

Report on a visit to Cull Pond, Duncormick, by members of the Wexford Naturalists' Field Club on 9 July 2011.

Report compiled by Jim Hurley, 19 July 2011.

Introduction. The visit to Cull Pond, Duncormick, by members of the Wexford Naturalists' Field Club (WNFC) on 9 July was part of the club's annual programme of events for 2011. The purpose of the visit was twofold: (1) to collect and identify damselflies (weather permitting) as a follow-on to an introductory lecture titled 'Dragonflies and Damselflies' delivered to club members on 7 July, and (2) to record other wildlife in the pond area (Source: WNFC brochure for 2011).

Location. Cull Pond is located at S 937 069 (OSI Discovery Series, Sheet No 77, scale 1:50,000), 4.5km north-west of the fishing village of Kilmore Quay on the South Wexford Coast. The pond lies immediately north of the Cull Bank, the dam that keeps high tides from flooding Inish and Ballyteige Slob, an extensive area of polder land reclaimed from the sea by a syndicate of local landlords following An Gorta Mór, the Great Potato Famine of 1845-1849 (Hurley, 2008 pages 26-32).

Place name. Cull Pond is located in the townland of Cull, an 118ha townland bordering the tidal estuary known to birdwatchers as 'The Cull'. The word Cull is believed to be a corruption of 'col', the Irish for Hazel *Corylus avellana*. Consequently, the townland name is interpreted as referring to that native shrub or small tree (de Vál, 1995 page 216).

Geology. The underlying bedrock is Wexford Formation pale grey limestone, often dolomitised (Tietzsch-Tyler *et al.*, 1994 and the Bedrock Geology Dataset on the GSI online Public Data Viewer at <http://www.gsi.ie/mapping.htm> accessed 16 July 2011). Bedrock does not outcrop in the area. The nearest exposure of the formation is at Seafield (S 922 088), 2.5km to the north-west.

Soils. Soil in the pond field is mineral alluvium (Code 51) derived from the underlying undifferentiated alluvium soil parent material (Code 400) (EPA ENVision Map Viewer at <http://maps.epa.ie/internetmapviewer/mapviewer.aspx> accessed 16 July 2011).

History. Cull Pond is not featured on the 1841 Ordnance Survey Sheet. Local sources claim that a natural mound occurred in the past at the site of the present pond and that that mound and the substrate below it were the sources of soil to build the Cull Bank earthen dam (personal communication, Pat and Ibar Power, landowners). The 1922 Ordnance Survey sheet supports that local information in that it features a cliffed edge on the northern side of the existing pond. The pond would, therefore, appear to be artificial in origin and to date from about 1855. On its seaward side, the earthen dam at the Cull Bank is faced with an armouring wall of blocks of limestone sourced from the quarry at Seafield (S 922 088), 2.5km to the north-west.

Description. Cull Pond is located at an altitude of 3m and lies on a north-west to south-east axis adjoining the sea wall at the Cull Bank. The pond is roughly rectangular in shape and has an area of about 0.4ha. The pond's longest axes, as measured on aerial photographs, are 172m by 27m. The aerial photographs used were those on the GSI online Public Data Viewer at <http://www.gsi.ie/mapping.htm> accessed 16 July 2011). The depth of the pond is unknown but its emergent vegetation suggests that it is relatively shallow throughout.

Water quality. The results of chemical analysis evidence that water quality is good. However, while water quality is good, low summer water level, the presence of extensive algal mats floating on the surface, and the highly disturbed southern end of the pond where cattle congregate to drink, combined to give some members the impression that the pond was polluted.

Habitat types. A pond is defined as a small (typically <0.25ha) body of standing water. Cull Pond may therefore be interpreted as a large pond or a very small lake. Lake and pond habitat types are classified largely by their trophic status and acidity. Trophic status is a measure of the level of nutrients present in the water. To date, Cull Pond has not been assigned to a specific habitat type. The National Parks and Wildlife Service regards other ponds in the Duncormick area with underlying limestone as EU habitat type 3104 ('Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp'; Annex 1 of the Habitats Directive) (NPWS, 2008). The water in Cull Pond is very hard (pH = 9.5) and is moderately mesotrophic (ammonia 0.58mg/lN, nitrate 3.1mg/lNO₃, orthophosphate <0.03mg/lP) but the extent, if any, of benthic vegetation of *Chara* spp (stoneworts) has not been established. The abundance of Spiked Water-milfoil *Myriophyllum spicatum* in the pond suggests elevated nitrogen levels (Ellenberg variable N =7). Using the Fossitt framework and considering its artificial origin, Cull Pond may be classified as FL8 ('Other artificial lakes and ponds')(Fossitt, 2000 page 20). Other habitats in the pond field included the narrow fringe of freshwater marsh (GM1) around the pond, the small (1.95ha) field of agricultural grasses (GA1) with scrub (WS1), and partially border of hedgerow (WL1).

Designations. Cull Pond, and the field that the pond is located in are part of candidate Special Area of Conservation (cSAC, Site Name Ballyteige Burrow, Site No IE000696) (NPWS Map Viewer at <http://webgis.npws.ie/npwsviewer/> accessed 16 July 2011). The adjoining estuary is part of Ballyteige Burrow Nature Reserve (SI No 279 of 1987).

Permissions. Cull Pond is located on private property and is part of the Ballyteige Burrow candidate Special Area of Conservation (cSAC). Permission for club members and their guests to visit the pond was kindly granted by the landowners: the Power family of Park Farm. The club's fieldtrip and field work activities were not deemed a Notifiable Action requiring formal consent from the State's competent authorities for nature conservation (personal communication, Tony Murray, Conservation Ranger, National Parks and Wildlife Service).

Weather. Weather conditions on the afternoon of the fieldtrip were generally mild and pleasant but were very changeable with spells of bright sunshine alternating with hazy, overcast conditions punctuated by freshening breezes preceding by one very short shower and one longer, squally one.

Recording results. About 36 members attended the fieldtrip. Weather conditions were poor for damselflies. The insects were generally scarce apart from a large number of Common Bluetails flying low in the marsh fringing the pond. These Common Bluetails afforded everyone the opportunity to examine the anatomy of a damselfly in the hand. Small numbers of Common Bluets and Azure Bluets were also netted and examined. Other life forms were recorded. While all members contributed to the recording effort, the following members kindly acted as leaders, validators and rapporteurs for various taxonomic groups.

- Roy Watson and Frankie Tennant (wild flowers in the pond field, hedgerow, etc.),
- Paul Green (grasses, sedges, rushes, marsh and aquatic plants),
- Jim Hurley (dragonflies and damselflies),
- Mary Foley (butterflies),
- Michael O'Donnell (moths),
- Janet Whelehan (bumblebees),
- Deirdre Twoomey (pond life),
- Simon Collins and Brian O'Connor (birds), and
- Will Warham (mammals).

Picnic. After the fieldwork, Rose Hurley provided picnic refreshments for everyone. On behalf of the club, Mary Foley, WNFC Events Organiser, thanked Rose for the spread she laid on and for her delicious home baking. Mary also thanked all those who made the fieldtrip such a successful and enjoyable event.

Results of recording in Cull Pond and the small field that the pond is in.

Vascular plants. The names of 105 vascular plants are tabulated below in alphabetical order of botanical taxon.

Botanical taxon	English name
<i>Achillea millefolium</i>	Yarrow
<i>Agrostis capillaris</i>	Common Bent
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Alisma plantago-aquatica</i>	Water-plantain
<i>Alopecurus geniculatus</i>	Marsh Foxtail
<i>Anagallis arvensis</i> subsp <i>arvensis</i>	Scarlet Pimpernel
<i>Angelica sylvestris</i>	Wild Angelica
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Apium nodiflorum</i>	Fool's-water-cress
<i>Arrhenatherum elatius</i> var. <i>bulbosum</i>	False Oat-Grass
<i>Bellis perennis</i>	Daisy
<i>Beta vulgaris</i> subsp <i>maritima</i>	Sea Beet
<i>Bolboschoenus maritimus</i>	Sea Club-rush
<i>Bromus hordeaceus</i>	Soft-brome
<i>Cardamine pratensis</i>	Cuckooflower
<i>Carduus tenuiflorus</i>	Slender Thistle
<i>Carex arenaria</i>	Sand Sedge
<i>Carex nigra</i>	Common Sedge
<i>Carex otrubae</i>	False Fox-sedge
<i>Carex ovalis</i>	Oval Sedge
<i>Centaurea nigra</i>	Common Knapweed
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium palustre</i>	Marsh Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Crataegus monogyna</i>	Hawthorn
<i>Crepis capillaris</i>	Smooth Hawk's-beard
<i>Cynosurus cristatus</i>	Crested Dog's-tail
<i>Dactylis glomerata</i>	Cock's-foot
<i>Daucus carota</i> subsp <i>carota</i>	Wild Carrot
<i>Eleocharis palustris</i>	Common Spike-rush
<i>Elytrigia repens</i>	Common Couch
<i>Elytrigia repens</i> subsp <i>repens</i> var. <i>aristata</i>	
<i>Erodium cicutarium</i>	Common Stork's-bill
<i>Festuca rubra</i> agg.	Red Fescue
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Galium aparine</i>	Cleavers
<i>Galium palustre</i> subsp <i>palustre</i>	Common Marsh-bedstraw
<i>Galium verum</i>	Lady's Bedstraw
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill
<i>Geranium molle</i>	Dove's-foot Crane's-bill
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hydrocotyle vulgaris</i>	Marsh Pennywort
<i>Hypochaeris radicata</i>	Cat's-ear
<i>Iris pseudacorus</i>	Yellow Iris
<i>Juncus acutiflorus</i>	Sharp-flowered Rush
<i>Juncus articulatus</i>	Jointed Rush
<i>Juncus effusus</i>	Soft-rush
<i>Juncus maritimus</i>	Sea Rush
<i>Lemna gibba</i>	Fat Duckweed
<i>Lemna minor</i>	Common Duckweed
<i>Lemna minuta</i>	Least Duckweed
<i>Lemna trisulca</i>	Ivy-leaved Duckweed
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Lonicera periclymenum</i>	Honeysuckle

<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil
<i>Lotus pedunculatus</i>	Greater Bird's-foot-trefoil
<i>Lychnis flos-cuculi</i>	Ragged-Robin
<i>Lythrum salicaria</i>	Purple-loosestrife
<i>Malva sylvestris</i>	Common Mallow
<i>Mentha aquatica</i>	Water Mint
<i>Molinia caerulea</i>	Purple Moor-grass
<i>Myosotis laxa</i>	Tufted Forget-me-not
<i>Myriophyllum spicatum</i>	Spiked Water-milfoil
<i>Oenanthe crocata</i>	Hemlock Water-dropwort
<i>Ononis repens</i>	Common Restharrow
<i>Plantago coronopus</i>	Buck's-horn Plantain
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Plantago major</i> subsp <i>major</i>	Greater Plantain
<i>Poa pratensis</i>	Smooth Meadow-grass
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Potamogeton pectinatus</i>	Fennel Pondweed
<i>Potentilla anserina</i>	Silverweed
<i>Prunus spinosa</i>	Blackthorn
<i>Pteridium aquilinum</i>	Bracken
<i>Pulicaria dysenterica</i>	Common Fleabane
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus aquatilis</i>	Common Water-crowfoot
<i>Ranunculus bulbosus</i>	Bulbous Buttercup
<i>Ranunculus flammula</i>	Lesser Spearwort
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rorippa nasturtium-aquaticum</i>	Water-cress
<i>Rubus fruticosus</i> agg.	Bramble
<i>Rumex acetosa</i> subsp <i>acetosa</i>	Common Sorrel
<i>Rumex acetosella</i>	Sheep's Sorrel
<i>Rumex conglomeratus</i>	Clustered Dock
<i>Rumex crispus</i> subsp <i>crispus</i>	Curled Dock
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Salix cinerea</i> subsp <i>oleifolia</i>	Rusty Willow
<i>Schoenoplectus tabernaemontani</i>	Grey Club-rush
<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio jacobaea</i> var. <i>flosculosus</i>	
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Sparganium erectum</i>	Branched Bur-reed
<i>Stellaria graminea</i>	Lesser Stitchwort
<i>Taraxacum</i> agg.	Dandelion
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Ulex europaeus</i>	Gorse
<i>Urtica dioica</i>	Common Nettle
<i>Veronica chamaedrys</i>	Germander Speedwell
<i>Vicia cracca</i>	Tufted Vetch
<i>Vicia sativa</i> subsp <i>segetalis</i>	Common Vetch

Leeches. One unidentified species in the pond.

Insects.

Odonates: Common Bluetail *Ischnura elegans* (>100), Common Bluet *Enallagma cyathigerum* (4), Azure Bluet *Coenagrion puella* (11), Blue Emperor *Anax imperator* (3 flying; one dead male floating in the pond with its abdomen eaten away), and Four-spotted Chaser *Libellula quadrimaculata* (1).

Bugs. Water Scorpion *Nepa cinerea*, Lesser Water Boatman *Plea* sp., and Greater Water Boatman *Notonecta glauca*.

Butterflies: Green-veined White, Common Blue, Small Tortoiseshell, Speckled Wood, Meadow Brown, Ringlet, Small Heath, and Red Admiral.

Moths: Straw Dot *Rivula sericealis*, Timothy Tortrix *Aphelia paleana*, micro moth *Celypha lacunana*, and the grass moth *Chrysoteuchia culmella*.

Bumblebees: White-tailed Bumblebee *Bombus lucorum* agg., Red-tailed Bumblebee *Bombus lapidarius*, Common Carder Bee *Bombus pascuorum*, and the Large Carder Bee *Bombus muscorum*.

Beetles: Soldier Beetle *Rhagonycha fulva*, Seven-spot Ladybird *Coccinella 7-punctata*, Ten-spot Ladybird *Adalia 10-punctata*, Great Diving Beetle larvae *Dytiscus marginalis*, and an unidentified diving beetle.

Molluscs. Common Bithynia *Bithynia tentaculata* (pond) and Large Red Slug *Arion rufus* (field)

Amphibians. Common Frog *Rana temporaria* and Smooth Newt *Triturus vulgaris*.

Fish. Ten-spined stickleback *Pungitius pungitius*.

Birds.

In the pond: Little Grebe.

Actually landed in the field: Linnet, Whitethroat, and Blackbird.

Flying directly over the field: Kestrel, House Martin, Swallow, Sand Martin, Goldfinch, Greater Black-backed Gull, Black-headed Gull, Lesser Black-backed Gull, Starling, Curlew, Woodpigeon, Herring Gull, Rook, Mallard, Black-tailed Godwit, Feral Pigeon, Little Egret, Whimbrel, Shelduck, Redshank, Swift, Wren, Oystercatcher, Woodpigeon, Cormorant, and Grey Heron.

Within a few feet of the field (i.e. the overhead wires on the very edge of the field by the gate, or in the sky just offline with the field): Meadow Pipit, Pied Wagtail, Greenfinch, and Skylark.

Mammals. Tracks of a Eurasian Otter were seen and the remains of the dead Irish Hare were found.

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