

# THE FLORA OF SANQUHAR AND KIRKCONNEL PARISHES.

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IN the subjoined list I have detailed in systematic order all the species known to exist in the two parishes, and, as they are all recent and personal records, verified in all doubtful instances by Mr Arthur Bennet, of Croydon, they may be considered perfectly reliable.

In the interests of the botanist, I have closely followed the nomenclature and authorities given in the London Catalogue, 8th ed., adding to each its most familiar English name, the locality where found, and its comparative rarity.

Here, as elsewhere, the geological formation exercises an important influence on the floral distribution. The new red sandstone or coal-bearing regions of the Nith and lower parts of Euchan and Crawick, with its deep alluvial soil and fertile holms, though limited in extent, are rich in floral beauty. The remainder, and by far the greater part, of the district is wholly Silurian (whinstone), covered over with sedgy moor or peaty heath and pasture, with here and there alluvial deposit along the streams, and scarcely congenial to the maintenance of a varied flora.

Altitude has likewise an interesting and, to the close observer, quite as marked an influence on the distribution of the various species. As one follows the windings of the Nith from the sea, the first marked change is observed at Auldgirith, where the northern limit of *Lythrum Salicaria*, *Cicuta virosa*, and *Solanum dulcamara* is reached. Continuing the ascent, the more lowland species gradually diminish or disappear, till the converging hills, touching the river at Enterkinfoot, make a line of demarcation beyond which *Thalictrum saxatile*, *Stellaria nemorum*, *Galium cruciatum*, *Lychnis alba*, etc., seem to be unable to pass. From

this point till the new red sandstone at Ryehill and Euchan is encountered the ground is comparatively barren. Above this, however, the glens of Crawick and Euchan, with their remnants of natural forest that once covered the whole region, have preserved for us the rarest specimens of our local flora. To the survival of that remnant of the ancient wood we owe the existence of the *Bitter Wood* and *Pencilled Vetches*, the *Broad-leaved Helleborine*, the *Carline* and *Melancholy Thistle*, the *Green Spleenwort*, the *Meadow Horsetail*, the rarer *Willows* and *Hawkweeds*. The botanist may note the omission of many of the commoner forms from this list, but the absence of natural lakes explains the paucity of *Pondweeds*, *Charae*, and other aquatic forms common elsewhere, though this scarce accounts for the remarkable absence of some of the most familiar aquatic species, such as *Water Crow-foot*, *Duckweed*, *Water Purslane*, etc.

Despite its many disadvantages, Sanquhar district can boast of possessing no less than 40 species hitherto unrecorded from any other part of Dumfriesshire. Two of these, viz., the *Yellow Pond Lily* (*Nuphar intermedium*) and the *Floating Rush* (*Juncus fluitans*), are very rare, having previously been reported from—with the possible exception of Thornhill—but three or four other places in Britain. Of the others, *Salix nigricans*, *Equisetum pratense*, *Hieracium prenanthoides*, and *Poa glaucantha* are rare and interesting species. Among the remainder there are 16 *Roses*, 3 *Brambles*, 5 *Hawkweeds*, and 6 *Willows*. The total number of species and varieties, so far as I have observed, amount in the aggregate to 496. Of these, 8 are garden escapes, 9 have been casually introduced, 3 are imported fodder plants, and 12 are planted trees.

## SUB-KINGDOM—PHANEROGAMS.

### ORDER RANUNCULACEÆ.

*Anemone nemorosa* (L.), WOOD ANEMONE—Common on the river banks.

*Ranunculus Lenormandi* (Schultz)—In shallow ponds.

*Ranunculus hederaceus* (L.), IVY-LEAVED CROWFOOT—Rare, near Old Barr and Kirkconnel.

- Ranunculus Flammula* (L.), LESSER SPEARWORT—In wet places, common.
- Ranunculus Flammula*, var. *Pseudo-Reptans*—In wet places on the hills.
- Ranunculus auricomus* (L.), GOLDIELOCKS—On the roadsides, not common.
- Ranunculus acris* (L.), UPRIGHT CROWFOOT—Common and general.
- Ranunculus repens* (L.), CREEPING CROWFOOT—Very common.
- Ranunculus bulbosus* (L.), BULBOUS CROWFOOT—In the pastures at Sanquhar Castle and Spango Bridge.
- Ranunculus Ficaria* (L.), PILEWORT—Common in shady places.
- Caltha palustris* (L.), MARSH MARIGOLD—Common in marshy places.
- Trollius Europæus* (L.), GLOBE FLOWER—In a few places on banks of Nith and Euchar.
- Aquilegia vulgaris* (L.), COLUMBINE—Railway near Knockenjig, probably a garden escape.

## NYMPHÆACEÆ.

- Nuphar intermedium* (Ledeb.), YELLOW WATER LILY—Black Loch.

## PAPAVERACEÆ.

- Papaver dubium* (L.), SMOOTH-HEADED POPPY—Common at Kirkconnel Station.

## FUMARIACEÆ.

- Fumaria officinalis* (L.), COMMON FUMITORY—Common in the corn fields.
- Corydalis claviculata* (DC.), WHITE CLIMBING FUMITORY—Holm walks.

## CRUCIFERÆ.

- Nasturtium officinale* (R.Br.), WATER CRESS—Not common, at Newark, Spango Bridge, and Kirkconnel.
- Barbarea vulgaris* (R.Br.), YELLOW ROCKET—In moist places along the Nith.

- Arabis sagittata* (DC.), HAIRY WALL CRESS—Rare, Kello Water.
- Cardamine amara* (L.), COMMON BITTER CRESS—On the Nith near Sawmills.
- Cardamine pratensis* (L.), LADY'S SMOCK—Common in moist meadows.
- Cardamine hirsuta* (L.), HAIRY CARDAMINE — Common in damp places.
- Cardamine flexuosa* (With.)—Euchan, in shady places, rare.
- Erophila vulgaris* (DC.), WHITLOW GRASS — Localised at Sanquhar Castle and Glenmaddie Craig.
- Cochlearia officinalis* (L.), SCURVY GRASS — Rather rare, near Euchan Quarry and Glenmaddie Craig.
- Sisymbrium Thaliana* (Hook.), THALE CRESS—Not common, on the old stone walls and roadside fences.
- Sisymbrium officinale* (Scop.), HEDGE MUSTARD—Along the highways.
- Brassica Rutabaga* (DC.), SWEDE—Common in the Castle cornfields.
- Brassica Monensis* (Huds.), ISLE OF MAN CABBAGE—A casual on railway embankment near Mennoch.
- Brassica Sinapis* (Visiani), FIELD MUSTARD—Very common in cultivated grounds.
- Erysimum cheiranthoides* (L.)—Near Kirkconnel Station, introduced.
- Capsella Bursa-pastoris* (Moench)—SHEPHERD'S PURSE—Very common.
- Lepidium Smithii* (Hook.), PEPPERWORT—Common along hedge banks.
- Thlaspi arvense* (L.), PENNY CRESS—Chapel Hill, Carco.
- Raphanus Raphanistrum* (L.), CHARLOCK — Common in the cornfields.

## CISTINEÆ.

- Helianthemum Chamæcistus* (Mill.), ROCK ROSE—On the bank near Spango Bridge.

## VIOLACEÆ.

- Viola palustris* (L.), MARSH VIOLET — In marshy ground, Sanquhar Moor, &c.

*Viola sylvatica* (Fr.), DOG VIOLET—Common.

*Viola tricolor* (L.), WILD PANSY—Common.

*Viola arvensis* (Murr.), FIELD PANSY—Common in cultivated ground.

*Viola lutea* (Huds.), YELLOW PANSY—Common on the upland pastures.

*Viola lutea*, var. *amœna* (Syme), PURPLE PANSY—Common on the hills, especially at Wanlockhead.

#### POLYGALEÆ.

*Polygala vulgaris* (L.), MILKWORT—Common on hilly pastures.

#### CARYOPHYLLÆ.

*Silene Cucubalus* (Wibel), BLADDER CAMPION—Rare, Ellick Bridge and Mennock Railway.

*Lychnis Flos-cuculi* (L.), RAGGED ROBIN—In most places near Nith.

*Lychnis diurna* (Sibt.), RED CAMPION—Rather rare, hedge banks.

*Lychnis Githago* (Lam.), CORNCOCKLE—In cornfield near Station, probably accidental.

*Cerastium semidecandrum* (L.)—On Crawick railway bridge.

*Cerastium glomeratum* (Thuill.), BROAD-LEAVED MOUSE-EAR CHICKWEED—Common.

*Cerastium triviale* (Link), NARROW-LEAVED MOUSE-EAR CHICKWEED—Common.

*Stellaria media* (Cyr.), COMMON CHICKWEED—Very common and general.

*Stellaria Holostea* (L.), GREATER STITCHWORT—Common along hedgerows.

*Stellaria graminea* (L.), LESSER STITCHWORT—Not uncommon in dry bushy places.

*Stellaria uliginosa* (Murr.), BOG STITCHWORT—Common in wet places.

*Arenaria trinerva* (L.), SANDWORT—Common in damp shady places.

*Arenaria serpyllifolia* (L.), THYME-LEAVED SANDWORT—Along railway embankment, rather rare.

*Sagina procumbens* (L.), PEARLWORT—Common on waste ground.

*Spergula arvensis* (L.), CORN SPURREY—Very common.

## PORTULACEÆ.

*Montia fontana* (L.), WATERBLINKS—Common.

## HYPERICINEÆ.

*Hypericum perforatum* (L.), PERFORATED ST. JOHN'S WORT—Common.

*Hypericum quadratum* (Stokes), SQUARE-STEMMED ST. JOHN'S WORT—Common on wet places in the hilly districts.

*Hypericum humifusum* (L.), TRAILING ST. JOHN'S WORT—Very rare, railway bank, Gateside, and near Euchar Cottage.

*Hypericum pulchrum* (L.), UPRIGHT ST. JOHN'S WORT—On dry heaths and banks.

*Hypericum hirsutum* (L.), HAIRY ST. JOHN'S WORT—Local, near Newark, Ardoch, and Bankhead pit.

## TILIACEÆ.

*Tilia vulgaris* (Hayne), LIME TREE—Introduced.

## LINEÆ.

*Linum catharticum* (L.), PURGING FLAX—Common on dry heaths.

## GERANIACEÆ.

*Geranium sylvaticum* (L.), WOOD CRANE'S BILL—Common in the pastures along Nith.

*Geranium pratense* (L.), MEADOW CRANE'S BILL—Localities same as the last, but much rarer.

*Geranium molle* (L.), SOFT-LEAVED GERANIUM—Common in the fields.

*Geranium dissectum* (L.), DOVE'S FOOT CRANE'S BILL—Common.

*Geranium Robertianum* (L.), HERB ROBERT—Common and general.

*Oxalis acetosella* (L.), WOOD SORREL—Very common and general.

## ILICINEÆ.

*Ilex Aquifolium* (L.), HOLLY—Naturalized.

## SAPINDACEÆ.

- Acer Pseudo-platanus* (L.), PLANE TREE—Elliock Woods, introduced.  
*Acer campestre* (L.), COMMON MAPLE—Elliock Woods, introduced.

## LEGUMINOSÆ.

- Genista anglica* (L.), PETTY WHIN—Among the heather at Wanlockhead.  
*Ulex europæus* (L.), WHIN or FURZE—Common.  
*Cytisus scoparius* (Link), BROOM—Common.  
*Ononis repens*, var. *inervis* (Lange), RESTHARROW—Railway bank near Ardoch.  
*Trifolium pratense* (L.), PURPLE CLOVER—Very common, cultivated.  
*Trifolium medium* (L.), ZIGZAG CLOVER—Common along the railway banks.  
*Trifolium hybridum* (L.), ALSIKE CLOVER—Introduced as a fodder plant.  
*Trifolium repens* (L.), DUTCH or WHITE CLOVER—Very common.  
*Trifolium procumbens* (L.), HOP TREFOIL or YELLOW CLOVER—Common.  
*Trifolium dubium* (Sibth.), LESSER YELLOW CLOVER—Not so common as the last.  
*Anthyllis vulneraria* (L.), LADIES' FINGERS—Railway bank near the shooting range.  
*Lotus corniculatus* (L.), BIRD'S FOOT TREFOIL—Common.  
*Lotus pilosus* (Beeke), GREATER BIRD'S FOOT TREFOIL—Not uncommon in damp places.  
*Vicia hirsuta* (Koch), HAIRY TARE—Sanquhar Castle, Mennock.  
*Vicia Cracca* (L.), TUFTED VETCH—Common in the hedges.  
*Vicia Orobus* (DC.), BETTER VETCH—Abundant in Euchan and Kello woods.  
*Vicia sylvatica* (L.), PENCILLED VETCH—Crawick woods, near Knockenhair, and Kello woods.  
*Vicia sepium* (L.), BUSH VETCH—Common.  
*Vicia sativa* (L.), TARES—Escape from cultivation.  
*Vicia angustifolia*, var. *Bobartii* (Fors.)—Railway bank at Sanquhar Station.



- Lathyrus pratensis* (L.), YELLOW VETCHLING—Very common.  
*Lathyrus macrorrhizus* (Wimm), HEATH PEA—Common on dry heaths.

## ROSACEÆ.

- Prunus communis* (Huds.), SLOETHORN—Common.  
*Prunus Avium* (L.), GEAN TREE—Common.  
*Prunus Padus* (L.), BIRD CHERRY—Common.  
*Spiraea salicifolia* (L.), WILLOW-LEAVED SPIREA—Elloick woods, garden escape.  
*Spiraea Ulmaria* (L.), QUEEN OF THE MEADOW—Common.  
*Rubus Ideus* (L.), RASPBERRY—Common.  
*Rubus plicatus* (W. & N.), BRAMBLE var.—Common.  
*Rubus carpinifolius* (W. & N.), BRAMBLE—Hedges south of Sanquhar.  
*Rubus ramosus* (Blox.), BRAMBLE var.—Rare, Crawick.  
*Rubus Koehleri* (Weihe), BRAMBLE var.—Road side, Crawick.  
*Rubus saxatilis* (L.), STONE BRAMBLE—Common along Nith and tributaries.  
*Rubus chamemorus* (L.), CLOUD BERRY—Common at Wanlockhead and Garland.  
*Geum urbanum* (L.), WOOD AVENS—Common along hedgerows.  
*Geum intermedium* (Ehrh.)—On the river bank at Ryehill, frequent on the roadside between Elloick and Burnsands.  
*Geum rivale* (L.), WATER AVENS—In damp woods, not common.  
*Fragaria vesca* (L.), WILD STRAWBERRY—Common.  
*Potentilla Fragariastrum* (Ehrh.), BARREN STRAWBERRY—Common on dry banks.  
*Potentilla Tormentilla* (Neck.), TORMENTIL—Common.  
*Potentilla procumbens* (Sibth.), PROCUMBENT TORMENTIL—Frequent along the roadsides north and south.  
*Potentilla reptans* (L.), CREEPING TORMENTIL—A few plants grow on the Castle walls.  
*Potentilla Anserina* (L.), SILVER WEED—Common.  
*Potentilla Comarum* (Nestl.), MARSH CINQUEFOIL—In marshes and peaty bogs.  
*Alchemilla arvensis* (Lam.), PARSLEY PIERT—Common.  
*Alchemilla vulgaris* (L.), LADY'S MANTLE—Common.



*Agrimonia Eupatoriæ* (L.), AGRIMONY—Generally distributed, but local at Braeheads, Ellick woods, &c.

*Rosa spinosissima* (L.). SCOTCH ROSE—Very local, Ellick Bridge, Euchar and Kello water.

*Rosa mollis* (Sm.)—Common.

*Do. do.*, var. *cærulea* (Woods)—Common in Crawick Glen.

*Rosa tomentosa* (Sm.)—Very common.

*Do. do.* var. *subglobosa* (Sm.)—Very rare, in hedgerows near Rigg.

*Rosa rubiginosa* (L.), SWEET BRIAR—An escape.

*Rosa canina*, var. *lutetiana* (Leman)—Common.

*Do. do.*, var. *dumalis* (Bechst.)—Common.

*Do. do.*, var. *urbica* (Leman)—Not common, on Nith near Ellick Bridge.

*Do. do.*, var. *arvatica* (Baker)—Very rare, near Ellick Bridge.

*Do. do.*, var. *dumetorum* (Thuill.)—Common.

*Do. do.*, var. *pruinosa* (Baker)—Very rare, near Grange.

*Do. do.*, var. *tomentella* (Leman)—Not uncommon south of town.

*Do. do.*, var. *verticillacantha* (Merat.)—Not unusual on Crawick stream.

*Do. do.*, var. *collina* (Jacq.)—Very rare, near Memnock.

*Do. do.*, var. *decipiens* (Dum.)—Very rare, on Nith above Burnfoot.

*Do. do.*, var. *glauca* (Vill.)—Common.

*Do. do.*, var. *subcristata* (Baker)—Not uncommon.

*Do. do.*, var. *coriifolia* (Fr.)—Rare, Carcoside and Holm woods.

*Do. do.*, var. *Borreri* (Woods)—Very rare, on Nith above Ellick Bridge.

*Pyrus Aucuparia* (Gaert.), ROWAN TREE—Common.

*Pyrus Malus*, var. *acerba* (DC.), CRAB APPLE TREE—In the woods.

*Crataegus Oxyacantha* (L.), HAWTHORN—Common.

## SAXIFRAGEÆ.

- Saxifraga stellaris* (L.), STARRY SAXIFRAGE—In the wet ground near source of Euchar Water.
- Saxifraga hypnoides* (L.), LADIES' CUSHION—Rare, on the Enterkin, Gareland, and high hills.
- Chrysosplenium alternifolium* (L.), ALTERNATE-LEAVED GOLDEN SAXIFRAGE—Very local, near Grange, Burnsands, Laggrie.
- Chrysosplenium oppositifolium* (L.), OPPOSITE-LEAVED GOLDEN SAXIFRAGE—Common.
- Parnassia palustris* (L.), GRASS OF PARNASSUS—Comparatively rare, on Crawick and Kello.
- Ribes Grossularia* (L.), GOOSEBERRY—A garden escape.
- Ribes rubrum* (L.), RED CURRANT—A garden escape.

## CRASSULACEÆ.

- Sedum Telephium* (L.), ORPINE or LIVE LONG—In a few places along the railway, a doubtful native.
- Sedum villosum* (Linn), HAIRY STONECROP—Confined to wet roadsides in the hilly districts, as Cogshead, Nethercog, Glenglass Burn, &c.

## DROSERACEÆ.

- Drosera rotundifolia* (L.), SUNDEW—Town moor.

## HALORAGACEÆ.

- Myriophyllum spicatum* (L.), SPIKED WATER MILFOIL—In the River Nith.
- Callitriche stagnalis* (Scop.), WATER STARWORT—Common in muddy places.
- Callitriche hamulata* (Kuetz)—Auchengruith Mill dam and town reservoir.

## ONAGRACEÆ.

- Epilobium angustifolium* (L.), FRENCH WILLOW—Abundant on Nith, Euchar, and Gareland Cleuch.
- Epilobium montanum* (L.), WILLOW HERB—Common.
- Epilobium palustre* (L.), MARSH WILLOW HERB—Common in wet places.

*Oenothera biennis* (L.), EVENING PRIMROSE—A garden escape, at Nith Mills.

*Circœa lutetiana* (L.), ENCHANTER'S NIGHTSHADE—Not infrequent in shady woods.

#### UMBELLIFERÆ.

*Hydrocotyle vulgaris* (L.), MARSH PENNYWORT—Town Moor.

*Sanicula europœa* (L.), WOOD SANICLE—Not common, Crawick and Ellicock woods.

*Conium maculatum* (L.), HEMLOCK—A few plants at Sanquhar Castle.

*Carum verticillatum* (Koch), WHORLED WATER PARSNIP—In the meadows at Conrig and Bogue.

*Ægopodium Podagraria* (L.), BISHOP'S WEED—Common, a troublesome garden weed.

*Pimpinella saxifraga* (L.), BURNET SAXIFRAGE—Common.

*Conopodium denudatum* (Koch), EARTH NUT—Common.

*Anthriscus sylvestris* (Hof.), COW PARSLEY—Common, the railway embankments.

*Æthusa Cynapium* (L.), FOOL'S PARSLEY—Rare, Nith Mills.

*Meum Athamanticum* (Jacq.), BALD MONEY—Common on the upland meadows, on Euchar, Crawick, and Kello waters.

*Angelica sylvestris* (L.), WILD ANGELICA—Common.

*Heracleum sphondylium* (L.), COW PARSNIP—Common.

*Daucus Carota* (L.), WILD CARROT—Very rare, in a field near the station.

*Caucalis Anthriscus* (Huds.), HEDGE PARSLEY—Common along the hedges.

#### ARALIACEÆ.

*Hedera Helix* (L.), IVY—Common.

#### CAPRIFOLIACEÆ.

*Adoxa Moschatellina* (L.), MOSCHATEL—Crawick woods, near Grange.

*Sambucus nigra* (L.), ELDER or BOURTREE—Common.

*Sambucus Ebulus* (L.), DWARF BOURTREE—Ellicock Saw Mill.

*Viburnum Opulus* (L.), GUELDER ROSE—On Nith near South Mains and Holm walks.

*Lonicera Periclymenum* (L.), HONEYSUCKLE—Common.

## RUBIACEÆ.

*Galium boreale* (L.), BEDSTRAW—Common along the Nith.

*Galium verum* (L.), YELLOW BEDSTRAW—Not common, Braehead and near Kirkconnel.

*Galium Mollugo* (L.), GREAT HEDGE-BEDSTRAW—Euchan road, near Barr cottages.

*Galium saxatile* (L.), HEATH BEDSTRAW—Common on the moors.

*Galium palustre* (L.), WATER BEDSTRAW—Common in most places.

*Galium Aparine* (L.), GOOSEGRASS or CLEAVERS—Very common in hedges.

*Galium tricorne* (With.)—An alien, at Railway Station.

*Asperula odorata* (L.), WOODRUFF—Generally distributed, but local.

*Sherardia arvensis* (L.), FIELD MADDER—Not common, in fields.

## VALERIANEÆ.

*Valeriana officinalis* (L.), VALERIAN—Fairly common.

## DIPSACEÆ.

*Scabiosa succisa* (L.), DEVIL'S BIT—Common.

*Scabiosa arvensis* (L.), FIELD SCABIOUS—In a cornfield near Drumbuie, introduced with seeds.

## COMPOSITÆ.

*Solidago Virgaurea* (L.), GOLDEN ROD—Common.

*Bellis perennis* (L.), DAISY—Very common.

*Antennaria dioica* (R.Br.), CATSFOOT—Common on the hill pastures.

*Gnaphalium uliginosum* (L.), MARSH CUDWEED—Common in wet, sandy places.

*Gnaphalium sylvaticum* (L.), CUDWEED—Common in pasture lands.

- Achillea Millefolium* (L.), YARROW—Common.
- Achillea Ptarmica* (L.), SNEEZEWORD—Common.
- Anthemis Cotula* (L.), COMMON MAYWEED—Very rare, railway embankment, Bankhead Coal-pit.
- Chrysanthemum segetum* (L.), CORN MARIGOLD—Common.
- Chrysanthemum Leucanthemum* (L.), OX EYE DAISY—Common.
- Matricaria inodora* (L.), SCENTLESS FEVERFEW—Common.
- Tanacetum vulgare* (L.), TANSY—An escape, near Old Barr.
- Artemisia vulgaris* (L.), MUGWORT—Common.
- Tussilago Farfara* (L.), COLT'S FOOT—A troublesome weed, in clayey soils.
- Petasites vulgaris* (Desf.), BUTTERBUR—Common on the Nith near Mains ford.
- Senecio vulgaris* (L.), GROUNDSEL—Very common.
- Senecio sylvaticus* (L.)—Very rare, near Crawick Mill.
- Senecio Jacobaea* (L.), RAGWORT—Common.
- Senecio aquaticus* (Huds.), MARSH GROUNDSEL—Very common.
- Carlina vulgaris* (L.), CARLINE THISTLE—Limited to Euchar Glen.
- Arctium minus* (Schk.), BURDOCK—Rare, Ellick Saw Mill.
- Cnicus lanceolatus* (Hoffm.), SPEAR THISTLE—Common.
- Cnicus palustris* (Hoffm.), MARSH THISTLE—Common.
- Cnicus arvensis* (Hoffm.), FIELD THISTLE—Common.
- Cnicus heterophyllus* (Willd.), MELANCHOLY PLUME THISTLE—Abundant in Euchar Glen, less so in Crawick and Nith.
- Centaurea nigra* (L.), BLACK KNAPWEED—Common.
- Centaurea Cyanus* (L.), CORN BLUEBOTTLE—An alien, on the railroad near Kirkconnel.
- Lapsana communis* (L.), NIPPLEWORT—Common.
- Crepis virens* (L.), SMOOTH HAWK'S-BEARD—Common in wet meadows.
- Crepis paludosa* (Moench)—Very common in wet and shady places.
- Hieracium Pilosella* (L.), MOUSE-EAR HAWKWEED—Common.
- Hieracium iricum* (Fr.)—Rare, below Ellick Bridge.
- Do. *vulgatum* (Fr.)—Common on rocky banks.
- Do. do., var. *maculatum*—On the cliffs at Bankhead pit, and on Euchar and Glendyne.

*Hieracium tridentatum* (Fr.)—Common on the banks of Nith and Euchan.

*Hieracium prenanthoides* (Vill.)—Rare, Carserig Burn, and near Elloock Saw Mill.

*Hieracium umbellatum* (L.)—Very rare, Knoockenjig Ford.

*Hieracium crocatum* (Fr.)—On the Nith near Ryehill.

Do. *Eupatorium* (Griseb)—Very rare, below Elloock Bridge.

*Hieracium boreale* (Fr.)—Common on the Nith.

*Hypochaeris radicata* (L.), LONG-ROOTED CAT'S EAR—Very common.

*Leontodon hispidus* (Linn.), ROUGH HAWKBIT—Very common.

*Leontodon autumnalis* (L.), AUTUMNAL HAWKBIT—Common.

*Leontodon autumnalis*, var. *pratensis* (Koch)—Near source of Euchan and Glenglass Burn.

*Taraxacum officinale* (Web.), DANDELION—Common.

Do. do. var. *palustre* (DC.)—Not uncommon in the wet hill pastures.

*Sonchus oleraceus* (L.), COMMON SOW THISTLE—Common.

*Sonchus arvensis* (L.), CORN SOW THISTLE—Common in corn-fields.

#### CAMPANULACEÆ.

*Jasione montana* (L.), SHEEP'S-BIT—Common.

*Campanula rotundifolia* (L.), HAREBELL—Common.

Do. *latifolia* (L.), GIANT HAREBELL—Newark wood, Polskeoch, and Crawick stream.

#### VACCINIACEÆ.

*Vaccinium Oxycoccos* (L.), CRANBERRY—Town moor.

Do. *Vitis-Idæa* (L.), COWBERRY—Scarcely distributed in sub-alpine glens, on the Lowthers very abundant.

*Vaccinium Myrtillus* (L.), BLAEBERRY—Common.

#### ERICACEÆ.

*Andromeda Polifolia* (L.), WILDROSEMARY—Very rare, Black Loch.

*Calluna Erica* (DC.), LING or HEATH—Common.

*Erica tetralix* (L.), HEATH—Very common.

*Erica cinerea* (L.), FINE-LEAVED HEATH—Common.

*Pyrola minor* (Sw.), LESSER WINTER GREEN—Very local, below Mennock, Glendyne, and near Craigdarroch.

#### PRIMULACEÆ.

*Primula vulgaris* (Huds.), PRIMROSE—Common.

*Lysimachia vulgaris* (L.), YELLOW LOOSESTRIFE—In a ditch above Gateside, on the Nith near Saw Mill.

*Lysimachia nemorum* (L.), YELLOW PIMPERNEL—Common.

*Anagallis arvensis* (L.), SCARLET PIMPERNEL or POOR MAN'S WEATHER GLASS—Chiefly as a garden weed.

#### OLEACEÆ.

*Fraxinus excelsior* (L.), ASH—Generally planted, but undoubtedly native in Ashcleugh, Crawick.

*Ligustrum vulgare* (L.), PRIVET—Planted.

#### GENTIANEÆ.

*Gentiana campestris* (Linn.), FIELD GENTIAN—On hilly pastures, as at Barr Moor and Euchan.

*Menyanthes trifoliata* (L.), BOG BEAN—Black Loch.

#### BORAGINEÆ.

*Symphytum officinale* (L.), COMMON COMFREY—Not common, Braeheds, Manse Pool, Kirkcounel, &c.

*Symphytum tuberosum* (L.), TUBEROUS COMFREY—Abundant north of Kirkcounel Station.

*Symphytum asperrimum* (Bab.), ROUGH COMFREY—Auchengruith, introduced.

*Achusa sempervirens* (L.), EVERGREEN ALKANET—Sanquhar Castle, the only relic of the Castle garden.

*Myosotis caespitosa* (Schultz)—Fairly common along the roadside ditches, as at Crawick and Connelbush.

*Myosotis repens* (D. Don.), CREEPING FORGET-ME-NOT—The common form in the district.

*Myosotis arvensis* (Hoff.), FIELD SCORPION GRASS—Common.



- Myosotis arvensis*, var. *umbrosa* (Bab.)—Common in the woods.  
*Myosotis versicolor* (Reichb.), BLUE AND YELLOW SCORPION GRASS—Common in the meadows.

## SCROPHULARINEÆ.

- Verbascum Thapsus* (L.), COMMON MULLEIN—Very rare, a few plants near Railway Station.  
*Linaria vulgaris* (Mill.), YELLOW TOAD FLAX — Rare, at Sanquhar Castle, and near Old Barr.  
*Scrophularia nodosa* (L.), KNOTTED FIGWORT—Not uncommon in moist places.  
*Digitalis purpurea* (L.), FOXGLOVE—Common.  
*Veronica hederaefolia* (L.), IVY-LEAVED SPEEDWELL—Very rare on roadside near Nith Mills.  
*Veronica agrestis* (L.), GREEN FIELD SPEEDWELL—Abundant as a garden weed, less so in the fields.  
*Veronica arvensis* (L.), WALL SPEEDWELL—Common.  
*Do. serpyllifolia* (L.), THYME - LEAVED SPEEDWELL — Common.  
*Veronica officinalis* (L.), COMMON SPEEDWELL—Common.  
*Do. Chamædrys* (L.), GERMANDER SPEEDWELL—Common.  
*Do. scutellata* (L.), MARSH SPEEDWELL—Near Ulzieside sheep folds, at Grange Mill dam.  
*Veronica Beccabunga* (L.), BROOKLIME—Rare, in ditches in Crawick Glen.  
*Euphrasia officinalis* (L.), EYEBRIGHT—Very common.  
*Bartsia Odontites* (Huds.), RED EYEBRIGHT—Common.  
*Pedicularis palustris* (L.), LOUSEWORT—Common in boggy places.  
*Pedicularis sylvatica* (L.), RED RATTLE—Common in wet heather.  
*Melampyrum pratense* (L.), COMMON COW WHEAT—Abundant in Euchar Glen.  
*Rhinanthus Crista-galli* (L.), YELLOW RATTLE—Common.

## LENTIBULARIÆ.

- Pinguicula vulgaris* (L.), BUTTERWORT—Common in peaty bogs.

## LABIATÆ.

- Mentha Piperita*, var. *officinalis* (Hull.), PEPPERMINT—An escape, in ditch in the Glebe.

- Mentha sativa*, var. *rivalis* (L.C.), RED MINT—The common wild mint of the district.
- Mentha arvensis*, var. *Nummularia* (Schreb), CORN MINT—Common in cornfields.
- Thymus Serpyllum* (Fr.), WILD THYME—Very common on dry heaths.
- Nepeta Glechoma* (Benth.), GROUND IVY—Generally distributed, but not common.
- Prunella vulgaris* (L.), SELF-HEAL—Common.
- Stachys Betonica* (Benth.), BETONY—Abundant, on Euchar, and Nith from Euchar to E. lock Bridge.
- Stachys palustris* (L.), MARSH WOUNDWORT—Common.
- Do. sylvatica* (L.), WOOD WOUNDWORT—Common.
- Galeopsis speciosa* (Mill.)—In cultivated ground, Old Barr and Greenhead, Wanlockhead.
- Do. Tetrahit* (L.), COMMON HEMP NETTLE—Common.
- Lamium amplexicaule* (L.), HENBIT.
- Lamium purpureum* (L.), RED DEAD NETTLE—Common.
- Lamium album* (L.), WHITE DEAD NETTLE—Roadside near Carco, only locality.
- Teucrium Scorodonia* (L.), WOODSAGE—Common.
- Ajuga reptans* (L.), COMMON BUGLE—Common in wet pastures.

## PLANTAGINEÆ.

- Plantago major* (L.), GREATER PLANTAIN—Very common.
- Do. lanceolata* (L.), RIBWORT or RIBGRASS—Very common.

## ILLECEBRACEÆ.

- Scleranthus annuus* (L.), KNAPWELL or KNOWEL—Not common, in sandy fields.

## CHENOPODIACEÆ.

- Chenopodium album*, var. *viride* (L.), GOOSEFOOT or FAT-HEN—Common.
- Atriplex angustifolia* (Sm.), ORACHE—Common.

## POLYGONACEÆ.

- Polygonum Convolvulus* (L.), BLACK BINDWEED—Common in the fields.

*Polygonum aviculare* (L.), KNOT GRASS—Very common.

Do. *Hydropiper* (L.), WATER PEPPER—Fairly common in wet places.

*Polygonum Persicaria* (L.), SPOTTED PERSICARIA—Common.

Do. *amphibium*, var. *terrestret* (Leers)—On the embankment near the Station.

*Rumex sanguineus*, var. *viridis* (Sibth.), GREEN-VEINED DOCK—Common.

Do. *obtusifolius* (L.), BROAD-LEAVED DOCK—Common.

Do. *crispus* (L.), CURLED DOCK—Common.

Do. *alpinus* (L.), MONK'S RHUBARB—An escape, at Euchar Bank.

Do. *Acetosa* (L.), COMMON SORREL—Common.

Do. *Acetosella* (L.), SHEEP'S SORREL—Very common.

#### EUPHORBIACEÆ.

*Euphorbia Helioscopia* (L.), SUN SPURGE—Common.

Do. *Peplus* (L.), PETTY SPURGE—Very rare, near Railway Station.

*Mercurialis perennis* (L.), DOG'S MERCURY—Common in the woods.

#### URTICACEÆ.

*Ulmus campestris*, var. *suberosa* (Ehrh.), COMMON ELM—Generally planted.

*Urtica dioica* (L.), COMMON NETTLE—Common.

Do. *urens* (L.), SMALL NETTLE—Common in the farmyards.

#### CUPULIFERÆ.

*Betula alba* (L.), BIRCH—Common.

*Alnus glutinosa* (L.), ALDER—Common.

*Quercus Robur* (L.), OAK—Common.

*Corylus Avellana* (L.), HAZEL—Common.

*Castanea sativa* (Mill.), CHESTNUT—Planted.

*Fagus sylvatica* (L.), BEECH—Common.

#### SALICINEÆ.

*Salix pentandra* (L.), BAY-LEAVED WILLOW—On Nith below Mains, Ellick wood, and Burnfoot.

- Salix fragilis* (L.), CRACK WILLOW—Very rare, Ellick woods.  
*Do. alba* (L.), WHITE WILLOW—Holm woods, planted.  
*Do. purpurea* (L.), PURPLE OSIER—Common on Nith.  
*Do. do.*, var. *Woolgariana* (Borr.)—Common on Nith.  
*Do. viminalis* (L.), OSIER—Generally planted.  
*Do. cinerea* (L.), GREY SALLOW—Common.  
*Do. do.* var. *aquatica* (Sm.)—Very rare, on Nith near Mains.  
*Do. aurita* (L.), ROUND-EARED SALLOW—Common.  
*Do. Caprea* (L.), GREAT SALLOW—Common.  
*Do. phlycifolia*, var. *Davalliana* (Sm.), Common on Euchar and Nith.  
*Do. do.*, var. *tenuior* (Borr.)—Very rare, near Glen-glass.  
*Do. do.*, var. *tetrapla* (Walker)—Rare, near Burnfoot.  
*Do. nigricans* (Sm.), BLACK WILLOW—A few small trees near Euchar Head.  
*Populus alba* (L.), WHITE POPLAR—Planted.  
*Do. tremula* (L.), ASPEN—In woods, a native.  
*Do. nigra* (L.), BLACK POPLAR—Introduced, as at Mains and Knockenstob.

## EMPETRACEÆ.

- Empetrum nigrum* (L.), CROWBERRY—Common on the Lowthers, less so on other hills.

## CONIFERÆ.

- Juniperus communis* (L.), JUNIPER—Not common, Kello and Euchar glens.  
*Taxus baccata* (L.), YEW—Planted.  
*Pinus sylvestris* (L.), SCOTCH FIR—Planted.

## ORCHIDEÆ.

- Listera ovata* (R.Br.), TWAYBLADE—Not infrequent, Auchengruith, Euchar, &c.  
*Epipactis latifolia* (Sm.), HELLEBORINE—Very rare, Crawick woods, near Knockenhair, Rifle Range.  
*Orchis mascula* (L.), EARLY PURPLE ORCHIS—Common in pastures

*Orchis latifolia* (L.), MARSH ORCHIS—Common in wet meadows.

*Orchis maculata* (L.), SPOTTED HAND ORCHIS—Common.

*Habenaria conopsea* (Benth.), FRAGRANT ORCHIS—Common, especially so in Euchan.

*Do.* *albida* (R.Br.), SMALL WHITE ORCHIS—Rare, on the banks of Euchan, near Waterfall.

*Do.* *chloroleuca* (Ridley), BUTTERFLY ORCHIS—Not infrequent in moist woods and meadows.

#### IRIDEÆ.

*Iris Pseudacorus* (L.), YELLOW FLAG—Rare, on the Crawick near Spango, Laggrie.

#### AMARYLLIDEÆ.

*Narcissus Pseudo-narcissus* (L.), DAFFODIL—An outcast, on Nith near Saw Mill.

#### LILIACEÆ.

*Allium ursinum* (L.), RAMSONS—Common in the woods.

*Scilla nutans* (Sm.), WILD HYACINTH—Very common.

*Narthecium ossifragum* (Huds.), BOG ASPHODEL—Rare, on boggy places on hills.

#### JUNCACEÆ.

*Juncus bufonius* (L.), TOAD RUSH—Common on the waysides.

*Juncus squarrosus* (L.), HEATH RUSH—Common on the moors.

*Do.* *effusus* (L.)—Common.

*Do.* *supinus* (Moench)—Common in hill ditches.

*Do.* *do.*, var. *fluitans* (Fr.)—Very rare, Auchengruith Mill dam.

*Do.* *acutiflorus* (Ehrh.), SPRIT or SPROT—Common on the moors.

*Luzula pilosa* (Willd.), WOOD RUSH—Not common, on wooded banks.

*Luzula maxima* (DC.), GREAT WOOD RUSH—Common.

*Do.* *campestris* (DC.), FIELD WOOD RUSH—Very common.

*Do.* *multiflora*, var. *congesta* (Koch)—Common on the moors.

## TYPHACEÆ.

- Sparganium ramosum* (Curtis), BRANCHED BUR REED—Very rare, on Kelloside common.  
 Do. *simplex* (Huds.), UNBRANCHED BUR REED—On Nith above Saw Mill, only locality.

## NAIADACEÆ.

- Triglochin palustre* (L.), MARSH ARROW GRASS—Common on the hills.  
*Potamogeton natans* (L.), BROAD-LEAVED POND WEED—Common in the ditches and slow streams.  
*Potamogeton pusillus* (L.), SMALL POND WEED—In pools at Knockenhair, Auchengruith, and Guffockland.  
 Do. *heterophyllus* (Schreb.), VARIOUS-LEAVED POND WEED—Very rare, Guffockland dam.

## CYPERACEÆ.

- Eleocharis palustris* (R.Br.), CREEPING SPIKE RUSH—Common by the side of Nith.  
*Scirpus cespitosus* (L.), DEER'S HAIR—Common on the moors.  
 Do. *setaceus* (L.), BRISTLE MUD RUSH—Rather rare, along muddy roadsides.  
 Do. *sylvaticus* (L.), WOOD RUSH—Frequent on Nith below town.  
*Eriophorum vaginatum* (L.), HARE'S-TAIL COTTON GRASS—Common on the hills.  
 Do. *angustifolium* (Roth.), COMMON COTTON GRASS—Common.  
 Do. *do.*, var. *elatus* (Koch)—Rare, Knockenstob Moor, Glenmaddie Craig.  
*Carex dioica* (L.)—Not common, wet places on the Braehead.  
 Do. *pulicaris* (L.), FLEA CAREX—Common in wet places.  
 Do. *muricata* (L.), PRICKLY CAREX—Not infrequent along the road sides.  
 Do. *echinata* (Murr.), LITTLE PRICKLY CAREX—Not uncommon.  
 Do. *remota* (L.), DISTANT-SPIKED CAREX—Common in shady woods.

- Carex ovalis* (Good.), OVAL-SPIKED CAREX—Common.  
*Do. curta* (Good.), WHITE CAREX—Not uncommon, Barr Bank, Farthingmolloch Burn.  
*Do. aquatilis*, var. *Watsoni* (Syme), WATER CAREX—Abundant on Nith.  
*Do. Goodenowii* (Gay.), COMMON CAREX—Common.  
*Do. glauca* (Murr.), GLAUCOUS HEATH CAREX—Common on the heath.  
*Do. pilulifera* (L.), PILL-HEADED CAREX—Common.  
*Do. præcox* (Jacq.), EARLY CAREX—Common on dry banks.  
*Do. pallescens* (L.), PALE CAREX—Not infrequent.  
*Do. panicea* (L.), CARNATION CAREX—Common.  
*Do. sylvatica* (Huds.), WOOD CAREX—In Euchar and Crawick Glens.  
*Do. levigata* (Sm.), SMOOTH-STALKED BEAKED CAREX—Newark Wood and Matthew's Folly.  
*Do. binervis* (Sm.), GREEN-RIBBED CAREX—Not uncommon on the hills.  
*Do. fulva* (Good.), TAWNY CAREX—Common on hills.  
*Do. do.* var. *Hornschuchiana* (Hoppe)—Fairly common on moist clayey banks, on the hills.  
*Do. flava* (L.), YELLOW CAREX—Common.  
*Do. do.*, var. *minor* (Townsend.)—Common on the higher hills.  
*Do. hirta* (L.), HAIRY CAREX—Rare, on a few places on Nith, as below Saw Mill.  
*Do. rostrata* (Stokes), BOTTLE CAREX—Not common.

## GRAMINEÆ.

- Phalaris canariensis* (L.), CANARY GRASS—An escape, in Crawick Woods.  
*Do. arundinacea* (L.), REED CANARY GRASS—Common along River Nith.  
*Anthoxanthum odoratum* (L.), SWEET-SCENTED VERNAL GRASS—Common.  
*Alopecurus geniculatus* (L.), BENT FOXTAIL—Common in roadside ditches.  
*Alopecurus pratensis* (L.), COMMON FOXTAIL—Very common.  
*Milium effusum* (L.), MILLET GRASS—Very rare, Holm walks.



- Phleum pratense* (L.), TIMOTHY GRASS or CAT'S-TAIL — Very common.
- Do. arenarium* (L.), SEASIDE CAT'S-TAIL—Very rare, Brae-heads.
- Agrostis canina* (L.), BROWN BENT GRASS—Common in peaty heaths.
- Do. alba* (L.), FIORIN GRASS—Common in wet ditches.
- Do. vulgaris* (With.), FINE BENT GRASS—Very common in the meadows.
- Aira caryophyllea* (L.), SILVERY HAIR GRASS—Not common.
- Do. precox* (L.), EARLY HAIR GRASS—Rare, on dry banks.
- Do. cespitosa* (L.), TUFTED HAIR GRASS—Common.
- Do. flexuosa* (Trin.), WAVY HAIR GRASS—Common in heathy places.
- Holcus mollis* (L.), SOFT GRASS—Common.
- Do. lanatus* (L.), YORKSHIRE FOG—Common.
- Avena flavescens* (L.), YELLOW OAT GRASS—Rare, roadside, Crawick Bridge, and Bankhead pit.
- Avena pratensis* (L.)—Common in the holms of Nith.
- Arrhenatherum avevaceum* (Beauv.), FALSE OAT GRASS—Not common.
- Do. do.* var. *nodosum* (Reich.)—Common.
- Triodia decumbens* (Beauv.), HEATH GRASS—Common on the heathy pastures.
- Cynosurus cristatus* (L.), DOG'S-TAIL GRASS—Common.
- Koeleria cristata* (Pers.), CRESTED HAIR GRASS—Dry pastures, Spango, &c.
- Molinia caerulea* (Moench), PURPLE MOLINIA—Not infrequent in the moors.
- Melica nutans* (L.), MOUNTAIN MELIC—Not uncommon, Crawick, Euchan, and Kello Glens.
- Do. uniflora* (Retz.), WOOD MELIC—Common.
- Dactylis glomerata* (L.), COCK'S-FOOT—Common.
- Briza media* (L.), QUAKING GRASS—Not uncommon.
- Poa annua* (L.), ANNUAL MEADOW GRASS—Common.
- Do. nemoralis* (L.), WOOD-STALKED GRASS—Rare, on rocks along Nith.
- Do. do.* var. *glauantha* (Reichb.)—On rocks Kello Water, only locality.

- Poa pratensis* (L.), SMOOTH-STALKED POA—Common.  
*Do. trivialis* (L.), ROUGH-STALKED POA—Common.  
*Glyceria fluitans* (R.Br.), FLOAT GRASS—Common.  
*Festuca sciuroides* (Roth.)—Not uncommon, on roadside, and in cultivated fields.  
*Do. ovina* (L.), SHEEP'S FESCUE—Common on the hills, often viviparous.  
*Do. rubra* (L.), HARD FESCUE—Common.  
*Do. elatior*, var. *loliacea* (Huds.)—Rare, Sanquhar Castle.  
*Do. do.* var. *pratensis* (Huds.), MEADOW FESCUE—Not common, in meadows and along waysides.  
*Bromus giganteus* (L.), TALL BEARDED GRASS—Common in woods.  
*Do. asper* (Murr.), HAIRY BROME GRASS—Common along rivers.  
*Do. racemosus* (L.), SMOOTH BROME—Not common.  
*Do. mollis* (L.), SOFT BROME—Common.  
*Brachypodium sylvaticum* (Roem.), FALSE BROME—Common.  
*Lolium perenne* (L.), RYEGRASS—Common.  
*Do. do.* var. *Italicum* (Br.), ITALIAN RYE—Cultivated.  
*Lclium temulentum*, var. *arvense* (With.), DARNEL—Very rare, Nith at Kirkconnel.  
*Triticum caninum* (Beauv.), WHEAT GRASS—Common.  
*Do. repens* (Beauv.), COUCH GRASS—Common.  
*Nardus stricta* (L.), MAT GRASS—Common on hills.

## FILICES OR FERNS.

- Hymenophyllum unilaterale* (Bor.), FILMY FERN—Near sources of Kello and Mennock Waters.  
*Pteris aquilina* (L.), BRAKE or BRACKEN—Common.  
*Cryptogramme crispa* (R.Br.), PARSLEY FERN—Rare, on the hills at Euchar Bank.  
*Lomaria Spicant* (Desv.), HARD FERN—Common in the woods and on banks.  
*Asplenium Adiantum-nigrum* (L.), BLACK SPLEENWORT—Rare, Sanquhar Castle, and on railway wall near Ryehill.  
*Asplenium viride* (Huds.), GREEN SPLEENWORT—Euchar Glen, nearly extinct.

- Asplenium Trichomanes* (L.), COMMON SPLEENWORT—Common.
- Asplenium Ruta-muraria* (L.), WALL RUE—Very rare, Sanquhar Castle and Euchar Bridge.
- Athyrium Filix-femina* (Roth.), LADY FERN—Very common.
- Scolopendrium vulgare* (Syme), HART'S TONGUE—A few plants found in Euchar.
- Cystopteris fragilis* (Bernh.), BRITTLE BLADDER FERN—Kello Water, Orchard Burn, very abundant.
- Polystichum lobatum*, var. *aculeatum* (Syme), PRICKLY SHIELD FERN—Not infrequent in the upland glens.
- Lastræa Oreopteris* (Presl.), SWEET MOUNTAIN FERN—Common in the hilly districts.
- Lastræa Filix-mas* (Presl.), MALE FERN—Common.
- Lastræa dilatata* (Presl.), BROAD SHIELD FERN—Common.
- Polypodium vulgare* (L.), COMMON POLYPODY—Very common.
- Polypodium Phegopteris* (L.), BEECH FERN—Common.
- Do. *Dryopteris* (L.), OAK FERN—Common along wooded streams.
- Ophioglossum vulgatum* (L.), ADDER'S TONGUE FERN—In the meadows at the Shooting Range.
- Botrychium Lunaria* (Sm.), MOONWORT—In hill pastures, as at Ulzieside.

## EQUISETACEÆ.

- Equisetum arvense* (L.), FIELD HORSE TAIL—Common.
- Do. *pratense* (Ehrh.)—Very rare, Holm Wood, and Nith above Saw Mill.
- Do. *sylvaticum* (L.), WOOD HORSE TAIL—Common.
- Do. *palustre* (L.), MARSH HORSE TAIL—Not common, roadside Nether Cog, reservoir Kirkconnel.
- Do. *limosum* (L.), SMOOTH HORSE TAIL—Common in wet places.

## LYCOPODIACEÆ.

- Lycopodium Selago* (L.), FIR CLUB MOSS—Springly on upland moors.
- Do. *clavatum* (L.), COMMON CLUB MOSS—Local, on Craigdarroch Moor, Glenmaddie and Pampha Linns.

*Lycopodium alpinum* (L.), ALPINE CLUB MOSS—Very rare, near the march on the Lowthers.

*Selaginella selaginoides* (Gray)—Common in boggy places on the hills.

## CHARACEÆ.

*Chara fragilis*, var. *barbata* (Gant)—In sheep drains near Pol-skeoch.

*Nitella opaca* (Agardh.)—Auchengruith and Guffockland Mill dams, and near Brickwork.

## M O S S E S.

THE Mosses recorded in this List do not by any means comprise all those to be found in the district, but only those discovered by the writer. As many other species doubtless exist, the list is a very imperfect one, but is here given for its scientific value, and in the hope that some more competent bryologist may complete what the writer had but begun :—

<i>Sphagnum acutifolium.</i>	<i>Pleuroidium subulatum.</i>
„ <i>purpureum.</i>	„ <i>alternifolium.</i>
„ <i>fimbriatum.</i>	<i>Blindia acuta.</i>
„ <i>squarrosum.</i>	<i>Trichostomum tophaceum.</i>
„ <i>rigidum compactum.</i>	<i>Barbula rigida.</i>
„ <i>cymbifolium.</i>	„ <i>muralis.</i>
<i>Andrea petrophila.</i>	„ <i>unguiculata.</i>
„ <i>alpina.</i>	„ <i>rigidula.</i>
<i>Gymnostomum rupestre.</i>	„ <i>spadicea.</i>
„ <i>curvirostrum.</i>	„ <i>convoluta.</i>
<i>Weissa viridula.</i>	„ <i>tortuosa.</i>
<i>Dichodontium pellucidum.</i>	„ <i>subulata.</i>
<i>Dicranella squarrosa.</i>	<i>Ceratodon purpureus.</i>
„ <i>peteromala.</i>	<i>Eucalypta vulgaris.</i>
<i>Dicranum scoparium.</i>	<i>Grimmia apocarpa.</i>
<i>Campylopus atrovirens.</i>	„ <i>rivulare.</i>
„ <i>fragilis.</i>	„ <i>maritima.</i>
<i>Leucobryum glaucum.</i>	„ <i>pulvinata.</i>
	„ <i>trichophylla.</i>

- Rhacomitrium aciculare.*  
 „ *heterostichum.*  
 „ *fasciculare.*  
*Ptychomitrium polyphyllum.*  
*Ulota Bruchii.*  
 „ *phyllantha.*  
*Orthotrichum rupestre.*  
 „ *affine.*  
 „ *leiocarpum.*  
*Physcomitrium pyriforme.*  
*Fuaria hygrometrica.*  
*Bartramia ithyphylla.*  
 „ *pomiformis.*  
 „ *fontana.*  
 „ *arcuata.*  
*Webera nutans.*  
*Bryum bimum.*  
 „ *alpinum.*  
 „ *cæspiticium.*  
 „ *argenteum.*  
 „ *capillare.*  
 „ *pseudo-triquetrum.*  
*Mnium cuspidatum.*  
 „ *undulatum.*  
 „ *hornum.*  
 „ *punctatum.*  
*Aulacomnium palustre.*  
*Atrichum undulatum.*  
*Pogonatum nanum.*  
 „ *aloides.*  
 „ *uvigerum.*  
*Polytrichum piliferum.*  
 „ *juniperum.*  
 „ *commune.*  
*Fissidens bryoides.*  
 „ *adiantoides.*  
*Cinclidotus fontinaloides.*
- Fontinalis antipyretica.*  
*Hedwigia ciliata.*  
*Neckera pumila.*  
 „ *crispa.*  
 „ *complanata.*  
*Pterygophyllum lucens.*  
*Thuidium tamariscinum.*  
*Pterogonium gracile.*  
*Thannium alopecurum.*  
*Isothecium myurum.*  
*Homalothecium sericeum.*  
*Brachythecium velutinum.*  
 „ *rutabulum.*  
 „ *riculare.*  
*Eurhynchium myosuroides.*  
 „ *prælongum.*  
*Hyoconium flagellare.*  
*Rynchoszegium ruscifolium.*  
*Plagiothecium denticulatum.*  
 „ *undulatum.*  
*Hypnum revolvens.*  
 „ *uncinatum.*  
 „ *filicinum.*  
 „ *commutatum.*  
 „ *falcatum.*  
 „ *cypressiforme.*  
 „ *resupinatum.*  
 „ *molluscum.*  
 „ *stellatum.*  
 „ *cuspidatum.*  
 „ *Schreberi.*  
 „ *purum.*  
 „ *stramineum.*  
 „ *scorpioides.*  
*Hylocomium splendens.*  
 „ *squarrosum.*  
 „ *loreum.*  
 „ *triquetrum.*

# FAUNA OF SANQUHAR DISTRICT.

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## BIRDS.

THE birds of the district fall naturally into two classes: those nesting in the locality, and the migratory. The latter differ little from those usually observed over the South of Scotland. Each autumn sees the *Redwing Fieldfare* flocking on the fields, and followed later by *Redpolls*, *Siskins*, *Bramblefinches*, &c. In severe winters the *Snow Bunting* is always to be seen at Wanlockhead, where I have seen it so late as May, and there also the *Ptarmigan* has been found. *Gulls* and other aquatic species frequent the Nith in the winter season, but there is no record of any noteworthy specimen having been seen. About thirty years ago a *Turtle Dove* was shot near Crawick—the only instance of its occurrence in the district, though its range of habitat has been gradually extending northward. Since then, two migratory species deserving of record have been captured. The one, the *Golden Oriole*, was found at Kirkconnel, dead amidst the snow; the other, the *American Redwinged Starling*, partially devoured by a cat, was seen by the writer at Kirkconnel in the winter of 1887.

Of the birds nesting in the district, the songsters rank first, both in numbers and importance. Of these, the *Missel Thrush* and the *Blackbird* are common. The former, more wary and cunning, selects the outlying glens and woods, while the “Blackie” shows a decided attachment to the haunts of man. The *Mavis* or *Song Thrush* is a comparatively rare bird, the severe winters of 1885 and 1886 having almost exterminated them. Of the *Ring Ouzel*, or *Mountain Blackbird*, this is *par excellence* the home. In every rocky glen or rugged mountain scar his impudent chatter may be heard. With his nest firmly planted on the ledge of some steep rock, or buried in the heather bush on an overhanging crag in some lofty glen, he rears his voracious

brood in complete security. The same, or presumably the same, pair return year after year to the same place to breed, and the nests of many preceding seasons may be found within a few yards of each other. For no apparent reason, the glens of Glenim, Garple, and Gareland are most frequented, the first having annually a dozen or more pairs nesting.

The *Wheatear*, a most regular migrant, usually arriving on the 2nd of April, is common on the upland pastures.

The *Whinchat*, *Redbreast*, *Wren*, and the *Willow Wren*, with its feather-lined, dome-shaped nest, are familiar to all.

In the crevices of rocks in Crawick, a few *Redstarts* have built for a number of years, but elsewhere only a few pairs may be seen.

The *Sedge Warbler*, abundant in more favoured localities, is, on account of the lack of suitable nesting ground, here quite rare. Along the river, and in the hedges near South Mains, the *White-throats'* nests, and in the fir woods above, the *Golden-crested Wrens'*, are fairly common.

The *Garden Warbler* is rare, only one instance of its nesting having come under my observation.

The *Dipper*, or "Water Crow," one of the few birds hardy enough to withstand the winter's snows, may be found along almost all the water courses year after year in the same locality; and, with a sublime indifference to climatic conditions, he has his mossy nest concealed behind some waterfall, or in the crevice of some wall or other structure "reared by man's officious care," and commences hatching on the 14th April.

Of the *Tit* family, only the *Blue Tit* or *Blue Bonnet*, and *Great Tit* or *Ox-eye*, are found.

The *Pied Wagtail* and *Gray Wagtail* nest on the banks of the rivers, the latter, however, in decreasing numbers.

The *Chaffinch*—"Shilfa"—and *Hedge Sparrow* frequent every hedge; the *Sky Lark* and *Meadow Pipit* every meadow. In the bushes and on the banks of the Nith the *Tree Pipit* is common.

The *Yellow Hammer* and *Greenfinch*, common enough as winter visitors, are comparatively rare in the nesting season.

The *Martin*, *Sand Martin*, and *Swallow* are all common.

The *House Sparrow* is everywhere except at Wanlockhead.



The *Spotted Flycatcher* is not infrequently found in Crawick woods. The *Tree Creeper* is scarce, and limited to Euchan.

The *Red Bunting* and *Bullfinch* are frequently met with in the wooded glens and rushy moors.

The *Goldfinch* is very rare; only twice have I known it to nest in the last four years—once in Kirkconnel, and once in Sanquhar.

The common *Linnet* probably breeds in the district, but so far I have failed to locate it.

The *Twite* and *Stonechat* have been reported. The former, I think, nests in Glendyne; the latter I have never seen at any time.

*Starlings* and *Swifts* occupy all the available sites in the old Castle and other buildings.

The *Magpie* and *Carrion Crow*, nesting in the outlying woods and glens, still flourish in spite of constant persecution. *Jackdaws* nest in many of the chimney stalks in town, but their chief strongholds are the rocky steeps in Kello, Spango, and Polveoch.

The rookery in the Ellick woods supplies *Rooks* enough for the county.

The *Cuckoo* is common, especially in Euchan.

One pair of *Nightjars* have nested in the Holm woods for many years.

The *Tawny Owl*, *Long-eared Owl*, and *Barn Owl* are all represented. The former is common in the old woods; the two latter are very rare, and limited to Auchensell woods and Crawick Glen. The *Short-eared Owl* is still occasionally seen in the Glendyne district, and in all probability nests in the heather there.

The hilly nature of the district favours the continuance of birds of prey, and one can still find the *Merlin*, *Sparrow Hawk*, and *Kestrel*. The *Peregrine Falcon*, until a few years ago, nested regularly in Spango burn. The game little *Merlin*, nesting in the heather round the Gareland, defies extermination. The *Sparrow Hawk*, more accessible, is gradually becoming scarcer, and may soon be extinct. The *Kestrel*, less persecuted, is quite common, there being scarcely an outlying glen in which his rude nest may not be found.

The *Ring Doves* nest in abundance in the fir woods.

Of game birds we have the usual group—*Red Grouse*, *Black Grouse*, *Pheasant*, and *Partridge*, and all in abundance; and the *Woodcock* has been seen so late as June.

The *Corncrake* or *Landrail* is common, usually arriving about the 13th of May.

A few pairs of *Moorhen* and *Coot* breed among the sedges near the Nith.

*Curlews* and *Lapwings* are very abundant.

*Golden Plover* and *Snipe* nest in fair numbers on the higher grounds.

The *Sandpiper* or *Sand Whaup* nests on the sandy banks of the Nith and tributaries.

The *Redshank*, common enough in the marshy ground near Cumnock, has been but once found in the district. One pair in 1888 nested on Sanquhar Moor.

Of the *Ravens*, once common, only a solitary pair breed in the district. For many years they have nested in the same locality, in spite of constant persecution, and in a few years more they will certainly be exterminated.

In the fir woods near Elliock, and on Rigg Burn, a few pairs of *Hérons* are annually observed.

In the spring of 1884 a few pairs of *Black-headed Gulls* nested on the island in the Black Loch. In the following seasons their numbers so increased that the eggs literally covered the island, and some, unable to find accommodation, now build themselves nests like little boats on the floating leaves of the bog-bean and water-lilies that abound in the lake.

Of the *Duck* tribe, only the *Teal* and *Mallard* remain throughout the summer. The former is rare, and not a regular breeder; the latter is common, and in some places abundant.

Mr Laurie, of Dalgoner, mentions having seen and shot the *Dotterel Plover* on the Scaur hills some years ago. Whether this was the genuine *Dotterel*, or only the *Durlin*, it is impossible to state, as the birds have not been observed for the last few years, though I have searched the hills far and wide.

An interesting attempt was made by the late Duke of Buccleuch to introduce the *Quail*, *Ptarmigan*, and *Capercaillie*

into the district. The *Quail* hatched out all right, found their wings, and departed. The *Ptarmigan* followed suit. The *Capercaillie*, reared with difficulty, haunted the surrounding woods for a brief space, then one by one disappeared, and fell before the marauders' guns in other districts.

Excluding all species not personally authenticated, the total number nesting in the parishes of Sauquhar and Kirkconnel is 64—not a large number, but the absence of water-surface and marsh-lands eliminates almost wholly the aquatic species, while the scarcity of scrub and copse explains the paucity or absence of some well-known songsters.

The above list—the fruits of but a few years' observation on the part of the writer—is probably far from complete.

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### MAMMALS.

Standing on Knockenhair or Carco heights, and surveying the country beneath, one sees the narrow valleys of the Nith and tributaries, with their holms and pastures, flanked by higher ground, sloping into hills round and mossy, covered with heath and “spret.”

Recently-planted pine woods show dark here and there along the valley slopes, with a narrow fringe of natural woods of oak, birch, and willow bordering the rivers and streamlets. The existing remnant of natural wood gives no conception of the immensity of the forests of prehistoric times.

An examination of the district reveals the remains of oak, birch, and pine with dense undergrowths of hazel. Low in the valley, buried beneath the alluvial deposits of centuries, large trees have been exposed, such as furnished the ancient lake-dwellers of the moor with logs to form their canoes and build their island homes, the stakes of which still stand, silent monuments of their industry.

On the higher grounds, the oak-remains are replaced by birch and hazel, these gradually becoming smaller, till, on most of the storm-swept heights, they are entirely absent. This forest extended from the “World's End” (meaning *wold* or *wood* end),

north of the town, west to Scaur, and south-east to join that of Durisdeer, once famous for its "dun deer," thence along the mountains to join with those of Moffatdale and Ettrick. From historic evidence during and subsequent to the Roman Invasion, dense forests existed, not only in Scotland, but in the greater part of Britain. Scottish tradition accuses the Romans of having burned these forests to expel the hostile natives from their otherwise impregnable retreats. In later times, as the country became more populous and herds increased, the inhabitants had recourse to the fire and axe to secure their property, and even their lives, from the ravages of wolves. Even so late as the seventeenth century we find Cromwell compelling the burning of the Highland forests to exterminate the wolves. It is not too much to assume that the reasons which led to the disforested of other districts existed also in Dumfriesshire.

Of the wild animals then abundant, but now extinct, in Britain, there were—The Bear, Wolf, Beaver, Boar, Reindeer, and the Wild White Cattle, the *Urus* of Cæsar (*Bos primigenius*), now represented by the white cattle of Hamilton Park and Chillingham. The preservation of large tracts of forest-land by the votaries of the chase, and the wild nature of the remoter districts, led to the survival of some of these animals to comparatively recent times. The Bear became extinct in the tenth century, the Reindeer in the twelfth, the Boar and the Wolf not until the seventeenth. Though no remains of these have been found in the immediate neighbourhood of Sanquhar, yet the evidence of their former presence in Dumfriesshire is conclusive enough.

In some excavations made by the late Sir William Jardine near Shaws, bone-remains of the Bear, Reindeer, Roe, and Red Deer were found. While no remains of the Wolf and Boar have been found, yet the monastic annals of Teviotdale detail the granting of the right of pasturage in Eskdale, the owner—who lived between 1153 and 1163—reserving for himself the right to hunt the *Wild Boar, Deer, and Stag*. In the name *Glenmaddie*, or *Glen of the Wolf*, the only record of that animal's presence is preserved, though no doubt it existed in other glens equally suitable to its habits. When these animals became extinct in the district history gives no record. Ere the close of the eleventh

century evidence, which it is needless here to detail, proves almost conclusively that the surrounding forests were at that time almost swept away. Following this, the Red Deer, Wild Cat, Marten, and Badger gradually became extinct or retreated northwards. The Roe and Fallow Deer can scarcely be considered indigenous to the district, the few ever found being but stray animals from the Drunlanrig preserves. The bone-remains found in the Deer Park adjoining the old Castle are those of the Fallow Deer kept by the Castle Barons for ornamental purposes.

The animals at present existing are all common and well-known species. Rarest of these are the Pole Cat—now very seldom seen, and probably limited to the Mennock Gleu—and the Otter, of which but a few pairs exist on this section of the Nith. In the outlying or less frequented glens, a few Foxes annually breed. Though never very numerous, these animals, unlike all other animals of the chase, seem not only to survive persecution, but actually to increase. The district here is not by any means highly favourable to their increase, or even existence, their presence being in great measure due to their seeking refuge from the hounds of the lowland hunters. Hares, Rabbits, and Mountain Hares are abundant. These last are not indigenous, having been introduced on Hartfell, and subsequently on Cairntable, some fifty or sixty years ago, from which they have spread over all the higher ground.

The smaller rodents are numerous, and similar to those generally distributed throughout Scotland, and merely require mention—Brown Rat, Water Rat or Vole, House Mouse, Field Mouse, Harvest Mouse, Shrew Mouse, Mole, Weasel, Stoat, Tree Squirrel, Hedgehog, and the Common Bat.