

PERTSHIRE SOCIETY OF NATURAL SCIENCE

BOTANICAL SECTION

BULLETIN No.17 - 1993

INTRODUCTION

I am again grateful for the cooperation of excursion leaders and other contributors for letting me have material in good time.

In SNH Notes Ros Smith tells how the Forest Enterprise followed up our work in picking out sites of certain rare plants in the Black Wood of Rannoch last year (Excursion 5, 1992). It was gratifying to learn that when the Director-General and other Forest Authority and Scottish Natural Heritage top brass visited the Black Wood for its inauguration as a Caledonian Forest Reserve, the Forest District Manager, Charles Taylor, gave full credit to the Section for the help we had given him in spotting rare plant sites. Thank you, Charlie. It is a pleasure to help, and doubly pleasant to be recognised.

On 3 December 1994 the Perthshire Society of Natural Science will celebrate the centenary of the death of our founder, Francis Buchanan White. There will be a special meeting, and it is also hoped to repeat one or more of his favourite botanical walks. It is fitting that all this will happen when his great granddaughter, Anne Mathers, is Chairman of our Section.

We can also celebrate FWBW's life and work by carrying on with recording the ever-changing flora of Perthshire, and collecting material for the new Flora we hope in due course to produce.

THE EDITOR

OBITUARY - MRS G. E. BORROWMAN

Mrs 'Gem' Borrowman, late of Laganallachie, Dunkeld, died in Roundelwood House, Crieff, on 16 November 1993.

Gem had been an enthusiastic member of the Botanical Section from its inception, and attended its meetings until age and physical limitations prevented her.

She was the daughter of the late Col McLeod, and widow of the late Lt Col Charles G. Borrowman, and had accompanied him on military service in India, of which she had many tales. Col Borrowman was an excellent artist and has pictures in Perth Art Gallery. They spent their retirement years in the family home of Lagganallachie, where both her father and her husband are buried.

Always pleasant and cheerful, she will be sadly missed.

W. F. FRENCH

REPORTS OF FIELD MEETINGS

NOTE: In the following reports the numbering of the excursions in the Summer 1993 Programme has been retained, but there are no reports of the PSNS (Open) trips. No.(1), on 19 May, was to the hydroelectric dam at Pitlochry, (3), on 9 June, to Branklyn Garden, and (13), on 20 October, to Dundee Observatory.

(2) BIRNAM GLEN

26 MAY 93

A chilly wind was whipping across Birnam railway station car park as nine of us gathered for the first meeting of the 1993 season. We could not have had a better venue in the circumstances, for the wooded glen we had come to explore was peaceful and proved to be an excellent place to get one's eye in at the start of the field season.

We refrained from making notes until we were well clear of gardens and policies, but once in the glen we scouted both sides of the track that runs beside the Inchewan Burn and in the two hours it took us to cover about a mile we recorded over 140 plant species. As the light began to fade we reached a footbridge beyond which the path continued through a coniferous plantation. At this point however we turned back, and - even with a stop to chat to Richard and Joanna, who had arrived too late to join the main party - reached our starting point in about a quarter of the time the outward journey had taken.

The final tally was 143, mostly fairly common woodland species. Notable finds included Stone Bramble (*Rubus saxatilis*), Goldilocks (*Ranunculus auricomus*), Sanicle (*Sanicula europaea*), Wood Cranesbill (*Geranium sylvaticum*), Brittle Bladder Fern (*Cystopteris fragilis*), Beech Fern (*Phegopteris connectilis*), Oak Fern (*Gymnocarpium dryopteris*), and Hard Shield Fern (*Polystichum aculeatum*).

BARBARA HOGARTH

(4) FALLS OF KELTIE (NN 82 SE & NE)

12 JUNE 93

The objects of this outing were to explore Keltie Gorge and obtain more records from the quadrant immediately north of Crieff. Sixteen of us, with an impressive array of cars, met at the car park between Monzie church and the community hall. We left half the cars there, and in the rest drove along to the access road leading to Mains of Cailander, the farmer, Mr Pollock, having kindly said we could park in the sandpit a couple of hundred yards up from the public road. The vehicular track leading along the west side of the gorge had been thoughtfully marked with red and white plastic ribbons by the local riders, who were going to take their horses along it the following day. Much of our botanising was done along this, with forays down into the gorge and to ponds and other promising looking sites on the 'open' side.

The weather was fine and the flora, though not exceptional, was interesting enough to keep us happily occupied and the score mounted. Finally the track veered away from the gorge to the south-west, and back into NN 82 SE. For various reasons some of the party turned back at this point, having found Trailing St John's Wort (*Hypericum humifusum*) just over the dry-stone dyke. From this point the views over the Monzie policies to the Knock of Crieff were beautiful, and Keltie Glen itself was unspoilt, though many of the trees had obviously been planted. Seven persevering souls tackled the upper gorge to view the Falls of Keltie. There was no visible track, and we were thankful that the bracken 'canopy' had not yet closed, for it

promised when full grown to be over our heads. At the end of the day the tally of plants was 121.

Eventually we won back to the cars, tired after a most enjoyable afternoon. Thanks to Mrs Crichton of Monzie who kindly let us explore her glen.

BILL GAULD

(5) CRAIGROSSIE (NN 91 SE)

26 JUNE 93

Nine Section members met for a Saturday afternoon walk up Craigrossie, a prominent hilltop in the Ochils, four kilometres east of Auchterarder. We parked our cars in a disused quarry (NN 977 125) west of the summit, and within 30 metres made an unusual find, Bird's Foot (*Ornithopus perpusillus*), present in some quantity at the foot of Castle Craig. Other finds in the same area, such as Rockrose (*Helianthemum nummularium*) and Crested Hair Grass (*Koeleria cristata*) indicated base-rich conditions. Above Castle Craig was found Prickly Sedge (*Carex muricata* ssp *lamprocarpa*), very local in Perthshire. The area was so interesting that at one point it seemed unlikely that the party would progress very far from the starting point, but eventually we moved on. A puddle on the farm road was home to a big patch of Ivy-leaved Crowfoot (*Ranunculus hederaceus*). The streamside a few hundred metres further on provided a number of records, including Rough Chervil (*Chaerophyllum temulentum*), one of the less common Umbellifers. We then left the farm road and followed a small tributary stream leading east towards the summit of Craig Rossie. This harboured Brittle Bladder Fern (*Cystopteris fragilis*) and lots of Lemon-scented Fern (*Oreopteris limbosperma*). The final stretch to the summit was of limited botanical interest, although Parsley Fern (*Cryptogramma crispa*) was found on scree. Our reward was a superb view from the summit, in very clear, haze-free conditions, with Dundee and the Tay Bridge just visible in the far east. From there some of us walked directly down towards the cars, while others headed north down a gully which led to the junction with the main road. This proved very interesting botanically, finds including Northern Marsh Orchid (*Dactylorhiza majalis* ssp *purpurella*), Brown Sedge (*Carex disticha*), Hairy Stonecrop (*Sedum villosum*), and more *Ornithopus*. It was well after 6 pm when we all got back to the cars, with a very respectable plant list.

Thanks to Mr Mitchell of Pairney farm, and to Fountain Forestry, for letting us botanise over their land.

LES SMITH

(6) MEALL A' CHOIRE LEITH (NN 64)

3 JULY 93

This full day excursion, to which the Section was invited, was arranged by the Botanical Society of Scotland, to explore two corries of this 924 m mountain on the south side of Glen Lyon, and was led by Douglas McKean, of the Royal Botanic Garden, Edinburgh.

The party met at Camusvrachan (NN 620 479), and visited the slightly basic Coire Liath and the acid Coire Ban, on the east side of Meall a' Choire Leith, on a cold, misty day with frequent rain showers.

The lower farmed ground was rich in grasses, including Meadow Oat Grass (*Avenula pratensis*), Quaking Grass (*Briza media*), and Soft Brome (*Bromus*

hordeaceus). There were also some fine clumps of Spiguel (*Meum athamanticum*). In all, 180 species were recorded for the NW quadrant of our square.

No new records were made for the SW quadrant, which contained the two corries, since it also includes Ben Lawers! One noteworthy find was a large clump of Creeping Azalea (*Loiseleuria procumbens*), sprawling over a flat rock from a single thick rootstock, and surrounded by calcicoles such as Alpine Mouse Ear (*Cerastium alpinum*) - a far cry from *Loiseleuria*'s usual wind-blown, exposed ridge habitat.

RICHARD THOMAS

(7) CARN A' CHLAMAIN and CONLACH MHOR

4 JULY 93

After meeting in Blair Atholl at 10 am, twelve of us travelled up Glen Tilt in convoy, having bought passes for the cars from the Estate (The goodly number of cars we met showed how much this initiative by Atholl Estates is appreciated). We split into three parties, with two pairs scouring both banks of the Tilt between Marble Lodge and Clachglas, while the remainder wended their way up the stalkers' zigzag path from Forest Lodge to the plateau around Carn a' Chlamain and Conlach Mhor.

Our purpose was twofold, to deal with a relatively under-recorded square in NN 97 NW and to attempt to refind the Alpine Foxtail (*Alopecurus alpinus*) on Conlach Mhor mentioned in the 1898 Buchanan White *Flora of Perthshire*.

As anticipated, the hill group soon found their way out of the calcareous heathland and grassland of the lower slopes of the glen (Kidney Vetch (*Anthyllis vulneraria*) being probably the most interesting species) and into the desert of blanket bog and acidic montane heaths on the top. It was hard work desperately trying to notch up species in each little flushed bit we came across. It was also hard work keeping one's feet in the gale. The only notable discovery was Alpine Catstail (*Phleum alpinum*) in a flush on the side of Carn a' Chlamain after we had all scurried off the summit with a squall at our backs. This species is very rare in Perthshire. It occurs in the same sort of locations as the *Alopecurus*, although it is probably less exacting; the edges of moderately rich flushes and runnels seem to be required (but without Yellow Saxifrage), but it is probably much overlooked, and young panicles may well be munched by sheep and deer. Cloudberry (*Rubus chamaemorus*) was frequent in the blanket bog areas. Creeping Azalea (*Loiseleuria procumbens*) was recorded, and Dwarf Cornel (*Cornus suecica*) and Bog Bilberry (*Vaccinium uliginosum*) were found on the slopes of Carn a' Chlamain.

A quick look at the south side of Conlach Mhor did not reveal any likely areas for the *Alopecurus*. Marsh Cudweed (*Gnaphalium uliginosum*) was found in a bit of - almost - species-rich grassland, looking suspiciously like Wood Cudweed (*G. sylvaticum*), but this did not stand up to detailed examination. The waterfalls near Stac Crom looked potentially rich, but rather dangerous if approached from above, and after a quick scan with binoculars were left for another day.

The glen bottom was perhaps the more desirable place to botanise, although it is already very well recorded. The preponderance on the east side of the Tilt of soils derived from limestone made for a rich flora, and resulted in tallies of 99 for square NN 87 SE, and 158 for Square NN 97 SW. The most interesting plants were Globe Flower (*Trollius europaeus*), Cowslip (*Primula veris*) - in NN 87 SE, and Fragrant Orchid (*Gymnadenia conopsea*) - both squares, and Frog Orchid (*Coeloglossum viride*) and Scottish Asphodel (*Tofieldia pusilla*), in square NN 97 SW only

The turnout had been a good one considering the weather forecasts, perhaps this is testimony to the lack of reliance that can be placed upon them, and the enthusiasm and meteorological intuition of the participants, or maybe it's just a case of 'If you don't risk it, you never get out'!

NEALE TAYLOR

(8) CRAIG MAC RANAICH (in the centre of NN 52)

11 JULY 93

This was a joint meeting between the section and the Botanical Society of the British Isles, and the object was to record on this rarely-visited mountain area west of Glen Ogle, wholly within the NE quadrant of the square.

Twelve members met near the old Killin Junction railway station at Glen Ogle summit on a fine day, which fortunately belied its forecast. Our route started along the line of the railway, with its ballast and rock cuttings providing a variety of habitats. Of particular interest was a well-trodden non-flowering grass tentatively identified as Flattened Meadow Grass (*Poa compressa*), but confirmation of this species, for which there are no post-1970 records in Vice-County 88 (Mid-Perthshire), will have to await a flowering specimen. From the railway we struck steeply uphill past an attractive waterfall, then through very leggy heather with frequent boggy ground; the full range of plants usual to these habitats was seen, including Chickweed Wintergreen (*Trientalis europaea*), Lesser Twayblade (*Listera cordata*), and Few-flowered Sedge (*Carex pauciflora*).

At length we reached the rocks of Meall Sgallachd, north-west of Craig Mac Ranaich. Calcium-rich areas proved to be few and very restricted: calcicoles such as Holly Fern (*Polystichum lonchitis*) and Purple Saxifrage (*Saxifraga oppositifolia*) were seen, but well scattered and in very small quantity, and they were interspersed with calcifuges such as Three-leaved Rush (*Juncus trifidus*) and Golden Rod (*Solidago virgaurea*).

On the way down some members visited the well-known Lochan Lairig Cheile, finding Bog Sedge (*Carex limosa*) and Least Yellow Water Lily (*Nuphar pumila*).

A total of 197 species was recorded, and there were fine views of several types of birds of prey and dragonfly.

R. E. THOMAS

(9) BEINN A' CHUALLAICH (substituted for TALLABHEITHE)

1 AUGUST 93

The original purpose of this meet had been to explore several upland quadrants north of Loch Rannoch. Though access permission had been granted for the area we did not also get the vehicular access we wanted in order to avoid a long tramp over a wet moorland which promised very little botanically. As the date approached there was a general disinclination among intending participants to undertake this. Fortunately it proved possible for Ros to get us permission for a last minute suggestion by Richard of a visit to Beinn a' Chuallaich, a well-known area, with over 100 species already on the card, but interesting and due another check.

Six of us met at the Killichonan car park (NN 833 583) before heading back to Kinloch Rannoch, where we squeezed the party into two cars, as parking at our new destination was very limited. From Drumchastle Farm we set off up a good zigzag path on the south-facing slopes of the Beinn.

Our first stop was a series of flushes where we were able to confirm that False Sedge (*Kobresia simpliciuscula*) was still thriving. From there Ros led us with uncanny accuracy to the lower end of a series of sugar limestone outcrops, immediately finding the very rare Alpine Pennycress (*Thlaspi alpestre*). Other interesting finds on these outcrops included Sibbaldia (*Sibbaldia procumbens*), Heath Pearlwort (*Sagina subulata*), Alpine Cinquefoil (*Potentilla crantzii*), Purple Saxifrage (*Saxifraga oppositifolia*), Alpine Sawwort (*Saussurea alpina*), Field Gentian (*Gentianella campestris*), and Rock Sedge (*Carex rupestris*).

As we had gained most of the height by this time we all headed for the summit of Beinn a' Chuallaich, which at 891 m boasted both cairn and trig. point. The descent took us to some more outcrops, heather moorland, and a deep chasm, all of which yielded disappointingly few more records. We did however stumble across a high altitude Sycamore (*Acer pseudoplatanus*), a seedling growing in a peat bog at 750 m. Is this a record? After that we found Starry Saxifrage (*Saxifraga stellaris*), Yellow Saxifrage (*S. aizoides*), Hair Sedge (*Carex capillaris*), and on the lower ground Common Rockrose (*Helianthemum nummularium*).

The six intrepid bogtrotters who would otherwise have gone to Tallabheithe all agreed that the alternative had provided a rewarding excursion, especially Ros, who had not been so high for years.

We thank Mr D. Dunlop, Dunalastair Estate, for access permission.

BARBARA HOGARTH

(10) WOLFHILL and ST MARTIN'S (NO 13 SE)

14 AUGUST 93

Fourteen members met in the pouring rain at St Martin's Church (NO 154 304) to examine the mainly arable farmland of NO 13 SE. All previous records for this quadrant had come from an area of calcareous fen near Dunsinnan House, so this time we intended to cover quite different habitats. Before leaving the church we paid our respects to another PSNS member, the late Charles Geikie Matthew (1862-1936) who is interred in the churchyard. While a naval surgeon he had taken a particular interest in the ferns of China, and was elected FLS in 1909. On retirement he returned to his native Perthshire where he assisted the PSNS with gifts of money and books. He also arranged the herbarium of the late Col Henry Drummond Hay.

Our excursion followed the general ^{line} of the abandoned turnpike road northwards to the village of Wolfhill. In all 178 species were recorded, bringing the total for the Square to 223. A tiny remnant of the formerly common acid heath still harboured Heather (*Calluna vulgaris*). Field margins held arable weeds such as Cut-leaved Cranesbill (*Geranium dissectum*) and Common Fiddleneck (*Amsinckia micrantha*), roadside species such as Burnet Saxifrage (*Pimpinella saxifraga*), and Hedge Bedstraw (*Galium mollugo* agg.). Heath Pearlwort (*Sagina subulata*), found on a single outcrop of rock in a field, is generally confined to the Highlands. Smooth Tare (*Vicia tetrasperma*) and Salad Burnet (*Sanguisorba minor*) were found in a disturbed area round a new pond. These species have not been recorded recently in the Vice-County, and they may well have been introduced during reseeding of the area. (Despite efforts confirmation of this has not yet been obtained).

In spite of the weather the excursion was worthwhile in showing that even the most thoroughly farmed area can hold surprises. I should like to thank all who look part and especially Ros for supplying details of the plant species

MICHAEL TAYLOR

(11) FUNGUS FORAY - BIRKS OF ABERFELDY

29 AUGUST 93

Six people started from the car park a little after the scheduled time. We were joined later by Richard Thomas and family, who had tarried of courtesy to speed parting guests. It was a pleasant day, and the Birks had many visitors beside ourselves, not a few of whom took a friendly interest in our goings on, and two helped with reports of findings.

We started slowly, to regain familiarity with our subject, and to 'tune' our various handbooks to some degree of conformity - 'twere too much to say 'unanimity'!

An early find was a group of two or three little off-white wine-glasses with frilled rims - new to all of us - which we eventually made out to be *Tarzetta catinus*. Two tree stumps were smothered in *Coprinus disseminatus* (Fairies' Bonnets), and another with *Ganoderma applanatum* (Artist's Fungus), which had liberally dusted itself and much of the surrounding vegetation with its reddish brown spores. *Lactarius pyrogalus* appeared correctly under hazel, and some *Lycoperdon pyriforme* on a rotten tree-trunk. The violet colour of *Laccaria amethystea* was again admired, and noses wrinkled at *Phallus impudicus* (Stinkhorn).

The engineered path took us by many flights of steps to the bridge over the waterfall, which we stopped to admire, before returning by the north side of the gorge. On the way back a fine specimen of apricot coloured *Amanita crocea* was found at the side of the path - occasional or common, depending on which book you look at.

At the end of the day we had 27 confirmed identifications, quite a few of which had not been recorded on our last foray to the Birks in 1985. A full list of the 1993 finds is given in the Appendix (A).

We felt we had not done badly, and had enjoyed a very happy foray among the fungi.

BILL GAULD

(12) BRYOPHYTES - RSPB RESERVE, KILLIECRANKIE

12 SEPT 93

Soon after 2 pm four Section members, under the guidance of Martin Robinson, the RSPB Warden, and his two temporary assistants, left Balrobbie car park.

The stones of the Drystane Dyke separating the track from the farmland provided the first study area. The stones, all acidic in type, provided a suitable substrate for a number of species, three of the genus *Racomitrium*, and two of *Polytrichum*. Abundant patches of *Hypnum cupressiforme* gave protection to a small liverwort from the genus *Lophozia*.

Leaving the track we then climbed up acidic grassland to a birch wood. In the drier areas three very similar mosses occurred, *Pleurozium schreberi* with once pinnate branches on a red stem, *Hylocomium splendens* with twice-pinnately branched red stems, and *Pseudoscleropodium purum*, with green stems. In association with the birches were bright green tufts of *Dicranum scoparium* and a *Rhytiadelphus*.

The next area was quite different - calcareous flushes. Typical mosses of the semi-submerged areas were *Scorpidium scorpioides* and *Drepanocladus revolvens*, and along with them two thalloid liverworts, of the genera *Riccardia* and *Jungermannia*. In less damp parts moss genera represented were *Cratoneuron*,

Calliergon, *Ctenidium*, and *Fissidens*. We allowed ourselves, however, the pleasure of enjoying the Grass of Parnassus which also abounded there.

Our final study area was a wooded gully leading back from the flushes to the track. On the bark of some Hazel was the moss *Ulota crispa*, and on the ground beneath them tufts of *Dicranum majus*. Down the gully ran a stream with rocky sides and much fallen and rotting wood. Leafy liverworts were as abundant as mosses. Members of the genera *Scapania* and *Plagiochila* formed bright green covers to the rock surfaces, along with a third liverwort, *Nowellia curvifolia*. On wood from which the bark had decayed and fallen off a red incrustation proved to be a leafy liverwort of the genus *Frullania*. The same mosses as we had already found in the woodland area also occurred, and species of *Mnium* and *Plagiomnium* were common.

By this time our heads were buzzing with all these unfamiliar names, so it was a great relief to come upon a moss which actually had a common name Apple Moss (*Bartramia pomiformis*), so-called from the shape of its spore capsules.

At about 5.30 pm we arrived back at the car park, where Martin was given a well earned vote of thanks for giving us a most interesting and informative afternoon.

A full list of moss and liverwort species found is given in the Appendix (B).

ANNE MATHERS

SCOTTISH NATURAL HERITAGE NEWS

Since last year Scottish Natural Heritage is beginning to settle down and define its priorities. One of these is the future of access to the countryside and SNH has put out for consultation a paper setting out the options. The Botanical Section sent in some comments, among other things voicing concern about possible problems over access for excursions like ours, especially if access, particularly in the Lowlands, were to be confined to Rights of Way. Also of direct interest to the Section is the recent designation of the Black Wood of Rannoch as a Caledonian Forest Reserve as well as a Forest Nature Reserve, in recognition of its great interest as a remnant Caledonian Pinewood. This is one of the threatened habitats defined under the European Community Habitats Directive, shortly to be put into effect. Also in the Black Wood the Section's efforts last year in marking sites of certain rare plants were followed up by Forest Enterprise, who had a contractor cutting the fire 'traces'. Before the contractor started the bamboo canes we had used as temporary markers were replaced with posts and so the sites were safeguarded.

ROS SMITH

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APPENDIX

(A) FUNGI recorded at BIRKS OF ABERFELDY on 29 AUG 93

Amanita excelsa*
A. crocea*
Clitocybe nebularis*
Laccaria amethystea
Collybia peronata
Lactarius piperatus
L. torminosus
L. glyciosmus
L. pyrogalus*
Russula mairei
R. lutea*
Clitopilus prunulus*
Enteloma nodorosum*
Paxillus atrotomentosus
Coprinus micaceus*
C. disseminatus*
Cantharellus cibarius
Boletus badius*
B. calopus*
Leccinum versipelle
Suillus grevillei*
Ganoderma applanatum
Fomes fomentarius
Hydnum rufescens
Lycoperdon pyriforme
Phallus impudicus
Tarzetta catinus* (Buczaki)

NOTES: (1) All fungi except the last are listed in the order given in *Mushrooms and other Fungi of Great Britain & Europe*, by Roger Phillips (Pan Books, 1981). The *Tarzetta* is described on p.219 of *Fungi of Britain and Europe*, by Stefan Buczacki (Collins New Generation Guide, 1989)

(2) The twelve items marked * were not recorded on the previous visit on 6 October 85, when the tally was 84.

W. W. GAULD

/(B)

(B) MOSSES and LIVERWORTS recorded at RSPB, KILLIECRANKIE on 13 Sept 93

	MOSSES	LIVERWORTS
WALL HABITAT:-	<i>Grimmia trichophylla</i> <i>Ceratodon purpureus</i> <i>Racomitrium fasciculare</i> <i>R. lanuginosum</i> <i>R. heterostichum</i> <i>Polytrichum piliferum</i> <i>P. juniperum</i> <i>Hypnum cupressiforme</i>	<i>Lophozia</i> sp. <i>Pleurozia purpurea</i> <i>Leiocolea</i> sp.
ACIDIC GRASSLAND/BIRCHWOOD:-	<i>Pseudoscleropodium purum</i> <i>Pleurozium schreberi</i> <i>Rhytiadelphus triquetrus</i> <i>R. squarrosus</i> <i>Dicranum scoparium</i> <i>Barbula</i> sp.	
CALCAREOUS FLUSH HABITAT:-	<i>Calliargon cuspidatum</i> <i>Cratoneuron commutatum</i> <i>C. filicinum</i> <i>Drepanocladus revolvens</i> <i>Scorpidium scorpioides</i> <i>Ctenidium molluscum</i> <i>Campylium stellatum</i> <i>Fissidens adianthoides</i> <i>Philonotis calcarea</i> <i>Schistidium apocerpum</i>	<i>Riccardia (Aneura) pinguis</i> <i>R. sinuata</i> <i>Jungermannia</i> sp. <i>Pellia</i> sp.
GULLY WOODLAND/STREAM HABITAT:-	<i>Orthotrichum</i> sp. <i>Ulota crispa</i> <i>Bryum capillare</i> <i>Pogonatum urnigerum</i> <i>Polytrichum formosum</i> <i>P. commune</i> <i>Dicranum majus</i> <i>Rhytiadelphus loreus</i> <i>Atrichum undulatum</i> <i>Mnium hornum</i> <i>Thuidium tamariscinum</i> <i>Hylocomium splendens</i> <i>Racomitrium canescens</i> <i>Plagiomnium undulatum</i> <i>Bartramia pomiformis</i> <i>Fissidens bryoides</i> <i>Distichum capillaceum</i> <i>Brachythecium rutabulum</i> <i>Plagiothecium undulatum</i>	<i>Lophocolea bidentata</i> <i>L. cuspidatum</i> <i>Diplophyllum albicans</i> <i>Plagiochila asplenioides</i> <i>P. porelloides</i> <i>Radula complanata</i> <i>Scapania nemorea</i> <i>Nowellia curvifolia</i> <i>Frullania tamarisci</i> <i>F. dilatata</i> <i>Conocephalum conicum</i> <i>Tritomaria quinquentata</i> <i>Lophozia ventricosa</i> <i>Riccardia palmata</i> <i>Peltigera</i> sp.

MARTIN ROBINSON