinn a'Bhuird and Ben Avon.

The circuit starts in open birch and juniper woodland with sunny glades and here we saw the first of many Scotch Argus butterflies. Folk flitted about after the butterflies with cameras until Martin Robinson pointed to some flat, feathery green leaves in a flush. He had found *Utricularia ochroleuca* (Bladderwort), a species new to some of us – more photos! This plant could so easily be overlooked as at first glance it resembles a robust moss.

The birch woodland gradually opens out onto heathland. Here *Pyrola media* (Intermediate Wintergreen), one of the species we had come to see, was present but not as prolific as it had been in 2005. The flowers were unfortunately past their best.

Beyond the woodland a mosaic of wet and dry heath is criss-crossed by flushes and grassy strips. Here the party spread out - eyes down. Lynne Farrell was successful in refinding *Meum athamanticum* (Spiguel), albeit a single plant, in mature heath rather than its usual meadow habitat. *Meum* was last recorded on Morrone in 1978 in the same 10 km square.

We left the main path to visit a complex of low limestone crags known to have a good colony of *Linnaea borealis* (Twinflower) plus *Asplenium viride* (Green Spleenwort), *Potentilla crantzii* (Alpine Cinquefoil), *Helianthemum nummularium* (Common Rock-rose), *Orthila secunda* (Serrated Wintergreen) and *Vicia sylvatica* (Wood Vetch). We were not disappointed – there was plenty to see. We found both *Listera cordata* (Lesser Twayblade) and *Listera ovata* (Common Twayblade) and were treated to a stunning display of *Gentianella campestris* (Field Gentian) on the flushed slopes below the crags.

The day had been getting gradually hotter and it was a welcome relief to return to the dappled shade of birch and juniper woodland for the walk back. At the viewpoint with a panoramic indicator board we were able to put names to the lower peaks - there had been a fair amount of discussion about which was which earlier in the day!

The final detour of the day was to tussocky fen with *Eriophorum latifolium* (Broad-leaved Cottongrass) and *Juncus alpinoarticulatus* (Alpine Rush) reminiscent of that found at Tulach Hill in Perthshire).

Lots of interesting plants and habitats, spectacular scenery, butterflies, dragonflies, sunshine and good company – what more could a botanist ask for?

Barbara Hogarth

9. Life down under - Dupplin Loch, Perth

Wednesday, August 16th

This was a successful evening visit, one that was within easy travelling distance from Perth to a site that is as much a wilderness in its own right as the western edge of Perth is a concrete and asphalt jungle. The contrast between the two could not be greater. Dupplin Estate is not altogether natural, and Dupplin Loch is artificial, but the estate management has provided a number of habitats that are as near to natural as we might expect for this location. The contrast has made me think what a failure our planning system is. To be fair to my Council colleagues I am not criticising them as the problems lie elsewhere, but development should include the extension or creation of wildlife habitats around our communities and not just an extension of the modern human habitat. Development as it is accepted in planning terms can only squeeze

habitats. For another example look at what has happened or is likely to happen to the western edge of the Gleneagles Hotel. While protection might be offered to some parts of the rolling countryside, the parts become disconnected from a more meaningful whole and suffer from the fragmentation that is so common at the edge of our settlements, an effect that results in less viable habitats that are out of context with their surroundings. I think we also deserve a better standard of architecture and layout in developments than the mass production which so easily meets with approval, but can be described only as "pitiful".

But back to our excursion, as I'm sure you will want to know what we found. We split up in two groups to cover two tetrads. One group covered heath and grassland, the other covered woodland and the loch. We found a wide range of plants across the different habitats, including *Genista anglica* (Petty Whin), *Listera ovata* (Common Twayblade), *Circaea lutetiana* (Enchanter's-nightshade), *Lycopodium clavatum* (Stag's-horn Clubmoss), *Bidens cernua* (Nodding Bur-marigold) and a flowering patch of *Pyrola minor* (Lesser Winter-green) was much admired by all.

We were in varying degrees of wetness, but we were not able to get access to open water. We found 14 different sedges, including *Carex diandra* (Lesser Tussock-sedge) and in the shallows we found *Sparganium natans* (Least Bur-reed), which is a smaller "creeping" version of its larger cousin *Sparganium erectum* (Branched Bur-reed). At the edge of Dupplin Loch we found a lot of plant debris that had been washed up from deeper water. With the able assistance of Martin Robinson we were able to identify a number of pondweeds; *Potamogeton crispus* (Curled Pondweed), *P. natans* (Broad-leaved Pondweed), *P. obtusifolius* (Blunt-leaved Pondweed), *P. polygonifolius* (Bog Pondweed) and *P. pusillus* Small Pondweed. I had extracted historic records from herbaria for all these species apart from *P. crispus* - which was probably too common to be of interest for herbaria collections and was certainly the commonest pondweed in Dupplin Loch. *P. gramineus* (Various-leaved Pondweed) awaits re-discovery. Confirmation of old records is satisfying for the finder, the vice-county recorder, and reassures us all of the health of a habitat. Also among the plant debris was the uncommon *Ceratophyllum demersum* (Rigid Hornwort) which can be confused with the commoner *Myriophyllum* (Water-milfoil).

The lateness of the hour meant we could not explore very far and another day was arranged for a subsequent visit when Martin, Jim McIntosh and I circumnavigated the loch. I managed to recover a flower from the large-leaved water lily that occurs at the edge of the loch, and I was able to identify this plant as *Nuphar lutea* (Yellow Water-lily), that is the pure species and not the hybrid. Our tally for the two days was just over 200 species.

Alistair Godfrey

10. Autumn's fungal harvest - Dupplin Loch, Perth

Sunday, October 22nd

And this leads us to our next excursion at Dupplin Loch, which was the last excursion of the year when we found around 125 species of fungi. The exact tally is speculative as we were not able to identify everything we found, but our list was very impressive. No one was more pleased than Keith Cohen, without whose help we would have been able only to identify a fraction of what we found. We travelled no further on this day than we had on the evening of August 16th; much time was spent on the grassland south of Blairbell before we headed east into mixed woodland and

then broadleaved woodland before bringing our exploration to an end on the ridge at the west end of Pitcairnie Loch.

We found 11 species of waxcap, and all but one was growing on the unimproved grassland south of Blairbell. Keith was impressed by the numbers of *Hygrocybe punicea* (Crimson Waxcap), which is fairly uncommon, and a species that looks superficially similar to *H. coccinea* (Scarlet Waxcap) that we also found. The combination of the continuing warm spell and sufficient moisture was one reason for such a good show of fungi, but Dupplin Estate's habitats once more turned up trumps.

Keith provided us with many tips to identify fungi; *Mycena alcalina* smells like cleaning fluid, *M. sanguiolenta* (Bleeding Bonnet) exudes red juice and *Russula fellea* (Geranium Brittle-gill) smells and feels just as it says. We cut the stems of *Boletus* and *Leccinum* to look at staining, sometimes the colour of the flesh changed rapidly on exposure to air. We were told about the colour of spores, the shape of the cap and the pattern of the gills as characters to aid identification. We had a range of edibility from culinary chanterelles (*Cantharellus cibarius*) through inedible fungi to the poisonous *Amanita muscaria* (fly agaric), and an equally wide range of common names to describe characters; *Auriscalpium vulgare* (Ear-pick Fungus), *Hydnum repandum* (Hedgehog Fungus), *Hygrophorus hypothejus* (Herald of winter), *Laetiporus sulphureus* (Chicken of the Woods) and *Leotia lubrica* (Jellybaby). Two of my favourite combinations of technical and common names are *Oudemansiella mucida* (Porcelain Fungus) and *Phaeolus schweinitzii* (Dyer's Mazegill): a mouthful of vowels with punctuating consonants! The first of these two was growing out of the bole of a living beech tree, the slimy white cap of the fungus bore a passing resemblance to the fine, thin texture of a bone-china cup. I think the name "mazegill" refers to the woody texture of the radiating rings of this bracket fungus. Dyers used this fungus to extract a yellow-brown pigment for dyeing wool and cloth. Our specimen was growing at the base of a big larch tree.

When we returned to our cars we displayed our finds on the bonnet of someone's car and Keith reminded us of what we found. If you wish a full list of what we found by e-mail, send a request to alistair.godfrey@btinternet.com. As we were sorting through the fungi we heard calls from the north, then a large flock of pink-footed geese passed overhead and landed in Dupplin Loch. The geese didn't remain there for long and lifted into the sky to give us another wonderful display of aerial acrobatics. What a sight to end an eventful programme of excursions!

Alistair Godfrey