St. Andrews.

Saturday, 21st June 1851.

Party of 51 went to St. Andrews. Started at 8.50 a.m. and proceeded to Leuchars, thence by coach to St. Andrews. Fares going and coming, 5s. 1od.

Visited castle, cathedral, and other places. Walked along shore to the west.

Gathered :-

Sagina maritima Lepigonum marinum Sclerochloa maritima (on the Sclerochloa loliacea Triticum laxum Elymus arenarius

Left St. Andrews at 5.7 p.m. and reached Edinburgh at 7.45 p.m.

Charleston, Queensferry.

Saturday, 28th June 1851.

Met at Granton at 9 a.m. and proceeded by Stirling boat to Charleston. Party, 60. Walked by shore to Queensferry. Examined Ferry Hills. Returned by boat and reached Edinburgh at 7 p.m. Fares going and coming, 1s.; pier, Granton, 4d.; pier, Queensferry, 6d.

Plants gathered were :-

Nasturtium sylvestre (Inverkeithing)
Alyssum calycinum (Ferry Hills)
Hesperis matronalis (woods at Limekilns)
Sinapis alba
Diplotaxis tenuifolia (St.

Davids)
Viola hirta
[Notes, R.B.G., Edin., No. VIII., 1902.]

Melilotus arvensis (St.

Davids)
Vicia lutea (Ferry Hills)
Spiræa Filipendula
Sedum villosum
Haloscias scoticum (Inverkeithing)
Dipsacus sylvestris

Silybum Marianum

Hieracium aurantiacum (woods at Limeklins) Campanula Rapunculus (churchyard near Limekilns, Mr. Duff) Anagallis arvensis Cynoglossum officinale (Rosyth)

No Oxytropis uralensis seen.

Veronica polita (Inverkeithing)
Arum maculatum (woods at Limekilns)
Arundo epigejos (St. Davids)
Serrafalcus commutatus
Lolium italicum
Triticum junceum

North Berwick, Dirleton, Gullan, Aberlady, Gosford.

Saturday, 12th July 1851.

Party of 50 met at the North British Railway Station at 8 a.m. and proceeded to North Berwick. Return tickets, 2s.

Walked along common at North Berwick, gathering :-

Helosciadium repens Thrincia hirta Erythræa Centaurium Habenaria viridis

Festuca rubra Equisetum variegatum Lycopodium selaginoides

On Dirleton Common :—
Fumaria micrantha
Alyssum calycinum
Reseda lutea

Galium Mollugo Centaurea Scabiosa Calamintha Acinos

At Dirleton Castle :— Sedum reflexum Smyrnium Olusatrum

Silene conica

Parietaria erecta

At Gullan —

Ranunculus trichophyllus
"confusus
Cerastium arvense
Carduus nutans
Utricularia vulgaris
Alisma ranunculoides
(Gullan Loch)

Potamogeton plantagineus
,, oblongus
,, pusillus
Carex disticha
,, paniculata

At Luffness :-

Hippuris vulgaris

Scirpus maritimus

Scirpus Tabernæmontani Near Aberlady:—

Trifolium fragiferum

Lepturus filiformis

Near Gosford :-

Malva moschata Geranium sanguineum Listera ovata Knappia agrostidea Botrychium Lunaria

Inula dysenterica
Hippophaë rhamnoides

Joined train at Longniddry at 7 and returned to Edinburgh about 8 p.m.

Linlithgow, Blackness, Hopetoun, Niddry Castle, Winchburgh.

Saturday, 19th July 1851.

Party of about 30 met at Edinburgh and Glasgow Railway Station at 8 o'clock and proceeded to Linlithgow. Fares to Linlithgow and back from Winchburgh, 1s. After visiting palace and church, walked to Binns, thence to Blackness and Hopetoun and Winchburgh, joining train at 7.15 p.m.

Linlithgow Palace:-

Parietaria officinalis

Linlithgow Loch :—
Ranunculus aquatilis
(various forms)

Stellaria glauca

At Binns :-

Hypericum humifusum Typha latifolia Sparganium ramosum

Numerous maritime plants near Blackness.

Niddry Castle:-

Dianthus deltoides

Verbascum Thapsus

Banks of Canal near the castle :— Genista tinctoria

Ben Lomond.

Thursday, 24th July 1851.

Party consisting of J. H. Balfour, Hugh Cowan, William Cunningham, George Drysdale, Alex. E. Duff, Alex. D. Gulland, J. K. Jackson, Charles Jenner, Chris. Kerr, John Kerr, William Liddell, R. M'Dowall, John Matthews, J. Rany, James Robertson, John Ross, John Sibbald, Patrick Heron Watson, Christ. Young, met at the Edinburgh and Glasgow Railway Station at 11 a.m. and proceeded to Glasgow. Left baggage at hotel close to railway, went to St. Rollox and saw Mr. Tennant's works. visited the Cathedral and the University, saw the Hunterian Museum through the kindness of Dr. Allen Thomson. Dined at Josez Hotel at 3 p.m. for 1s. 6d. each. Joined the steamboat at the Broomielaw at 4 p.m., and proceeded to Bowling and thence by train to Balloch. At Balloch went on board steamboat on Loch Lomond about 6 p.m. and reached Inverarnan about 9.30 p.m. Return tickets had been granted by the E. & G. Railway, third class 5s., Dumbarton and Loch Lomond Co., first class 4s., total 9s. At Inverarnan the party were comfortably accommodated at M'Lellan's Inn.

Friday, 25th July 1851.

Party rose about 4 a.m. and proceeded to gather:

— Malaxis paludosa

Quercus (many forms in Glen Hymenophyllum Wilsoni Falloch) Lycopodium inundatum

Proceeded to the rocks on the northern side of Ben Lomond and thence to the summit.

Gathered :-

Cochlearia alpina Saxifraga nivalis
Silene acaulis Gnaphalium supinum
Cerastium alpinum Poa alpina
Sibbaldia procumbens Polystichum Lonchitis

Reached Rowardennan in time for the steamboat at 4,30 p.m. Proceeded to Glasgow. Joined train to Edinburgh at 8.30 p.m. and reached Edinburgh about 10,30 p.m.

EXCURSIONS IN 1852.

Canal, Slateford, Colinton, Woodhall, Currie.

Saturday, 15th May 1852.

Met at Canal Basin, Port Hopetoun, at 10 a.m. Party about 90. Walked by Canal banks to Slateford, Colinton, Woodhall, and Currie. Returned by train passing Currie at 4.16 p.m.

Picked :-

Ranunculus auricomus
Berberis vulgaris
Meconopsis cambrica
Cardamine amara
Geranium pheum
Prunus Padus
Saxifraga hypnoides (near
Colinton)
Scrophularia vernalis

Orchis mascula
Arum maculatum (Colinton
Woods, right hand going
up)
Bryum capillare
Agaricus campestris
Polyporus squamosus
Lepidodendron (near Currie)

Gorebridge, Arniston, Dalhousie.

Saturday, 22nd May 1852.

Party of 100 proceeded by train at 11 to Gorebridge. Return tickets, 1s. Walked to Arniston and thence to Dalhousie. Joined the train at 7.30 p.m.

Among the plants gathered were :--

At Arniston :-

Aconitum Napellus Cardamine amara Staphylea pinnata Spiræa salicifolia Pyrus Malus Saxifraga Geum " umbrosa Ribes nigrum

Ribes nigrum
Lilium Martagon
Paris quadrifolia

At Dalhousie :-

Chelidonium majus Cardamine amara Stellaria uliginosa Pyrus Malus Ribes alpinum Daphne Laureola Neottia Nidus-avis Arum maculatum

Dysart, Wemyss.

Saturday, 29th May 1852.

Party between 80 and 90 met at Northern Railway Station at 9.45 a.m. and proceeded to Dysart. Fare, 1s. 4d.

Met Lord Rosslyn's gardener and walked through Dysart

Woods, where we gathered :-

Aconitum Napellus
Saxifraga Geum
,, umbrosa
,, granulata
Doronicum plantagineum
Anchusa sempervirens

Polygonum Bistorta Listera ovata (in woods near Dysart) Convallaria majalis Ornithogalum umbellatum

Several plants have escaped from garden, as :-

Geum agrimonioides Symphytum tauricum Narcissus poeticus

Proceeded along the shore to Wemyss, gathering many interesting coal-fossils, as specimens of *Calamites, Pecopteris, Neuropteris*, and *Sphenopteris*;

also :-

Fumaria officinalis Cochlearia officinalis Reseda Luteola Sileñe maritima Stellaria uliginosa Honckenya peploides Erodium cicutarium Astragalus hypoglottis Sanicula europæa Dipsacus sylvestris (not in flower, in great profusion)
Leontodon levigatus
Armeria maritima
Plantago Coronopus
Triglochin palustre
Carex arenaria
, hirta
Corallina officinalis

Returned by the road to Dysart, and reached it at 4.20 p.m., in time for the train.

Midcalder, Dalmahoy, Ravelrig, Currie.

Saturday, 5th June 1852.

Party of 85 proceeded by train at 7.45 a.m. to Midcalder. Walked to Dalmahoy, Ravelrig, and Currie, and returned by train passing Currie at 4.16 p.m.

Among the plants gathered were:-

Helianthemum vulgare

Viola palustris

- " sylvatica " canina
- " tricolor
- " tricoloi

Drosera rotundifolia Linnæa borealis

Pyrola minor (not in flower) Trientalis europæa

Pinguicula vulgaris Corallorrhiza innata

Cockburnspath, Dunglass Woods and Dene.

Saturday, 12th June 1852.

Party of nearly 70 met at the North British Railway Station at 8 and proceeded to Cockburnspath. Return tickets, 2s. 6d. Met Mr. Hardy of Penmanshiel at Cockburnspath Station. Mr. Buist sent the forester to conduct the party through Dunglass Woods. Visited Dunglass Dene, going up on the east and returning on the west side.

Gathered:—

Berberis vulgaris
Cardamine amara
Viola odorata (in fruit)
Hypericum calycinum
Geranium phæum
,, sylvaticum
Hex Aquifolium
Acer campestre

Circæa lutetiana
Viburnum Lantana
Vinca major
,, minor
Veronica montana
Neottia Nidus-avis
Carex pendula

Various common ferns in great luxuriance.

Eranthis hyemalis Scolope
Artemisia Absinthium (in gre
Ieaf) Equiset
Anchusa sempervirens Polypor
Luzula pilosa

Scolopendrium vulgare (in great profusion) Equisetum Telmateia Polyporus squamosus

Visited the sea-shore and walked along it as far as Pease Burn and ascended the burn picking *Malva rotundifolia*.

In Pease Dene :-

Polystichum angulare (in abundance).

On sea-shore, numerous ordinary sea-weeds :-

Glaucium luteum Cochlearia officinalis Silene maritima Honckenya peploides Anthyllis Vulneraria Astragalus hypoglottis

Astragalus Glyciphyllos Œnanthe crocata Armeria maritima Plantago maritima Equisetum palustre ,, hyemale

Near shore :-

Circæa lutetiana Carduus tenuiflorus Chenopodium Bonus-Henricus Salix Caprea ,, viminalis

Returned by train passing Cockburnspath at 6 and reached Edinburgh at 7.50 p.m.

Dunfermline, Knock Hill, Black Devon, Saline Hill.

Saturday, 19th June 1852.

Party of 50 proceeded by the train at 6.30 a.m. by Perth and Dundee Railway to Dunfermline. Arrived about 9 and breakfasted at the Royal Hotel for 1s. a head. Return tickets, 1s. 9d.

Dr. James Dewar met the party and gave directions as to route. About 6 or 8 were too late for the train and joined the party in the after part of the day. Walked north from Dunfermline to Lochend, where Meum athamanticum grew, then struck off to the left by a farm-house to a pond, where we found:—

Nuphar luteum
Hippuris vulgaris
Cicuta virosa
Potamogeton natans

Potamogeton crispus Scirpus Tabernæmontani Carex teretiuscula ,, curta

Nymphæa alba is also said to grow here.

Then walked through a wet mountain country towards Knock, gathering on the way:-

Vaccinium Oxycoccus Salix repens Carex pauciflora

Went over the eastern part of Knock Hill, where grew :-

Viola lutea (yellow and blue)
Sedum villosum
Antennaria dioica

Trientalis europæa Botrychium Lunaria

Went to banks of Black Devon and gathered :-

Rubus saxatilis
Epilobium angustifolium (not
in flower)
Tanacetum vulgare
Hieracium prenanthoides
(not in flower)

Polygonum viviparum Gymnadenia conopsea " albida Habenaria bifolia Serrafalcus commutatus

On banks there are also found:-

Pyrola rotundifolia

Pyrola media

Near Knock :-

Trollius europæus (picked in large quantity in several places) Saxifraga tridactylites

Returned by the eastern (middle) Saline Hill, gathering:-

Allosorus crispus (on its western side)

Botrychium Lunaria Lycopodium Selago Came across the country direct to Dunfermline. Picked:— Lepidium Smithii on hill where Asplenium alternifolium is said to have been found. Dr. Dewar sent Botrychium Lunaria and Genista anglica from Torryburn.

St Boswells, Dryburgh Abbey, Bemersyde, Gladswood, Eildon Hills, Melrose.

Saturday, 26th June 1852.

Party of about 100 met at the North British Railway Station at 7.45 and proceeded by train to St. Boswells. Return fare to St. Boswells and back from Melrose, third class, 3s. After reaching St. Boswells proceeded to Dryburgh Abbey, crossing the ferry; rd. paid at ferry and 3d. to enter Dryburgh. After visiting the ruins, walked along banks of Tweed by Bemersyde and Gladswood as far as the bridge near Melrose. Crossed the bridge and visited the Eildon Hills, then visited the Abbey at Melrose, and returned to Edinburgh by the train at 6.15 p.m.

The following are some of the plants gathered :-

Gladswood :— Thalictrum minus

Berberis vulgaris
Arabis hirsuta
Viola hirta
Malva moschata
Tilia grandifolia
Geranium sanguineum
,, nodosum
,, sylvaticum
,, lucidum
Euonymus europæus

Vicia sylvatica Prunus communis Pyrus Aria Cornus sanguinea Galium boreale

., Mollugo

Solidago Virgaurea Centaurea nigra Vinca minor Origanum vulgare Mentha viridis Betula alba Salix fragilis

Galium pusillum

" alba Populus alba " tremula

Carex sylvatica Melica nutans ... uniflora

Juniperus communis Asplenium Adiantum-nigrum

., Trichomanes

Dryburgh :-

Aquilegia vulgaris Staphylea pinnata Ononis arvensis Potentilla reptans Pyrus communis Ligustrum vulgare Polemonium cæruleum Verbascum Thapsus Lilium Martagon

Banks of Tweed, near Dryburgh :-

Ranunculus aquatilis Symphytum officinale Linaria vulgaris Mentha viridis

Near Dryburgh :— Clematis Vitalba

Clematis Vitalba Rosa spinosissima ,, tomentosa Anthemis arvensis Plantago media

" rubiginosa " canina

Salix cinerea, var. aquatica Scirpus sylvaticus

Bemersyde :--

Meconopsis cambrica
Doronicum Pardalianches
Mentha viridis

Buxus sempervirens Polystichum aculeatum Lastrea Filix-mas, var. incisa

Near Melrose :-

Lepidium Smithii

Anthemis arvensis

Eildon Hills :—
Sinapis alba (fields near)
Antennaria dioica
Listera cordata

Allosorus crispus Lycopodium Selago

Melrose Abbey :— Asplenium Ruta-muraria

Burntisland, Aberdour, Donibristle, St. Davids, Inverkeithing, North Queensferry.

Saturday, 3rd July 1852.

Party of about 50 met at Granton at 10 and proceeded to Burntisland. Dr. Christison and Dr. James Simpson were in the

boat. Walked by the shore to Starly Burn and Aberdour. Entered Donibristle gate (permission given), visited the garden, and then proceeded to St. Davids, Inverkeithing, and Queensferry, meeting the steamboat there at 6.30 p.m. Expenses, 2s. 6d. Amongst plants collected were:—

At Donibristle :—	
Thalictrum minus	20.00
	Medicago maculata Dipsacus sylvestris
,, majus Sagina subulata	Allium Scorodoprasum
At North Queensferry	
Thalictrum minus	Astragalus Glyciphyllos
" majus	Spiræa Filipendula
At St. Davids :-	
Reseda lutea	Haloscias scoticum
Geranium pyrenaicum Melilotus officinalis	Matricaria Chamomilla (fiel near)
Spiræa Filipendula	Arundo epigejos
Potentilla reptans	and single and single
At Inverkeithing :-	
Saponaria officinalis	Suæda maritima
Spiræa Filipendula	Sclerochloa maritima
Haloscias scoticum	" distans
Sambucus Ebulus	
In Aberdour Woods:-	and the second
Circæa lutetiana	Rumex viridis
At Aberdour:-	
Lepigonum marinum	Carex distans
Solanum Dulcamara	,, extensa
Blysmus rufus	Anold contributes of
At Burntisland :	

Sclerochloa loliacea

Sagina maritima

Sclerochloa maritima

Beattock, Garpol Linn, Beld Crag.

Saturday, 10th July 1852.

Party of about 40 met at the Caledonian Railway Station at 7,350 a.m. and proceeded by train at 7,45 to Beattock. Return tickets, including the returning by the express train at night, 4s. (Some went by cheaper train for 2s. 6d., returning at 4,28 by another cheap train.)

At Beattock Station met the Rev. Mr. Little of Kirkpatrick Juxta, who directed us on our way and accompanied us to the Garpol Linn, where we got many good plants. Then we walked across the country to the Beld Crag, a rich locality. On our way back to the station visited the Manse garden, where many good alpines are cultivated by Mr. Little.

Reached the station about 6.45 p.m. in time for tea, and returned by express train at 7.44, reaching Edinburgh at 9.30.

List of the plants got :-

Garpol Linn :-

Aquilegia vulgaris Rubus carpinifolius

,, saxatilis Vaccinium Oxycoccus (near) Gymnadenia conopsea (near)

albida (near)

At Beld Crag :-

Pyrola secunda Carex sylvatica

Near Beattock :— Lepigonum rubrum

Genista tinctoria Spiræa salicifolia Jasione montana

Ligustrum vulgare Rumex aquaticus

Near Beld Crag:— Hypericum humifusum

Hypericum humifusu Veronica scutellata Hymenophyllum Wilsoni Cystopteris fragilis Lastrea Oreopteris

Polypodium Dryopteris ,, Phegopteris

Holcus mollis

Asplenium viride

Potamogeton oblongus Carex pallescens

" lævigata

" fulva Ophioglossum vulgatum Lycopodium clavatum

Veronica Anagallis Allosorus crispus Mr. Little gave us a specimen of Woodsia ilvensis from the hills near Moffat.

North Berwick, Canty Bay, Bass, Tantallon Castle, Dirleton.

Saturday, 17th July 1852.

Party of 46 met at North British Railway Station at 8 a.m. and proceeded by train to North Berwick. Return tickets, 2s. From North Berwick walked by Canty Bay. Some (about 34) went to the Bass in G. Adam's boats. Twelve went to Tantallon Castle and walked by the shore and common to Dirleton, where the whole party met about 5.30 p.m. Returned by train at 6.23 p.m.

Some of the plants gathered were :-

At North Berwick :--

Thalictrum minus
Papaver Argemone
Eryngium maritimum
Helosciadium repens
Carduus Marianus
Leontodon lævigatus
Thrincia hirta (common)
Anagallis tenella
Listera ovata

At and near Canty Bay:—
Silene noctiflora
Scabiosa Columbaria

At and near Tantallon:— Lepidium latifolium

Dirleton:—
Fumaria micrantha (near)
Reseda lutea
Cerastium arvense

Habenaria viridis
Phleum nodosum
Triticum repens
,, laxum
,, junceum
Equisetum palustre, var.
procumbens

Tragopogon minor Hyoscyamus niger

Equisetum variegatum

Sempervivum tectorum

Galium Mollugo Centaurea Scabiosa Lamium intermedium At Dirleton Castle :—

Sedum album
, reflexum

Smyrnium Olusatrum
Centranthus ruber

Dirleton Common :—
Alyssum calycinum
Silene conica

Calamintha Acinos

On the Bass :—
Lavatera arborea

Beta maritima

Arran, Largs, Wemyss Bay.

Thursday, 22nd July 1852.

Party consisting of J. H. Balfour, Andrew Beatson Bell, George C. Bell, James N. Bennie, James S. Beveridge, George S. Blackie, William B. Boyd, James T. Brown, William Bryce, Philip Cockold, Alex. Cowan, Alex. Fraser, James Gardner, Frederick Gourlay, Alex. Johnston, W. Keddie, Chris. Kerr, junior, John Locking, James M'Allum, James M. Gregor, Valentine M. M'Master, James Alex. Menzies, Charles Popham Miles, Robert Osborne, James Peddie, junior, David Ross, John Ross, Robert Sharpe, Alex. R. Simpson, John Spittal, Robert L. Stuart, James G. Surenne, J. Sutherland, William B. Turner, E. W. Wakefield, George H. Wakefield, John E. Wakefield, Arch. Young, James Young, proceeded by train at 11 a.m. on Thursday, 22nd (after lecture), to Glasgow, third class. Return tickets, allowing party to return on Saturday or Monday, 53.

Arrived at Glasgow at one, saw model of Arran in Andersonian. Joined boat at Broomiclaw at two, along with Mr. Miles, Keddie, and Jardine. Mr. Connal had a cart waiting for the baggage. Evening fine. Reached Brodick about 8 p.m.

Some difficulty in getting beds, Mrs. Jamieson had been previously written to on the subject. She secured beds in various farm-houses and cottages. Walked along shore to Invercloy in the evening, picking Brassica monensis, Mertensia maritima, Triticum laxum.

Friday, 23rd July 1852.

Breakfasted before 7 a.m. and then started about 7.45 a.m. for Goatfell; reached the top about 11, gathering:—

Radiola Millegrana Alchemilla alpina Saxifraga stellaris Drosera anglica Sedum Rhodiola Oxyria reniformis Carex rigida Lycopodium Selago
,, alpinum
,, selaginoides
Batrachospermum vagum
Conferva alpina (below
mountain)

Numerous lichens for analysis by Dr. George Wilson were picked.

Descended by a very steep descent into Glen Sannox. Walked to the shore. Gathered:—

Drosera anglica

Rhynchospora alba

Also caught a viper. Bathed at Sannox and walked by shore to Corrie, visited lime-quarries, interesting from quantity of *Productus*, then proceeded by the shore to Brodick, which was reached about 7.30 p.m.

Other plants gathered were :-

Sagina apetala
Hypericum Androszemum
,, humifusum
Parnassia palustris
Cotyledon Umbilicus
Sedum anglicum
Lythrum Salicaria
Circea alpina
Œnanthe Lachenalii
Pastinaca sativa (near Corrie)
Petroselinum sativum (near
Corrie)
Solidago Virgaurea
Anagallis tenella
Samolus Valerandi
Erythrea Centaurium

Erythræa linarifolia Lycopus europæus Scutellaria galericulata Stachys palustris ambigua Mentha sylvestris, var. velutina (near Brodick) Atriplex Babingtonii Juneus maritimus supinus Scolopendrium vulgare Cystopteris fragilis Lastrea Foenisecii Polypodium Dryopteris Phegopteris Osmunda regalis

Saturday, 24th July 1852.

Party left Brodick by steamboat at 6.30 a.m., reached Largs about 8.30. Dr. Greville met the party. Several went on to Glasgow and to other places on the Clyde. Thirty sat down along with Dr. G. in the Brisbane Arms to breakfast. Mr. Cunningham had kindly provided breakfast for the whole party.

After breakfast the party walked by the shore to Wemyss Bay, gathering on the road the following specimens:—

Lepidium Smithii Raphanus maritimus Lepigonum marinum Hypericum dubium maculatum Malva moschata Spiræa salicifolia Cotyledon Umbilicus (abundant at Wemyss Bay) Sedum anglicum Lythrum Salicaria Carum verticillatum Aster Tripolium Anagallis tenella Samolus Valerandi Erythræa linarifolia Mertensia maritima Scutellaria galericulata Beta maritima

Suæda maritima Hippophaë rhamnoides Scirpus pauciflorus Blysmus compressus rufus Rhynchospora alba Carex extensa Triticum repens laxum iunceum Asplenium marinum (Wemyss Bay) Scolopendrium vulgare Osmunda regalis Ceramium rubrum (various states) Desmarestia aculeata Fucus ceranoides (fine speci-

men)

On reaching Wemyss Bay, party went on board the steamboat and reached Glasgow about 6.30 p.m. Visited college, cathedral, and cemetery, and after getting tea went by train at 8.30 p.m. to Edinburgh.

Ireland.

Friday, 6th August 1852.

A party consisting of J. H. Balfour, John Sutherland, Philip Cockell, Alexander Cowan, P. Neill Fraser, William John Menzies, D. C. M'Callum, John Sibbald, left Edinburgh this day by the train at 11 for Glasgow, provided with boxes, boards, and paper, and all the apparatus required for a botanical excursion.

Reached Glasgow about one and proceeded to the Broomielaw to join the Dublin steamboat the "Herald," found that the boat had sailed and that they must join it at Greenock, sailed by Arran boat at 2 p.m., met Middleton and Alston and Hussey on board, landed at Greenock about four and got berths on board the "Herald," which sailed at 5.20. Had a good passage in the evening, but when opposite Allsa Craig a squall came on with rain, and there was a good deal of pitching during the night. Lord and Lady Gough were on board.

Saturday, 7th August 1852.

The wind continued strong this morning, and very few of the party breakfasted on board. We reached Dublin about 9 a.m. and proceeded to the Gresham, where most of us breakfasted. Dr. Mackay called after breakfast and kindly accompanied us to Trinity College; saw the buildings, chapel, dining hall, and then went to the museum, where we met Dr. Robert Ball and Professor Allman. The museum does great credit to Ball's exertions. He gave me hints as to a plan of fastening bottles-viz., to fit a rim of indiarubber, such as that used for letters, to the mouth of the jar, and then put a round piece of glass above it so as to close the mouth, and to hold this firm by means of a bit of brass curved in the centre and worked into the rim on each side. Several preparations were shown well preserved in this way, Visited Ball's fernery at 3 Grange Road, saw many excellent ferns growing well. He gave a suggestion as to the mode of making diagrams and tables, by using oil paint (such as that contained in tin-tubes) with common naphtha (6d. or 1s. per gallon), and lay it on the paper with a brush; the mixture dries soon

From Ball's proceeded with Dr. Mackay to Glasnevin Garden and visited the houses. Mr. Niven was unfortunately absent. During our visit a thunderstorm came on and we were detained long in the houses. The houses are new and well constructed and contain many good plants. Noticed particularly

the mode of growing bananas in the earth of the house in clusters. It gives a more tropical aspect and shows the habit of the plant. Cyanches Loddigesii was in flower. Victoria grown in a small tank, not sufficient to enable it to flower. Fine specimen of Banksia in flower. Examined some Triticum, one of which seemed to be Triticum laxum. After seeing Glasnevin, went down to the College Botanic Garden and saw a number of excellent plants, a fine specimen of Dracana Draco, some good orchids, many interesting plants in the open air. Afterwards went to the hotel with Dr. Mackay, who dined with the party.

Visited various parts of Dublin in the evening and returned to tea.

Monday, 9th August 1852.

At 6.30 a.m. we walked to the Zoological Gardens at Phœnix Park, and saw the collection of animals, which is by no means extensive. Afterwards drove round the whole of the Phœnix Park, and had a fine view of Wicklow Court from the road near the Hibernian School for Soldiers.

Gathered Linum angustifolium and Faniculum vulgare in abundance. Breakfasted at 9 at the hotel and then joined the train for Howth at 9.45, accompanied by Professor Allman. Met Dr. Mackay and Mr. Bain at Howth, walked by the rocks to the lighthouse and then to Baldoyle, where Dr. Mackay gave us lunch.

At Howth the plants gathered were :-

Erodium moschatum
" maritimum
Ulex nanus
Eryngium maritimum
Sium nodiflorum
Crithmum maritimum
Inula dysenterica

Carlina vulgaris Statice occidentalis Erythræa littoralis Beta maritima Obione portulacoides Euphorbia Paralias

Many of the plants are those found round Edinburgh, such as:-

Malva sylvestris ,, rotundifolia Echium vulgare Salvia Verbenaca From Baldoyle we sailed across the tongue of sea to Portmarnock, wading a good part of the way.

Plants :-

Convolvulus Soldanella Euphorbia Paralias (abundant) Orchis pyramidalis

Walked to Malahide, where we arrived about 7 p.m. Dined with Ball and returned by the train at 9.38.

Tuesday, 10th August 1852.

Breakfasted with Dr. Mackay at 8 and left at 9 in two cars for Bray, accompanied by Professor Allman, Dr. Mackay, and Mr. Bain. Visited the Dargle, gathering cut-leaved variety of Polypodium vulgare, also Hymenophyllum Wilsoni. Then proceeded to Powerscourt Waterfall, where I gathered Lastrea Foenisecii, and Hymenophyllum Wilsoni. Dr. Mackay provided lunch, which was taken under the trees during a thunderstorm. After the storm the weather cleared, and we returned to Dublin by the beautiful village of Enniskerry and by the Scalp. Near Enniskerry grow:—

Inula dysenterica Origanum vulgare Malaxis paludosa Epipactis palustris Ophrys apifera Scirpus Savii

Took tea with Professor Allman. He noticed a peculiar fact as to the proboscis of the fly sticking among the stamens of Apocynum androsamifolium; the flower thus acting as a fly-catcher, the animal dies. The hygroscopicity of Carlina vulgaris was also noticed.

Wednesday, 11th August 1852.

Breakfasted at 6 and left by train at 7 a.m. for Cork, which was reached about 2.30. Visited the Exhibition at Cork, which is upon the whole creditable. Then went to Queen's College, visited the halls and museum.

Gathered Ceterach officinarum on the walls near the college, along with it were:—

Asplenium Adiantum-nigrum
,, Trichomanes
,, Ruta-muraria

Scolopendrium vulgare Polypodium vulgare

Visited different parts of Cork. Called on Dr. J. R. Harvey, who had known me in Edinburgh at the Plinian Society, got directions as to my route, also received a copy of the work on the famous Flora of Cork. Mr. Sibbald joined the party this evening.

Thursday, 12th August 1852.

Dr. Sutherland and I walked to Sommers Town about 6.30 a.m. to see a famous cork tree. The tree is of large dimensions and of great age. It is in an orchard belonging to a Mr. Jeffreys.

In a loch near Sommers Town saw Œnanthe fistulosa, Bidens cernua, and Typha latifolia. On roadside Senebiera didynna. On walls at Cork Senecio squalidus. On wall near Sommers Town Ceterach officinarum.

Breakfasted at Cork at 9 a.m., and proceeded by steamboat at 10 to Queenstown. Walked along shore to point opposite Monkstown, gathering:—

Sinapis nigra
Fœniculum vulgare (abun-

Dipsacus sylvestris Antirrhinum Orontium Euphorbia portlandica

Crossed to Monkstown; behind it there was abundance of Petasites fragrams, quite wild in its situation by a roadside. Walked from Monkstown to Passage, where the party had lunch. Then went by rail to Blackrock. From Blackrock crossed to Glanmire Glen, walked along the banks of the Glanmire Burn. On wall near the sea there was abundance of a peculiar Hypericum which seems new. On the walls also there was profusion of Ceterach officinarum. On the stones by water Apium graveolens. From Glanmire walked to Riverstown. Examined banks of water where Trichomanse was said to be found. From Riverstown to Cork in the evening.

Friday, 13th August 1852.

At 6 a.m. left Cork by railway for Bandon; there we called on Professor Allman, who kindly visited some localities with us.

We gathered :-

Hypericum elodes Linaria repens (on banks of Bandon Water) Pinguicula grandiflora (introduced) Pinguicula lusitanica Scutellaria galericulata ,, minor

After breakfast (the chief hotel is French's) went by coach to Bantry and then walked partly by the shore to Glengariff, which was reached about 8.30 p.m. The inns were all crowded; we went to Rorke's Hotel but could not be accommodated with beds; slept on the floor of a farm-house near the inn. Picked on the way Calamintha officinalis. Glengariff is beautifully situated, and requires a residence of a day or two to see its beauties.

Saturday, 14th August 1852.

At 6 a.m. went to bathe in Bantry Bay, and gathered in the woods:—

Saxifraga umbrosa Euphorbia hiberna Hymenophyllum tunbridgense

After breakfast the party went in a car to Kenmare, sent baggage by a separate car, passed along a curious road through tunnels, saw *Euphorbia hiberna* and *Saxifraga umbrosa* in abundance.

After reaching Kenmare the party divided in two. Dr. Sutherland, Mr. Cockell, Professor Allman, and Mr. Shaw went in a car, while Messrs. Cowan, Menzies, Sibbald, and Balfour walked.

Numerous interesting plants were seen, especially :-

Saxifraga umbrosa Hymenophyllum tunbridgense Lastrea Foenisecii Osmunda regalis

Visited Turk Waterfall and saw some splendid specimens of ferns. Reached Muckross Hotel about 7 p.m.

Monday, 16th August 1852.

This morning was very wet. In spite of it our party went in a two-horse car to the Gap of Dunloe, walked through the Gap, and visited the rocks in it.

Gathered :-

Nuphar luteum Nymphæa alba Saxifraga hirsuta ,, serratifolia Saxifraga umbrosa Lobelia Dortmanna Lastrea Foenisecii

Leaving the Gap, walked to the Upper Lake, where the fouroared boat was waiting for us.

On the way gathered :-

Ilex Aquifolium Drosera longifolia Hieracium prenanthoides Euphorbia hiberna Rhynchospora alba

Sailed through the Upper Lake and then through the Long Range, Eagles' Nest, passing Turk Mountain. Passed through the Rapids under the bridge near the Middle Lake. Landed and had lunch. Picked abundance of Arbutus Unedo in fruit. One of the prettiest scenes was in the space between the Upper and Middle Lake. A race took place between four of our party in one boat and five of another party in another. Our party, consisting of Balfour, Menzies, Allman, and Sibbald, with Dr. Sutherland as cockswain, beat the other.

Scotch reels and Irish jigs took place in the hall where we had lunch. Returned to the inn about 6 p.m.

Tuesday, 17th August 1852.

One of the boatmen having offered to show me a station for *Trichmanus breviselum* I started at 5 a.m. and went with him to a burn on Turk Mountain beyond the fall. After passing through very wet and entangled ground, thickly beset with thorns, brambles, and hollies, to the no small detriment of clothes and person, we reached the spot. The weather, which had been lowering all morning, now broke up, and by the time I got to the inn there was promise of a fine day. Accordingly at

8.30 we started in a large car to visit M'Gillicuddy's Reeks; we reached the cottages near the foot of the mountain about 12 and commenced our ascent, followed by guides of various kinds, none of whom were employed by us. On reaching a cottage on the ascent, milk and whisky were offered as usual. From the cottage several boys accompanied us, and were not a little astonished when, in place of taking the usual path, we diverged by the side of a rivulet, which we ascended, picked numerous specimens of Saxifraga umbrosa and its varieties, as well as Saxifraga stellaris. We ascended by peculiar ragged peaks of red sandstone until we reached the most north-easterly summit, where we had a fine view for a few minutes. Mist came on afterwards and we had only temporary glimpses of the scenery. All the party had followed me except Mr. Cockell, who went up by the beaten track. As the mist was now thick and there was some risk that Mr. Cockell might lose himself, I started with Mr. Menzies and a guide for the summit of Carran Tuohill, the highest point of the Reeks, and indeed the highest part in Ireland. The rest of the party descended under the guidance of a boy by a difficult ravine. Before getting to Carran Tuohill we saw Mr. Cockell attempting to come down by very dangerous cliffs, and we had some difficulty in directing him. After going to the top of Carran Tuohill and having a temporary glimpse towards the west and south, we descended by the usual trail to the bottom of the hill. On the way we gathered abundance of :-

Saxifraga hirta
,, umbrosa
Solidago Virgaurea (very small)
Armeria maritima

Aira cæspitosa
,, ,, vivipara and
the alpine form
Cystopteris fragilis

On the summit:—

Sedum Rhodiola Hymenophyllum Wilsoni Asplenium viride

On the lower ground :-

Pinguicula lusitanica

Returned to the cottages at the foot of the hill about 6.30 and

had lunch, which was brought in the car. Did not get back to the inn till about to p.m. owing to the darkness of the night. From Killarney to Muckross the rain descended in torrents, and the road was so dark that the driver had to lead the horses.

Wednesday, 18th August 1852.

This morning about 5.30 a.m. with Messrs. Sutherland, Menzies, and Sibbald, I started for Mangerton, and as the hill was rather misty we took a guide with us. On getting near the summit the mist began to clear off, and ultimately the party had a fine view of the whole lake scenery. The view was heightened by the fleecy clouds floating below and the mist clearing off at different points. Visited the Punch Bowl, the Bachelor's Well, and the Horse Glen. Saw abundance of Saxifraga umbrosa in various states, and of Pinguicula grandiflora. Near the base gathered Pinipinella mains, Verbena officinalis, Calamintha officinalis.

On returning to the inn about 10 had breakfast. I went with Mr. Sprott to visit the Misses Horsley, while the rest of the party went to Ross Castle and Muckross Demesne. Some of them gathered abundance of Orobanche.

The Misses Horsley drove me to some stations for Trichomanes, one of which was that shown to me by the boatman. Along with it was Saxifraga Geum. The stations were on Turk Mountain. Almost all the streams coming from that mountain have Trichomanes on their banks. The fern grows in dark, shady places under the drip of water. The stations are difficult of access owing to the prevalence of brambles, and both Mr. Sprott and I suffered in the cause. It was astonishing, however, to see the enthusiasm with which Miss Horsley mastered all difficulties, and, in spite of wet, streams, brambles, hollies, and thorns, pointed out about five stations for the fern. The Misses Horsley are great collectors of ferns, and are anxious to get some of the rarer Scottish species, which were of course promised by me. After leaving the mountain we proceeded on the car to Ross Castle, where there is a fine view, then sailed across to Ross Island and saw great profusion of Lastrea Thelypteris, barren and fertile fronds.

From Ross Island sailed to Innisfallen and saw the remains of the old monastery, as well as several spots famous in story. The herbage of the island is very nutritious, and it is said that sheep fatten very rapidly; they are only kept on it for six weeks at a time. After walking round the island we sailed for O'Sullivan's Waterfall, a very pretty one in a deep rocky chasm surrounded by ferns of all kinds. Lastrea Foenisecii was here, as in all other parts of Killarney, abundant. Hymenophyllum tunbridgense was also very luxuriant on the rocks. Found the character of the dark rhizome of Lastrea Foenisecii on making a longitudinal section to hold good, thus this plant seems to be distinguished from L. dilatata. From the waterfall sailed by Glena to the cottages of Lady Kenmare, which we visited, then sailed on to the point where the waters meet, near Dinish Cottage. Entered the Middle Lake, visited the Wine Cellars or hollowed caves under the limestone rocks, landed at Jack-a-Boys Bay, so called from the appearance of a rock like a boy in the bay. Near the bay, on marshy ground leading to the Muckross Offices, picked:-

Athyrium Filix-fœmina ,, irriguum Scolopendrium vulgare Lastrea Thelypteris Osmunda regalis

The last mentioned is the common fern here, and is particularly beautiful near the Meeting of the Waters below the Rapids and the Middle Lake.

Near Jack-a-Boys Bay saw :-

Euonymus europæus

Rhamnus Frangula

Landed at Mr. Herbert's Pier and walked by the Muckross Manor and its pretty garden to the Abbey. Muckross Manor is prettily situated on a small eminence commanding a fine view of the Lower and Middle Lakes. The Abbey is very beautiful and tolerably perfect. In it there is an old yew growing. Reached the hotel about 6.30 p.m. to dinner, and was occupied in arranging plants till near 12 p.m.

Thursday, 19th August 1852.

After settling Muckross Hotel bill, which was tolerably moderate, we started at 6.30 a.m. for Killarney. Took our seats on the coach to Tralee. Mr. Sprott and Mr. Cockell accompanied us to that place. Mr. Fraser was left at Muckross to go

to Dublin by Mallow. The coach was crowded with passengers and lugagae. We had secured tickets for 11s. 6d. each, which took us to Tralee, Dingle, Tarbert and Limerick. Mr. Gallacher kindly granted us this favour. Got to Tralee to breakfast, and, leaving most of our heavy baggage there, proceeded by a car to Dingle by Connor Hill. The road over the hill is a remarkable one; it rises to a great height, not less than 1500 feet above level of sea, and crosses the summit of the mountains. We had to walk a great part of the way. Gathered numerous specimens of Saxifraga umbrosa, S. hirsuta, S. stellaris.

Reached Dingle about 4 p.m. and bathed in the bay. Were comfortably accommodated at Petrie's Hotel. Mr. P. is a Scotchman and was glad to welcome his fellow-countrymen. Charges were moderate.

Friday, 20th August 1852.

After bathing and breakfast left in two cars for the foot of Brandon Mountain. Reached some miserable cottages at the foot of the hill, where we procured a guide, as the mountain-top was covered with mist. The mountain is easily ascended in an hour and a half. We had a good view on the way up, seeing Blasquet Islands, Skellig Rocks, Valentia, Kerry Head, the Atlantic, &c. On the top, however, mist prevailed, and we had no view. We gathered abundance of:

Ranunculus	acris	(alpine	Sa
form)			Se
Saxifraga af	finis	10000	Cy
h	irta		Po

Saxifraga umbrosa Sedum Rhodiola Cystopteris fragilis Polystichum Lonchitis

Waited in vain for a clear view. Descended and drove to the rocks near Ballinahow, where there is a lead mine. Rocks fine. Peculiar rocky bay, where the boats of the fishermen are kept. Proceeded along the shore of Smerwick harbour, where the ship "Ben Nevis" was wrecked last Christmas. Saw the tower of Ballidavid, old castle called Galerus, and an ancient oratory said to be the most perfect in Ireland; the stones were placed so as to form a gothic arch, but it was not built on the principle of the arch. Near Smerwick harbour gathered abundance of Althea officinalis. After lunch started by our car about 7 p.m. for

Tralee, going by the old road which avoids Connor Hill. It was so dark that we did not pick Sibthorpia, which grows along the road. Reached Tralee about 11 p.m. after a long and tiresome drive. The road winds in a remarkable way, and is by no means safe in a dark night; it goes along the edges of many very steep banks, and the turns are often very rapid. The whole county of Kerry abounds in Cosyledon.

Saturday, 21st August 1852.

Left Tralee at II a.m., partly by coach and partly by car. Passed through a bleak, peaty, and uncultivated country to Listowel. Near Listowel there is a fine property of the Knight of Kerry (Fitzgerald). There is also one belonging to a Mr. Palmer called Banmore, which might be made very productive and beautiful.

The fine river of the Fale passes Listowel, and we crossed it by a good bridge. At Listowel the car party got a new car and proceeded to Tarbert, where we had lunch, thence coach and car. Went to the moveable pier which conveys the passengers to a moored pier, whence they embark on board the steamers on the Shannon. The Shannon is a noble expanse of water below Limerick, but its banks are very tame and uninteresting. It does not exhibit the beautiful scenery of the Clyde.

We reached Limerick about 8 p.m. and took up our quarters in Cruise's Hotel, Grey Street.

Monday, 23rd August 1852.

At 6 a.m. party of five went by coach to Killaloe, distant 12 Irish miles from Limerick. Mr. Sibbald left the party here and returned home. Our drive was through an undulated country, and the roads were often steep and the turns sharp so that we were nearly overturned by our bad driver. Some of the baggage was shaken off, while we escaped. Another car which started at the same time with us and which was driven equally badly broke down at Ballina Lodge, so that we had to wait some time for the passengers and baggage at Killaloe. Went on board the steamboat on the Shannon and sailed about 9. The scenery on this upper part of the Shannon, and especially of Louch Derz, is

interesting, and much less tame than that of the lower Shannon. We enjoyed our sail much. On board I met an old classfellow, Archibald Cockburn, from 60 Mark Lane, London; there was also Dr. Forbes and his brother. At Shannon harbour canal crosses to Ballinasloe. Shannon Bridge is a well fortified place; numerous troops are landed there. Near it are curious ruins of round towers and churches. One of the towers is very perfect.

Reached Áthlone about 5 p.m. Here Mr. Sutherland and Mr. Mr. Mallum left for Dublin by train at 6.3 p.m. Mr. Cowan, Mr. Menzies, and self dined at Haire's Hotel, along with Dr. Forbes and his brother (Rourke's Hotel seems to be the best and cleanest). Visited fortifications of Athlone before dinner. There is a beautiful railway bridge here.

Left Athlone by train at 10.22 p.m. for Galway and took up our quarters at the Railway Hotel at 12.30. This hotel is on a splendid scale and has just been opened. During the cattle show at Galway on the 20th it was opened and received the Lord Lieutenant and the visitors.

Tuesday, 24th August 1852.

This morning visited part of Galway. Went to Queen's College and heard that Dr. Melville was gone on a yacht to the island of Aran, and that another boat was about to follow him containing Mr. Bilston, the Curator. We accordingly, with Mr. Bilston's permission, embarked on board this boat with certain part of our baggage and sailed down Galway Bay. The wind was rather adverse, but by tacking we got down about 20 or 25 miles; after this the wind lulled and we were unable to make Aran, accordingly we proceeded, partly by sailing and partly by rowing, to Cortello Bay, where we arrived about 8 p.m. and took up our quarters in a small hut, where we got potatoes and milk, as well as some tea and bread, which the boatman provided for us.

We contrived to pass the night tolerably well on beds provided for us, but we did not take off our clothes. The cottagers were very attentive and did all in their power to promote our comfort. Wednesday, 25th August 1852.

As the wind was favourable and the day fine we started at 5 a.m. and proceeded to the boat, gathering on the way plants of Dabeocia polifolia. We sailed about 6. We hailed a fishing boat and got some crabs and lobsters, some of which we boiled on board. We also fished for mackerel and got about a dozen excellent fish, which served us for breakfast and dinner on the island. Landed at Kilronan, in the larger island of Aran, about 9 and went to the house of the boatman, Michael Gill, where we had breakfast. Afterwards proceeded with a guide called Pat Mullen to visit the island. It is a remarkable limestone island, literally paved with stone, with scanty vegetation here and there. Crevices between the rocks in which many good plants, especially ferns, grow. Walked towards the lighthouse and then went to a sandy bay, where we bathed in the Atlantic, crossed the island to visit splendid limestone cliffs, about 400 feet high, and the old fortification of Dunaengus. Limestone hollowed out in a remarkable way into caverns and deep pools. Visited the Seven Churches, the ruins of which are seen at a part about 6 miles from Kilronan. We had a fine view of County Clare, Galway Bay, Connemara, &c.

Plants gathered were :-

Cerastium arvense
Arenaria verna
Malva sylvestris
Geranium sanguineum
Ulex nanus
Poterium Sanguisorba
Saxifraga affinis ? (in abundance on all the rocks)
Smyrnium Olusatrum
Haloscias seoticum
Torilis Anthriscus
, nodosa
Asperula cynanchica
Adiantum Capillus-Veneris
Asplenium marinum

" Trichomanes " Ruta-muraria Scolopendrium vulgare Sambucus Ebulus Senecio Jacobea (without a ray)
Carlina vulgaris
Lycopus europeus
Marrubium vulgare
Plantago Coronopus (hairy var.)
Neottia spiralis (abundant on turfy and sandy soil)
Sesleria cerulea
Juniperus nana
Ceterach officinarum

All these ferns were in profusion in the limestone crevices. Ergot of rye was also abundant.

Returned about 7 p.m. and partook of hot dinner consisting of mackerel, bream, and rock fish.

Saw numerous patients, for whom I prescribed. Among the rest were the brother-in-law of our landlord, a person named Martin Hernan, and another, Michael Haharty.

Visited a cottage near the Seven Churches, where we had milk and potheen.

Thursday, 26th August 1852.

This morning was very fine, and we rose at 5 a.m., but as there was not a breath of wind we had to delay our journey by boat. After breakfast a breeze began to spring up, and we started about 8 a.m. with a fair wind for Roundstone, which we reached in 31 hours. The distance is about 20 miles. The breeze sprang up very quickly, and the Atlantic waves were rather high to be comfortable for bad sailors. The strength of the breeze kept the boat tolerably steady. On reaching Roundstone we proceeded to the inn kept by Mr. Macaulay, the postmaster, the father of Wm. M'Call, who died of cholera in 1849, and who did so much to promote our knowledge of Irish seaweeds; his name is constantly mentioned by Harvey in his Phycologia, The father has taken the name of Macaulay, which he says is his correct family name. He is a Scotchman by birth, and was delighted to see Mr. Menzies in his kilt. The old man was constantly speaking of the merits of his son, to whose memory he has erected a monument in the churchyard of the Presbyterian Chapel. He took us to see it.

We then walked over the gap in the hill behind Roundstone and gathered:-

Nymphæa alba Erica mediterranea Eriocaulon septangulare

After lunch we went by car to Clifden, which we reached about 6,30 p.m. Mr. Macaulay accompanied us in the car about a mile to show us a station for *Errica Mackatii*. On the road to Clifden we passed abundance of this heath, and at Craggiemore, in marshy ground on the left-hand side of the road, and in hollow ground, we gathered *Errac alilaris*.

We took up our quarters in Hart's Hotel, which does not, however, appear to be the best in Clifden. Kerr's Hotel seems to be the cleanest and most comfortable.

We were occupied all evening putting our plants in paper.

Friday, 27th August 1852.

After breakfast left by a private car for Kylemore, where we gathered abundance of *Dabeccia polifolia*, both pink and white. The scenery here reminded us much of Scotland. Kylemore Lough is like one of those in our Highlands. The hills around are worthy of examination. We then proceeded to Leenane, where there is a high hill deserving notice. Near Leenane we picked *Carduus pratensis*.

We then walked up the hill on the way to Maam, and after joining our car we reached the hotel about 2.30 p.m. After bathing in the river, and lunching at Mr. Rourke's inn, we proceeded by the mail car to the point where we join the car for Clifden, and we reached Galway about 8.30 p.m., passing through Oughterard. Mr. Rourke at Maam is an amusing man, and occupied our attention during lunch by tales of Irish and other botanists who had visited his hotel.

We took up our quarters in the Railway Hotel, Galway. Met there Lord Oranmore, who seemed to be much interested in our account of our trip.

Saturday, 28th August 1852.

This day was the last botanising day of the party. After breakfast we visited Queen's College, and then proceeded to the shore of Lough Corrib. Our time was very limited, as we had to start for Dublin in the afternoon. Hence we were not able to reach the station for Rhynchospora fusca and Eriocaulon septangulare.

We gathered :-

Nasturtium palustre Bidens cernua ,, tripartita Nepeta Cataria Alisma ranunculoides Ceterach officinarum

along with numerous other ferns in the limestone rocks. A canal is being made, and communication between Lough Corrib and Galway is being fully opened up for vessels.

At 4 p.m. we left by train for Dublin and arrived at Anderson's Hotel at 10.30 p.m. Here the botanical trip ended; the parties who remained to the last being—J. H. Balfour, Alexander Cowan, William John Menzies.

EXCURSIONS IN 1853.

Granton, Cramond, Craigcrook.

Saturday, 14th May 1853.

Party of about 100 met at Granton at 11 and walked by shore to Cramond, up the Almond. Returned by Craigcrook, and reached Edinburgh about 5.30 p.m. Return ticket 1s.

Ordinary sea-side plants, gathered :-

Cochlearia officinalis

Acer platanoides (plantations) Vicia sativa

" lathyroides (Cramond

Island) Potentilla verna Armeria maritima

Primula vulgaris, var.

Symphytum officinale (not in flower)

Linaria Cymbalaria(Ravelston) Euphorbia Lathyris (banks of

Almond)
Convallaria multiflora (banks
of Almond)

Equisetum limosum

Gorebridge, Arniston, Dalhousie.

Saturday, 21st May 1853.

Party of 128 met at North British Railway Station at 11 a.m. and proceeded to Gorebridge; walked to Arniston, and then by the banks of the water to Dalhousie and met train there at 7.31 p.m. Return ticket, 1s.

Plants gathered :-

Ranunculus auricomus
, Ficaria
Aconitum Napellus
Stellaria nemorum
Prunus Avium
Chrysosplenium alternifolium
Adoxa Moschatellina
Asperula taurina

Doronicum plantagineum Pulmonaria officinalis Lathrea Squamaria Neottia Nidus-avis (old spikes) Arum maculatum Scolopendrium vulgare Equisetum Telmateia Morchella esculenta Specimen of stem of mountain ash, with twining honeysuckle much compressed.

Dysart, Ravenscraig Castle, Wemyss.

Saturday, 28th May 1853.

Party of 126 met at the Northern Railway Station at 9.45 a.m. and proceeded to Dysart. Walked to Ravenscraig Castle, and gathered:—

Pyrus Malus

Salvia Verbenaca

Smyrnium Olusatrum Many sea-weeds along shore.

Entered woods at Dysart and walked through them.

Plants gathered :-

Aconitum Napellus Berberis vulgaris Geum agrimonioides (natural-

ised in woods)
Saxifraga Geum

,, umbrosa ,, granulata Viburnum Lantana Doronicum plantagineum Symphytum tuberosum Lamium maculatum Convallaria majalis Ruscus aculeatus Ornithogalum umbellatum

Ornithogalum umbellatun Lilium Martagon

Saw fine Rhododendrons, particularly a new species, R. salignum, from Sikkim. Also saw Fuchsia syringæflora.

From Dysart walked by shore to Western and Eastern Wemyss amidst rain, which continued from 2.30 p.m. till evening.

Near Wemyss Castle, gathered :-

Lepidium latifolium | Humulus Lupulus

In caves at Wemyss:-

Asplenium marinum

North Queensferry, Inverkeithing, Donibristle, Aberdour, Burntisland.

Saturday, 4th June 1853.

Party of between 80 and 90 proceeded to Granton, went by steamboat to Queensferry—fares 4d. each, besides 2d. at Granton Pier. Landed at Queensferry for 3d. each. Examined the Ferry hills on the eastern side.

Picked:—

Thlaspi arvense

Spiræa Filipendula (not in flower)

Near Inverkeithing ;-

Sagina maritima Geranium sanguineum Sedum villosum Anthriscus vulgaris

From Inverkeithing walked to St. David's and gathered:-

Diplotaxis tenuifolia Reseda lutea Leonurus Cardiaca

Entered Donibristle Woods, and were accompanied to the garden and grounds by Mr. Gavin and the under-keeper. Walked to Aberdour, picking:—

Viola hirta (in fruit)

Medicago maculata Dipsacus sylvestris Cynoglossum officinale Atropa Belladonna (not in flower)

Hyoscyamus niger

Listera ovata (not expanded) Allium Scorodoprasum

Passed through Aberdour woods to Burntisland. At Burntisland, gathered:—

Salvia Verbenaca

Sclerochloa maritima

Parietaria officinalis Carex distans

Returned by boat at 6.15.

Midcalder, Meadowbank, Dalmahoy, Ravelrig, Currie, Woodhall.

Saturday, 11th June 1853.

Morning very unpromising. A party of about 75 met at the Caledonian Railway Station at 7.45 a.m. and proceeded to Mid-calder, thence walked to Meadowbank, Western Dalmahoy Hill, Ravelrig, Eastern Dalmahoy Hill, Currie, and Woodball, and returned about 6 p.m. Return tickets 8d. The evening was so bad and the party so thoroughly drenched that the greater part walked home.

Plants gathered :-

Meconopsis cambrica Hesperis matronalis

Viola palustris

- ,, canina .. flavicornis
- " sylvatica
- ., lutea

Geranium phæum

" columbinum

Drosera rotundifolia Pyrola minor (in bud) Trientalis europæa

Myosotis palustris

Pinguicula vulgaris

Corallorrhiza innata

Listera cordata Arum maculatum

Arum maculatu Carex filiformis

Cockburnspath, Dunglass, Pease Dene.

- Saturday, 18th June 1853.

Party of 84 met at the North British Railway Station at 8 a.m., and proceeded to Cockburnspath. Return tickets 2s. each. From Cockburnspath, after visiting the factor, Mr. Smith, proceeded to Dunglass woods and there gathered:—

Eranthis hyemalis Ribes alpinum

Berberis vulgaris Cardamine amara

" sylvatica Alliaria officinalis Hypericum calycinum

Geranium phæum Chrysosplenium oppositifolium

,, alternifolium Proceeded towards the shore, picking :-

Malva sylvestris Potentilla reptans Equisetum Telmateia cking:— Artemisia Absinthium

Viburnum Lantana Ligustrum vulgare

Veronica montana

Neottia Nidus-avis Carex pendula

Anchusa sempervirens

Lamium Galeobdolon

Potentilla reptans

Walked along the shore to the opening of Pease Dene and

gathered:—
Glaucium luteum
Haloscias scoticum
Hippophaë rhamnoides

Carex vulpina
Psamma arenaria
Triticum junceum
Equisetum Telmateia

Carex arenaria Equisetum Telma
Walked up Pease Dene to the bridge, picking:—

Geranium sylvaticum Digitalis purpurea Polystichum angulare

Returned by train, passing Cockburnspath at 6 p.m.

Kincardine, Tulliallan, Culross, Torryburn, Charleston.

Saturday, 25th June 1853.

Party of about 80 met at Granton Pier at 7 a.m. and proceeded by the Stirling boat to Kincardine. Fares, going and coming, Is. Breakfasted at Dewar's Inn, then walked along the embankment, where good plants were gathered. Mr. Robert Carr picked Hordeum maritimum; this plant is in great quantity on the embankment. Mr. John Cunningham gathered Hordeum pratense, which is less abundant. Festuca arundinacea was very luxuriant, and a number of common grasses.

After leaving the embankment proceeded to station for Osmunda regalis, which was gathered partially in fruit.

On the shore there was abundance of *Scirpus maritimus* and *Aster Tripolium* (not in flower).

In woods at Tulliallan, Dr. James Dewar gathered Corallorrhiza innata; did not find Paris quadrifolia. Also picked Pyrola minor, Aquilegia vulgaris, Rumex sanguineus.

On the shore, between Kincardine and Culross, gathered :-

Ranunculus aquatilis
,, sceleratus (with fasciated stem)
Lepigonum marinum
Melilotus officinalis
Rosa tomentosa
,, canina
Myriophyllum spicatum
Hydrocotyle vulgaris
Apium graveolens
Helosciadium inundatum
Œnanthe crocata
Centranthus ruber

Aster Tripolium (with fasciated stem)
Matricaria Parthenium
Hypocheris glabra (Mr. Tate)
Vinca major
Lithospermum officinale
Echium vulgare (fasciated stem)
Solanum Dulcamara
Iris Pseudacorus
Sparganium ramosum
Glyceria aquatica
Carex intermedia
, paniculata

In the woods at Torryburn :-

Epipactis latifolia Orchids (various) Holcus mollis Ophioglossum vulgatum

At Torryburn, kindly entertained by Dr. Dewar.

Between Torryburn and Charleston :-

Papaver Rhœas Æthusa Cynapium dubium Valerianella dentata Dipsacus sylvestris Argemone Sinapis alba Hieracium vulgatum Viola palustris Erythræa Centaurium Saponaria officinalis Atropa Belladonna Verbascum Thapsus Lychnis Agrostemma Atriplex littoralis Malva sylvestris Babingtonii " rotundifolia Habenaria bifolia Geranium pratense chlorantha Melilotus leucantha (vulgaris) Sclerochloa maritima Potentilla argentea (near Charleston) distans

Returned by boat from Charleston about 7 p.m. and reached Granton about 8.

Lanark, Cora Linn, Bonnington, Cartland Crags.

Saturday, 2nd July 1853.

Party of 140 met at the Caledonian Railway Station at 8 a.m. and proceeded to Lanark. Return tickets 2s.; pupils also allowed to return on Monday.

On reaching the station walked to Lanark, gathering on the way:-

Aconitum Napellus Carex aquatilis?

Epilobium angustifolium Equisetum palustre
Carum Carui ,, limosum
Rumex aquaticus

Got five guides at the inn and went to Cora Linn and Bonnington.

Plants gathered were :-

Trollius europæus Carex disticha
Aquilegia vulgaris ,, paniculata
Vicia Orobus ,, remota
Orchis latifolia ,, glauca
,, maculata ,, sylvatica
Carex dioica ,, binervis
ulicaris ,, fulva

Carex flava

,, ampullacea Polystichum aculeatum

Polypodium Dryopteris

Near Cora Linn :-

Aquilegia vulgaris Rubus saxatilis

Saxifraga oppositifolia

At Bonnington:

Spiræa salicifolia Humulus Lupulus Polypodium Phegopteris Equisetum arvense ... umbrosum

sylvaticum

Circæa alpina Asplenium viride

Poa nemoralis (and var. like

Balfourii)

On the road from Lanark to station, returning:

Antennaria dioica | Gymnadenia conopsea

Mimulus luteus Habenaria chlorantha

Some of the party picked at Stonebyres:—
Solidago Virgaurea | Milium effusum

At Cartland Crags:— Iasione montana

Returned by train at 3.45 and reached Edinburgh before 6 p.m.

North Berwick, Canty Bay, Bass, Tantallon, Dirleton.

Saturday, 9th July 1853.

Party of 80 or 85 met at the North British Railway Station and proceeded by the 8.10 a.m. train to North Berwick. Return tickets 2s. each.

On reaching North Berwick, walked by the shore to Canty Bay, gathering:—

Vicia sylvatica

Eryngium maritimum Haloscias scoticum Scabiosa Columbaria Habenaria viridis

Alopecurus agrestis (in abundance near the station)

Visited the Bass in four boats provided by Adams (6d. each person).

Picked :-

Lavatera arborea Hyoscyamus niger Beta maritima Narcissus biflorus

On returning some visited Tantallon and got :-Lepidium latifolium

Silybum Marianum

Others went to Berwick Law, others walked by road to North Berwick, and picked :-

Silene noctiflora

Hippophaë rhamnoides

Convolvulus sepium (not in flower)

Abundance of Petasites fragrans in a wood close to North Berwick. Afterwards went to the Common and walked by it to Dirleton.

Plants gathered were :-

Ayssum calvcinum Reseda lutea Silene conica Galium Mollugo Thrincia hirta

Anagallis tenella Cynoglossum officinale Calamintha Acinos Equisetum variegatum

Between Dirleton and railway station :-Fumaria parviflora

And near the station :-

Iberis amara

Anthemis Cotula

Returned by train, reaching Edinburgh at 7.45 p.m.

Overtown, Wishaw.

Saturday, 16th July 1853.

Party of 24 met at Caledonian Railway Station-day very wet-and proceeded to Overtown. Return ticket from Wishaw 2s. 6d.

On reaching Overtown the rain was falling very heavily, nevertheless the party visited the banks of Garrion Burn, which was much swollen. A number of ordinary plants were gathered. Ferns and grasses large and abundant.

From the Garrion Burn went to banks of Clyde. Plants gathered were :—

Hypericum perforatum
,, hirsutum
Tilia grandifolia
,, parvifolia
Geranium sylvaticum
,, pratense

Epilobium angustifolium Circæa lutetiana ,, alpina Campanula latifolia Scirpus sylvaticus

Followed banks of Clyde below Garrion Bridge, gathering :—
Origanum vulgare Equisetum umbrosum (Mr.
Calamintha Clinopodium Ross)

Went to Wemyss Hill Farm and were hospitably entertained by ${\rm Mr.}\ {
m Paterson},$ the farmer.

Returned by train, reaching Edinburgh at 5.30 pm.

Cumberland Lakes.

Thursday, 21st July 1853.

Party consisting of J. H. Balfour, Mohammed Badre, Thomas Barclay, Sheriff-Clerk of Fife, Claudius W. Bell, George C. Bell, George Birdwood, W. Weddel Bizzett, Patrick Blair, Frederick Cock, Philip Cockell, Francis Collins, Charles W. Cowan, Hugh Cowan, John Cowan, Emile W. Dubuc, William P. Falla, Robert Farquharson, Patrick Graham, M. A. Katib, Harold Hanson, Thomas Hardie, Wm. Henderson, T. H. James, C. Webster Kerr, James Landall, G. S. Lawson, George Lindsay, Frederick E. Martyn, John Matthews, Wm. John Menzies, David Milroy, William D. Murison, Albert C. Peggram, D. Pisani, Robert Pringle, William O. Roberts, David Ross, M. A. Soubki, Samuel Smith, James Tod, jun., J. B. Tuke, Walter Williamson, W. Blackburn Wood, James Young, left Edinburgh on Thursday, 21st July, by train at 12 noon, having received return tickets for Windermere for 15s. each. The party proceeded to Carlisle, which they reached about 4.18 p.m., then they went by train at 4.33 to Kendal Junction, where they met Mr. Wakefield, who regretted that his brother George could not accompany the party. At Kendal Ormskirk gingerbread had an extensive

sale among the party. On reaching Kendal there was a detention of more than half an hour, during which some of the party visited the town. Afterwards the party went to the Windermere station, where a cart, sent from Ambleside, was ready for the luggage. Some of the party walked, others rode, and others went by boat to Ambleside.

On the way there was gathered abundance of:-

Sanguisorba officinalis

Stachys Betonica

Lactuca muralis

Reached Donaldson's Salutation Hotel about 10 p.m. Excellent arrangements made for the tea-dinner and for beds, so that all were well accommodated.

Friday, 22nd July 1853.

Some of the party were up this morning at 4.30 a.m. and visited Stock Gill. Fine waterfall.

The plants picked were :-

Impatiens Noli-me-tangere Campanula latifolia Festuca sylvatica Hymenophyllum Wilsoni

Scolopendrium vulgare Polystichum aculeatum Polypodium Dryopteris Phegopteris

The morning was misty and wet, the atmosphere being close and warm. After breakfast and paying the bill, amounting to 5s. 6d. each, 39 of the party started for Rydal. Six remained-Graham, Badre, Tuke, Roberts, Lawson, and Landall; they took boats, and resolved to come to Patterdale by coach.

The walking party proceeded to Rydal, picking on the way :-

Meconopsis cambrica Tilia parvifolia Sedum Telephium

Sedum album " reflexum Sempervivum tectorum

Visited Rydal Waterfall and Rydal Mount, and gathered :-Carpinus Betulus Lastrea Oreopteris

Quercus sessiliflora

and a variety of Lastrea Filix-mas with singularly contorted fronds.

In Rydal Lake :-

Nuphar luteum Nymphæa alba Myriophyllum spicatum

Lobelia Dortmanna Potamogeton natans oblongus On banks of Rydal Lake :-

Berberis vulgaris Hypericum Androsæmum

Lythrum Salicaria

Rhynchospora alba Carex dioica " vesicaria

On the roadside :-

Staphylea pinnata Parnassia palustris

Parnassia palustris Drosera rotundifolia Anagallis tenella Narthecium ossifragum

On the hills near Rydal :--

Sedum anglicum Iasione montana Allosorus crispus (the fern of the district)

Walked to Grasmere; some visited Wordsworth's tomb. Near Dunmail Raise Saxifraga umbrosa was seen, and near by the burn Solanum Dulcamara. Reached Wythburn a little after 22 to lunch. Engaged a guide for 5s. to go to Helvellyn, as the hill was covered with mist.

On the way up the hill the following plants were gathered :-

Alchemilla alpina Saxifraga stellaris

Saxifraga stellaris ,, aizoides ,, hypnoides Oxyria reniformis Lycopodium Selago

, clavatum

selaginoides

When a considerable height had been gained the party entered a thick cloud. It was cold and wet. When they reached the summit the cold was very intense.

The party prepared to descend, and had proceeded a short way down Swirrel Edge, when the mist suddenly began to clear away; nearly all of them again ascended to the summit. The mist gradually rose like a curtain, displaying hill after hill, until the whole became beautifully clear, with scarcely a cloud in the sky. The view was splendid, and for at least an hour the party enjoyed it. Scawfell, Bowfell, Borrowdale, Honister Crag, Skiddaw, Saddleback, Windermere, Coniston, Esthwaite, Morecambe Bay and its islands, the Solway, the hills of Northumberland, &c., were distinctly clear. It was truly splendid, and the guide said that he had very rarely seen such a view from Helvellyn.

The party next examined the rocks above the Red Tarn.

The following were some of the plants gathered :-

Hieracium alpinum Anemone nemorosa Lawsoni (Soubki) Cochlearia officinalis Vaccinium Vitis-Idæa Viola sylvatica Armeria maritima Cerastium alpinum Veronica serpyllifolia Malachium aquaticum humifusa Alsine verna (Bizzet) Rubus saxatilis Polygonum viviparum Alchemilla alpina Oxvria reniformis Salix herbacea Saxifraga oppositifolia nivalis (C. Cowan) Juniperus nana stellaris Juncus triglumis Carex rigida (on the summit) aizoides Poa alpina hypnoides Sedum Rhodiola Festuca ovina vivipara Polytrichum alpinum Solidago Virgaurea Saussurea alpina Splachnum mnioides

Descended below Striding Edge in a fine evening to Patterdale, and were comfortably entertained at Guelderd's Hotel, where everything was ready for us in the way of tea-dinner and beds. Sir Walter and Lady Trevelyan were staying at the hotel. Visited the son of a Mr. Mortimer from Manchester, who was in delicate health, and prescribed for him.

The six who remained at Ambleside, finding that the day cleared up, had walked by Rydal and Grasmere and came over the lower part of Helvellyn, reaching Patterdale late in the evening. Mr. Soubki remained behind the party on Helvellyn and lost his way, but reached the inn late in the evening.

The evening was remarkably fine, and it was with difficulty that the party was induced to retire to rest.

Some continued boating and walking till 12 at night, others put their plants into paper.

Saturday, 23rd July 1853.

Breakfasted at Guelderd's Inn at 7 a.m., and after paying the bill, 6s. 2d. each, started for the shores of Ulleswater. Many took to boats, others to the coach, only 19 walked by Gowbarrow Park to Pooley Bridge and Penrith.

On the shores of Ulleswater the following plants were gathered: -

Thalictrum maius Aquilegia vulgaris Papaver somniferum Hypericum perforatum maculatum humifusum hirsutum Geranium nodosum (near a cottage) phæum Genista tinctoria Prunus Padus Spiræa salicifolia Sanguisorba officinalis Circaea lutetiana Galium boreale

Galium Mollugo (near Pooley Bridge)
Senecio aquaticus
Serratula tinctoria (near Pooley Bridge)
Hieracium boreale
Lactuca muralis
Jasione montana
Ligustrum vulgare
Linaria vulgaris
Mentha rotundifolia
Calamintha Clinopodium
Stachys Betonica
Quercus pedunculata
, sessiliflora (at Gow-

barrow Park)

The best plants were gathered between Gowbarrow Park and Pooley Bridge, within two miles from the latter place. In Ulleswater Nymphaa alba occurs. Plantago media was gathered abundantly after passing Pooley Bridge.

Between Pooley Bridge and Penrith:-

Malva moschata Potentilla reptans Galium Mollugo Plantago media

Walked by Brougham Hall to the Round Table, and reached Penrith about 3 p.m.

At Penrith Castle Diplotaxis tenuifolia was picked.

Left Penrith by express train at 3.20, and reached Edinburgh at 7.15 p.m. Mr. Barclay, Mr. Menzies, and C. Cowan remained at Carlisle; Claud Bell at Carstairs. The weather during this trip was upon the whole good, and all seemed to enjoy the excursion.

Clova

Thursday, 4th August 1853.

A party consisting of J. H. Balfour, Thomas Barclay, George Bayley, Alexander Cowan, Charles W. Cowan, E. W. Cropper, John G. Cunningham, James Gilchrist, William M. Ogilvie, Charles Jenner, M. A. Katib, G. Lawson, Mostapha Mostapha,

David Ross, M. A. Soubki, William B. Wood, Peter Young, left Edinburgh on Thursday, 4th August, at 6,30 a.m. by the Northern Railway, having taken second-class return tickets for Glammis at the fare of 9s. 2d. Proceeded by Perth to Glammis, and reached the latter place about 11,30 a.m., where Findlay's cart was waiting for the baggage. Rev. W. Balfour of Holyrood and Master Harry White met the party there and walked with them to Kirriemuir, where they had lunch in Robb's Commercial Inn. Walked thence to Cortachy and Clova, reaching the latter about 8 p.m.

On the way picked the following plants:-

Woods near Kirriemuir :-

Pyrola minor Listera cordata
Trientalis europæa

Roadside, Clova :--

Alchemilla alpina Pyrola media
Saxifraga aizoides Plantago maritima
Meum athamanticum Polygonum viviparum

Were all accommodated in the inn and hall. Eleven slept in the hay in the hall, the rest at the inn.

Friday, 5th August 1853.

Mr. Bayley went to fish in the Esk, while the rest of the party, after bathing and breakfasting, crossed the Esk and walked past Ogilvy's House towards Glen Dole,

On the way gathered :-

Meum athamanticum Tofieldia palustris
Carduus heterophyllus Carex aquatilis (near the
Malaxis paludosa bridge)
Gymnadenia albida

Afterwards went towards Craig Rennet, at the foot of Glen Fee.

Gathered :-

Arctostaphylos Uva-ursi | Pyrola media

Cliffs on right side of Glen Fee yielded:

Draba incana

Epilobium angus

Draba incana Epilobium angustifolium
Oxytropis campestris Woodsia ilvensis
Saxifraga nivalis

Crossed from these cliffs to opposite side and gathered abundance of :—

Polypodium alpestre

At the upper part of Glen Fee :-

Thalictrum alpinum Silene acaulis Sibbaldia procumbens Saxifraga oppositifolia Epilobium alsinifolium Gnaphalium supinum Veronica alpina

Salix Myrsinites

Salix arbutifolia
Carex Vahlii
,, atrata
,, rigida
,, vaginata
,, capillaris
Polystichum Lonchitis

On reaching rocks at the top of Glen Fee, walked along the summit, gathering Azalea proximbers. Had a glorious view of all the mountains—plenty of snow on some. Reached Clova about 8 p.m. thoroughly tirel.

Saturday, 6th August 1853.

This morning several of the party were knocked up and remained at home. George Bayley went up Glenesk to fish. The rest of the party went to Glen Dole, and visited the rocks near the top.

There we picked :-

Dryas octopetala Erigeron alpinus Vaccinium uliginosum Veronica saxatilis Poa Balfourii Asplenum viride

Could not get any Astragalus alpinus.

Walked along the rocks towards the foot of Glen Dole, gathering:-

Epilobium alpinum Saussurea alpina Veronica alpina Veronica saxatilis Salix reticulata

Returned to the inn about $6.30\,$ p.m., and were engaged putting up plants in paper.

Monday, 8th August 1853.

This morning, after our usual bathe in the Esk and after breakfasting, proceeded about 8 a.m. up the glen to Glen Dole, and then up Jock's Road to the summit of the hill.

Near the White Waterfall found abundance of Polypodium alpestre in fine fructification. In all parts of the mountain here this fern is remarkably luxuriant. At Don's original station for Sonchus it is very large, along with Athyrium Filix-famina; the two are usually associated together, and it does not seem to be the rule (as Backhouse states) that where the one begins the other ends. Along with these ferns Lastrea Oreopteris and L. dilatata are common.

At the top of Jock's Road also there is abundance of Rubus Chammorus and Cornus succica—some of them were still in flower, others in fruit. Saussurea alpina also was seen on the rocks near the falls.

Proceeding along the White Water we looked in vain for Juncus castaneus, but we picked:—

Sibbaldia procumbens Epilobium alsinifolium ,, alpinum Gnaphalium supinum Veronica alpina

and many other alpine plants.

Crossing the hills towards Little Gilrannoch we gathered :-

Rubus Chamæmorus (in fine flower) Epilobium alpinum Trientalis europæa (in flower) Carex vaginata (in abundance) Alopecurus alpinus Phleum alpinum

On the felspar rocks of Little Gilrannoch Lychnis alpina was found to be tolerably abundant. Only a small quantity was gathered. The party divided at this point after lunch, some returning to the inn, whilst Gilchrist, Soubki, Mostapha, Wood, A. and C. Cowan, Ross, and Balfour walked to Canlochan, descended into the glen and gathered:—

Thlaspi alpestre Saussurea alpina Gentiana nivalis Veronica humifusa ,, alpina Veronica saxatilis Luzula spicata Poa alpina ,, Balfourii Returned to the inn at Clova about 9 p.m. after a long day's work. Near Braedownie a green flowered var. of Galium verum was picked, and near Acharn Hieracium denticulatum and Hieracium premanthoides.

Tuesday, 9th August 1853.

After bathing and breakfast, left the inn about 8.30 a.m. and walked to the lower part of Glen Dole. Ascended the rocks of Craig Rennet, gathering:—

Linnæa borealis (in fine flower) Arctostaphylos Uva-ursi Lycopodium annotinum

Walked along the rocks towards the Astragalus cliff. Gathered the usual alpine plants, also:—

Hieracium alpinum ,, nigrescens Mulgedium alpinum (not in flower) Salix arenaria .. reticulata

Ascended to the summit by a deep ravine, where the Mulgadium grew. Examined the station of the Astragalus cliff, but did not see any specimens. On the summit gathered Carex rariflora in abundance. Walked towards the ravine which descends into Glen Fee and examined the rocks along the northern side, saw Epilobium angustifolium, and many alpine plants. No Woodsia. Returned to the inn about 7.30 p.m. Cunningham and Ogilvie left this morning.

Wednesday, 10th August 1853.

This day examined the rocks round Loch Brandy and the loch itself. The plants gathered were:—

Subularia aquatica Callitriche autumnalis (in a pool close to loch) Sparganium natans Isoëtes lacustris

On the rocks *Potentilla alpestris*, and all the ordinary alpine species. Looked in vain for *Potentilla tridentata*.

Returned to the inn between 5 and 6 p.m. Gathered:-

Lamium maculatum

Carex aquatilis, var., on the banks of the Esk

Bayley left for Perth, Stirling and Dollar; Jenner and Wood for Braemar.

Thursday, 11th August 1853.

The party, now reduced to 12, after sending their baggage by cart to Glammis, and breakfasting, left the inn about 10 a.m. and walked to Dykehead, Kirriemuir and Glammis.

On the way gathered :-

Rosa villosa Meum athamanticum Lysimachia vulgaris Ligustrum vulgare (near Cortachy) Mentha viridis (?) (about one mile from Clova Inn)

Reached Glammis Station about 4 p.m. and joined train at 4.50, arriving in Edinburgh about 9.30 p.m.

EXCURSIONS IN 1854.

Canal, Slateford, Colinton, Dreghorn, Pentlands.

Saturday, 13th May 1854.

Party of about 80 or 90 met, 10 a.m., at the Canal Basin, Port Hopetoun, and walked along the banks of the Canal to Slateford, and thence to Colinton, Dreghorn and the Pentlands, returning by Morningside about 5 p.m.

Usual plants gathered. Among others:-

Anemone nemorosa
Corydalis lutea (Colinton
grounds)
Cardamine amara
Lychnis diurna
Geranium phæum
Potentilla Fragariastrum
Antennaria dioica (Pentlands)

Tussilago Farfara
Petasites vulgaris
Doronicum Pardalianches
Vinca major (Colinton)
,, minor
Lilium Martagon
Arum maculatum (near
Dreghorn gate)

Burntisland, Pettycur, Kinghorn.

Saturday, 20th May 1854. Queen's Birthday.

Party of 120 met at the Dundee and Perth Railway Station and at Scotland Street Station at 9.45 a.m., and proceeded to Burntisland. Return tickets, 9d.

Visited the Island, gathering :-

Salvia Verbenaca Parietaria officinalis Sclerochloa maritima

Thence walked to hills to the east of Burntisland, where we got Botrychium Lunaria. Mr. David Philip Martyn picked Orobanche rubra. Mr. Lowe gathered Alyssum calprisum (on the bank near the roadside) and Reseda lutea was also found. Some shale plants, as Lepidodendron, and some coaly matter, in the trap tuff.

Walked by the shore to Pettycur and then by Kinghorn and Kinghorn Loch to Burntisland.

Picked on the way Fumaria micrantha, Thlaspi arvense, Litterella lacustris, Polamogeton lucents, Nostoc on stones in running water, and a peculiar kind of lichen on stones at Kinghorn Loch.

Tynehead Borthwick Castle, Crichton Castle, Fushie Bridge, Gorebridge.

Saturday, 27th May 1854.

Party of 130 met at the North British Railway Station at 11 a.m. and proceeded to Tynehead, thence they walked to Crichton Castle, Borthwick Castle, Fushie Bridge, and Gorebridge, returning by the train which passes Gorebridge at 7.27 p.m. Return tickets, 1s. 2d.

Near Tynehead Genista anglica was gathered in profusion, and also:—

Hippophaë rhamnoides Gymnadenia albida (by Mr. Fairbairn) Botrychium Lunaria Lycopodium Selago ,, clavatum In woods on the bank of the stream :-

Cardamine amara (near Crichton Castle) Alyssum calycinum Viola palustris " sylvatica Cerastium arvense Vicia Orobus Anthemis arvensis

Listera cordata
Carex paniculata
" paludosa
Polypodium Dryopteris
" Phegopteris
Equisetum arvense

sylvaticum

palustre

Near Borthwick Castle :-

Cardamine amara Myrrhis odorata Anchusa sempervirens

Pyrola media

Humulus Lupulus Arum maculatum Potamogeton oblongus

Valeriana dioica was also gathered, but very sparingly, the chief station being destroyed by the draining of the marsh. It was also gathered by the side of a hedge to the west of Fushie Bridge. The station for Trollius europæus has been destroyed by cultivation.

Burntisland, Starly Burn, Aberdour, Donibristle.

Saturday, 3rd June 1854.

Party of about 100 met at the Dundee and Perth Railway Station and at Scotland Street Station, and proceeded to Burntisland. Return tickets, 9d.

Walked to Starly Burn, Aberdour, and Donibristle, and returned by the boat at 5.10 p.m.

The following plants were gathered :-

Thalictrum majus (Aberdour) Lepidium campestre (near Aberdour) Thlaspi arvense Sagina subulata Euonymus europæus Medicago maculata (Donibristle) Dipsacus sylvestris (near Donibristle) Primula elatior
Anchusa sempervirens
(Aberdour Castle)
Solanum Dulcamara
Atropa Belladonna
Hyoscyamus niger (near
Donibristle)
Allium Scorodoprasum

Ornithogalum umbellatum
Blysmus rufus
Carex distans
,, extensa
Ophioglossum vulgatum
(Aberdour)
Botrychium Lunaria
(Aberdour)

Bathgate, Boghead, Torbane Hill, Kirkton, Woodcockdale, Linlithgow.

Saturday, 10th June 1854.

Party of about 80 met at the Edinburgh and Glasgow Railway Station at 8.15 a.m. and proceeded to Bathgate, thence walked to Boghead and Torbane Hill, Kirkton, Knock Hill, Woodcockdale, Lithgow Bridge, and Linlithgow. Return tickets, 1s. 6d. each. Visited Torbane Hill coal-pit; about 40 of the party descended under the guidance of Mr. MrKinlay. Numerous fossils seen—Stigmaria, Sigillaria, Calamites. Many species of Carex picked in the boggy ground near, also Vacacinium Oxyoccaus and Leontodon palustris, and near Kirkton Senecio saracenicus, Chara flexilis. Near Bathgate Geranium lucidum. Near Bellside Sedum Telephium and Pyrethrum Parthenium.

At and near Knock Hill:-

Hesperis matronalis Viola lutea Cerastium tetrandrum Sedum villosum Symphytum tuberosum Botrychium Lunaria

At Kipps:-

Sisymbrium Thalianum

Sagina subulata

In Woodcockdale:-

Trollius europæus Geranium sylvaticum Doronicum Pardalianches

Near Linlithgow :-

Fumaria micrantha Nasturtium palustre (the Loch) Rumex obtusifolius (with very large leaves like R. alpinus) Lilium Martagon

Returned by train passing Linlithgow at 6.39 p.m.

Cockburnspath, Dunglass Dene, Pease Dene.

Saturday, 17th June 1854.

The morning was very unpromising, but 55 met at the North British Railway Station at 7.45 a.m. and proceeded to Cockburnspath. Return tickets, 2s.

The day turned out very wet, and the east wind was very cold. The ardour of a great number of the party was damped on reaching Cockburnspath, and they remained at the Inn all day or returned to Edinburgh. Nevertheless 15 or 20 ventured up Dunglass Dene; on coming to the bottom of the glen, on returning, several of the party left for the purpose of walking to Dunbar and Linton. About 12 still remained who proceeded along the coast, but by the time the party reached Pease Dene only nine remained, who continued to the last, and got back to Cockburnspath at 3 p.m., when they got their habiliments dried at Mrs. Wetherall's kitchen fire; the drying scene was not a little ludicrous.

A number of good plants were gathered :--

In Dunglass Dene, besides some good specimens of ferns, there were:—

Eranthis hyemalia
Cardamine amara
Hypericum calycinum
Acer campestre
Ribes alpinum
Campanula latifolia
Pyrola minor
Lysimachia Nummularia
Vinca major
, minor

Anchusa sempervirens Veronica montana Lamium Galeobdolon Neottia Nidus-avis Carex pendula " lævigata Scolopendrium vulgare Polystichum aculeatum Equisetum Telmateia On the shore :-

Glaucium luteum Astragalus hypoglottis Enanthe crocata

In Pease Dene, Vicia sativa, var. angustifolia and Poly-

stichum angulare.

The party returned by train passing Cockburnspath at 6 p.m.

In Dunglass Dene a plant (not in flower), which appears to be Solidago altissima, was gathered.

East Linton, Prestonkirk, Tynningham, Belhaven Sands, Dunbar.

Saturday, 24th June 1854.

Party of 50 met at the North British Railway Station at 8 a.m. and proceeded to East Linton; thence they walked to Prestonkirk, Tynningham, where they were met by Mr. Lees; and then proceeded by the sands to Belhaven and Dunbar, returning by the train passing Dunbar at 6.25 p.m. Return tickets, 2s. Amongst the 140 species of plants gathered were:—

Near Prestonkirk:-

Fumaria capreolata

" micrantha " officinalis Malva sylvestris

Ballota fœtida

Near Tynningham and at the mouth of the Tyne :-

Lepigonum marinum Antennaria maritima, var. gallica Hieracium aurantiacum Salicornia herbacea Suæda maritima

On Belhaven sands:-

Reseda lutea Onobrychis sativa Poterium Sanguisorba Plantago major (in a viviparous state)

Kincardine, Tulliallan.

Saturday 1st July 1854.

Party of 66 went by train to Granton at 6.30 a.m. Return tickets, rail, 3d. each. Then by Stirling boat to Kincardine, paying 2d. at pier at Granton (2d. also returning). Return tickets by steamboat, is.

On reaching Kincardine, breakfasted at Dewar's Unicorn Inn for 1s. 3d.each. Then under the direction of a guide kindly supplied by Mr. Menzies, Count Flahault's factor, we walked through Tulliallan woods and garden, and gained the shore near sands, returning by the embankment to Kincardine, and going on board the steamboat at 6.45 p.m.

Among the best plants gathered were :-

Corydalis claviculata Fumaria capreolata micrantha officinalis Sagina maritima Lepigonum rubrum marinum Geranium lucidum (old castle) Genista anglica Rubus cæsius? Rosa arvensis? Enanthe crocata Viburnum Opulus Vaccinium Vitis-Idaea Trientalis europæa (abundant in Tulliallan woods) Ligustrum vulgare Anchusa sempervirens Solanum Dulcamara

Parietaria officinalis Empetrum nigrum Habenaria viridis bifolia chlorantha Carex pulicaris " fulva ,, riparia Milium effusum Molinia caerulea Glyceria aquatica Sclerochloa distans Festuca arundinacea Hordeum pratense (on embankment) Hordeum maritimum Juniperus communis Lastrea Oreopteris Osmunda regalis (on sands)

An abundance of *Ranunculus hirsutus* near Kincardine, eighteen inches high, and of the var. parvulus on the shore.

Inchkeith, Inchcolm.

Saturday, 8th July 1854.

Party of upwards of 200 went to Inchkeith and Inchcolm. Tickets, including railway to Leith and steamboat, 2s, 6d. The party met at the railway station at 7.45 a.m., and proceeded to Leith. The Stirling steamboat "Prince of Wales" had been hired and was waiting at the West Pier. Professor Edward Forbes and many of his pupils joined the trip.

The party first went to Inchkeith, where they arrived about 0.30 a.m. and after spending three or four hours on the island they proceeded to Inchcolm, on which they remained for a couple of hours. The day was favourable, and lunch was supplied partly on deck. Among the interesting plants collected on Inchkeith were the following :-

Sinapis nigra Conium maculatum (abundant) Haloscias scoticum

Hvoscvamus niger (very abundant) Marrubium vulgare

On Inchcolm Dipsacus sylvestris and Hyoscyamus niger were seen, and peculiar fasciated stems and heads of Carduus.

Longniddry, Gosford, Aberlady, Luffness, Gullan, Dirleton.

Saturday, 15th July 1854.

Party of about 50 met at the North British Railway Station at 8 a.m. and proceeded to Longniddry. Thence walked to Gosford, Aberlady, Luffness, Gullan, and Dirleton, and returned by train at 6.55 p.m. from Drem. Return tickets, 1s.

Amongst plants gathered were :-

Silene anglica (near Luffness) Silene noctiflora (Luffness, abundant)

Trifolium fragiferum Sedum album ., reflexum Hippuris vulgaris

Smyrnium Olusatrum
Helosciadium repens
Sium angustifolium
Centranthus ruber
Carduus nutans
Centaurea Scabiosa
Thrincia hirta
Campanula hybrida
Anagallis arvensis
, tenella
Asperugo procumbens
Scrophularia vernalis
Limosella aquatica (Gullan

and at Drem)

Utricularia vulgaris
Hippophaë rhamnoides
Habenaria viridis
Scirpus Tabernæmontani
"maritimus
Carex vulpina
Lepturus filformis
Triticum repens
"laxum (near Lufiness)
Chara hispida
"vulgaris

St. Andrews, Guard Bridge, Leuchars.

Saturday, 22nd July 1854.

Party of 86 met at the Edinburgh, Perth, and Dundee Railway Station at 6.30 a.m. and proceeded to St. Andrews. Return tickets, 5s. 8d. Professor Edward Forbes and Dr. Greville were in the party.

Reached St. Andrews about 10 a.m., and breakfasted in the Town Hall (76 sat down to breakfast). Mr. Thomson of the Star Hotel provided breakfast at 1s. 6d. each.

After breakfast, walked by Links to Guard Bridge and thence to Tents Muir, reaching Leuchars about 6 p.m. in time for the train.

Among the plants gathered were the following:-

Fumaria micrantha Lychnis Githago Œnanthe crocata Anthemis Cotula " arvensis Anagallis tenella Rhinanthus major Littorella lacustris Euphorbia Esula Juncus balticus Carex incurva
Lycopodium Selago
, inundatum
,, clavatum
,, selaginoides
Didymodon inclinatum
Trichostomum rubellum
Gymnostomum fasciculare
Bryum trichodes

Loch Lomond.

Wednesday, 26th July 1854.

Party consisting of J. H. Balfour, Edward Forbes, Thomas Barclay, George Coates Bell, H. M. Birdwood, Thomas M. Cage, M. Cowan, Henry Davidson, Robert Dean, Robert Farquharson, Patrick Graham, Thomas Hardie, John Hay, James Hector, Wm. R. Hill, Robert D. Horne, William F. Humphrey, William Johnston, Mohamid Ali Katib, James Landall, Henry Leach, James H. Lock, Stevenson Macadam, David P. Maclagan, Robert Maclagan, John Matthews, James Miller, R. Mutrikima, William Nichol, Alexander Nicolson, John Grant Nicolson, Alexander Peddie, James Peddie, junr., F. H. Richardson, William O. Roberts, Alexander R. Simpson, David Simpson, M. A. Soubki, P. Appleby Stephenson, Wm. R. Todd, J. B. Tuke, Thomas J. Walker, James Wardrop, John K. Wilson, left Edinburgh at 5 p.m. on Wednesday, 26th July, and proceeded to Glasgow. Were accommodated at the Queen's Hotel. Return tickets to Inverarnan and back to Edinburgh, 7s. 6d.

Thursday, 27th July 1854.

Left by the steamboat at 7 a.m. for Bowling and Loch Lomond; reached Inverarnan about 11.30 a.m. Were all comfortably accommondated by M*Lellan, the innkeeper. Proceeded up Glen Falloch, picking Quercus pedunculata and Quercus sessiliflora, and ascended some of the lower hills about a mile and a half from Inverarnan.

Gathered :--

Saxifraga stellaris " aizoides Sedum Rhodiola Oxyria reniformis Hymenophyllum Wilsoni

Returned by Glen Caorrunn, gathering a number of subalpine ferns.

Friday, 28th July 1854.

Started about 7.15 a.m. to visit Ben Laoigh, Ben Oss, and

other hills in the neighbourhood. On Ben Dubh Chraige picked the following plants:— hills and a language of the control of the

Thalictrum alpinum Arabis petræa Cochlearia grœnlandica Silene acaulis Sagina subulata Rubus Chamæmorus Sibbaldia procumbens Saxifraga oppositifolia stellaris aizoides hypnoides Epilobium alpinum Antennaria dioica (var. of Gnaphalium supinum Saussurea alpina Vaccinium uliginosum Armeria maritima Euphrasia officinalis Rhinanthus Crista-galli Plantago maritima Polygonum viviparum Oxyria reniformis Salix arenaria .. herbacea

Habenaria chlorantha
Juncus trifdus
, triglumis
Luzula spicata
Rhynchospora alba
Carex pauciflora
, rigida
,, capillaris
,, saxatilis
Aira cæspitosa vivipara
Poa alpina
,, Balfourii
Asplenium viride
Cystonteris fragilis

Malaxis paludosa

Polystichum Lonchitis
Polypodium Dryopteris
,, Phegopteris
Botrychium Lunaria
Lycopodium Selago
,, alpinum
,, selaginoides

dentata

Andreæa Hookeria

Professor Forbes visited Ben Oss and gathered similar alpine species, and in addition *Allosorus crispus*.

Saturday, 29th July 1854.

Party, diminished by departure of some members, started about 8 a.m. and proceeded along banks of Falloch towards Ben Voirlich. Geological party under Professor Forbes proceeded by shore of lake. Botanical party ascended Ben Voirlich and descended to Loch Sloy, reaching Tarbet about 3 p.m.

Among the plants gathered were the following:-

Thalictrum alpinum Ranunculus acris (alpine form) Corydalis claviculata Cardamine pratensis Cochlearia vars. Cerastium alpinum Hypericum Androsæmum humifusum Rubus nitidus Sibbaldia procumbens Alchemilla alpina Saxifraga oppositifolia stellaris aizoides hypnoides Sedum Rhodiola Lycopodium annotinum anglicum (near Tarbet) Isoëtes lacustris Lythrum Salicaria

Epilobium alpinum Carum verticillatum (near Tarbet) Gnaphalium supinum Lysimachia vulgaris Scutellaria galericulata (Loch Lomond) Salix herbacea Listera cordata Juneus trifidus " triglumis Luzula spicata Carex pauciflora rigida saxatilis Poa Balfourii Osmunda regalis

Joined the steamboat at 4 p.m. and reached Glasgow at 8 p.m. Returned by train which left Glasgow at 9, and reached Edinburgh about 11 p.m.

Braemar.

Tuesday, 8th August 1854.

Party composed of J. H. Balfour, M. A. Badre, Thomas Barclay, George Coates Bell, Herbert M. Birdwood, Edward W. Cropper, J. Earle, James Gilchrist, M. A. Katib, G. Lawson, G. S. Lawson, James Miller, David Ross, M. A. Soubki, J. G. Whitehead, left Edinburgh by the Edinburgh, Perth and Dundee Railway at 9.45 a.m. on Tuesday, 8th August 1854. Return tickets, available for 14 days, had been granted for 12s. 6d. Train reached Aberdeen much behind its time : in place of 4.23, being 5.30. Dined at Douglas Hotel close to the

station, and at 7 p.m. proceeded by train to Banchory. On our arrival there found all the inns occupied. The party had to hunt for beds in the village.

Wednesday, 9th August 1854.

Party breakfasted at the Burnett Arms, and after sending baggage by a cart to Aboyne and Ballater, started on their walk. Examined woods on the banks of the Dee. Gathered:—

Rubus cordifolius Pyrola (several species) Trientalis europæa Plantago maritima Goodyera repens (abundant in woods at Aboyne)

Lunched at Aboyne, a very comfortable hotel. Visited Suspension Bridge, walked by south side of Dee to Ballater. Visited Pannanich Wells, near them there is abundance of Mimulus luteus. Near Ballater there is abundance of Melampyrum sylvaticum. Were comfortably accommodated at the inn at Ballater.

Thursday, 10th August 1854.

Left Ballater at 8 a.m. after sending the baggage by cart to Castleton of Braemar. Walked along the banks of the Dee as far as the Balmoral Suspension Bridge, crossed the bridge to Balmoral, and were allowed by Dr. Robertson to see all parts of the grounds. Visited the old and new buildings under the guidance of Mr. Paterson, the gardener. The old building appears to be most in keeping with the situation. The new Palace is built of beautiful white granite from Glen Gelder; the building is very chaste and elegant so far as it has been completed; much remains to be done. It is proposed to have a square tower connected with it, 100 feet high. The flowergarden is well kept. Went by the private walks to the summit of a hill overlooking Balmoral, and had a fine view. Picked:—

Vaccinium Vitis-Idæa Pyrola secunda Melampyrum sylvaticum Neottia Nidus-avis

The gardener informed us that the Queen occasionally used Lycopodium clavatum as a wreath for her head.

Proceeded to Lochnagar, botanised in the corrie, gathered abundance of *Polypadium alpestre*, which commenced a few hundred feet below the little tarn and extended up to the high cliffs. No *Asplenium Filix-famina* was seen.

Among the plants gathered were :-

Cerastium alpinum Hieracium alpinum (very Rubus Chamæmorus hairy) Sibbaldia procumbens Juneus trifidus " triglumis Saxifraga oppositifolia Luzula spicata stellaris Phleum alpinum aizoides Poa alpina vivipara rivularis .. laxa hypnoides Allosorus crispus Epilobium alpinum Cornus suecica Lastrea dilatata (in various Antennaria dioica, var. forms) Gnaphalium sylvaticum, var. Lycopodium annotinum Gnaphalium supinum

After reaching the top, descended by Ballochbuie, gathering on the way *Splachnum minioides* growing on the jaw-bone of a dead sheep, and *Betula nana*.

Reached Invercauld Arms, Braemar, about 9.30 p.m., after a long and fatiguing walk. Found all prepared for us by Mr. G. Clark

Friday, 11th August 1854.

All were so tired with yesterday's journey that we did not breakfast till about 9 a.m. At 10 started for Little Craigendal, going by the second valley on the right hand after crossing the Ben na Bourd burn by a wooden bridge. It is perhaps better to take the third valley on the right, and thus to come on the southwest corner of Little Craigendal, where Astragalus appirus grows.

Among the plants gathered, besides the Astragalus, on Little Craigendal were the following:—

Silene acaulis Potentilla alpestris Sibbaldia procumbens Gnaphalium supinum Pyrola secunda Carex capillaris Bartramia fontana (male and female) The Astragalus had flowered early, and only a few specimens were procured in blossom.

Returned to the inn about 6.30 p.m.

Saturday, 12th August 1854.

Left the inn this morning at 8 o'clock in two carriages, and proceeded to the foot of Loch Callater, thence walked to rocks in Glen Callater and Glen Candlich (Cean-mohr?). The day became very wet and misty, and after spending three or four hours on the rocks, and being thoroughly wet, we returned to the inn about 4,30 p.m.

The plants gathered were (besides lower cryptogams):-

Thalictrum alpinum
Subularia aquatica
Saussurea alpina
Hieracium (many forms)
Lobelia Dortmanna
Salix venulosa
, stictocarpa

Monday, 14th August 1854.

The morning being misty we postponed our trip to Ben na Mac Dhu. The whole party (with the exception of Mr. Bell, who went fishing) proceeded in a large car, accompanied by Mr. Esson, the accountant, to visit Canlochan. The car took the party a little beyond a bridge about eight miles from Castleton, on the Spital of Glenshee road. The party ascended the hill and visited the Canlochan rocks.

In the Glen we picked the following plants:-

Draba incana Hieracium forms Cochlearia forms Sonchus alpinus (about 6 or 8 specimens in flower) Cerastium alpinum Pyrola rotundifolia Dryas octopetala " minor Saxifraga nivalis Gentiana nivalis (sparingly) stellaris aizoides Veronica humifusa hypnoides (with alpina large flower) saxatilis (sparingly Erigeron alpinus in flower)

Carex	vitilis
	atrata

- ., rigida
- " aquatilis
- " stictocarpa
- " stictocarpa
- ,, capillaris
- " binervis

Poa alpina

Poa Balfourii ,, nemoralis Asplenium viride

Polystichum Lonchitis

Polypodium alpestre (in large quantity, and towards the east side of Canlochan

very large)

The rocks in the Glen are of a basalt or hypersthene nature.

Visited Glas Maol and had a splendid view of all around as the day cleared up. Saw the Lomonds in Fife, Pentlands, and Edinburgh? Ochils, Ben Lawers, Ben Nevis, all the Braemar hills. Descended from Glas Maol, joined the road about three miles from the Spital of Glenshee, and joined the car at the bridge about 6 p.m. and returned to Castleton.

Tuesday, 15th August 1854.

The morning being fine we breakfasted at 6 a.m. and started at 7 by conveyance to the Linn of Dee, accompanied by Mr. Rathay and Mr. Esson (in all 15). Mr. Barclay had a horse and guide to meet him at the Linn of Dee and take him to Loch Etchachan. We walked by Glen Lui after seeing the Linn of Dee and the Mar Forest. We gathered Arabis petræa in stony places in the bed of the Linn.

Remarked particularly in all the old firs deprived of their bark the spiral arrangement of the wood. The trees were dead. Got a curious knot from one of the trees for the Museum. Walked up Glen Derry to Loch Etchachan and then to the top of Ben na Mac Dhu, which we reached between 1 and 2. On the way gathered Lunalla arcuala and some other rare plants.

On or about the summit among the plants seen were:-

Silene acaulis
Gnaphalium supinum
Salix herbacea
Luzula arcuata
,, spicata
Carex rigida
Festuca ovina vivipara
Lycopodium Selago
M

he plants seen were:—
Andreæa rupestris
Polytrichum alpinum
Dicranum nigro-viride
Trichostomum lanuginosum
Cetraria islandica
"nivalis
Lecidea geographica

Lunched at the summit and had a fine view, descended towards the shelter and Loch Avon amidst a pretty severe shower.

Gathered Carex leporina on the sides of a stream going to the corrie of the Avon, not far from patches of snow, also Stellaria cerastaides and many alpine plants. Polypodium alpsetre abounds on the ascent to Loch Etchachan and on the descent to Loch Avon, also on the ascent to Cairngorm from Loch Avon. It is a very abundant fern. Reached the Shelter Stone by a steep and rugged descent about 4 p.m. Our men had brought up plaids and provisions. They returned with the horses. Proceeded to make a fire of juniper. Kettle boiled and tea prepared. Mr. Rathay, alarmed at the dampness of the cave, left us at 7 p.m., and walked to Castleton, which he reached at 2 in the morning.

We had a restless night in the cave. Some sat up all night and kept themselves warm by the fire outside. The stone is 40 feet long, on an average, 20 feet broad, and about 16 or 18 feet high.

Wednesday, 16th August 1854.

Mr. Esson returned this morning to Castleton; the rest of the party after breakfast ascended to Cairngorm, gathering abundance of Polypodium alpestre, Luzula arcuata, and other alpine plants. Mist came on after the party reached the summit; the fine view was only seen for a few minutes. Descended from summit and visited cliffs looking to the Spey side. These cliffs seem worthy of examination. It is probable that the best way of examining all the hill in this quarter is from the Spev side. Important to find accommodation on that side. Walked by back of Ben na Mac Dhu, picking numerous confervoid plants. Descended into the valley of the Dee; had beautiful view of the pass to Rothiemurchus. After reaching Glen Dee visited the Wells of Dee: near this there is abundance of Polypodium alpestre all the way, continuing till opposite Cairn Toul. On the descent from Ben na Mac Dhu, Asplenium Filix-famina picked by Mr. G. Lawson, high up, above Polypodium alpestre.

Among other plants were gathered :-

Veronica alpina Stellaria cerastoides Hieracium alpinum Phleum alpinum

Lunched at Wells of Dee, Rain came on and continued till about five. Met our conveyance near the Linn of Dee and returned about 7 p.m.

Thursday, 17th August 1854.

After paying bill and arranging for transmission of baggage to Dunkeld by a cart, the party left in a conveyance for the head of Glen Tilt (Mr. G. S. Lawson returned to Aberdeen) about 11 a.m. Walked through the Glen, picking alpine saxifrages and :-

Rubus saxatilis Epilobium angustifolium Polystichum Lonchitis

Asplenium viride

Near the Glen, in the woods :-Campanula latifolia

Melampyrum sylvaticum

Dr. Gilchrist visited the Marble Ouarry near the bridge about four or five miles from Blair. A bridge near the upper part of the Glen is broken down, so that it is almost impossible for an ordinary traveller to proceed without wading up to the knees; in a flood it must be quite impassable. Surely the Right of Way Society should see that the road is passable for travellers. Our party were not interrupted, although we went by the same route as my party in 1847 did. The gate at which we were stopped was at once opened to them by an old woman. Most of the party kept on the left side of the river after passing the lowest bridge and descended by what was the old road, keeping clear of the woods entirely. Reached the Bridge of Tilt Inn about 8 p.m. and were comfortably accommodated.

Friday, 18th August 1854.

This morning party breakfasted at 6 a.m. and at 7 commenced their walk. Mr. Barclay went by the mail to Dunkeld. Walk-

ing party II in number proceeded by Killiecrankie, gathering Lathyrus niger in the woods nearly opposite Mrs. Hay's cottage. Attempt is now made to shut up the old Killiecrankie road and to allow visitors to enter by a small gate which is kept locked and only opened when parties request permission to go through. Our party were escorted by a Highlander. Spent about an hour in the wood. Reached Dunkeld about 1.30 p.m., when Mr. Barclay met the party. After lunch at Fisher's Inn. proceeded by coach to Dunkeld Road Station, and joined the railway, reaching Edinburgh about o p.m.

EXCURSIONS IN 1855.

Granton, Caroline Park, Cramond Woods, Barnton. Craigcrook, Craigleith.

Saturday, 12th May 1855.

About 100 met at Granton Pier at 10 a.m. Walked by shore to Caroline Park, Granton Woods, Cramond Woods, and returned by Barnton, Craigcrook, and Craigleith. Visited Granton Quarry and got a specimen of the fossil tree.

Among the plants gathered were :-

Anemone nemorosa Ranunculus Ficaria Caltha palustris Eranthis hyemalis (at Caroline Park) Aconitum Napellus (at Caroline Park) Fumaria capreolata Cochlearia officinalis Capsella Bursa-pastoris Viola odorata ,, hirta

sylvatica Geranium molle

Oxalis Acetosella Prunus domestica Geum rivale Potentilla Fragariastrum

verna Saxifraga granulata

Chrysosplenium oppositifolium

Ribes Grossularia .. alpinum

rubrum nigrum

Bunium flexuosum Valerianella olitoria

Tussilago Faríara

Petasites vulgaris Doronicum Pardalianches Vinca minor Myosotis arvensis Veronica hederæfolia Mentha viridis Lamium purpureum

- ,, incisum ,, maculatum
- ,, album Polygonum Bistorta

Daphne Laureola Mercurialis perennis Ulmus montana

Salix triandra

- " Caprea
- ., viminalis

Salix Smithiana

" Helix Stratiotes aloides Polygonatum multiflorum Luzula sylvatica Lemna trisulca

" minor Asplenium Trichomanes

Equisetum arvense " limosum Polytrichum piliferum

Dicranum scoparium
Trichostomum lanuginosum
Bryum punctatum
Didymodon purpureum
Hypnum splendens

Ramalina scopulorum Cetraria islandica

Tynehead, Borthwick, Fushie Bridge, Gorebridge.

Saturday, 19th May 1855.

Party of 100 met at the North British Railway Station at 10.45 a.m. and proceeded to Tynehead, thence walked to Borthwick and Fushie Bridge, and returned by train passing Gorebridge at 4.57 p.m. Return third-class tickets, 1s. 2d.

Vegetation very far back, three weeks or a month behnd. Observed colours in vegetation as they affected the eye, found that the yellow dandelion and green grass were very marked features. M'Cosh talks of the red stalk of the dandelion, but in most cases they were green, and even when a reddish or brownish tinge was present it did not appear to the eye. The marked effect was produced by yellow and green, and these, although not complementary colours, were pleasing. So also in many places nothing seen but the yellow primroses and the green sward—without any other colour, no white nor red. Some of the party visited Arniston also.

Some of the plants gathered were :-

Ranunculus aquatilis " Ficaria Caltha palustris

Viola palustris (not in flower) ,, tricolor

" arvensis

Oxalis Acetosella (with pink flower, nearly all the plants had flowers of this colour and were very beautiful)

Genista anglica Lathyrus macrorrhizus Fragaria vesca

Potentilla Fragariastrum Chrysosplenium oppositifolium

" alternifolium

Adoxa Moschatellina Doronicum plantagineum (scarcely in flower) Pyrola media (not in flower)

Primula vulgaris

" veris Fraxinus excelsion Anchusa sempervirens Myosotis sylvatica

,, arvensis Lathræa Squamaria

Lamium amplexicaule Salix Caprea

Empetrum nigrum Luzula pilosa

Arum maculatum (not expanded)

Phalaris arundinacea Melica nutans

Juniperus communis Equisetum arvense

" sylvaticum " limosum

Chara vulgaris

" flexilis Polytrichum commune Dicranum heteromallum Didymodon purpureum

Bryum hornum
Hypnum cuspidatum
Stereocaulon paschale
Evernia prunastri

Mid-Calder, Meadowbank, Dalmahoy Hills, Ravelrig, Balerno, Currie, Woodhall.

Saturday, 26th May 1855.

Party of 75 met at the Caledonian Railway Station, Lothian Road, at 8.30 a.m., and proceeded to Mid-Calder, thence walked to Meadowbank, Dalmahoy Hills, Ravelrig, Water of Leith, Balerno, Currie, and Woodhall. Returned from Currie by the train passing that place at 5.26 p.m. Return tickets, 8d. Vegetation was found to be far behind.

Among the plants gathered were :-

Anemone nemorosa Ranunculus acris

" repens

Caltha palustris
Meconopsis cambrica (in bud)
Cardamine sylvatica
Sisymbrium Thalianum
Alliaria officinalis

Viola palustris

,, sylvatica

" canina

,, tricolor

" lutea Arenaria serpyllifolia Montia fontana Oxalis Acetosella Acer platanoides Vicia sepium Lathyrus macrorrhizus

Lathyrus macrorrhi Prunus insititia ,, communis

Potentilla Fragariastrum Saxifraga granulata

" hypnoides (in bud) Ribes Grossularia

" rubrum Myrrhis odorata Anthriscus sylvestris Adoxa Moschatellina Antennaria dioica Vaccinium Myrtillus

Primula vulgaris veris

Fraxinus excelsior Vinca minor, var. alba Menyanthes trifoliata Anchusa sempervirens Scrophularia vernalis Veronica serpyllifolia Pedicularis sylvatica Mentha viridis (not in flower)
Nepeta Glechoma
Lamium incisum
Mercurialis perennis
Ulmus montana
Fagus sylvatica
Salix fragilis

" Caprea " viminalis

" Smithiana Helix

Empetrum nigrum

Orchis mascula

Allium ursinum (not out) Tulipa sylvestris

Paris quadrifolia (not in flower)

Luzula pilosa

" sylvatica

" campestris Arum maculatum (nearly out)

Carex vulgaris

, glatica , pallescens

Equisetum arvense

" palustre Polytrichum commune Didymodon purpureum

Bartramia pomiformis Bryum punctatum

,, pyriforme

Funaria hygrometrica Lecanora tartarea Cladonia rangiferina

Alectoria jubata Cetraria glauca

Calicium chrysocephalum Bæomyces rufus Scyphophorus pyxidatus

" bellidiflorus phærophoron coralloides

Burntisland, Aberdour, Donibristle, Humbie Woods, Pettycur, Kirkcaldy, Wemyss.

Saturday, 2nd June 1855.

Party of 60-70 proceeded at 9.45 a.m. by train to Burntisland, and returned by the train at 5 p.m. Return tickets, 9d. Walked from Burntisland to the Island, then by the shore all the way to Aberdour, thence to Humbie Woods, Grange Quarry, and Burntisland. Some of the party went to Donibristle, others to Wernyss, Dysart, and Kirkcaldy.

Among the plants gathered were the following :-

Ranunculus acris

repens

" bulbosu

" Ficaria Berberis vulgaris (near

Aberdour) Arabis hirsuta

Cardamine hirsuta

Alyssum calycinum (near

Cochlearia officinalis

" danica Brassica Napus

rassica Napus ,, Rapa

Lepidium campestre

" Smithii

Thlaspi arvense Helianthemum vulgare Viola hirta

Cerastium tetrandrum

Geranium sanguineum ,, molle Ilex Aquifolium

Medicago maculata Vicia lathyroides Prunus insititia

" domestica Saxifraga granulata Smyrnium Olusatrum (near Kirkcaldy)

Hedera Helix (in fruit) Dipsacus sylvestris (not

Dipsacus sylvestris (no in flower)

Matricaria Parthenium (old Castle, Aberdour, not in flower)

Silybum Marianum (not in flower)

Hieracium murorum

,, vulgatum Leontodon lævigatus

Vaccinium Myrtillus

Armeria maritima

Fraxinus excelsior

Anchusa sempervirens

Solanum Dulcamara (not in flower)

Linaria Cymbalaria

Antirrhinum majus (old Castle, Aberdour, not in flower)

Veronica Chamædrys

, Beccabunga Lamium amplexicaule

,, purpureum

" incisum

Lamium album Plantago Coronopus Rumex scutatus (Aberdour Castle) Ulmus montana Parietaria erecta Quercus Robur Orchis mascula

var. alba Allium Scorodoprasum (not in flower) Tulipa sylvestris (Donibristle) Triglochin maritimum

Many sea-weeds.

Blysmus rufus Carex præcox ., distans Avena pubescens Sclerochloa loliacea (Burntisland Pier) Pinus sylvestris Asplenium marinum (Wemyss) Ophioglossum vulgatum

Botrychium Lunaria Equisetum arvense sylvaticum

Linlithgow, Carriden, Blackness, Hopetoun.

Saturday, 9th June 1855.

Party of 74 met at the Edinburgh and Glasgow Railway Station, and proceeded to Linlithgow. Visited the Palace, walked to Carriden, Blackness, and Hopetoun, and returned from Winchburgh at 4.5 p.m. Return tickets, 1s. 6d.

Among the plants collected were the following:-

Ranunculus aquatilis sceleratus Berberis vulgaris Nasturtium palustre Arabis hirsuta Cardamine sylvatica Draba verna Lepidium campestre Sinapis arvensis

" alba Viola sylvatica " tricolor

" arvensis

lutea

Lychnis diurna Moehringia trinervia Ilex Aquifolium Prunus Padus Cratægus Oxyacantha Saxifraga granulata Petroselinum sativum (not in flower) Myrrhis odorata Caprifolium Lonicera (not in flower) Valeriana pyrenaica (Hopetoun)

Valerianella olitoria

Primula veris
Ligustrum vulgare (not in flower)
Vinca minor
Symphytum officinale
Plantago maritima
"Coronopus

Chenopodium Bonus-Henricus Quercus Robur Salix fragilis, var. Rus-

" alba

" viminalis " Smithiana

,, Sintinana Listera ovata (not in flower) Orchis mascula
Triglochin palustre
Eleocharis palustris
uniglumis

" multicaulis

Blysmus rufus

Alopecurus geniculatus Asplenium Ruta-muraria ,, Filix-fœmina

Polystichum aculeatum Lastrea Filix-mas

,, dilatata Botrychium Lunaria

Jungermannia bidentata Agaricus campestris

Cleghorn, Lanark, Cora Linn, Bonnington Falls.

seliana

Saturday, 16th June 1855.

Party of nearly 100 met at the Caledonian Railway Station at 7 a.m., and proceeded to Clephorn Station. Return tickets, 2s. 6d. Walked by the road to Lanark, thence proceeded to Cora Linn and Bonnington Falls, and returned by the banks of the Mouse to Clephorn, joining the train at 4.8 p.m. Mr. MrKinley, the gardener at Bonnington, had made arrangements as to the guides. There were four guides, to whom we paid in all 6s. 8d., and to the woman at the gate 2s.

Among the plants collected were the following:-

Ranunculus auricomus Trollius europæus Aquilegia vulgaris Aconitum Napellus (not in flower) Cardamine amara Sisymbrium Thalianum Viola palustris Cerastium glomeratum Montia fontana
Geranium sylvaticum
, lucidum
Anthyllis Vulneraria
Vicia Orobus
, sylvatica (not in
flower)
Rubus saxatilis
Pyrus Aucuparia

Saxifraga oppositifolia Galium boreale Carduus heterophyllus (not in flower) Hieracium murorum Vaccinium Vitis-Idæa (not in flower) Pyrola media? (not in flower) Origanum vulgare (not in flower) Salix viminalis Neottia Nidus-avis Orchis latifolia Convallaria majalis Eriophorum latifolium Carex disticha

" paniculata " aquatilis

" vulgaris " glauca

" præcox " panicea

" fulva

Carex ampullacea Melica uniflora Briza media Asplenium Adiantumnigrum

" viride

" Trichomanes " Filix-fœmina

Cystopteris fragilis Polystichum aculeatum

Lastrea Filix-mas ,, dilatata

Polypodium Dryopteris ,, Phegopteris

Equisetum arvense .. umbrosum

" sylvaticum

" palustre " limosum

" hyemale Bartramia fontana

Ramalina fraxinea Peltidea canina

Newton, Dryburgh, Gladswood, Eildon Hills, Melrose, Hassendean, Minto Crags.

Saturday, 23rd June 1855.

Party of about 100, including Mr. Christie of the School of Design and 15 of his pupils, met at the North British Railway Station at 7,30 a.m., and proceeded to Newton Station, thence walked to Dryburgh Abbey and along the banks of the Tweed by Gladswood to the Eildon Hills and Melrose. Visited the East and Middle Eildon Hills, ascending to the top of each. Return tickets 2s. 6d., besides 3d. at Dryburgh, 1d. at Ferry, and a few pence at Melrose. Messrs. Nichol and Sadler went to Hassendean and visited Minto Crags, where they got Asplenium germanicum (one specimen).

They also gathered :-

Trollius europæus Berberis vulgaris Viola canina Lychnis Viscaria Sanguisorba officinalis (not in flower) Valeriana dioica Typha latifolia Carex paludosa Asplenium septentrionale Lycopodium Selago Sticta serobiculata

The chief plants gathered by the rest of the party were:-

Berberis vulgaris Nasturtium palustre? Arabis hirsuta Cochlearia officinalis (walls of Melrose Abbey) Hesperis matronalis (Gladswood) Sisymbrium Thalianum Ervsimum cheiranthoides (shore of Tweed near Dryburgh) Lepidium Smithii Stellaria nemorum Moehringia trinervia Malva moschata (not in flower)

Tilia grandifolia
Geranium sanguineum
,, sylvaticum
... molle

" lucidum Euonymus europæus Staphylea pinnata Anthyllis Vulneraria Vicia sylvatica (not in flower) Lathyrus pratensis

Prunus Avium
,, Padus
Rubus saxatilis
Geum intermedium
Fragaria elatior
Potentilla reptans (r

Potentilla reptans (not in flower)

Rosa spinosissima

Pyrus Aria Saxifraga umbrosa Sanicula europæa

Galium boreale Valeriana dioica (at foot of Middle Eildon Hill)

Antennaria dioica Anthemis arvensis Matricaria Parthenium Doronicum Pardalianches

Doronicum Pardalianches Hieracium Pilosella ... vulgatum

Apargia hispida Vaccinium Vitis-Idæa ,, Myrtillus

Erica cinerea Lysimachia nemorum Symphytum officinale

Echium vulgare Verbascum Thapsus (not in flower)

Digitalis purpurea Lathræa Squamaria Mentha viridis Origanum vulgare Plantago media

Rumex sanguineus ,, viridis

Buxus sempervirens (in fruit) Alnus glutinosa Salix fragilis, var. Russeliana

- ., cinerea
 - , aquatica
 - " Caprea

Populus alba Neottia Nidus-avis

Scirpus sylvaticus Carex disticha

- " glauca
- " pilulifera
- " panicea
- " binervis
- " fulva

" flava Melica nutans

., uniflora

Briza media Poa nemoralis Nardus stricta

Taxus baccata (drooping, at Dryburgh) Allosorus crispus

Asplenium Adiantumnigrum

Trichomanes

Polystichum aculeatum

Lastrea Oreopteris Equisetum palustre

Lycopodium alpinum

Andreæa rupestris

Trichostomum lanuginosum

Grimmia ovata

Falkland, Bishop Hill, West Lomond Hill, Glenvale, East Lomond Hill.

Saturday, 30th June 1855.

Party of upwards of 100, including Mr. Christie and about 12 pupils of the School of Design, started by the train from North Bridge Station and Scotland Street Station at 6.30 a.m., and proceeded to Falkland Road Station. Return tickets, 2s.

Walked from Falkland Road Station to Falkland, where, through the kind attention of Mr. Barclay, breakfast was prepared. Mr. Howden, factor for Mr. Bruce, had arranged to allow the breakfast-table to be placed on the lawn in front-of the old Palace. The party amounted to 114, including all our party and Mr. Christie's, also Mr. Barclay, the Sheriff-Clerk of Cupar, Mr. Howden, the Rev. Mr. M'Duff, minister of Falkland, Mr. Gulland, Mr. Cruikshank, the schoolmaster, and Mr. Laing, from Cupar. Dr. Balfour was chairman, and Mr. Barclay croupier. In front of the chairman was placed the huge tin kettle which had been used by the botanical party (of which Mr. Barclay was one) who visited Ben na Mac Dhu last year, and who slept for a night under the shelter-stone. The kettle

had an inscription on it to the following effect:—"Professor Balfour's Botanical Party to Ben na Muich Dhui, August 1854."

After partaking of a very substantial breakfast, the party, under the guidance of Mr. Howden, visited the old Palace with its large Hall, John Knox's pulpit. They then proceeded to the roof of the building, where they had an excellent view of the surrounding country. Visited the new church built by the late Mr. Tindal Bruce. Then walked to Falkland House, some visited the interior of the mansion. Thence proceeded towards the West Lomond Hill, at the foot of which lunch was provided by Mr. Barclay. After lunch the party went to the top of the hill, which is 1712 feet above the level of the sea. Had a fine view of Kinross-shire and Loch Leven. Descended into Glenvale, and walked along the side of the stream. Proceeded to Balo and by the south side of the East Lomond to the Falkland Road Station, where the party arrived about 6.30 p.m., thoroughly wet by a heavy thunderstorm which commenced between 3 and 4 p.m. and lasted all evening. Some visited the Bishop Hill. Returned to Edinburgh by the train passing Falkland Road at 7.12 and reaching Edinburgh about 9 p.m.

Among the plants gathered were the following:-

Fumaria micrantha Cardamine amara Viola lutea Sagina subulata Geranium pusillum Oxytropis Halleri (on Bishop Hill) Saxifraga umbrosa " hypnoides Chrysosplenium alternifolium Sedum villosum Hippuris vulgaris Epilobium angustifolium alsinifolium (latter abundant on West Lomond Hill)

Papaver Argemone

Galium pusillum (in Glenvale) Solidago Virgaurea Antennaria dioica Centaurea Cyanus Hieracium atratum Leontodon Taraxacum palustris Vaccinium Vitis-Idaea Trientalis europæa (in great profusion in the woods and on the hill) Myosotis repens Solanum Dulcamara Veronica scutellata Littorella lacustris

Conium maculatum

Chenopodium Bonus-Henricus Polygonum viviparum (abundant)

Salix cinerea aquatica

repens

fusca

Empetrum nigrum Listera cordata (in great profusion) Orchis mascula

latifolia maculata

Gymnadenia conopsea Habenaria bifolia Iuncus supinus

Luzula multiflora congesta

Potamogeton oblongus

heterophyllus Eleocharis palustris

Scirpus pauciflorus Carex dioica

pulicaris

stellulata

curta ovalis

vulgaris

glauca

pilulifera

præcox

panicea

fulva flava

ampullacea

vesicaria (in tarn on the hill) Aira flexuosa

Briza media

Poa nemoralis

" montana Nardus stricta

Pteris aquilina

Allosorus crispus

Blechnum boreale

Asplenium Adiantum-nigrum Ruta-muraria

(old Palace)

Filix-fœmina

Cystopteris fragilis Polystichum aculeatum

Lastrea Oreopteris Filix-mas

dilatata

Polypodium vulgare

Dryopteris Phegopteris

Botrychium Lunaria

Equisetum arvense umbrosum

sylvaticum

palustre

limosum

Lycopodium Selago clavatum

alpinum

selaginoides Pilularia globulifera Andreæa Rothii

rupestris

Bartramia fontana

pomiformis Bryum punctatum

Hypnum stramineum

Polytrichum commune alpinum

Sphagnum acutifolium

cymbifolium compactum

Splachnum sphæricum

Trichostomum canescens lanuginosum

Cetraria glauca Cladonia rangiferina

Peltidea canina Scyphophorus pyxidatus Sphærophoron coralloides

North Berwick, Dirleton, Gullan, Luffness, Aberlady, Gosford, Longniddry.

Saturday, 7th July 1855.

A party of about 60 or 70 met at the North British Railway Station and proceeded to North Berwick, thence walked by the Links to Dirleton and its Castle, then to Gullan and Gullan Links, Luffness, Aberlady, Gosford, and Longniddry, returning by the train reaching Edinburgh at 7.50 p.m. Return tickets, is. 6d. Day remarkably fine, and many good plants procured.

Among others, the following:-

Papaver Argemone Alyssum calycinum (Dirleton) Reseda lutea Viola canina (Dirleton) Silene noctiflora Geranium pusillum Trifolium fragiferum Hippuris vulgaris Conjum maculatum Smyrnium Olusatrum Galium Mollugo Centranthus ruber Pulicaria dysenterica Crepis biennis (Luffness) Thrincia hirta Campanula glomerata

" Trachelium(Luffness) Anagallis arvensis

" tenella Erythræa pulchella Polemonium cæruleum (Luffness) Cynoglossum officinale Asperugo procumbens (Luff-

Solanum Dulcamara Hyoscyamus niger (abundant near Luffness) Scrophularia vernalis (Gosford) Veronica Anagallis

Utricularia vulgaris Calamintha Acinos Stachys ambigua

Lamium intermedium (Luffness) Littorella lacustris (Gullan)

Beta maritima Salicornia herbacea Hippophaë rhamnoides Listera oyata

Epipactis latifolia Habenaria viridis Sparganium ramosum Potamogeton oblongus

" rufescens Ruppia maritima (Luffness) Scirpus pauciflorus

Carex incurva (near Longniddry) Carex disticha

" teretiuscula " paniculata

,, vulpina

,, distans

" extensa

Carex Œderi (abundant in Gullan Links between the marshy ground and the sand hills) Carex hirta Phleum arenarium Trisetum flavescens Triodia decumbens Sclerochloa maritima Lepturus filiformis Botrychium Lunaria Equisetum valegatum Lycopodium selaginoides Chara hispida " vulgaris

Dunfermline, Knock Hill, Black Devon, Saline, Rumbling Bridge, Loch Leven, Benarty, Bishop Hill.

Saturday, 14th July 1855.

Party of 60-70 met at the Edinburgh, Perth, and Dundee Railway Station at 6.30 a.m. and proceeded to Dunfermline. Return tickets, 2s. Breakfasted at Melvie's New Inn, Dunfermline, about 9 a.m. for 1s. 3d. each. Visited the Abbey—where two artists who accompanied the party remained to take measurements. Walked towards Cleghorn and Knock Hill, crossed over the western side of the hill and visited the banks of the Black Devon, and returned by the pass between the two Saline Hills to Dunfermline, which was reached about 6 p.m. Returned by train at 6.40 p.m., reaching Edinburgh about 9 p.m. Some of the party went the day previously to Loch Leven, Benarty, and met us, others went to Rumbling Bridge and joined us in the evening.

Among the plants gathered by the various parties were the following:-

Ranunculus hederaceus
,, Flammula
,, reptans (Loch
Fittie and Loch Leven)
Trollius europæus
Nuphar luteum
Nymphæa alba
Nasturtium palustre
Viola lutea
Radiola Millegrana (near
Loch Leven)

Linum usitatissimum
Trifolium medium
" striatum
Oxytropis Halleri (Bishop
Hill)
Vicia sylvatica
Rubus saxatilis
Saxifraga hypnoides
Sedum villosum
Sempervivum tectorum

Myriophyllum spicatum alterniflorum Callitriche platycarpa Helosciadium repens Cicuta virosa Carum Carui Meum athamanticum Viburnum Opulus Galium boreale (Bishop Hill) Witheringii uliginosum Centranthus ruber Chrysanthemum segetum Cardinas setosus Vaccinium Oxycoccus Erica Tetralix " cinerea Pyrola rotundifolia (Black Devon) media minor Veronica scutellata Calamintha Clinopodium Galeopsis versicolor Littorella lacustris Polygonum viviparum Rumex alpinus (near Rum bling Bridge) Euphorbia Cyparissias (near Rumbling Bridge) Myrica Gale Populus tremula Listera cordata ovata

Gymnadenia conopsea

Habenaria bifolia chlorantha Narthecium ossifragum Paris quadrifolia (near Rumbling Bridge) Sparganium ramosum Alisma ranunculoides (Loch Leven) Potamogeton natans oblongus perfoliatus(Loch Leven) acutifolius pusillus pectinatus Scirpus setaceus lacustris sylvaticus Eriophorum angustifolium Carex paniculata sylvatica Œderi filiformis Molinia cærulea Poa nemoralis ., montana Festuca bromoides Allosorus crispus (Saline Polypodium Dryopteris Phegopteris

Equisetum umbrosum

selaginoides

Lycopodium Selago .. clavatum

Avton, Eyemouth, St. Abb's Head.

Friday, 20th July 1855.

Party consisting of Dr. Balfour, Zerub Baillie, George Blackie, Joseph Bell, M. Cockram, W. H. Dewar, Alex. Dickson, George

Dods, Wm. Drysdale, E. W. Dubuc, J. A. Forbes, William Forbes, Adolphus Graham, William Grey, James Hay, J. Hector, A. B. Nieser, Joseph Perry, Wm. D. Singer, Francis Skae, V. E. Walker, M. Whitfield, M. Yellowlees, John A. Yule, met at the North British Railway Station at 4 p.m., and proceeded to Ayton. Mr. Hector had preceded us for the purpose of examining geologically Siccars Point and other rocks near the sea. He met the party near Eyemouth. Return tickets, 2s. 6d.

On reaching Ayton the party were met by the gardener to Mr. Mitchell Innes and conducted to Ayton Castle, where strawberries and cream were provided on the grass. After partaking of them the party visited the Castle under the direction of Mr. Mitchell Innes. The party then walked through the grounds of Ayton Castle and Netherbyres under the guidance of the gardener, and reached Eyemouth between 8 and 9 p.m. They were accommodated at Mr. William Paterson's Ship Inn; some had beds in other places.

Saturday, 21st July 1855.

Breakfasted at 7 a.m. and then walked by the coast to St. Abb's Head, and reached the shore near Fast Castle about 3 in the afternoon. Observed the remarkable construction of the lower Silurian rocks—the old sandstone cliffs with the trap. Day was delightful, although oppressively hot.

Among the plants gathered during the trip were the following:—

Thalictrum minus

" flexuosum(Netherbyres)
Ranunculus aquatilis
" hirsutus (near
Dunlow Farm)
Glaucium luteum
Fumaria capreolata
Sinapis alba
Cakile maritima
Dianthus deltoides
Silene maritima Lychnis Githago
Cerastium tetrandrum
Alsine verna (St. Abb's
Head)
Geranium pratense
Acer campestre (Netherbyres)
Astragalus hypoglottis
Vicia sylvatica
Agrimonia Eupatoria
Sedum Rhodiola
Epilobium angustifolium
Conium maeulatum

Æthusa Cynapium
Haloscias scoticum
Viburnum Opulus (Netherbyres)
Matricaria Parthenium
Carlina vulgaris
Hieracium prenanthoides
Tragopogon minor
Anagallis arvensis
Mertensia maritima
Solanum Dulcamara
Linaria vulgaris
Atriplex Babingtonii
Neottia Nidus-avis (Netherbyrese)

Listera ovata (Netherbyres) Gymnadenia conopsea Blysmus rufus Carex disticha ,, arenaria

- " vulpina
- , ovalis

Triticum repens

" junceum

Asplenium Adiantum-nigrum ,, Trichomanes Botrychium Lunaria Ramalina scopulorum

The total expenses at Eyemouth, including tea, beds, breakfast, and sandwiches, were 5s., which added to the railway fare makes the expense of the trip 7s. 6d.

Ben Lawers.

Friday, 3rd August 1855.

A party consisting of J. H. Balfour, R. K. Greville, Thomas Barclay, Joseph Bell, James S. Candlish, P. Neill Fraser, James Gilchrist, James Hector, Charles W. Hope, J. Augustus Metcalfe, James Miller, William Nichol, William Ogle, Andrew Pow, James C. Rattray, William D. Singer, Mohamed Ali Soubki, Hugh G. Stewart, C. J. J. Terrot, V. E. D. Walker, Jeft Edinburgh on Friday, 3rd August, at 6.30 a.m., and reached Stirling at 8.20. Met Dr. Gilchrist and Mr. Bell there. Nineteen breakfasted in Campbell's Royal Hotel. Some of the party gathered Lactua virosa and Linaria repens at Stirling Castle. After breakfast, left in a coach, hired for the purpose, which held six inside and thirteen out.

On reaching Callander visited Bracklinn Bridge, where we found:—

Vicia sylvatica Hieracium denticulatum " prenanthoides Hieracium strictum Polypodium Dryopteris Equisetum umbrosum Dr. Greville gathered Diatomella Balfouriana and other Diatomaceae.

Changed horses at Callander at Menzies' Inn—Menzies had been a keeper at Braemar when Greville, Brand, and I visited that part of the country in 1847. Met Mr. Hill and his son at Callander. Proceeded by the Pass of Leny to Loch Lubnaig. Gathered:—

Nuphar luteum ,, pumilum Nymphæa alba Lysimachia vulgaris

Again changed horses at King's House, near Lochearnhead. Walked from Lochearnhead to the summit of the Pass. On the way gathered many good mosses and diatoms:—

Bryum elongatum Didymodon capillaceum Neckera crispa Bryum alpinum

" nutans " julaceum (in abundant fructification) Orthotrichum rupestre Blindia acuta Hypnum myosuroides Sticta fuliginosa (Bracklinn Bridge)

Reached Mrs. M'Tavish's Inn at Killin at 7 p.m., and were all comfortably accommodated. Met Mr. Rattray, who joined the party. Met also a Mr. Young, who was making a collection of ferns; he was particularly interested in the ferns of Wales, and was engaged in publishing a work on the subject, illustrated by specimens.

Saturday, 4th August 1855.

Party numbering 21, including Mr. Young from Wales, proceeded at 8 a.m. to Craig Chailliach.

In Finlarig woods gathered Linnaa borealis and Habenaria chlorantha. Noticed particularly Watson's regions in ascending, characterised by Rubus Chamæmorus, Calluna vulgaris, Erica Tetralix, Pteris aquilina.

On reaching the foot of the cleft on Craig Chailliach, gathered Polystichum Lonchitis, Polystichum lobatum and varieties.

Ascended the hills and went along the foot of the high cliffs till we reached a deep ravine by which we ascended to the summit. Had a fine view although the day was rather misty now and then, though beautiful glimpses were seen of the surrounding scenery. On the Ben Chailliach cliffs were gathered all the ordinary alpine plants. Some of the rarer species seen were:—

Draba incana
, verna, var. inflata
Cochlearia Officinalis
,, alpina
Cerastium alpinum
Sagina apetala
,, subulata
Potentilla alpestris
Saxifraga nivalis
Epilobium alpinum
Vaccinium uliginosum

Euphrasia officinalis, var. gracilis Oxyria reniformis Salix nigricans, var. rupestris Carex atrata ,, stictocarpa ,, capillaris Sesleria cervalea Poa alpina vivipara ,, Balfourii and vars.

Botrychium Lunaria

The ravine at the end of the cliffs was very productive of alpine plants:---

Alsine rubella Dryas octopetala Potentilla alpestris

Armeria maritima

Veronica saxatilis Juncus biglumis Luzula spicata

Rain came on and lasted for about an hour Walked along the cliffs towards Ben-y-Cruiach Ben, and ascended the hill—reached the summit about 3 p.m. Gathered:—

Sibbaldia procumbens Saussurea alpina Carex atrata

Dr. Greville saw a golden eagle to-day, and Messrs. Metcalfe and Walker saw two eagles with white tail feathers.

Reached the inn about 6 p.m.

Craig Chailliach 2570 feet, Ben-y-Cruiach Ben 3070 feet above Killin.

Monday, 6th August 1855.

Twenty started this morning at 7.30 a.m. for Ben Lawers. Morning tolerable, but the hills misty. In the course of the day

the mist became very thick and rain fell in quantity. Walked to the $4\frac{3}{2}$ mile-stone from Killin, and then began to ascend the hill. Proceeded first in the direction of Loch-na-gat, gathering on the way:—

Rubus Chamæmorus Cornus suecica Eriophorum latifolium Splachnum sphæricum

Visited the rocks above Loch-na-gat, and then walked round the corrie in the midst of mist—the effects of the late storms seen in the debris on the hills—appearance of the effects of waterspouts. Gathered:—

Erigeron alpinus Myosotis suaveolens Juncus castaneus ,, biglumis Poa Balfourii Woodsia hyperborea Polypodium alpestre

and all the ordinary alpine plants. Abundance of Cystopteris montana on rocks to the west of Loch-na-gat.

Ascended to the top of Ben Lawers, which was reached about 3 p.m. Near the summit got Draha rupestris, Cetraria islandica. The wind on the summit was very strong, accompanied with mist and rain. Descended from the summit by the aid of the compass, taking a S.W. direction. Reached the glen leading to Glen Lyon, and thence proceeded across the flanks of Catyaheaman to Loch Tay. Reached the inn about 6.30 p.m. thoroughly drenched. On our return home at night found Mr. Hugh Macmillan, who had arrived from Aberfeldy in the morning with the view of ascending Ben Lawers.

Peltidea venosa is abundant on walls near Killin.

Tuesday, 7th August 1855.

This morning was wet, misty, and unpromising, and the party found it impossible to ascend any of the hills. Dr. Greville, on account of the weather, left for Edinburgh at 1 o'clock by the coach passing through Stirling. He took with him my packet of dried plants, including Cystopteris montana, also some roots of it as well as of Polypodium alpestre, Woodsia hyperborea and Draba rupestris.

About 10 a.m. some of the party visited the Macnab Burying Ground and saw the peculiar fir in which a branch from another tree has fallen into a cleft and become grafted; the branch now hangs down from the plant to which it is attached.

Some of the party then walked along the south side of Loch Tay and gathered numerous ferns in a fine state:—

Asplenium viride Polypoo ,, Trichomanes ,, (very large)

Polypodium Dryopteris ,, Phegopteris

Proceeded about six miles along the shore to a ferry, there crossed the loch, landing between one and two miles west of Lawers Inn. Returned by the road to Killin, visiting the upper part of Loch Tay and gathering:—

Arctium majus Calamintha Clinopodium Salix phylicifolia Carex vesicaria Parmelia caperata

Mr. Nichol attempted the ascent of Meal Ghaordie, but failed on account of the mist. Mr. Macmillan left for Aberfeldy by coach.

Wednesday, 8th August 1855.

The morning was doubtful, mist hung over the hills, and there was a calm in the air. The wind, however, ultimately assumed a north-westerly direction, and part of the mist was cleared away, but the higher summits were covered all day. Captain Terrot, Mr. Rattray, and Mr. Singer left for the South. There remained, therefore, 16 of our party, of whom 13 went to Meal Ghaordie, while three remained fishing in the Dochart, and caught two dozen trout. The botanical party started about 7.30 a.m. and walked along the banks of the Lochay. At Lochay Inn met Mr. George Mann, who had been successful in getting Cystopteris montand on Chorrach Uachdar. Walked about three miles up the Lochay to a farm, near which was seen some common metamorphic limestone with mica slate alternating with it. At the lower part of the hill picked:—

Corydalis claviculata Drosera anglica Meum athamanticum Malaxis paludosa Gymnadenia albida Ascended by the south-eastern side of the hill, gathering :—

Rubus Chamæmorus Vaccinium uliginosum
Comus suecica Tofieldia palustris

Then ascended to the summit amidst thick mist, gathering a number of alpine plants, especially mosses and lichens. Descended to the northern side of the hill, and afterwards examined the rocks on the southern side.

Among the plants gathered were (on the northern side by Mr. Nichol):—

Salix Lapponum ,, Myrsinites Salix arbutifolia Rhynchospora alba

Also gathered :-

Silene acaulis Cherleria sedoides Sibbaldia procumbens Epilobium alpinum Gnaphalium supinum Salix yenulosa

" herbacea " reticulata

Juncus trifidus ,, biglumis

" triglumis
Carex pulla (some specimens
very large on northern
side by Mr. Nichol)

Poa Balfourii Allosorus crispus Polypodium alpestre (in fruit on southern rocks) Cystopteris dentata Polystichum Lonchitis Lastrea dilatata

Lastrea dilatata
,,, var. collina
Splachnum mnioides
Sphærophoron coralloides
Stereocaulon paschale

Mr. Hector, by the aneroid, made height of hill 3124 feet, and height of *Pteris* about 1200 or 1300 feet above Killin.

Party returned to the inn about 6.30 p.m.

Thursday, 9th August 1855.

The morning was promising although there was still mist on the hills. A party of ten started for Ben Lawers about 7.30 a.m. The remainder went fishing and geologising. Mr. Hector examined the limestone quarry up the Lochay. The party to Ben Lawers walked by the road for about three miles, and then

turned up the hill. Ascended the back of the hill called Ben y Lassigh. By the time the party reached the summit there was still thick mist. Visited the cliffs on the west side of Ben Lawers and found abundance of :-

Draba rupestris (which was | Sedum villosum (which exalso found lower down) Alsine rubella

tended to near the summit) Erigeron alpinus Gentiana nivalis

Ascended the south side of Ben Lawers and saw abundance of Saxifraga cernua, some in flower, some in fruit, some barren. Then reached the summit of the hill, which was gained about 2 p.m., where we had a splendid view of the country around. The view was very extensive-Ben Lomond, Ben More, Ben na Mac Dhu, Ben Nevis, Ben Cruachan, and Schiehallion were seen.

Descended from the summit in the direction of Loch-na-gat. Gathered :-

Cerastium alpinum and many 1 alpine plants Alsine rubella

Iuncus castaneus Phleum commutatum Cystopteris montana

The sides of the hills were furrowed with the effects of the rain of the 3rd August, apparently as if waterspouts had burst on the hills. Vast masses of debris were carried down to the valleys below, and deep furrows were made in the hill.

Returned to the inn about 7 p.m.

Friday, 10th August 1855.

Many of the party were disposed to go directly to Invergrnan to-day, and accordingly Mr. Barclay, Dr. Ogle, Messrs. Fraser, Candlish, Stewart, Walker, and Dr. Soubki went by coach to Inverarnan, carrying the baggage of the party. They left Killin about 8 a.m. The remainder, viz. Dr. Balfour, Messrs, Hope. Nichol, Pow, Bell, Miller, Hector, Metcalfe, and Dr. Gilchrist, after settling the bill at Killin, proceeded on foot up Glen Lochay as far as the slated farm-house, where they were hospitably entertained with milk and cakes. The morning was

dull, and there was some drizzling rain on the high grounds, while the tops of the hills were covered with heavy and thick mist. On leaving the farm-house the party walked directly up the hill opposite the house, and finally reached the mountain called Chorrach Uachdar. The cliffs of this hill were carefully examined, and many alpine plants were seen, such as:—

Sibbaldia procumbens Saxifraga oppositifolia ,, stellaris Epilobium alsinifolium ,, alpinum Gnaphalium supinum Oxyria reniformis Salix herbacea " reticulata Juncus biglumis " triglumis

In a ravine on the hill there was abundance of Cystopteris montana; the spot had been apparently recently visited. Probably this was the spot where the plant was gathered by Mr. George Mann. In a spot of difficult access, Mr. Nichol gathered a specimen with a stalk 7 inches long and blade 3½ inches, making a total for the frond of 10½ inches. On Chorrach Uachdar there is a large quantity of the Cystopteris in different spots, some of them not likely to be reached except by good alpine climbers. Near the summit of this high hill there was abundance of Tussilago Farfara as well as Bellis perennis.

On leaving the cliffs, which are about 2400 feet above the level of the sea, the party ascended to the top of the hill (probably 1000 feet more) amidst thick mist; they required to guide themselves in their descent by the compass, directing their course S.W. On their way down Arctostaphylos Uva-ursi was gathered, also Hieracium boreale.

The party reached the Dochart, across which they waded. In Loch Dochart Lobelia Dortmanna was picked.

They then proceeded to Crianlarich, where they had refreshments, and then walked amidst drizzling rain and mist to Inverarnan, which was reached (M'Lellan's Inn) about 8.30 p.m., after walking for twelve hours, and covering 32 or 34 miles, many of them over lofty hills. Two of the party (Fraser and Candlish), who had gone by coach in the morning to Inverarnan, and thence to Tarbet by steamer, and walked back, gathered on the way Osmunda regalis and Lythrum Salicaria.

The party at Inverarnan to the number of 14 were most comfortably accommodated at this inn.

The Lochay Inn (John Cameron's), close to the bridge over the Lochay, and about half a mile from Killin, is infinitely superior to M'Tavish's at Killin, and ought to be encouraged.

Saturday, 11th August 1855.

The morning was misty and drizzly as on former days. The mist reached to the very bottom of the mountains and completely obscured the view of the beautiful scenery on Loch Lomond. After breakfast we left by the boat at 7.45 a.m. and reached Balloch, whence we proceeded by train to Bowling, and then to Glasgow, reached about 12.45, and Edinburgh reached at 2.45 p.m., thus ending the highland excursion for the season.

EXCURSIONS IN 1856.

Corstorphine, Almond Bridge, Cramond, Granton.

Saturday, 10th May 1856.

About 120 pupils met at the Edinburgh and Glasgow Railway Station at 12 noon and proceeded by train at 12.15 to Corstorphine Station (tickets 3d. each), thence walked over the hill to the Almond Bridge, and by the banks of the river to Cramond and along the shore to Granton.

Among the plants gathered were:-

Anemone nemorosa Ranunculus Ficaria Caltha palustris Cochlearia officinalis Capsella Bursa-pastoris Viola hirta "sylvatica Lychnis diurna Stellaria media

" Holostea

Geranium lucidum
,, molle
Prunus communis
,, Avium
Fragaria vesca
Potentilla Fragariastrum
Saxifraga granulata
Ribes Grossularia
, alpinum

rubrum

Galium Cruciata
Tussilago Farfara
Petasites vulgaris
Myosotis arvensis
Linaria Cymbalaria
Nepeta Glechoma
Lamium purpureum
,, album
Mercurialis perennis
Ulmus montana (in fruit)
Betula alba
Salix (various)

Orchis mascula
Endymion nutans
Luzula sylvatica
Carex vulgaris
Taxus baccata
Pinus sylvestris
Asplenium Trichomanes
"Ruta-muraria
Cystopteris fragilis
Lastrea Filix-mas
Equisetum arvense

Some of the party visited Colinton and gathered :-

Helleborus fœtidus Berberis vulgaris Doronicum Paradalianches Arum maculatum

Gorebridge, Arniston, Dalhousie, Dalkeith.

Saturday, 17th May 1856.

Party of 110 met at the North British Railway Station at 11.20 and proceeded to Gorebridge, thence walked to Arniston, Dalhousie, and Dalkeith Station, returning about 8 p.m. Return tickets, 1s. The day was very showery.

Among the plants gathered were the following:-

Anemone nemorosa
Ranunculus auricomus
,, Ficaria
Aconitum Napellus (in leaf)
Barbarea vulgaris
Viola sylvatica
Stellaria nemorosa
Mochringia trinervia
Oxalis Acetosella
Sarothamnus scoparius
Lathyrus macrorrhizus
Prunus communis
,, domestica

Prunus Avium
, Padus
Geum urbanum
, rivale
Chrysosplenium oppositifolium
, alternifolium
Ribes Grossularia
, alpinum

" alpinum Myrrhis odorata Adoxa Moschatellina Galium Cruciata Asperula odorata Valeriana pyrenaica (not in flower) Petasites vulgaris Doronicum plantagineum (not in flower) Primula vulgaris " veris Fraxinus excelsior Vinca minor Pulmonaria officinalis Myosotis sylvatica Lathræa Squamaria (abundant) Lamium purpureum " album Buxus sempervirens Ulmus montana Fagus sylvatica

Salix Russeliana ., Caprea Neottia Nidus-avis Orchis mascula Galanthus nivalis (in fruit) Allium ursinum Arum maculatum Carex vulgaris Alopecurus pratensis Pinus sylvestris Equisetum Telmateia arvense limosum Polypodium vulgare Phegopteris Xvloma acerinum Polyporus betulinus?

Burntisland, Starly Burn, Aberdour.

Saturday, 24th May 1856.

Party of about 90 proceeded by train at 9.45 a.m. to Granton, thence to Burntisland. Return tickets, 9d. From Burntisland the party walked by the shore to Starly Burn and Aberdour, and returned by the boat leaving Burntisland at 5 p.m.

Among the interesting plants gathered were the following:-

Ranunculus auricomus Cheiranthus Cheiri Arabis hirsuta Cochlearia danica (Island) Sisymbrium Thalianum Lepidium Smithii Thlaspi arvense Helianthemum vulgare Viola sylvatica

,, tricolor, var. arvensis

.. lutea

Acer Pseudo-platanus Geranium sanguineum , pheeum Medicago maculata Anthyllis Vulneraria Vicia hirsuta , lathyroides Spirea Filipendula Pyrus Malus Saxifraga granulata Myrrhis odorata Æthusa Cynapium

Asperula taurina (near
Burntisland)

Valerianella olitoria
Leontodon lævigatus
Primula caulescens
,, elatior

Anchusa sempervirens Myosotis collina Solanum Dulcamara Salvia Verbenaca Lamium incisum Asarum europæum Ruscus aculeatus Scolopendrium vulgare
Botrychium Lunaria
Hypnum commutatum (encrusted with carbonate of
lime)

Fucus ceranoides (an allowed form of Fucus vesiculosus, fresh - water shore at Aberdour where it joins the sea at Starly Burn)

Exidia Auricula-Judæ (on an elder near Aberdour Castle, Mr. Park, in large quantity)

Penicuik, Auchendinny, Roslin.

Saturday, 31st May 1856.

Party of about 80 met at the North British Railway Station at 8.40 a.m. and proceeded to Penicuik, then walked to Auchendinny and Roslin by banks of the Esk. Tickets to Penicuik and return from Roslin, 1s. 3d. each.

Among the plants collected were the following:-

Anemone nemorosa Ranunculus auricomus Trollius europæus Aquilegia vulgaris (Auch

Aquilegia vulgaris (Auchendinny) Aconitum Napellus (Auchendinny, not in flower)

Cardamine amara
,, hirsuta
,, sylvatica
Viola palustris
Cerastium glomeratum
Stellaria nemorum

" uliginosa Moehringia trinervia Montia fontana

Geranium sylvaticum ,, molle

Oxalis Acetosella (pink) Prunus Padus Pyrus Aucuparia

" Malus Saxifraga granulata

Chrysosplenium alternifolium

Ribes Grossularia

" rubrum

" nigrum

Sanicula europæa Myrrhis odorata Adoxa Moschatellina Myosotis versicolor Veronica agrestis arvensis montana Betula glutinosa Salix fragilis ., cinerea Caprea Neottia Nidus-avis Orchis mascula

Luzula pilosa Carex præcox Melica uniflora Polystichum aculeatum Polypodium Dryopteris Phegopteris Equisetum maximum

arvense umbrosum (Auchendinny and Penicuik)

sylvaticum palustre limosum

hvemale Bartramia fontana Agaricus fascicularis Morchella esculenta

Mid-Calder, Meadowbank, Dalmahoy Hills, Ravelrig, Currie.

Saturday, 7th June 1856.

Party of 80 met at the Caledonian Railway Station at 9.35 a.m. and proceeded to Mid-Calder, then walked to Meadowbank, Dalmahoy Hills, Ravelrig, Water of Leith, and Currie, returning from the latter place at 5.36 p.m. Return third-class tickets, 8d. Morning good, but afternoon very wet.

Among the plants collected were the following:-

Trollius europæus Meconopsis cambrica Corydalis claviculata Draba verna Sisymbrium Thalianum Viola palustris sylvatica

., canina ., tricolor

,, lutea

Geranium sylvaticum ., columbinum Prunus insititia domestica Geum intermedium Saxifraga hypnoides Myrrhis odorata Linnæa borealis Leontodon palustris Vaccinium Myrtillus Pyrola minor Trientalis europæa Anchusa sempervirens

Myosotis versicolor

Scrophularia vernalis (Meadowbank)

Salix cinerea

" Caprea Corallorrhiza innata Listera ovata

Listera ovata Orchis mascula

" latifolia Narcissus poeticus

Allium ursinum Tulipa sylvestris Arum maculatum

Scirpus cæspitosus Carex vulgaris

" glauca

" binervis Pinus sylvestris Polypodium Phegopteris Botrychium Lunaria Equisetum arvense

" sylvaticum

,, palustre

,, limosum Weissia verticillata (at

Currie)

Tortula papillosa (at Balerno)

Sticta crocata (and other lichens, Dalmahoy)

Sticta scrobiculata Lecanora tartarea

Usnea barbata Parmelia pulverulenta

" pallescens

Cockburnspath, Dunglass Dene, Pease Dene.

Saturday, 21st June 1856.

Party of between 80 and 90 met at the North British Railway Station at 8 a.m. and proceeded to Cockburnspath, visited Dunglass Dene, stones in the neighbourhood, and Pease Dene, returning by train passing Cockburnspath at 6.3, and reaching Edinburgh about 8 p.m. Return tickets, 2s.

Among the plants gathered were the following:-

Ranunculus hederaceus Silene maritima Stellaria uliginosa Geranium phæum

y, sylvaticum
Trifolium arvense

" striatum Anthyllis Vulneraría Astragalus hypoglottis Vicia sepium ,, sativa

,, lathyroides Chærophyllum temulum Œnanthe crocata

Valerianella olitoria Carduus acanthoides Pyrola minor

Vinca major

(

Vinca minor
Anchusa sempervirens
Hyoscyamus niger
Veronica montana
Lamium Galeobdolon
Chenopodium BonusHenricus
Neotita Nidus-avis.
Carex pendula
Briza media
Polystichum aculeatum
" angulare
Equisetum Telmateia

Equisetum Telmatei ,, arvense ,, palustre ,, limosum

Weissia verticillata Plocamium coccineum Delesseria sanguinea limosa

,, alata Odonthalia dentata Alaria esculenta

Ptilota plumosa Halidrys siliquosa Desmarestia aculeata Laminaria saccharina

" digitata Polysiphonia fastigiata Chylocladia articulata Corallina officinalis

Rhodymenia palmata Hypnea purpurascens Enteromorpha intestinalis Polyporus versicolor

North Queensferry, Inverkeithing, St. Davids.

Saturday, 28th June 1856.

Party of 50-60 met at Granton Pier at 6 a.m. and proceeded by steamboat to North Queensferry, thence walked to Inverkeithing and St. Davids, and returned to Queensferry by boat between 3 and 4 p.m. Return tickets—Queensferry, 9d.; Granton Pier, 2d.; Ferry Pier, 6d.

Among the plants gathered were the following:-

Thalictrum flexuosum " majus Ranunculus hederaceus Papaver Rhœas

,, dubium ,, Argemone Fumaria micrantha

Draba verna Brassica oleracea Diplotaxis tenuifolia Thlaspi arvense
Reseda lutea
Viola hirta
,, canina
Saponaria officinalis
Lychnis vespertina
Cerastium tetrandrum
,, semidecandrum

Sagina maritima " subulata Lepigonum marinum Linum usitatissimum Geranium sanguineum sylvaticum pyrenaicum Melilotus officinalis Trifolium arvense striatum filiforme Astragalus Glyciphyllos Oxytropis Halleri Vicia lutea sativa Spiræa Filipendula Rubus corylifolius Potentilla verna Comarum palustre Rosa spinosissima Sedum Telephium (not in Sedum villosum Sempervivum tectorum (not in flower) Callitriche platycarpa Carum Carui Anthriscus vulgaris

Œnanthe crocata

Daucus Carota

Haloscias scoticum

Pastinaca sativa (St. Davids)

Sambucus Ebulus (not in flower) Filago germanica Antennaria dioica Anthemis Cotula Carduus tenuiflorus crispus Campanula rotundifolia Erica cinerea Armeria maritima Anagallis arvensis Lithospermum arvense Echium vulgare Veronica agrestis Lamium intermedium maculatum Scleranthus annuus Suæda maritima Orchis mascula , maculata Scirpus pauciflorus Carex (numerous species) Arundo epigejos (St. Davids) Trisetum flavescens Koeleria cristata Sclerochloa maritima distans

Festuca arundinacea

Nardus stricta

Arran.

Wednesday, 2nd July 1856.

Party consisting of J. H. Balfour, George J. Allman, Alex. Abercrombie, Arthur Amys, J. W. Anderson, Roderick Hope Bain, John B. Balfour, Thomas Barclay, John M. Bell, Joseph Bell, M. Montgomerie Bell, William M. Black, James M. Brodie, E. B. Broxter, James Burn, George Calvert, James S. Candlish T.S. Christie, R. H. Clay, John de la Condamine, Robert C. Cowan, Ric. John Will. Dixon, James Dodd, George Dods, T. T. Douglass, Andrew Duncan, John Duncan, San Effendi, F. W. A. Fabeck, William Forbes, Thomas Fuller, Archibald W. Hamilton, Robert B. Hay, James Hector, George Hill, M. Horn, C. R. Howden, W. Jernanor, Henry Leach, W. Ward Lendam, William Lorimer, Alexander J. Macfarlan, William M'Neillie, Robert Maxwell, F. A. Morton, John R. Murray, William Nichol, Arthur Pearse, Andrew Pow, John Sandison, John Small, William D. Singer, Alex. D. Soutter, Wm. Hy. Stephenson, William Turnbull, Thomas James Walker, and George Williamson, met at the Edinburgh and Glasgow Railway Station at 8.20 p.m., and proceeded by the 8.30 train to Glasgow. Return tickets, available till 5th, 3s. 66.

Reached Glasgow at 10.30 p.m., and proceeded to the Queen's Hotel, George Square (Mr. Macgregor), where accommodation was ready for us all.

Thursday, 3rd July 1856.

Party was roused at 6 a.m., and, after settling the bill, proceeded at 7 a.m. to the Broomielaw to the Arran steamboat "Jupiter." Baggage was conveyed in a cart for a charge of 3s. Breakfasted on board the "Jupiter." Reached Springbank about 1 p.m. Here the botanical party landed with all the baggage, while Professor Allman with a party of about 12 proceeded by the steamboat to Holy Island. There Dr. Greville and Dr. Miles had boats ready for the party (dredging), who were very successful.

The botanical party, after making arrangements at the inn for beds and tea-dinner, walked by the shore to Corriegills and Clachland Point. Crossing the trap without going round the point, they walked by the shore to Lamlash, meeting Dr. Greville, and afterwards went by the road to Springbank.

The chief plants gathered were :-

Hypericum Androsæmum Saxifraga Geum (wood near Springbank) Cotyledon Umbilicus Anagallis tenella Samolus Valerandi Pinguicula lusitanica Juncus maritimus (not in flower) Blysmus rufus Schœnus nigricans Carex lævigata ,, fulva Triticum laxum (near LamHymenophyllum Wilsoni Asplenium marinum Lastrea Oreopteris

Also on shore between Springbank and Brodick :-

Brassica monensis Ervngium maritimum

lash)

Mertensia maritima Fucus vesiculosus, vars.

Returned for tea-dinner about 7 p.m. After putting plants in paper retired to rest; some to beds, others to mattresses on the floor of the court house, others to a bed of straw. One of the party slept in a sycomore-tree for three hours, and another lay on the grass plot.

Friday, 4th July 1856.

All were roused at 6 a.m., and, after breakfasting in the open air, started about 7.30 for their destinations. About 12 went to dredge with Professor Allman, the rest went to Goatfell. The day was good at first and promised well, but ere we reached the summit of the mountain (which is 2875 feet high) mist and rain came on. We found it impossible to go along the ridge to Glen Sannox, and we therefore descended to the shore at Brodick, and walked towards Corrie

The plants gathered were :-

Sedum anglicum
(Enanthe Lachenalii (not in
flower)
Jasione montana
Anagallis tenella
Erythræa littoralis (not in
flower)
Linaria Cymbalaria
Pinguicula lusitanica

Lycopus europæus (not in flower)
Scutellaria galericulata
Gymnadenia conopsea
Habenaria chlorantha
Juneus maritimus (not in flower)
Potamogeton plantagineus
Scheenus nigricans

In woods on the Red Sandstone Cliffs :-

Lythrum Salicaria (not in flower)

Hymenophyllum tunbridgense

Lastrea dilatata ,, Foenisecii Osmunda regalis On Goatfell :-

Alchemilla alpina Saxifraga stellaris Peplis Portula Vaccinium Vitis-Idæa Salix herbacea Carex pauciflora Carex pilulifera
,, pallescens
Juniperus nana
Lycopodium Selago
Batrachospermum vagum

Returned to Springbank about 3.30 p.m. Dredging party did not return till 7.30 p.m.

Mr. Nichol walked by Corrie to Loch Ranza, and did not return to Springbank till next day, when he brought back with him Pyrus fennica, Drosera anglica, Lobelia Dortmanna.

Saturday, 5th July 1856.

The morning was beautiful, and all breakfasted about 7 a.m. in the open air at Springbank. After breakfast the party divided into different sections, some going to dredge in Lamlash Bay, others boating and fishing, others going to Holy Island. The party for Holy Island proceeded to Lamlash and got a large boat to take them across and wait for them. They inspected Dr. Miles' Vivarium which is admirably kept, and contains many beautiful specimens of marine animals. Dr. Miles and Dr. Greville left in the morning for Glasgow.

The party next examined the vegetation of the island and gathered:—

Sedum anglicum Arctostaphylos Uva-ursi Lycopus europæus Scutellaria galericulata Zostera marina Asplenium marinum Osmunda regalis

Visited also St. Molio's Cave; some ascended to the top of the island. The day became overcast and some rain descended. It was not, however, till late in the afternoon that the mist, rain, and wind became great.

On returning to Lamlash gathered fine specimens of Hypericum Androsæmum and Cotyledon Umbilicus. Joined the boat at 1.45 p.m., our baggage having been put on board at Springbank. Dined on board the boat. Took up some of the party at Corrie in passing. The captain of the "Jupiter" made great efforts to take the party back to Glasgow in time for the 8 o'clock train to Edinburgh. He was much hindered by the parties coming on board at all the ports, owing to the day being set apart for Greenock Fair. In spite of this, we reached the Broomielaw at 7-45 p.m., and were in time for the train, reaching Edinburgh at 10 p.m.

Dysart, Wemyss, MacDuff's Castle, Leven Bridge, Thornton.

Saturday, 12th July 1856.

Party of 70-80 met at the Edinburgh, Perth, and Dundee Railway Station at 9.45 a.m. and proceeded to Dysart, thence walked to Wemyss, MacDuff's Castle, and Thornton Junction, where they joined the train at 8.10 p.m., and returned to Edinburgh about 10. Return tickets, 28.

Professor Allman with a geological party accompanied the botanists. At Dysart Station Mr. Barclay, Mr. Kerr, mining engineer, and the Messrs. Knight, sons of the Free Church minister of East Wemyss, met the party. Mr. Bywater also met them at his College, and exhibited his coal fossils and some diamonds. At Dysart the geological and botanical parties separated, the geological party guided by Mr. Kerr, the botanical by Messrs. Knight. The botanists walked near the shore to Wemyss, saw fossils on shore in shale.

Visited Chapel Gardens under guidance of Mr. Bywater, the gardener. Went to Wemyss Castle—examined cliffs and garden, went by shore to East Wemyss, called at Mr. Knight's and saw a beautiful collection of seaweeds and zoophytes, then walked to caves and gathered Asplenium marinum.

Visited the cave below MacDuff's Castle, and lunched at the Castle about 3,30 or 4 p.m. Violent thunderstorm passed towards south-east, we only got a few drops of rain. Mr. Barclay kindly provided lunch for the whole party. Walked towards Leven Bridge, and then by banks of Leven and Ore to Thornton Junction.

Among the plants collected were the following:-

Thalictrum minus Ranunculus aquatilis Brassica oleracea (Wemyss Castle rocks) Lepidium latifolium (Wemyss Castle rocks) Cerastium glomeratum Hypericum humifusum (Leven Railway banks) Linum usitatissimum Geranium sylvaticum pratense Acer campestre (hedges, MacDuff's Castle) Pyrus Aria Circæa lutetiana (Chapel woods) Conjum maculatum Smyrnium Olusatrum (Wemyss Castle) Sambucus nigra, var. laciniata (near Chapel) Valeriana pyrenaica (woods at Wemyss Castle) Dipsacus sylvestris (near Wemyss) Knautia arvensis Matricaria Parthenium

Senecio viscosus Cynoglossum officinale Anchusa sempervirens Hyoscyamus niger (Wemyss Castle) Verbascum Thapsus (MacDuff's Castle) Galeopsis versicolor Atriplex Babingtonii Polygonum Raii (near West Wemyss) Rumex viridis Euphorbia exigua Listera ovata Lilium Martagon (from garden) Scirpus setaceus (near Thornton) sylvaticus (near Thornton) Carex lævigata (near Thornton) Festuca arundinacea Triticum junceum Asplenium marinum (caves at Wemvss) Polyporus

Moffat.

Friday, 18th July 1856.

Party consisting of J. H. Balfour, A. Amys, J. Ballantyne, John Montgomerie Bell, Joseph Bell, M. Montgomerie Bell, James B. Carruthers, William Carruthers, John de la Condamine, Alexander Dickson, A. B. Duffin, Allan Duke, P. Neill Fraser, H. R. Handyside, Charles Wm. Hope, John A. Hudleston, J. St. Johnston, William Johnston, Henry Leach, Alexander J. Macfarlan, David Philip Maclagan, Robert Craig Maclagan, W. M'Neillie, Alex. C. Maingay, A. Murray, Robert Nicholson, John Orphoot, Ric. John Wil. Orton, James Sadler, John Sadler, William R. Sanders, Thomas James Walker, George Williamson, met at the Caledonian Railway Station at 5 p.m., and proceeded to Beattock, which was reached about 8,30 p.m. Return ticket, 4s. Three of the party, Messrs. Leach, Walker, and Orton, missed the train, and came by one at 8.15 p.m.

At Beattock met the Rev. Mr. Little, who had kindly made preparation for our accommodation at Moffat. Walked to Moffat and took up our quarters at the Annandale Arms Inn, Mrs. Cranstoun's, where all were comfortably accommodated. Beds were provided for the most of the party in the town. Mr. Hope, Mr. Fraser, and Mr. Maingay had been in the district two days before us and brought a number of good plants, among others Vicia Orobus and Allosorus crispus.

Saturday, 19th July 1856.

Breakfasted about 6.30 a.m. After settling bill proceeded by one omnibus with four horses and two carriages with two horses each to the Grey Mare's Tail. There we dismissed our conveyances, and walked the rest of the day.

Visited the waterfall and the rocks near it, gathering :-

Thalictrum minus
Epilobium alpinum
Oxyria reniformis

Festuca ovina vivipara Hymenophyllum Wilsoni Allosorus crispus

Thence, under the guidance of a shepherd provided by Mr. Little from Mr. Robert Johnstone, of Polmoodie, walked to Dobb's Linn, picking Saxifraga stellaris and Sedum villosum on the way. On the rocks near the Linn Saxifraga hypnoides and Botrychium Lunaria. Thence walked to Loch Skene, gathering on the way Rubus Chamæmorus and Melampyrum montanum, and in the Loch Littorella lacustris. Saw no Isoètes, Some of the party visited the rocks round Loch Skene searching for Woodsia itvensis, but did not find it. Mr. Sadler and his brother had started at about 3 a.m. with the view of getting this

fern, and Messrs. Hope, Maingay, and Fraser examined the Loch Skene rocks very carefully. They had previously searched for the fern unsuccessfully in the Beef Tub. Most of the party examined the rocks on White Coombe, which is said to be the highest hill in the south of Scotland.

On the rocks were found :-

Thalictrum alpinum Saxifraga stellaris Sedum Rhodiola Epilobium angustifolium alpinum Saussurea alpina Oxyria reniformis

Salix Lapponum " Myrsinites ., herbacea Carex rigida ., pilulifera Allosorus crispus

Ascended to the summit of the hill and had a splendid view all round, particularly in the direction of the Cumberland hills and the Solway.

After this our guide left us, and we proceeded under the direction of Messrs, Carruthers (natives of Moffat) along the top of the hill towards Hartfell, lunching on the side of a stream between White Coombe and Hartfell. The road was very fatiguing. Reached summit of Hartfell, and had again a splendid view. From this we descended by the Well Burn to the Mineral Well, and thence to Moffat, which was reached about 5 p.m. Some descended by a glen to the road, and Mr. Macfarlan got Woodsia ilvensis. After a cold collation we proceeded to Beattock and met the express train at 6.43, by which we returned to Edinburgh about 8.30 p.m.

The following are some of the more interesting plants gathered by the party :-

Ranunculus acris Trollius europæus Cardamine pratensis Cochlearia officinalis Geranium sylvaticum Vicia sylvatica (Grev Mare's Tail) Rubus saxatilis

" Chamæmorus

Saxifraga oppositifolia (Dobb's Linn) stellaris (Dobb's Linn) hypnoides (Dobb's Linn) Sedum Rhodiola villosum (Dobb's Linn)

Callitriche platycarpa ,, pedunculata

Epilobium angustifolium

" alpinum Circæa alpina

Viburnum Opulus Galium pusillum (Grey Mare's Tail)

Valeriana officinalis Solidago Virgaurea

Antennaria dioica Saussurea alpina Vaccinium Vitis Ide

Vaccinium Vitis-Idæa Pyrola minor " secunda

Melampyrum montanum Oxyria reniformis Rumex aquaticus

Salix Lapponum ,, Myrsinites

,, Myrsinites ,, herbacea Empetrum nigrum Narthecium ossifragum Carex remota

" rigida

,, pilulifera

, flava

Festuca ovina vivipara Hymenophyllum Wilsoni Allosorus crispus Athyrium Filix-femina Woodsia ilvensis Cystopteris fragilis Polystichum aculeatum

Lastrea Oreopteris .. Filix-mas

" dilatata Marchantia androgyna Neckera crispa Cladonia rangiferina

Sticta sylvatica ,, scrobiculata

, scrobiculata , pulmonaria

Haddington, Lennoxlove, Coalston, Eaglescarnie, Danskine Loch, Yester.

Saturday, 26th July 1856.

Party of 35 met at the North British Railway Station and proceeded to Haddington. Return tickets, 1s. 6d. each. At the Haddington Station met Mr. Shearer, who kindly accompanied us through the woods of Lennoxlove (where we visited the Tower by permission of Mr. Stuart), Coalston, and Eaglescarnie woods, visited Gothic Hall and cave, and walked to Yester, thence we walked to Danskine Loch and returned to Yester House about 3, where lunch was prepared for us by the Marquis of Tweeddale. Lord Arthur Hay and Lord Frederick Hay also joined the party. After luncheon walked by Gifford to Haddington, where the party joined the train at 6.50 p.m., and reached Edinburgh about 8 p.m.

Among the plants collected may be noted the following:-

Ranunculus sceleratus Stellaria nemorum Hypericum quadrangulum hirsutum

Tilia grandifolia

" parvifolia (Lennoxlove) " europæa

Geranium sylvaticum

pratense Ononis arvensis

Trifolium medium Rubus corylifolius Comarum palustre Agrimonia Eupatoria Rosa rubiginosa Saxifraga umbrosa (Lennoxlove)

Ribes Grossularia

., alpinum rubrum

Sempervivum tectorum Epilobium angustifolium

hirsutum parviflorum

palustre

Circæa alpina Viburnum Opulus Doronicum Pardalianches

(Lennoxlove) Arctium minus Hieracium vulgatum Tragopogon minor Campanula latifolia Calluna vulgaris Erica Tetralix

" cinerea Pyrola minor Lysimachia nemorum Anagallis arvensis

Ligustrum vulgare Ervthræa Centaurium Myosotis sylvatica (Yester) Lithospermum arvense Veronica polita

scutellata (Danskine)

Atriplex hastata Polygonum Convolvulus

> aviculare Persicaria

Rumex sanguineus

viridis Daphne Laureola (Lennoxlove)

Euphorbia exigua Ouercus Robur sessiliflora

(Lennoxlove)

Listera ovata Iuncus glaucus

" supinus (Danskine) Potamogeton natans

(Danskine) " compressus

Scirpus setaceus Carex muricata (Lennox-

ovalis

sylvatica (Yester)

hirta riparia (Danskine)

ampullacea Phalaris arundinacea Festuca arundinacea

Brachypodium sylvaticum Triticum caninum Cystopteris fragilis (Yester)

EXCURSIONS IN 1857.

Craigleith, Corstorphine, Barnton, Banks of the Almond, Cramond, Granton.

Saturday, 23rd May 1857.

Party of upwards of 100 met at Dean Bridge at 10 a.m. and walked by Craigleith Quarry to Corstorphine Hill, crossed over the hill to the Queensferry road, and then proceeded by Barnton to the banks of the Almond and Cramond. Returned by shore of Firth of Forth to Granton, and reached Edinburgh about 5,30 p.m. Rain in the afternoon.

Usual spring plants gathered :-

Anemone nemorosa Ranunculus Ficaria Epimedium alpinum Draba verna Viola lutea Geranium lucidum (Caroline Park) Acer platanoides (near

Almond)
Prunus Avium
... Cerasus

Padus

Saxifraga granulata Ribes Grossularia

" alpinum

" nigrum

Valeriana pyrenaica

Doronicum Pardalianches (Corstorphine)

Vinca minor

Lamium maculatum

Ruscus aculeatus

Allium ursinum

Penicuik, Valleyfield, Auchendinny, Roslin.

Saturday, 30th May 1857.

Party of 74 met at the North British Railway Station at 9 a.m. and proceeded to Penicuik. Return tickets, 1s. 3d. Walked to Valleyfield, saw the Paper Works, then walked by the banks of the North Esk to Auchendinny and Roslin. Visited Roslin Chapel. Returned by train passing Roslin Station at 5-29 p.m.

Among the plants gathered were the following:-

Ranunculus auricomus Trollius europæus (scarcely in flower) Cheiranthus Cheiri Arabis hirsuta Cardamine amara Viola palustris Stellaria nemorum uliginosa Oxalis Acetosella (pink) Prunus Avium " Padus Rubus saxatilis Chrysosplenium alternifolium Adoxa Moschatellina Valeriana pyrenaica Vaccinium Myrtillus Vinca minor Veronica montana Lamium incisum Salix alba ., cinerea

Caprea

Carex vulgaris glauca præcox Melica uniflora Asplenium Ruta-muraria (Roslin) Scolopendrium vulgare (Roslin) Polypodium Dryopteris Phegopteris Equisetum Telmateia umbrosum sylvaticum palustre limosum hvemale Polytrichum commune Bryum hornum Hypnum undulatum Bartramia fontana Jungermannia albida bidentată

epiphylla

Burntisland, Pettycur, Kinghorn.

Saturday, 6th June 1857.

Party of about 100 met at Edinburgh, Perth, and Dundee Railway Station at 10 a.m. and proceeded to Burntisland. Return tickets, 9d.

Walked by shore and rocks near it to Pettycur and Kinghorn, and returned by Kinghorn Loch to Burntisland in time for boat at 5.10 p.m.

Among the chief plants gathered were the following:-

Ranunculus aquatilis Trollius europæus (Glasmount woods) Cheiranthus Cheiri Arabis hirsuta Alyssum calycinum (railway banks)
Cochlearia officinalis
Thlaspi arvense
Reseda lutea
Viola sylvatica
,, canina
Silene inflata
,, maritima
Lychnis vespertina

Cerastium tetrandrum
,, arvense
(Links near
Pettycur and
railway banks)

Linum catharticum Geranium sanguineum Erodium cicutarium Trifolium repens

" procumbens

" minus " filiforme

Anthyllis Vulneraria Astragalus hypoglottis

" Glyciphyllos (railway banks)

Vicia hirsuta
Fragaria elatior
Saxifraga umbrosa
Carum Carui (near Kinghorn)
Myrrhis edorata
Seandix Pecten-Veneris

Valerianella olitoria Anthemis arvensis Senecio viscosus Centaurea Cyanus Hieracium vulgatum Leontodon palustris Tragopogon minor

Cynoglossum officinale Linaria Cymbalaria (Pettycur) Thymus Serpyllum Salvia Verbenaca Lamium amplexicaule

Primula veris

" incisum Plantago maritima Parietaria erecta Orchis mascula

Parietaria erecta
Orchis mascula
Ruscus aculeatus
Carex arenaria
" glauca

" ampullacea Phleum arenarium Aira præcox Avena pratensis Koeleria cristata Sclerochloa maritima

" loliacea Ophioglossum vulgatum (near Burntisland) Botrychium Lunaria Algæ (many)

Lanark, Cora Linn, Bonnington, Stonebyres, Cartland Crags.

Saturday, 13th June 1857.

Party of 100 met at Caledonian Railway Station at 6.45 a.m., and proceeded to Cleghorn Junction. Return tickets, 2s. 6d.

Walked from the station to Lanark, thence to the Falls of Clyde, Cora Linn, and Bonnington, thence to Stonebyres, Cartland Crags, and back to Cleghorn. Returned by train leaving Cleghorn at 4.37 p.m.

Among the plants gathered were the following:-

Trollius europæus Aquilegia vulgaris Arabis hirsuta Draba muralis (rocks at Cora Linn) Stellaria uliginosa Geranium sylvaticum lucidum Anthyllis Vulneraria Vicia Orobus Rubus saxatilis Carum Carui Galium boreale Solidago Virgaurea Antennaria dioica Doronicum Pardalianches Hieracium murorum Apargia hispida Pyrola minor Polemonium cæruleum Melampyrum pratense Polygonum Bistorta Neottia Nidus-avis Orchis latifolia Eriophorum latifolium

Carex disticha .. paniculata

,, aquatilis

" glauca " panicea

" sylvatica " binervis

" fulva

" flava " paludosa " ampullacea

Milium effusum Melica nutans

" uniflora Briza media Asplenium viride

Cystopteris fragilis
Polystichum lobatum
... aculeatum

Polypodium Dryopteris
,, Phegopteris
Equisetum umbrosum
Lycopodium selaginoides

Newton, Dryburgh Abbey, Eildon Hills, Melrose, Minto Crags, Hassendean, Galt.

Saturday, 20th June 1857.

Party of 75 met at the North British Railway Station and proceeded to Newton, then walked to Dryburgh Abbey, banks of Tweed to Eildon Hills and Melrose. Return tickets, 2s. 6d.

Some of the party went to Minto Crags by Hassendean, and gathered :-

Lychnis Viscaria Asplenium germanicum Asplenium septentrionale

and some good lichens, as :-

Nephroma resupinata Parmelia glomulifera

limbata scrobiculata

aquila Calicium chrysocephalum

Mr. Arnot examined Galtmede Moss and Cauldfield Loch, and got :-

Sedum villosum Valeriana dioica Euphorbia Esula Carex limosa

Sticta fuliginosa

Among the plants gathered by the party may be noticed :-

Thalictrum flexuosum (Tweedbank)

Eranthis hyemalis (in fruit, Dryburgh) Aquilegia vulgaris (Dry-

burgh) Aconitum Napellus (Dry-

burgh) Sisymbrium Thalianum Sinapis alba

Viola odorata (Dryburgh) ., lutea (Eildon) Tilia europæa

Geranium sanguineum

sylvaticum pratense

lucidum Euonymus europæus (Tweedbank)

Prunus Avium

Cerasus Padus Rubus saxatilis

Geum intermedium Saxifraga Geum (Dryburgh)

Lonicera Caprifolium (Dryburgh)

Galium boreale pusillum

Valeriana dioica Solidago Virgaurea

Antennaria dioica Anthemis arvensis

Matricaria Parthenium Doronicum Pardalianches

Fraxinus excelsior Menyanthes trifoliata Digitalis purpurea, var. alba

Lathræa Squamaria (Tweedbank)

Origanum vulgare Lamium album

Plantago media Polygonum Bistorta Rumex sanguineus

viridis Salix cinerea

., aquatica

Caprea

Neottia Nidus-avis Listera cordata Orchis latifolia ., maculata Polygonatum multiflorum Convallaria majalis

Carex disticha ., hirta Nardus stricta Polystichum aculeatum Lycopodium clavatum

Mr. Gorrie states that he found Poterium Sanguisorba in the low part of the Eildon, in the spot where the great fair is usually held.

East Linton, Binny Wood, Tynningham, Belhaven, Dunbar.

Saturday, 27th June 1857.

Party of 35 met at North British Railway Station at 8 a.m. and proceeded to East Linton, thence walked to Binny Wood, Tynningham, Belhaven, and Dunbar, returning from Dunbar at 6.26 p.m. Return tickets, 2s.

Among the plants collected were the following:-

Thalictrum minus Papaver Rhœas

dubium

Argemone

Cochlearia danica Cakile maritima

Lepigonum marinum Malva sylvestris

" rotundifolia

Rhamnus Frangula Agrimonia Eupatoria

Poterium Sanguisorba (near Belhaven)

Conium maculatum Scandix Pecten-Veneris

Anthriscus

Knautia arvensis Aster Tripolium

Artemisia maritima, var. gallica Pyrola minor

Solanum Dulcamara

Cynoglossum officinale

Hyoscyamus niger (Dunbar Castle)

Salicornia herbacea

Suæda maritima

Salsola Kali Rumex viridis

Hippophaë rhamnoides

Parietaria erecta

Juncus Gerardi

Triglochin palustre maritimum

Carex arenaria

distans

extensa

Phalaris arundinacea Phleum arenarium

Sclerochloa maritima

loliacea

(Dunbar Castle) Triticum junceum

Lastrea Oreopteris Verrucaria maura (rocks

near Dunbar)

Forteviot, Invermay Woods, Pitkeathly, Moncrieff Hill, Kinnoul Hill, Perth.

Saturday, 4th July 1857.

Party of about 40 met at the Scottish Central Railway Station at 6.30 a.m. and proceeded to Forteviot, and returned from Perth at 6.27 p.m., reaching Edinburgh at 9 p.m. Return tickets, 3s. 11d. They were met by Dr. Lauder Lindsay, Dr. Stirling, Dr. Lyell. They first visited Invermay Woods, and then went to Pitkeathly, visited Moncrieff Hill, crossed the water to Kinnoul Hill, and returned to Perth.

Among the more important plants gathered were the following:-

Thalictrum minus Nasturtium sylvestre Hesperis matronalis Lepidium campestre Smithii Malva moschata Genista anglica Ornithopus perpusillus Rubus nitidus Potentilla argentea Sedum Telephium Enanthe crocata Dipsacus sylvestris Solidago Virgaurea Doronicum Pardalianches Cnicus heterophyllus Centaurea Scabiosa Lactuca virosa (Kinnoul) Vinca minor

Cynoglossum sylvaticum Echium vulgare Solanum Dulcamara Scrophularia vernalis (sparingly) Betonica officinalis (abundant) Listera Nidus-avis ovata Epipactis latifolia (sparingly) Habenaria viridis chlorantha Paris quadrifolia (sparingly) Carex hirta Aira cæspitosa vivipara Bartramia pomiformis Cladonia rangiferina

Perth, Methven.

Saturday, 11th July 1857.

No excursion to-day owing to illness, but Mr. Sadler with others went to Perth, visited Muirward Wood, in Highfield

Farm, near New Scone, and gathered Moneses grandiflora and Trientalis europea, then proceeded 6 or 7 miles further to Methven Woods and Marsh. In the Almond Bank Marsh, at fourth milestone from Perth on way to Criefi, gathered:—

Cicuta virosa Vaccinium Oxycoccus Utricularia minor Scheuchzeria palustris Lastrea spinulosa

Kelso, Cornhill, Coldstream, Tweedmill, Twisel Castle, Norham, Berwick.

Friday, 17th July 1857.

The following party met at the North British Railway Station at 435 p.m. and proceeded to Kelso:—J. H. Balfour, Thomas Ainslie, J. Andrew, Robert Brown, Robert C. Cowan, Alex. Graham, Alex. Hutchison, Andrew Inglis, John Inglis, John C. Jones, John Linton, Alex. J. Macfarlan, John Menzies, William Mitchell, William Russell, Thomas G. Scott, P. A. Simpson, William D. Thomson, William Traill, George Williamson. Return tickets to Kelso on Friday and from Berwick on Saturday, 3s. 6d.

On reaching Kelso the party proceeded by train to Cornhill (paying 1s. each), and thence walked to Coldstream, where they met the Rev. Mr. Goldie. The party were accommodated partly at the Manse, partly in three different inns, Hardie's, Horne's, and the Black Bull.

Saturday, 18th July 1857.

After breakfasting at 6 a.m. proceeded along banks of Tweed to Tweedmill, then crossed to the Till, ascended that river to Twisel Castle and the old bridge over which the Earl of Surrey crossed with the English army to Flodden. Proceeded on English side of Tweed to point opposite Milnegraden, and then to Norham, which was reached between 1 and 2 p.m. Had lunch partly at the inn and partly at Mr. Ainslie's. Visited the old Castle of Norham, and then went by train to Berwick, reaching it about 3.20 p.m. Fares, 1s. 2d. each. Among the

plants gathered were the following:-

Cheiranthus Cheiri (Twisel) Nasturtium sylvestre (Tweed bank) Sisymbrium Irio (Pier gate, Berwick) Diplotaxis tenuifolia (Berwick wall, Northeast point near Pier) Lepidium latifolium (near Norham) Viola odorata (Norham) Saponaria officinalis (Twisel) Lychnis Githago Sagina maritima (Berwick walls) Hypericum perforatum hirsutum Malva moschata (Tweed, Coldstream) Geranium pratense Melilotus officinalis Trifolium arvense Prunus Avium Rubus nemorosus? Potentilla reptans Agrimonia Eupatoria Myriophyllum spicatum Lythrum Salicaria Epilobium angustifolium hirsutum montanum palustre Conium maculatum Enanthe crocata Æthusa Cynapium Torilis Anthriscus Sambucus Ebulus (Twisel) Dipsacus sylvestris (Coldstream) Scabiosa Columbaria Matricaria Parthenium

Tanacetum vulgare

Carduus acanthoides lanceolatus palustris arvensis Hieracium vulgatum Lactuca virosa (8-10 feet high) Lysimachia Nummularia (near Norham) Anagallis arvensis Ligustrum vulgare Anchusa sempervirens Lithospermum arvense Echium vulgare Convolvulus arvensis Hyoscyamus niger (near Railway Station, Berwick) Verbascum Thapsus Linaria vulgaris Origanum vulgare Lamium purpureum album Ballota fœtida Polygonum amphibium Humulus Lupulus Parietaria diffusa Salix aquatica ., Helix Anacharis Alsinastrum (Whiteadder) Sparganium ramosum Potamogeton natans heterophyllus lucens perfoliatus pectinatus

Carex vulpina (near Cold-

Holous mollis

stream, far from sea)

near Milnegraden, 8 or

Asplenium marinum (rocks

o miles from sea)

Stirling, Inverarnan, Loch Lomond, Ben Voirlich, Tarbet.

Thursday, 23rd July 1857.

Party of 18, composed of J. H. Balfour, M'Taggart Cowan, Robert C. Cowan, F. Deas, P. Neill Fraser, Alex. Graham, Edwin Grogan, John Inglis, John C. Jones, John Linton, Alex. J. Macfarlan, William Mitchell, David Robertson, William Russell, Thomas G. Scott, Offley B. Shore, P. A. Simpson, William D. Thomson, met at the Scottish Certarl Railway Station at 8 a.m. and proceeded to Stirling. After waiting about an hour and a half there, visiting the Castle, and gathering:—

Sedum album Lactuca virosa Verbascum Lychnitis Linaria repens

and other plants, the party proceeded by train to Balloch, and then by steamboat to Inverarnan, which was reached about 3.15 p.m. Return tickets to Stirling, available to 25th, 3s. Do., from Stirling to head of Loch Lomond, 5s. Total 8s.

Rain came on after leaving Stirling, and the sail up the loch was very wet. Mr. Shore left the party at Tarbet and went to Lord Benholme's. On reaching Inverarnan the party proceeded to M'Lellan's Inn, where beds had been provided.

In spite of the rain the party took short walks in the vicinity, and gathered:—Malaxis paludosa, Lycopodium inundatum, and other plants more common. After a tea-dinner the plants were examined and put into paper.

Friday, 24th July 1857.

Party breakfasted at 6.30 a.m. The day was wet and misty. Notwithstanding, the greater part walked to Ben Voirlich and examined the flora of the hill. Sleet and rain continued more or less until about 5 in the evening, when the sun broke out, and an exquisite view of the surrounding country was displayed.

Among the plants gathered were :-

Thalictrum alpinum Cochlearia, varieties Silene acaulis Rubus saxatilis Sibbaldia procumbens Alchemilla alpina Saxifraga oppositifolia

" stellaris " aizoides

,, hypnoides Sedum Rhodiola Epilobium alpinum

Galium boreale Antennaria dioica Gnaphalium supinum

Saussurea alpina Armeria maritima

Plantago maritima Polygonum viviparum

On the lower grounds :-

Corydalis claviculata Hypericum humifusum Drosera rotundifolia Lythrum Salicaria

Lythrum Salicaria Lysimachia vulgaris Salix herbacea Juncus trifidus

" triglumis Luzula spicata Carex rigida

,, pulla Aira cæspitosa vivipara

Poa Balfourii

Juniperus nana Hymenophyllum Wilsoni Cystopteris fragilis

" dentata Polystichum Lonchitis

Lycopodium Selago

,, clavatum

" alpinun Isoëtes lacustris

Stachys ambigua Quercus Robur ... sessiliflora

" sessiliflora Narthecium ossifragum Carex vesicaria

Saturday, 25th July 1857.

Breakfasted at 6.30 a.m., and then the majority of the party walked by shores of Loch Lomond to Tarbet and Loch Long, meeting the boat at Tarbet about 4.10 and reaching Edinburgh about 9 p.m. This day we gathered:—

Hypericum Androsæmum Drosera anglica Circæa alpina Hieracium prenanthoides ,, denticulatum Lobelia Dortmanna Littorella lacustris Scutellaria galericulata Polypodium Phegopteris Osmunda regalis

Day very windy and showery.

Arran.

Monday, 17th August 1857.

On Monday, 17th August, the following botanical party met at Lamlash:—J. H. Balfour, Mr. M'Taggart Cowan, Mr. Robert Cowan, Mr. Deas, Mr. Linton, Mr. Macfarlan.

Tuesday, 18th August 1857.

The party proceeded this morning by the steamboat at 5.45 to Corrie, and after breakfasting at Mrs. Jamieson's Inn proceeded to Sannox, where they had a bathe before going up Glen Sannox. On the way saw a large adder, walked up on the northern side of the glen, and at the upper part near Caisteal Abhail gathered Alchemilla conjuncta. It seems to be a new variety of A. alpina, for plants were found in which the leaflets were seemingly adherent. Gathered also a number of common plants as well as Saxifraga stellaris and Oxyria reniformis. The Glen is very poor as regards species, and the heather and slippery rocks render a walk through it very toilsome. Ascended a difficult gully by south side of Caisteal Abhail and had some difficulty in reaching the top. The day was very fine, and the party had an excellent view from the summit of Goatfell. Some clouds rested now and then on the different summits, which marred the effect. Ben Lomond clearly seen, Jura, Ireland, Mull of Cantyre, Mull of Galloway. Many lichens were collected on the summit, also Salix herbacea and Carex rigida. Descended by the steep side from the summit to Brodick. On the shore collected Sinapis monensis, Mertensia maritima, Fucus vesiculosus, varieties.

After refreshments at Springbank, reached Lamlash about 8 p.m.

Wednesday, 19th August 1857.

This day the party was joined by Mr. Stevenson, and proceeded about 9 a.m. along the Lamlash shore to Whiting Bay. Visited the Nameless Rill of Mr. Waller Paton.

Gathered:

Anagallis tenella Atriplex arenavia "Babingtonii Salicornia herbacea Salsola Kali Scirpus Savii ,, maritimus

Hymenophyllum tunbridgense Lastrea Foenisecii Polypodium Phegopteris

On the roadside to Whiting Bay there is abundance of Hypericum duium. Near Whiting Bay Mr. Robert Cowan picked Cichorium Intybus.

After bathing at Whiting Bay, party joined the "Isle of Arran" steamer and proceeded round the island to Loch Ranza, where they landed about 5 p.m. On landing at Loch Ranza five took up their quarters at the inn, while the Messrs. Cowan went to Dr. Hannie's house.

The party went up the glen from Loch Ranza by the waterfall and gathered specimens of *Pyrus fennica*.

Thursday, 20th August 1857.

After breakfast, started about 8 a.m. from Loch Ranza and walked along the shore by Catacol Bay to Dugary, Imachar (where we rested), King's Caves, Drumadoon, and Blackwater-foot, which was reached about 6.30 p.m. The day was very warm and oppressive, and the party bathed three times on the way.

Among the plants gathered were the following :-

Crambe maritima (shore Imachar)
Convolvulus Soldanella (shore at Blackwaterfoot)
Stachys arvensis
Polygonum Raii (shore at Blackwaterfoot)

Asplenium marinum (rocks at King's Hill) Cystopteris fragilis (Loch Ranza) Osmunda regalis (Loch Ranza)

After resting at Blackwaterfoot and taking tea, the party started at 7,30 p.m. across the hill, and had some difficulty in reaching the Lag road, along which they proceeded to Lamlash, which was reached about 11 p.m.

The distance accomplished this day was 40 miles, and all were very much knocked up.

Friday, 21st August 1857.

This day was spent chiefly in dredging off Holy Island in company with Dr. Carpenter. Many good animals were got as well as some sea-weeds. On the island abundance of Arctostaphylos Uva-ursi. In the evening occupied in fishing.

Saturday, 22nd August 1857.

The party broke up this day; most returned to Ayrshire or Glasgow, while Mr. M'Taggart Cowan remained at Invercloy. Some plants were picked along the shore. I visited Dr. Carpenter at the island and examined the flora partially.

Tuesday, 25th August 1857.

Mr. Hugh Cowan, from Thornton, and Mr. M'Taggart Cowan met me at Springbank, and, after picking some sand plants at Brodick, walked up Glen Cloy, where we gathered:—

Sedum Rhodiola Galium boreale Hymenophyllum Wilsoni (in great abundance) Asplenium viride Cystopteris fragilis Polystichum aculeatum Lastrea Foenisecii

and several other less rare plants.

Returned about 6 p.m. Mr. Robert Cowan gathered on Ben Gornic the following plants:—

Viola palustris Alchemilla alpina ,, conjuncta Saxifraga stellaris Sedum Rhodiola Galium saxatile Vaccinium Vitis Idæa Veronica officinalis Salix herbacea Juniperus nana

Thursday, 17th September 1857.

Party consisting of Archibald and John Stevenson, William Carpenter, and J. H. Balfour left Lamlash at 3 p.m. and walked by Whiting Bay and Dippin to Kildonan and thence to Lag. Called on Mr. Macrae at East Kilmorie, near Pladda, at

whose manse we saw beautiful specimens of Lavatera arbora, a plant commonly cultivated in Arran, perhaps originally from Alisa Craig, also Fuchsia, which forms hedges in many places. Hydrangea very vigorous.

The following were some of the plants seen :-

Montia fontana
Hyperieum Androssemum
Geranium pratense
Agrimonia Eupatoria
Cotyledon Umbilicus
Sedum anglicum
Anthemis nobilis (near cottage door, Kildonan)
Solanum Dulcamara

lants seen:

Verbascum Thapsus
Scutellaria galericulata
Atriplex arenaria
Suæda maritima
Carex vulpina
Asplenium marinum
Ramalina scopulorum
(abundant on trap rocks
at Dippin)

Numerous mushrooms gathered. Remarkable red Salicornia herbacea near Whiting Bay.

In the evening took up our quarters in Lag Inn, where we were well and cheaply accommodated. Reached Lag at 8.30 p.m. Met Mr. Spittal, who had been geologising in the district and who accompanied us during the rest of our trip.

Friday, 18th September 1857.

Breakfasted at Lag. Left Lag Inn about 8 a.m., and walked by the shore to Blackwaterfoot. On the way gathered a large quantity of:—

Ranunculus hederaceus Cakile maritima Silene maritima Geranium pratense Rosa spinosissima Eryngium maritinum Apium graveolens Haloscias scoticum Matricaria maritima Anagallis arvensis Anagallis tenella Mertensia maritima Convolvulus Soldanella Salsola Kali Polygonum Hydropiper , Persicaria ,, lapathifolium Scirpus maritimus Triticum laxum

Agaricus campestris

Numerous Rubi varying in the quality of fruit; Rubus discolor later in fruit than others, fruit highly-flavoured.

At Blackwaterfoot went to the fine basaltic column at Drumadoon and thence to King's Caves.

Gathered :-

Asplenium Adiantum-nigrum ,, marinum

" Trichomanes Scolopendrium vulgare Osmunda regalis Ramalina scopulorum (covering the basaltic rocks at Drumadoon)

Returned to Blackwaterfoot. Most of the party returned by cars to Lamlash, while Dr. B., Mr. J. Stevenson, and Mr. Spittal walked to Shedog and Shisken Church, and then by the Clachan Glen to Glen Benlister, and thence to Lamlash, which was reached about 8 p.m. after three hours' walking from Blackwaterfoot.

Tuesday, 22nd September 1857.

Walked by coast to Whiting Bay, Dippin, Kilmorie, Lag, getting the usual plants, *Hypericum dubium* being the rarest. From Lag walked in the evening by the shore back to Kilmorie, gathering on the way numerous specimens of *Agaricus campestris*.

On the rocks near Bennan Head:-

Silene maritima

Vicia sylvatica (still in flower, as well as specimens in fruit, especially on shingle of the shore) Pulicaria dysenterica Armeria maritima Plantago maritima

Reached Mr. Macrae's house at Kilmorie Manse, where I remained for the night.

Wednesday, 23rd September 1857:

After breakfast visited Stracy rocks with Mr. Macrae and his son Donald. Gathered:—

Geranium sanguineum Cotyledon Umbilicus Carlina vulgaris Atriplex arenaria ,, Babingtonii

Phragmites communis

Asplenium marinum (on trap rocks at Stracy) Equisetum Telmateia (some specimens between 6 and 7 feet high). This plant very abundant in the district Peculiar red matter on rocks at Bennan.

Visited the island of Pladda in a boat, gathered Agaricus campestris and Anthemis nobilis, no other plants of interest. Visited the lightouse. Joined the party for the steamer "Isle of Arran," and returned to Lamlash about 4 p.m. Sea rather rough and weather stormy.

Friday, 26th September 1857.

Visited the hill near Lamlash on the south of the road to Lag. Ascended by a mountain stream, reached the summit, whence a fine view was obtained, Goatfell and hills near it well seen, islands on Clyde, Ayrshire, Blackwaterfoot, Argyllshire. Descended by a deep ravine which joins the glen to south of Lag Road. This ravine very deep, steep sides, and yielded some good plants, as:—

Cardamine hirsuta (6 stamens and long style) Saifraga hypnoides (in profusion) Festuca ovina vivipara Hymenophyllum Wilsoni Blechnum boreale Asplenium Trichomannes (in great profusion)

Athyrium Filix-fœmina Cystopteris fragilis Lastrea Oreopteris

- ,, Filix-mas
- ,, dilatata Polypodium vulgare
 - ypodium vulgare ,, Dryopteris
 - Phegopteris

Numerous lichens and mosses. On the hill was seen a peculiar form of *Lastrea Filix-mas*. Numerous diatoms in slimy matter on the rocks. *Nastoc* also seen.

EXCURSIONS IN 1858.

Canal, Slateford, Colinton, Swanston.

Saturday, 15th May 1858.

Party of about 80-100 met at the Canal Basin at 10 a.m., and proceeded by the banks of the Canal to Slateford, Colinton, and Swanston, returning between 4 and 5 p.m.

Among the plants gathered were the following:-

Anemone nemorosa Ranunculus auricomus

" Ficaria Caltha palustris Corydalis lutea Sisymbrium Thalianum

Viola sylvatica Geranium phæum Staphylea pinnata

Staphylea pinnata Prunus communis

" Avium Pyrus Aria

" Aucuparia " Malus

Ribes Grossularia ,, rubrum

Myrrhis odorata Adoxa Moschatellina Tussilago Farfara

Petasites vulgaris Doronicum plantagineum Vinca minor Lamium purpureum

" album Daphne Laureola Carpinus Betulus

Salix alba " cinerea

" Helix Orchis mascula

Allium ursinum Endymion nutans

Lilium Martagon (not in flower)

Arum maculatum Potamogeton crispus Carex vulgaris

,, glauca Polystichum aculeatum Equisetum arvense

Grimmia pulvinata Lepraria flava

Scyphophorus pyxidatus Polyporus versicolor

Penicuik, Esk Mill, Auchindinny, Roslin.

Saturday, 22nd May 1858.

Party of about 90 met at the North British Railway Station at 9 a.m. and proceeded to Peniculik, thence to Valleyfield and visited Mr. Cowan's paper works, thence went by banks of Esk to Esk Mill, Auchindinny, and Roslin, returning by train leaving Roslin at 5,29 p.m., and reaching Edinburgh at 6,15 p.m. Return third-class tickets, is. 3d.

Among the plants collected were the following:

Ranunculus auricomus

Prunus Avium

Ranunculus auricomus Trollius europæus Cardamine amara Viola tricolor Oxalis Acetosella (pink) Staphylea pinnata (Roslin)

", Cerasus (between
Powder Mill and
Roslin on western
bank of river)

Rubus saxatilis (Auchindinny)

Pyrus Aucuparia " Malus

Saxifraga granulata Chrysosplenium alternifolium

Myrrhis odorata

Sanicula europæa Adoxa Moschatellina

Doronicum Pardalianches (Roslin)

Vaccinium Myrtillus Primula veris

Veronica montana Lamium amplexicaule

Salix Helix

., cinerea ., aquatica

" alba

., Caprea

Neottia Nidus-avis

Carex paniculata

præcox

sylvatica pendula

paludosa

Melica uniflora Polypodium Dryopteris

Phegopteris

Equisetum umbrosum

arvense sylvaticum

palustre

Bryumn puctatum

Polytrichum commune Dicranum scoparium

Jungermannia asplenioides

Evernia prunastri Calicium chrysocephalum

Polyporus versicolor

Burntisland, Aberdour, Donibristle, Kinghorn.

Saturday, 29th May 1858.

Party of about 60 met at 10 a.m. at station of Edinburgh, Perth and Dundee Railway, and proceeded to Burntisland. Walked by shore to Aberdour, and returned by road to Burntisland for boat at 5 p.m., railway to Edinburgh at 6. Return ticket, 9d. Some went to Donibristle, others to Kinghorn.

Among the plants gathered were :-

Berberis vulgaris

Lepidium campestre Cerastium trigynum

Sagina maritima Geranium phæum (Burntisland)

,, sanguineum Astragalus hypoglottis Smyrnium Olusatrum (Kinghorn)

Centranthus ruber

Valerianella olitoria

Armeria maritima

Primula veris Vinca major

Solanum Dulcamara (scarcely in flower)

Linaria Cymbalaria

Antirrhinum majus (Aberdour Castle, scarcely in flower)

Veronica agrestis arvensis

" serpyllifolia

Chamædrys

Veronica Beccabunga Salvia Verbenaca Plantago Coronopus Hippophaë rhamnoides Parietaria erecta Populus alba (leaf) Ornithogalum umbellatum Tulipa sylvestris Carex arenaria

.. vulgaris

Carex gluca
,, præcox
,, distans
,, extensa
Aira præcox
Sclerochloa loliacea
Asplenium Adiantum-nigrum
,, Ruta-muraria
Botrychium Lunaria

Exidia Auricula-Judæ

Mid-Calder, Meadowbank, Kames Hill, Dalmahoy Hill, Ravelrig, Currie.

Saturday, 5th June 1858.

Party of 90 met at the Caledonian Railway Station at 10.30 a.m. and proceeded to Mid-Calder, thence walked to Meadowbank woods, Kames Hill, Dalmahoy Hill, Ravelrig, Water of Leith, and Currie, returning from Currie by train at 6.9 p.m. Return tickets, 10d.

The day was remarkably fine, and there was a splendid view from the top of Kames Hill.

Among the plants gathered were the following :-

Ranunculus aquatilis
,, trichophyllus
Trollius europæus
Draba verna
Drisymbrium Thalianum
Viola palustris
,, sylvatica

,, sylvatica ,, canina ,, tricolor

,, arvensis
Cerastium semidecandrum
Stellaria uliginosa
Moehringia trinervia
Sagina subulata
Geranium sylvaticum and
var. (paler flower)
Geranium columbinum
Vicia sativa, var. Bobartii

Prunus Padus Geum intermedium Fragaria elatior Pyrus Aucuparia Ribes nigrum Adoxa Moschatellina Linnæa borealis Antennaria dioica Pyrola minor Menyanthes trifoliata Anchusa sempervirens Myosotis palustris Pinguicula vulgaris Mentha viridis Lamium amplexicaule intermedium Carpinus Betulus