Black Loch, Colvend 27th May 2022

What a wonderful site! Not only for the plants and insects, but for the fact that it's a deep kettle hole

"depression/hole in an outwash plain formed by retreating glaciers or draining floodwaters. The kettles are formed as a result of blocks of dead ice left behind by retreating glaciers, which become surrounded by sediment deposited by meltwater streams"[1]

and its surrounding ring of floating vegetation, called schwingmoor, which can sometimes, as here, support a person's weight – with care!

The owner led the way directly to the loch - unusually for us, we ignored the plants on the walk to it – we normally record right from the moment we leave the cars and

[1] Worth googling Kettle holes and reading the Wikipedia account

often get about 300m away in the first hour. And I'm glad we did, for the site supported a large number of plants we don't usually encounter. Surrounding the loch and schwingmoor there was a wide band of acid marsh/mire, dominated by purple moor-grass *Molinia caerulea* and a variety of mosses including the bog-mosses *Sphagnum fallax* and *S. palustre*. Within this we recorded heather *Calluna vulgaris*, cross-leaved heath *Erica tetralix,* tormentil *Potentilla erecta*, narrow buckler fern *Dryopteris carthusiana*, wild angelica *Angelica sylvestris*, Common sedge *Carex nigra* and a couple of rushes amongst other species of this habitat. Both cotton-grasses, common *Eriophorum angustifolium* and hare'stail *E. vaginatum,* were scattered throughout this area. A few plants of whorled caraway *Carum verticillatum* were seen here, in flower.

Nearer the loch, the vegetation become wetter, more acidic and very interesting. The undoubted highlight of the day was to find numerous shoots of bog sedge *Carex limosa*[2] scattered widely throughout this area.

Carex limosa Sarah White

[2] Status in Kirkcudbrightshire: Scarce; D & G LBAP species

This site probably holds the largest colony of this species in Kirkcudbrightshire (Vice-county 73).

Other sedges here included slender sedge *Carex lasiocarpa,* common yellow sedge *C. demissa,* white sedge *C. curta,* long-stalked yellow sedge *C. lepidocarpa*[3], lesser tussock sedge *C. diandra* which baffled us for some considerable time,

Carex diandra Max Carstairs

carnation sedge *C. panicea,* There was a single plant of round-leaved sundew *Drosera rotundifolia,* scattered shoots of bog asphodel *Narthecium ossifragum*, marsh arrow-grass *Triglochin palustris*, marsh violet *Viola palustris,* plentiful marsh pennywort *Hydrocotyle vulgaris*, with large areas of bog bean *Menyanthes trifoliata*

Menyanthes trifoliata Theo Stanning

[3] National Status: **IUCN Near Threatened**

The loch itself was surrounded by more bog bean and right on the edge of the schwingmoor, widespread marsh St John's wort *Hypericum elodes* amongst shoots of bottle sedge *Carex rostrata*, bladder sedge *C. vesicaria* and water horsetail *Equisetum fluviatile.* The surface of the shallow water of the kettle hole supported yellow water lily *Nuphar lutea* with a small scattering of white water lily *Nymphaea alba*

Hypericum elodes Theo Stanning

while grapnel sampling gave us bog pondweed *Potamogeton polygonifolius* and the Locally Scarce (for VC73) horned pondweed *Zannichellia palustris,* with duckweed *Lemna minor* clinging to the samples.

Zannichellia palustris David Hawker

We lunched in the adjoining unimproved grassland which was awash with flowering semi-parasitic yellow rattle *Rhinanthus sylvatica* and pignut *Conopodium majus* before returning to the loch area for a final look.

Kirkland farm unimproved grassland 2022 Sarah White

Bob recorded about 75 invertebrate species, including three Nationally Scarce spiders (a wolf spider, *Pirata piscatorius*, and two money spiders *Sintula cornigera* and *Hypselistes jacksoni*), two uncommon dragonflies (the Hairy Dragonfly *Brachytron pratense* and the Variable Damselfly *Coenagrion pulchellum}*, an uncommon water bug (the tiny Sphagnum Bug *Hebrus ruficeps*), and 2 Nationally Scarce water beetle (including the tiny *Chaetarthria simillima*). Also present were the photogenic Black-bellied Diving Beetle, Water Scorpion, and Water Spider. The last species, *Argyroneta aquatica*, is unique in its ability to venture underwater with the aid of a bubble of air trapped by abdominal hairs. He also recorded a palmate newt, while Max got a horse leech and a four-spotted darter dragonfly. We also found a single chimney sweeper moth.

I could go on, but this is already long enough. In all, we found 140 species of plant and that excludes the complex groups (willows, willowherbs, brambles). Many thanks for the numerous photos sent in; I just couldn't use all just a few, otherwise the report would have been a very large file and a very lengthy screed. So, apologies if your photos weren't included but I've got them on file.

This report does not cover the whole of the farm, just the area to the east of the farmhouse, in the 1km square designated as NX 86 54.

Addendum

D&G LBAP	Dumfries & Galloway Local Biodiversity Plan (2004)
IUCN	International Union for the Conservation of Nature