



Biodiversity Survey of Broadford County Limerick 2020 including An Gleann Beag Loop and Arboretum



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On behalf of the Broadford Development Association

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Figure 1 - Camuisce River [Crooked water] at Broadford

1 Introduction

The aim of this survey was to collect records of wild species present at Broadford (R3219, R3220, R3319, R3320, R3321 and R3322) County Limerick. The objective was to improve the number of species recorded at Broadford and to provide up to date records. The species lists include bony fish, bird, butterfly, dragonfly, hoverfly, other invertebrates, fungi, lichen and vascular plants. The report would then be published on a web site, made available as a free download and printed as a book. This will then create awareness of the Biodiversity of the area for the local people and visitors alike.

The methods used include binoculars, butterfly net, pond net, camera and visual sightings. The survey was carried out between May 2019 and March 2020, which included 14 summer visits and 14 winter visits. This was done to maximise the number of records during all the seasons of the year. All records have been submitted to the National Biodiversity Data Centre in Waterford and will be included onto their online maps.

I would like to thank Sylvia Reynolds, Julian Reynolds and Tom Harrington for providing suggestions and guidance.

All photographs are by Geoff Hunt

Any comments are always welcome by contacting geoffreyhunt@eircom.net or 087-7656439



Figure 2 - House Martin - *Delichon urbicum*

House Martins were seen at the Camuisce River in Broadford on 5th July 2019 collecting mud for nest building.

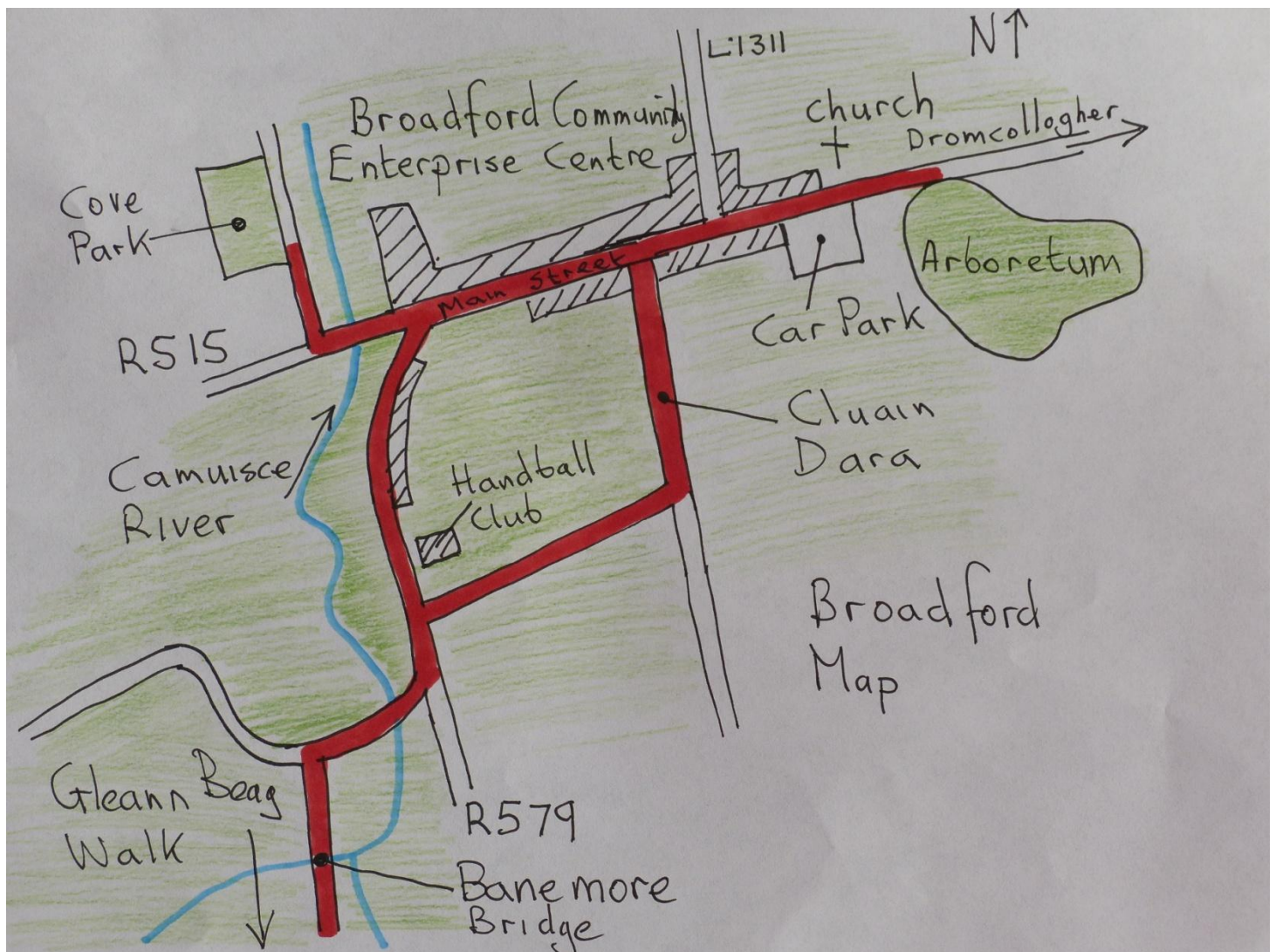


Figure 3 - Broadford Map

2 Survey Area

The village of Broadford [see Figure 3 above] County Limerick is situated 4km west of Dromcollogher near the County Cork boundary. Broadford has a variety of habitats including an Arboretum of native trees, a series of walking trails that include woodlands, hedgerows, meadows, a river and views of the majestic Golden Vale. This survey includes the way-marked [with red arrows] walk known as An Gleann Beag Loop, which approx 9.5 km starting from Broadford Church. It includes views from above Gleann Beag [a secret Valley with no access], and a forestry plantation. There are benches along the way for you to sit and admire the view. This walk has a number of stiles to climb over and is moderately strenuous. There are also sign boards that include pictures and information on the local built history and wildlife.

The Broadford Development Association have commissioned this survey so as to create awareness of the Biodiversity that survives alongside us as we live our daily lives. For this survey I have kept all my observations where there is public access [See figure 4 page 3] shown in Red.

2.1 An Gleann Beag Loop

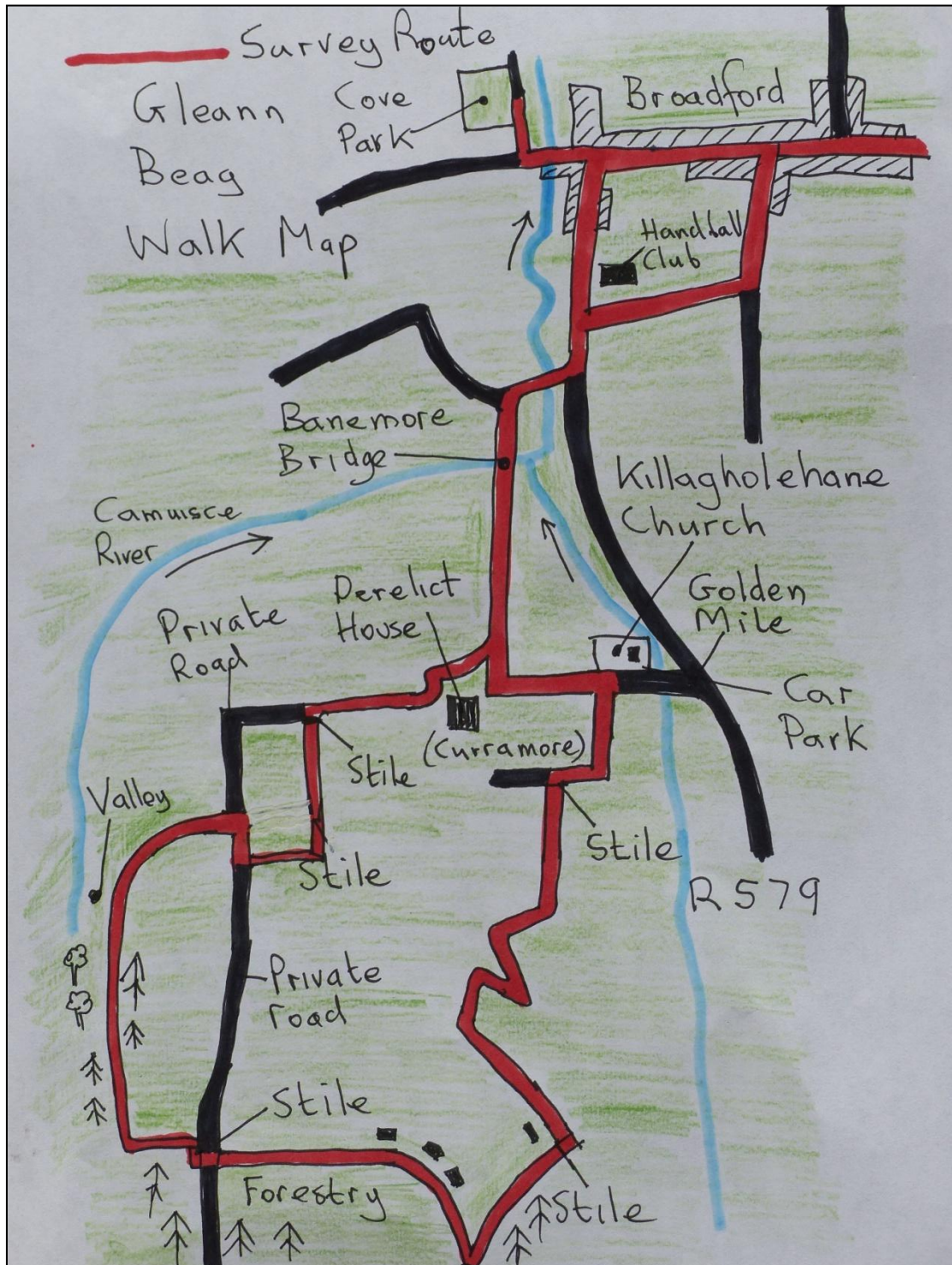


Figure 4 - Gleann Beag Loop Map

2.2 Broadford Arboretum

The arboretum has been developed in a disused limestone quarry. The trees that have been planted there are mainly native. The map below [Figure 5] shows where to find an example of each tree.

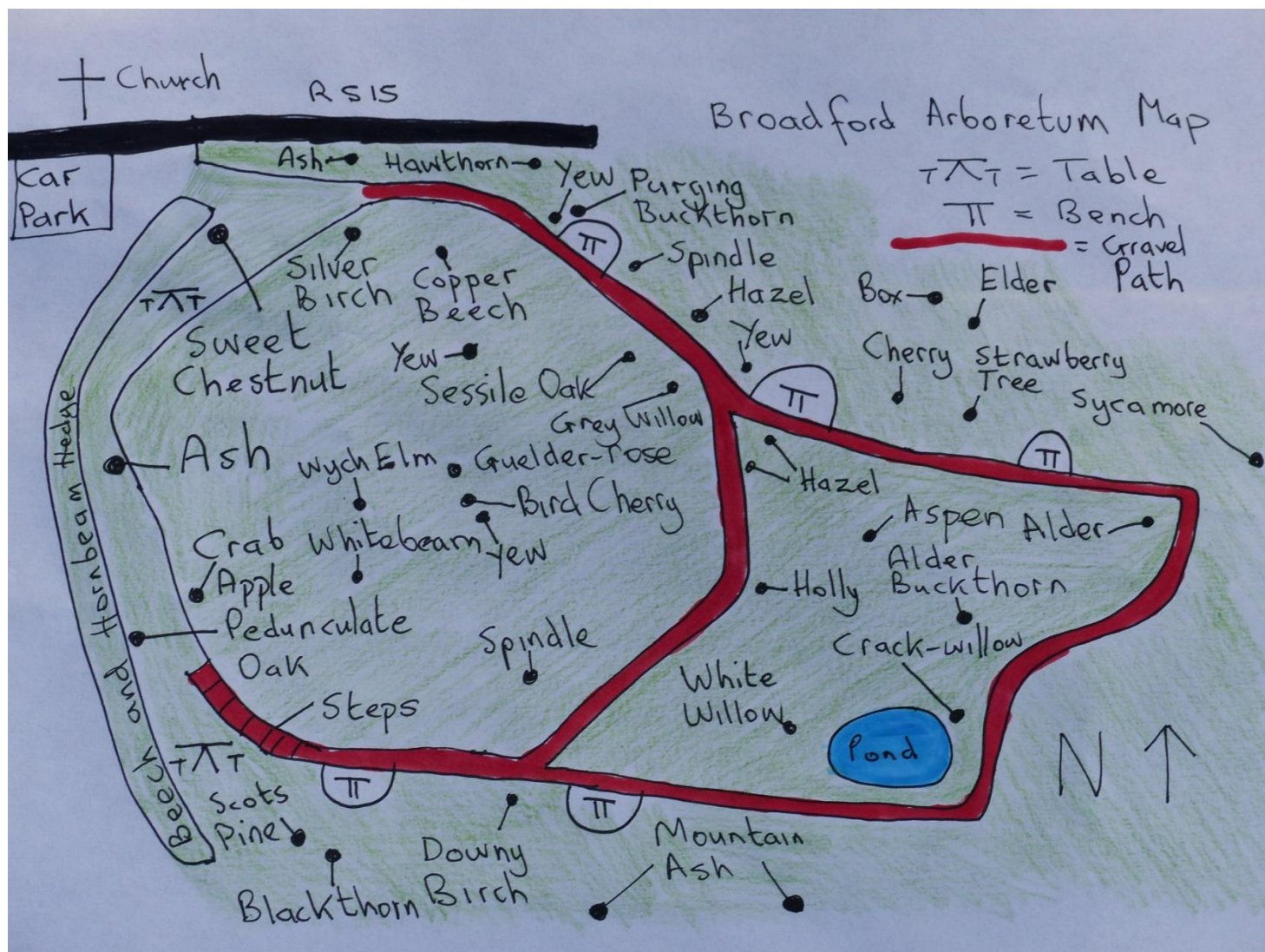


Figure 5 - Broadford Arboretum Map



Figure 6 - Arboretum entrance



Figure 7 - Arboretum Signboard

3 Flora and Fauna recorded at Broadford.

3.1 Birds

Table 1 below shows the 54 bird species that have been identified and recorded during this survey.

Table 1 - Bird species recorded at Broadford

Birds				
Water birds				
1	Mallard	<i>Anas platyrhynchos</i>	Mallard	04/07/2019
2	Grey Heron	<i>Ardea cineria</i>	Corrn riasc	19/05/2019
3	Golden Plover	<i>Pluvialis apricaria</i>	Feadóg bhuí	20/11/2019
4	Common Snipe	<i>Gallinago gallinago</i>	Naoscach	20/11/2019
5	Woodcock	<i>Scolopax rusticola</i>	Creabhar	23/12/2019
6	Great Black-backed Gull	<i>Larus marinus</i>	Droimneach mór	20/03/2020
Birds of prey				
7	Buzzard	<i>Buteo buteo</i>	Clamhán	28/08/2019
8	Sparrowhawk	<i>Accipiter nisus</i>	Spioróg	23/11/2019
9	Merlin	<i>Falco columbarius</i>	Meirliún	19/05/2019
10	Kestrel	<i>Falco tinnunculus</i>	Pocaire goithe	19/05/2019
Passerines				
11	Meadow Pipit	<i>Anthus pratensis</i>	Riabhog mhóna	23/11/2019
12	Swallow	<i>Hirundo rustica</i>	Fáinleog	19/05/2019
13	House Martin	<i>Delichon urbicum</i>	Gabhán binne	19/05/2019
14	Pied Wagtail	<i>Motacilla alba yarrelli</i>	Glasóg shraide	19/05/2019
15	Grey Wagtail	<i>Motacilla cinerea</i>	Glasóg liath	19/05/2019
16	Collared Dove	<i>Streptopelia decaocto</i>	Fearán baicdhubh	19/05/2019
17	Wood Pigeon	<i>Columba palumbus</i>	Colm coille	19/05/2019
18	Cuckoo	<i>Cuculus canorus</i>	Cuach	20/05/2019
19	Pheasant	<i>Phasianus colchicus</i>	Piasún	19/05/2019
20	Dipper	<i>Cinclus cinclus</i>	Gabha dubh	19/05/2019
21	Dunnock	<i>Prunella modularis</i>	Donnóg	19/05/2019
22	Treecreeper	<i>Certhia familiaris</i>	Snag	19/05/2019
23	Stonechat	<i>Saxicola torquata</i>	Caislín cloch	20/12/2019
24	Robin	<i>Erithacus rubecula</i>	Spideog	19/05/2019
25	Song Thrush	<i>Turdus philomelos</i>	Smolach	19/05/2019
26	Redwing	<i>Turdus iliacus</i>	Deargán sneachta	23/11/2019
27	Fieldfare	<i>Turdus pilaris</i>	Sacán	23/11/2019
28	Mistle Thrush	<i>Turdus viscivorus</i>	Liatráisc	23/11/2019
29	Blackbird	<i>Turdus merula</i>	Lon dubh	19/05/2019
30	Blackcap	<i>Sylvia atricapilla</i>	Caipín dubh	19/05/2019
31	Willow Warbler	<i>Phylloscopus trochilus</i>	Ceolaire sailí	19/05/2019
32	Chiffchaff	<i>Phylloscopus collybita</i>	Tiuf-teaf	19/05/2019
33	Goldcrest	<i>Regulus regulus</i>	Ciorbuí	19/05/2019
34	Spotted Flycatcher	<i>Muscicapa striata</i>	Cuilire liath	04/07/2019
35	Wren	<i>Troglodytes troglodytes</i>	Dreoilín	19/05/2019

36	Great Tit	<i>Parus major</i>	Meantán mór	19/05/2019
37	Blue Tit	<i>Cyanistes caeruleus</i>	Meantán gorm	19/05/2019
38	Coal Tit	<i>Pariparus ater</i>	Meantán dubh	19/05/2019
39	Long-tailed Tit	<i>Aegithalos caudatus</i>	Meantán earrfhada	28/08/2019
40	Jackdaw	<i>Corvus monedula</i>	Cág	19/05/2019
41	Magpie	<i>Pica pica</i>	Snag breac	19/05/2019
42	Rook	<i>Corvus frugilegus</i>	Ruach	19/05/2019
43	Hooded Crow	<i>Corvus cornix</i>	Feannóg	19/05/2019
44	Jay	<i>Garrulus glandarius</i>	Scréachog	20/12/2019
45	Raven	<i>Corvus corax</i>	Fiach dubh	19/05/2019
46	Starling	<i>Sturnus vulgaris</i>	Druid	19/05/2019
47	House Sparrow	<i>Passer domesticus</i>	Gealbhan binne	19/05/2019
48	Chaffinch	<i>Frigilla coelebs</i>	Rí rua	19/05/2019
49	Goldfinch	<i>Carduelis carduelis</i>	Lasair choille	19/05/2019
50	Greenfinch	<i>Carduelis chloris</i>	Glasán darach	19/05/2019
51	Linnet	<i>Carduelis cannabina</i>	Gleoiseach	04/07/2019
52	Siskin	<i>Carduelis spinus</i>	Siscín	06/10/2019
53	Bullfinch	<i>Pyrrhula pyrrhula</i>	Corcrán coille	19/05/2019
54	Crossbill	<i>Loxia curvirostra</i>	Crosghob	01/03/2020



Figure 8 - Buzzard - *Buteo buteo* Seen at Banemore Bridge on 30th November 2019.

3.2 Butterflies and Moths

Table 2 below shows the 13 butterfly and 3 moth species that have been identified and recorded during this survey .

Table 2 - Butterfly and Moth species recorded at Broadford

Butterflies			
1	<i>Aglais urticae</i>	Small Tortoiseshell	Ruán beag 15/08/2019
2	<i>Anthocharis cardamines</i>	Orange Tip	Barr buí 19/05/2019
3	<i>Argynnis paphia</i>	Silver-washed Fritillary	Fritileán geal 21/07/2019
4	<i>Cynthia cardui</i>	Painted Lady	Áilleán 15/08/2019
5	<i>Inachis io</i>	Peacock	Péacóg 19/05/2019
6	<i>Maniola jurtina</i>	Meadow Brown	Donnóg fhéir 10/07/2019
7	<i>Leptidea juvernica</i>	Cryptic Wood White	Bánóg choille 08/06/2019
8	<i>Pieris brassicae</i>	Large White	Bánóg mhór 19/05/2019
9	<i>Pieris napi</i>	Green-veined White	Bánóg uaine 19/05/2019
10	<i>Pieris rapae</i>	Small White	Bánóg bheag 19/05/2019
11	<i>Polyommatus icarus</i>	Common Blue	Gormán coiteann 15/08/2019
12	<i>Parage aegeria</i>	Speckled Wood	Breac 19/05/2019
13	<i>Vanessa atalanta</i>	Red Admiral	Aimiréal dearg 10/07/2019
Moths			
1	<i>Micropterix calthella</i>	Moth	19/05/2019
2	<i>Phlogophora meticulosa</i>	Angle Shades	15/08/2019
3	<i>Udea lutealis</i>	Pale Straw Pearl	15/08/2019



Figure 9 - Common Blue - *Argynnis paphia*

3.3 Hoverflies

Table 3 below shows the 24 species of hoverfly that have been identified and recorded during this survey.

Table 3 - Hoverfly species recorded at Broadford

Hoverflies		
1	<i>Cheilosia illustrata</i>	04/07/2019
2	<i>Chrysogaster solstitialis</i>	19/05/2019
3	<i>Dasysyrphus venustus</i>	19/05/2019
4	<i>Epistrophe eligans</i>	19/05/2019
5	<i>Episyrphus balteatus</i>	Marmalade Fly 13/06/2019
6	<i>Eristalis arbustorum</i>	15/08/2019
7	<i>Eristalis horticola</i>	13/06/2019
8	<i>Eristalis pertinax</i>	19/05/2019
9	<i>Eristalis tenax</i>	Dronefly 13/06/2019
10	<i>Eupeodes latifasciatus</i>	19/05/2019
11	<i>Eupeodes luniger</i>	15/08/2019
12	<i>Helophilus pendulus</i>	Pyjama Fly 19/05/2019
13	<i>Leucozona glauca</i>	04/07/2019
14	<i>Leucozona lucorum</i>	19/05/2019
15	<i>Melanostoma scalare</i>	Chequered Hoverfly 19/05/2019
16	<i>Meliscaeva cinctella</i>	04/07/2019
17	<i>Myathropa florea</i>	15/08/2019
18	<i>Platycheirus albimanus</i>	28/08/2019
19	<i>Rhingia campestris</i>	19/05/2019
20	<i>Sphegina clunipes</i>	28/08/2019
21	<i>Syritta pipiens</i>	15/08/2019
22	<i>Syrphus ribesii</i>	19/05/2019
23	<i>Volucella pellucens</i>	Great Pied Hoverfly 04/07/2019
24	<i>Xylota segnis</i>	04/07/2019



Figure 10 - Great Pied Hoverfly - *Volucella pellucens*

3.4 Bees

Table 4 below shows the 11 bee species that have been identified and recorded during this survey.

Table 4 - Bee species recorded at Broadford

Bees			
1	<i>Andrena nigroaenea</i>	Buffish Mining Bee	19/05/2019
2	<i>Apis mellifica</i>	Honey Bee	19/05/2019
3	<i>Bombus barbutellus</i>	Barbut's Cuckoo Bee	19/05/2019
4	<i>Bombus hortorum</i>	Small garden Bee	15/08/2019
5	<i>Bombus lapidarius</i>	Red Tailed Bumble Bee	19/05/2019
6	<i>Bombus lucorum agg.</i>	White-tail Bumble Bee	19/05/2019
7	<i>Bombus pascuorum</i>	Common Carder Bee	19/05/2019
8	<i>Bombus terrestris</i>	Buff-tail Bumble Bee	15/08/2019
9	<i>Halictus rubicundus</i>	Orange Legged Furrow Bee	19/05/2019
10	<i>Nomada leucophthalma</i>	Early Nomad Bee	19/05/2019
11	<i>Nomada marshamella</i>	Marsham's Nomad Bee	19/05/2019

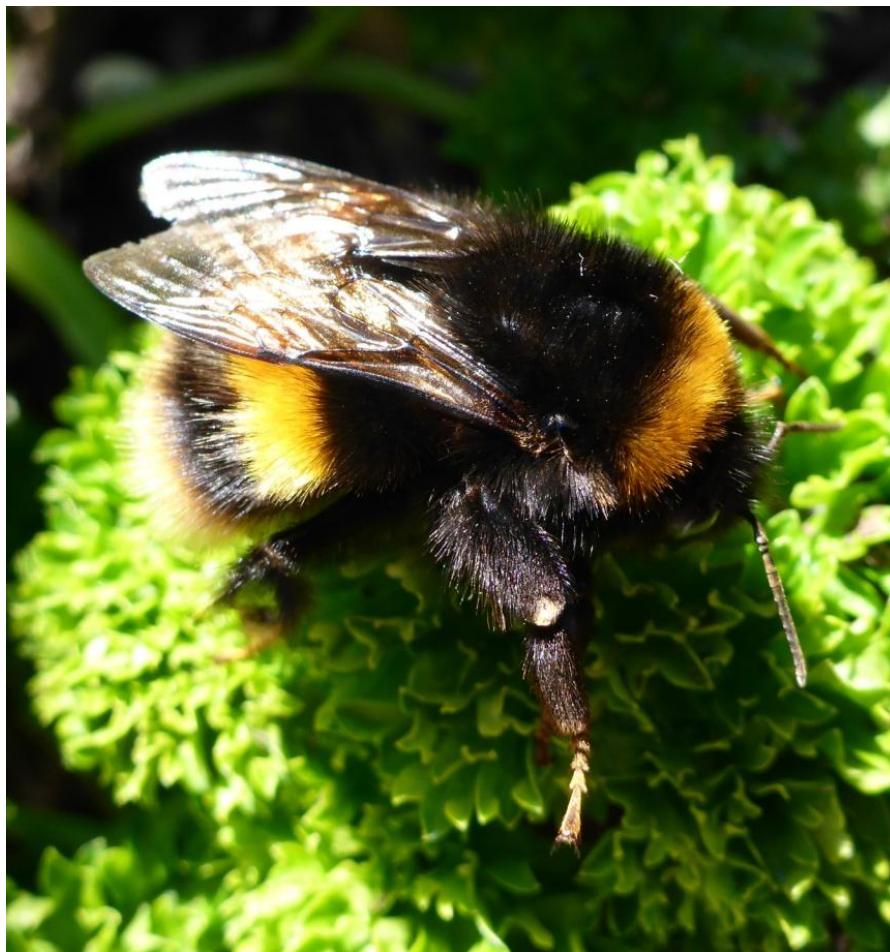


Figure 11 White-tailed Bumblebee - *Bombus lucorum agg.*

3.5 Shieldbugs

Table 5 below shows the 5 shieldbug species that have been identified and recorded during this survey.

Table 5 - Shieldbug species recorded at Broadford

Shieldbugs		
1	<i>Ancanthosoma haemorrhoidale</i>	Hawthorn Shieldbug 27/10/2019
2	<i>Dolycoris baccarum</i>	Hairy Shieldbug 15/08/2019
3	<i>Elasmostethus interstinctus</i>	Birch Shieldbug 15/08/2019
4	<i>Palomena prasina</i>	Green Sheildbug 15/08/2019
5	<i>Troilus luridus</i>	Bronze Shieldbug 15/08/2019



Figure 12 - Hawthorn Shieldbug - *Ancanthosoma haemorrhoidale*

Seen at Gleann Beag 27th October 2019.

3.6 Ladybirds

Table 6 below shows the 4 ladybird species identified and recorded during this survey.

Table 6 - Ladybird species recorded at Broadford

Ladybirds			
1	<i>Coccinella septempunctata</i>	7-spot Ladybird	19/05/2019
2	<i>Propylea quatuordecimpunctata</i>	14-spot Ladybird	15/08/2019
3	<i>Psyllobora vigintiduopunctata</i>	22-spot Ladybird	15/08/2019
4	<i>Halyzia sedecimguttata</i>	Orange Ladybird	15/08/2019



Figure 13 - 7-spot Ladybird - *Coccinella septempunctata*

Seen at the Arboretum on 19th May 2019

3.7 Other terrestrial invertebrates

Table 7 below shows the 19 species of other terrestrial invertebrate that have been identified and recorded during this survey.

Table 7 - Other terrestrial invertebrate species recorded at Broadford

<i>Other Terrestrial Invertebrates</i>			
1	<i>Andricus kollari</i>	Marble Gall	15/08/2019
2	<i>Araneus diadematus</i>	Spider	15/08/2019
3	<i>Aeshna juncea</i>	Common Hawker Dragonfly	04/07/2019
4	<i>Bibio marci</i>	St Mark's Fly	19/05/2019
5	<i>Chloromyia formosa</i>	Broad Centurion Fly	04/07/2019
6	<i>Cicadella viridis</i>	Leaf Hopper	15/08/2019
7	<i>Dicranopalpus ramosus</i>	Harvestman	15/08/2019
8	<i>Ectemnius sp</i>	Solitary Wasp	04/07/2019
9	<i>Forficula auricularia</i>	Common Earwig	15/08/2019
10	<i>Gastrophysa viridula</i>	Green Dock beetle	19/05/2019
11	<i>Haematopota pluvialis</i>	Notched Horned Cleg Fly	15/08/2019
12	<i>Ischnura elegans</i>	Blue-tailed Damselfly	21/07/2019
13	<i>Liophloeus tessulatus</i>	Weevil	19/05/2019
14	<i>Melolontha vulgaris</i>	Cockchafer	19/05/2019
15	<i>Mesembrina meridiana</i>	Noonfly	19/05/2019
16	<i>Metellina segmentata</i>	Spider	04/07/2019
17	<i>Rhagonycha fulva</i>	Common Red Soldier Beetle	16/06/2019
18	<i>Scathophaga stercoraria</i>	Dungfly	19/05/2019
19	<i>Tipula maxima</i>	Crane fly	19/05/2019



Figure 14 Harvestman - *Dicranopalpus ramosus*

3.8 Aquatic invertebrates

Table 8 below shows the 5 aquatic species identified and recorded during this survey.

Table 8 - Aquatic species recorded at Broadford

Aquatic Invertebrates			
1	<i>Asellus aquaticus</i>	Hoglouse	09/06/2019
2	<i>Velia caprai</i>	Water Cricket	09/06/2019
Mayfly			
1	<i>Baetis rhodani</i>	Large Dark Olive	09/06/2019
2	<i>Heptagenia sulphurea</i>	Yellow May dun	09/06/2019
3	<i>Rhithrogena semicolorata</i>	Olive Upright	09/06/2019



Figure 15 - Mayfly - *Rhithrogena semicolorata*

Found in the Camuisce River 9th June2019.

3.9 Amphibians

Table 9 below shows the 1 amphibian species identified and recorded during this survey

Table 9 - Amphibian species recorded at Broadford

Amphibians			
1	<i>Rana temporaria</i>	Frog	Frog

3.10 Fish

Table 10 below shows the list of 3 fish species identified and recorded during this survey.

Table 10 - Fish species recorded at Broadford

Fish			
1	<i>Gasterosteus aculeatus</i>	Three-spine Stickleback	19/05/2019
2	<i>Phoxinus phoxinus</i>	Minnow	27/07/2019
3	<i>Salmo trutta</i>	Brown Trout	27/07/2019



Figure 16 - Brown Trout - *Salmo trutta*

Seen in the Camuisce River on 27th July 2019.

3.11 Mammals

Table 11 below shows the list of 7 mammal species identified and recorded during this survey.

Table 11 - Mammal species recorded at Broadford

Mammals			
1	<i>Lepus timidus</i>	Irish hare	Giorria 23/03/2020
2	<i>Mustela erminea subsp.hibernica</i>	Irish Stoat	Easóg 06/10/2019
3	<i>Myodes glareolus</i>	Bank Vole	Vol bruaigh 01/03/2020
5	<i>Oryctolagus cuniculus</i>	European Rabbit	Coinín 07/09/2019
6	<i>Sciurus vulgaris</i>	Red Squirrel	Iora rua 03/01/2020
7	<i>Vulpes vulpes</i>	Fox	Sionnach 20/11/2019



Figure 17 - Red Squirrel - *Sciurus vulgaris*

Seen at Gleann Beag on 26th January 2020.

3.12 Vascular Plants

Table 12 below shows the list of 144 vascular plant species identified and recorded growing in the wild during this survey. The vascular plants include ferns, fern-allies and flowering plants.

Table 12 - Plant species recorded at Broadford

Vascular Plants			
1	<i>Acer pseudoplatanus</i>	Sycamore	Seiceamóir 19/05/2019
2	<i>Aegopodium podagraria</i>	Ground Elder	Lus an easpaig 19/05/2019
3	<i>Aesculus hippocastanum</i>	Horse Chestnut	Crann cnó capaill 15/08/2019
4	<i>Ajuga reptans</i>	Bugle	Glasair choille 19/05/2019
5	<i>Allium ursinum</i>	Ramsons	Creamh 20/05/2020
6	<i>Alnus glutinosa</i>	Alder	Fearnóg 19/05/2019
7	<i>Anagallis arvensis</i>	Scarlet Pimpernel	Falcaire fiáin 15/08/2019
8	<i>Anemone nemorosa</i>	Wood Anemone	Lus na gaoithe 20/05/2019
9	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	20/05/2019
10	<i>Anthriscus sylvestris</i>	Cow Parsley	Peirsil bhó 19/05/2019
11	<i>Arum maculatum</i>	Lords and ladies	Cluas chaoín 15/08/2019
12	<i>Asplenium ceterach</i>	Rustyback	Raithneach rua 19/05/2019
13	<i>Asplenium ruta-muraria</i>	Wall-rue	Luibh na seacht 19/05/2019
14	<i>Asplenium scolopendrium</i>	Hart's-tongue Fern	Creamh na muice fia 15/08/2019
15	<i>Asplenium trichomanes</i>	Maidenhair Spleenwort	Lus ns seilge 19/05/2019
16	<i>Barbarea vulgaris</i>	Winter-cress	Treabhach 18/03/2020
17	<i>Bellis perennis</i>	Daisy	Nóinín 19/05/2019
18	<i>Blechnum spicant</i>	Hard-fern	19/05/2019
19	<i>Calystegia sepium</i>	Hedge Bindweed	Lalus fáil 15/08/2019
20	<i>Capsella bursa-pastoris</i>	Shepherd's-purse	Lus an sparáin 15/08/2019
21	<i>Cardamine flexuosa</i>	Wavy Bitter-cress	20/05/2019
22	<i>Cardamine hirsuta</i>	Hairy Bitter-cress	Searbh-bhiolar giobach 19/05/2019
23	<i>Cardamine pratensis</i>	Lady's Smock / Cuckooflower	Biolar gréagáin 19/05/2019
24	<i>Centaurea nigra</i>	Common Knapweed	Minscoth 15/08/2019
25	<i>Cerastium fontanum</i>	Common Mouse-ear	Cluas luchóige Choiteann 19/05/2019
26	<i>Chamerion angustifolium</i>	Rosebay Willowherb	Lus na tine 15/08/2019
27	<i>Chrysosplenium oppositifolium</i>	Opposite-leaved Golden-saxifrage	Glóiris 19/05/2019
28	<i>Circaea lutetiana</i>	Enchanter's-nightshade	Fuinseagach 19/05/2019
29	<i>Cirsium arvense</i>	Creeping thistle	Feochadán reatha 19/05/2019
30	<i>Cirsium palustre</i>	Marsh Thistle	Feochadán corraigh 19/05/2019
31	<i>Cirsium vulgare</i>	Spear Thistle	Feochadán colgach 19/05/2019
32	<i>Conopodium majus</i>	Pignut	Cúlarán 19/05/2019
33	<i>Corylus avellana</i>	Hazel	Coll 19/05/2019
34	<i>Crataegus monogyna</i>	Hawthorn	Sceach gheal 19/05/2019
35	<i>Dactylis glomerata</i>	Cock's-foot	Garbhfhéar 19/05/2019
36	<i>Digitalis purpurea</i>	Foxglove	Lus mór 19/05/2019
37	<i>Dryopteris affinis</i> agg.	Scaly Male-fern	20/05/2020
38	<i>Dryopteris filix-mas</i>	Male -fern	Raithneach mhadra 19/05/2019
39	<i>Epilobium hirsutum</i>	Great Willowherb	Lus na Tríonóide 15/08/2019
40	<i>Equisetum arvense</i>	Field Horsetail	Scuab eich ghoirt 19/05/2019
41	<i>Euonymus europaeus</i>	Spindle	Feoras 19/05/2019

42	<i>Euphorbia hyberna</i>	Irish Spurge	Bainne caoin	19/05/2019
43	<i>Ficaria verna</i>	Lesser Celandine	Grán arcáin	19/05/2019
44	<i>Filipendula ulmaria</i>	Meadowsweet	Airgead luachra	19/05/2019
45	<i>Fragaria vesca</i>	Wild Strawberry	Sú talún fiáin	20/05/2019
46	<i>Fraxinus excelsior</i>	Ash	Fuinseóg	19/05/2019
47	<i>Fuchsia magellanica</i>	Fuchsia	Fiúise	28/08/2019
48	<i>Fumaria sp.</i>	Fumitory	Camán searraigh balla	19/05/2019
49	<i>Galium aparine</i>	Cleavers	Garbhlus	19/05/2019
50	<i>Galium palustre</i>	Marsh Bedstraw	Rú corraigh	16/06/2019
51	<i>Geranium molle</i>	Dove's-foot Crane's-bill	Crobh bog	15/08/2019
52	<i>Geranium robertianum</i>	Herb-robert	Ruithéal ri	19/05/2019
53	<i>Geum urbanum</i>	Wood Avens	Macall cille	13/06/2019
54	<i>Hedera helix s.l.</i>	Ivy	Eidhneán	15/08/2019
55	<i>Heracleum sphondylium</i>	Hogweed	Feabhrán	19/05/2019
56	<i>Hesperis matronalis</i>	Dame's Violet	Feabhrán	09/06/2019
57	<i>Hyacinthoides non-scripta</i>	Bluebell	Feascarlus	19/05/2019
58	<i>Hypericum androsaemum</i>	Tutsan	Meas torc allta	19/05/2019
59	<i>Hypericum pulchrum</i>	Slender St John's-wort	Beathnua baineann	04/07/2019
60	<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort	Beathnua fireann	15/08/2019
61	<i>Hypochaeris radicata</i>	Cat's-ear	Cluas chait	07/09/2019
62	<i>Ilex aquifolium</i>	Holly	Cuilleann	19/05/2019
63	<i>Iris pseudacorus</i>	Yellow Iris	Feileastram	19/05/2019
64	<i>Lamium purpureum</i>	Red Dead-nettle	Caichneantóg dhearg	19/05/2019
65	<i>Lapsana communis</i>	Nipplewort	Duilleog bhríde	19/05/2019
66	<i>Lathyrus pratensis</i>	Meadow Vetchling	Peasairin bui	13/06/2019
67	<i>Lemna minor</i>	Common Duckweed		09/06/2019
68	<i>Leucanthemum vulgare</i>	Oxeye Daisy	Nóinín mór	19/05/2019
69	<i>Leycesteria formosa</i>	Pheasant Berry/Himalayan	Féithleann álain	28/08/2019
70	<i>Lonicera periclymenum</i>	Honeysuckle	Féithleann	19/05/2019
71	<i>Lotus pendunculatus</i>	Greater Bird's-foot Trefoil	Crobh éin corraigh	04/07/2019
72	<i>Luzula sylvatica</i>	Great Wood-rush		18/03/2020
73	<i>Lysimachia nemorum</i>	Yellow Pimpernel	Lus Cholm cille	20/05/2019
74	<i>Lythrum salicaria</i>	Purple Loosestrife	Créachtach	15/08/2019
75	<i>Matricaria discoidea</i>	Pineapple Mayweed	Lus na hiothlann	19/05/2019
76	<i>Medicago lupulina</i>	Black Medick	Dúmheidic	19/05/2019
77	<i>Myosotis arvensis</i>	Field Forget-me-not	Lus mionla goirt	19/05/2019
78	<i>Nasturtium officinale</i>	Water-cress	Biolar	16/06/2019
79	<i>Odontites vernus</i>	Red Bartsia	Hocas tae	15/08/2019
80	<i>Oenanthe crocata</i>	Hemlock Water-dropwort	Dáthabha bán	19/05/2019
81	<i>Orchis mascula</i>	Early-purple Orchid	Magairlín meidhreach	19/05/2019
82	<i>Persicaria maculosa</i>	Redshank	Glúineach dhearg	15/08/2019
83	<i>Petasites hybridus</i>	Butterbur	Gallán mór	19/05/2019
84	<i>Plantago lanceolata</i>	Ribwort Plantain	Slánlus	15/08/2019
85	<i>Plantago major</i>	Greater Plantain	Cuach Phádraig	19/05/2019
86	<i>Polygonum aviculare agg.</i>	Knotgrass	Glúineach bheag	15/08/2019
87	<i>Polystichum setiferum</i>	Soft Shield-fern		20/05/2019
88	<i>Populus tremula</i>	Aspen	Crann creathach	19/05/2019
89	<i>Potentilla anserina</i>	Silverweed	Briosclán	19/05/2019
90	<i>Primula veris</i>	Cowslip	Blainne bó bleachtáin	18/03/2020
91	<i>Primula vulgaris</i>	Primrose	Sabhaircin	19/05/2019

92	<i>Prunella vulgaris</i>	Self Heal	Duán ceannchosach	15/08/2019
93	<i>Prunus domestica</i>	Wild Plum		19/05/2019
94	<i>Prunus laurocerasus</i>	Cherry Laurel		06/10/2019
95	<i>Prunus spinosa</i>	Blackthorn	Draighean	19/05/2019
96	<i>Pteridium aquilinum</i>	Bracken	Raithneach mhór	19/05/2019
97	<i>Quercus petraea</i>	Sessile Oak	Dair ghaelach	19/05/2019
98	<i>Quercus robur</i>	Pendunculate Oak	Dair	15/08/2019
99	<i>Ranunculus acris</i>	Meadow Buttercup	Fearbhán féir	19/05/2019
100	<i>Ranunculus repens</i>	Creeping Buttercup	Fearbhán	15/08/2019
101	<i>Reseda luteola</i>	Weld	Buí mór	09/06/2019
102	<i>Rhododendron ponticum</i>	Rhododendron	Róslabhra	09/06/2019
103	<i>Rosa canina</i> agg.	Wild Rose	Feirdhris	19/05/2019
105	<i>Rubus fruticosus</i> agg.	Bramble	Dris	19/05/2019
106	<i>Rumex crispus</i>	Curled Dock	Copóg chatach	15/08/2019
107	<i>Rumex obtusifolius</i>	Broad-leaved Dock	Copóg	19/05/2019
108	<i>Salix aurita</i>	Eared Willow	Saileach	20/05/2020
109	<i>Salix cinerea</i>	Grey Willow	Saileach	19/05/2019
110	<i>Sambucus nigra</i>	Elder	Trom	19/05/2019
111	<i>Sanicula europaea</i>	Sanicle	Bodán coille	19/05/2019
112	<i>Scrophularia auriculata</i>	Water Figwort	Donn lus uisce	13/06/2019
113	<i>Sedum album</i>	White Stonecrop	Grafán bán gcloch	28/08/2019
114	<i>Senecio jacobaea</i>	Ragwort	Buachalán buí	15/08/2019
115	<i>Senecio vulgaris</i>	Groundsel	Grúnlas	19/05/2019
116	<i>Silene flos-cuculi</i>	Ragged-Robin	Lus síoda	13/06/2019
117	<i>Sinapis arvensis</i>	Charlock	Praiseach bhuí	19/05/2019
118	<i>Sisymbrium officinale</i>	Hedge Mustard	Lus an óir	19/05/2019
119	<i>Smyrnium olusatrum</i>	Alexanders	Lusrán grándubh	28/08/2019
120	<i>Sonchus arvensis</i>	Perennial Sow-thistle	Bleachtán léana	15/08/2019
121	<i>Sonchus oleraceus</i>	Smooth Sow-thistle	Bleachtán mín	19/05/2019
122	<i>Sorbus aucuparia</i>	Mountain Ash	Caorthann	19/05/2019
123	<i>Stachys palustris</i>	Marsh Woundwort	Créacht lus	15/08/2019
124	<i>Stellaria alsine</i>	Bog Stitchwort	Tursarraing mhóna	19/05/2019
125	<i>Stellaria holostea</i>	Greater Stitchwort	Tursarraing mór	19/05/2019
126	<i>Symphoricarpos albus</i>	Snowberry	póirin sneachta	28/08/2019
127	<i>Taraxacum</i> agg.	Dandelion	Caisearbhan	19/05/2019
128	<i>Torilis japonica</i>	Upright Hedge-parsley	Fionnas fáil	15/08/2019
129	<i>Trifolium dubium</i>	Lesser trefoil	Seamair bhui	19/05/2019
130	<i>Trifolium pratense</i>	Red Clover	Seamair dhearg	19/05/2019
131	<i>Trifolium repens</i>	White Clover	Seamair bhán	19/05/2019
132	<i>Tripleurospermum inodorum</i>	Scentless Mayweed	Meá druá	07/09/2019
133	<i>Tussilago farfara</i>	Colt's-foot	Sponc	19/05/2019
134	<i>Ulex europaeus</i>	Gorse	Aiteann gallda	19/05/2019
135	<i>Ulmus glabra</i>	Wych Elm	Leamhán sléibhe	19/05/2019
136	<i>Urtica dioica</i>	Stinging nettle	Neantóg	19/05/2019
137	<i>Vaccinium myrtillus</i>	Bilberry	Fraochán	19/05/2019
138	<i>Veronica beccabunga</i>	Brooklime	Lochall	19/05/2019
139	<i>Veronica chamaedrys</i>	Germander Speedwell	Lus cré talún	19/05/2019
140	<i>Veronica persica</i>	Common Field-speedwell	Lus cré garrí	19/05/2019
141	<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	Lus an Treacha	19/05/2019
142	<i>Vicia cracca</i>	Tufted Vetch	Peasair na luch	15/08/2019

143 *Vicia sepium*
144 *Viola riviniana*

Bush Vetch
Dog-violet

Peasair fhiáin
Fanaigse

19/05/2019
20/05/2019



Figure 18 - Scarlet Pimpernel - *Anagallis arvensis*

In good weather the Scarlet Pimpernel *Anagallis arvensis* flower opens up early in the morning and closes the bright red petals sometime in the early afternoon. For this reason the plant was known as Poor-mans Barometer and Shepherd's Weather Glass. It is often found on waste ground and light soils. Although it is tiny, I personally think it is a beautiful flower to photograph.

3.13 Fungi

Table 13 Below show the 31 species of fungi identified and recorded during this survey.

Table 13 - Fungi recorded at Broadford

Fungi			
1	<i>Amanita fulva</i>	Tawny Grisette	06/10/2019
2	<i>Amanita muscaria</i>	Fly Agaric	22/09/2019
3	<i>Armillaria mellea</i>	Honey Fungus	07/09/2019
4	<i>Boletus chrysenteron</i> agg.	Red-cracking Bolete	11/09/2019
5	<i>Boletus subtomentosus</i>	Suede Bolete	11/09/2019
6	<i>Calvatia excipuliformis</i>	Pestle Puffball	27/10/2019
7	<i>Coriolus versicolor</i>	Turkeytail	22/09/2019
8	<i>Clavulina cristata</i>	Crested Coral	11/09/2019
9	<i>Clavulinopsis</i>	Yellow Clubs	27/10/2019
10	<i>Coprinus atramentarius</i>	Common Inkcap	06/10/2019
11	<i>Crepidotus variabilis</i>	Variable / Peeling Oysterling	06/10/2019
12	<i>Ganoderma australe</i>	Southern Bracket	28/08/2019
13	<i>Gymnopus confluens</i>	Clustered Toughshank	11/09/2019
14	<i>Hypholoma fasciculare</i>	Sulphur Tuft	07/09/2019
15	<i>Laccaria laccata</i>	Deceiver	06/10/2019
16	<i>Lactarius glyciosmus</i>	Coconut Milkcap	07/09/2019
17	<i>Lactarius quietus</i>	Oakbug Milkcap	27/10/2019
18	<i>Lactarius rufus</i>	Rufous Milkcap	22/09/2019
19	<i>Lycoperdon perlatum</i>	Common Puffball	11/09/2019
20	<i>Macrolepiota rhacodes</i>	Shaggy Parasol	06/10/2019
21	<i>Marasmius oreades</i>	Fairy Ring Champignon	27/10/2019
22	<i>Marasmius rotula</i>	Collared Parachute	22/09/2019
23	<i>Mycena pura</i>	Lilac Bonnet	22/09/2019
24	<i>Oudemansiella mucida</i>	Porcelain Fungus	06/10/2019
25	<i>Paxillus involutus</i>	Brown Rollrim	06/10/2019
26	<i>Rhodocollybia butyracea</i>	Buttercap	06/10/2019
27	<i>Russula cyanoxantha</i>	Charcoal Burner	11/09/2019
28	<i>Russula ochroleuca</i>	Ochre Brittlegill	07/09/2019
29	<i>Scleroderma citrinum</i>	Common Earthball	28/08/2019
30	<i>Trametes versicolor</i>	Turkeytail	27/10/2019
31	<i>Xylosphaera hypoxylon</i>	Candlesnuff Fungus	27/10/2019



Figure 19 - Fly Agaric - *Amanita muscaria*

3.14 Lichens

Table 14 Below show the 3 species of lichen identified and recorded during this survey.

Table 14 Lichen recorded at Broadford

Lichens		
1	<i>Aspicilia calcarea</i>	15/01/2020
2	<i>Parmotrema perlatum</i>	14/01/2020
3	<i>Xanthoria parietina</i>	Common Orange Lichen 15/01/2020



Figure 20 - Lichen - *Parmotrema perlatum*

4 Discussion

4.1 Species results

Figure 15 below shows the total number of species recorded and for each group during this survey for Broadford. The total number of species recorded altogether was 330.

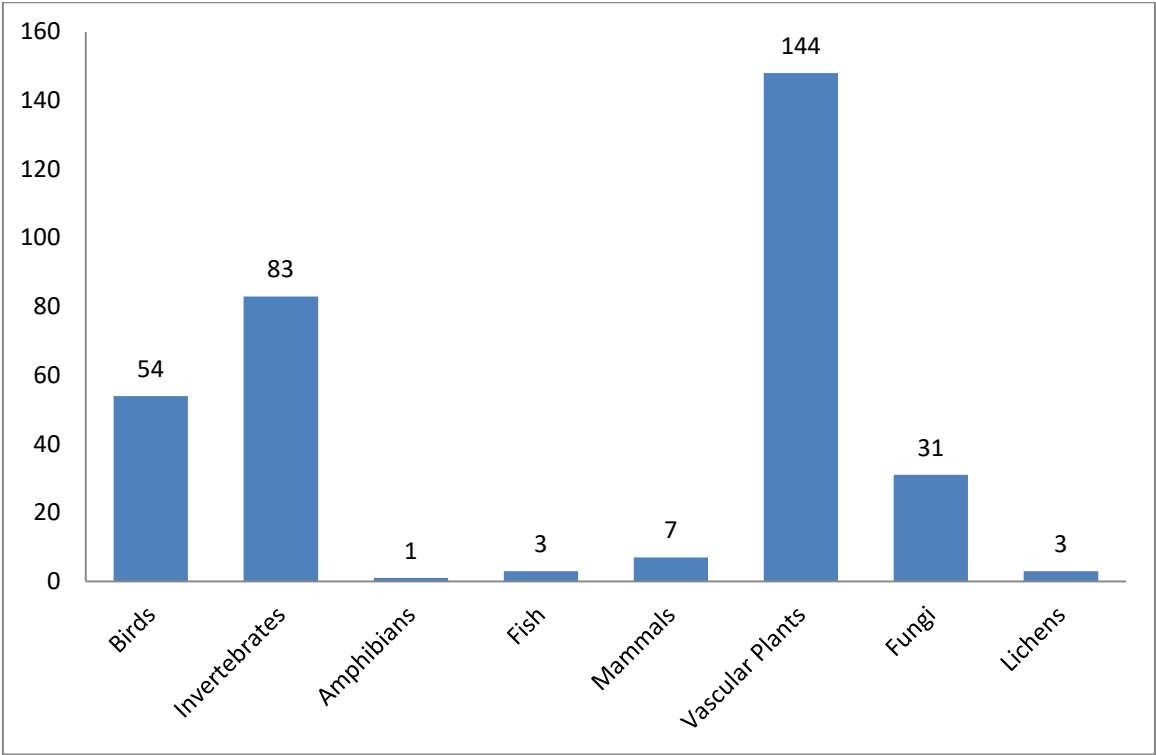


Figure 21 - Species numbers recorded at Broadford



Figure 22 - Variable / Peeling Oysterling - *Crepidotus variabilis*

4.2 Birds

The number of bird species recorded during this survey was 53. There are probably other bird species present but not recorded such as Barn Owl, Long-eared Owl and Reed Bunting. These species may be recorded in future surveys.

The Camuisce River is used by many birds for washing themselves, taking a drink, collecting mud for nest building and as a corridor of movement in safety.



Figure 23 - Goldfinches

A pair of Goldfinches seen taking a drink of water from the Camuisce River on 5th July 2019. The Irish name is *Lasair choille*, which translates as Flame of the wood. They have become more common in recent years and can be seen regularly at bird feeders. Finches are seed eaters, the Goldfinch has a long beak that can reach the seeds of Teasel. In the past they were kept in a cage as a good luck charm. A flock of Goldfinches is called a charm.

4.2.1 Birds of Conservation Concern

Birds of Conservation Concern is an assessment of the conservation status of all regularly occurring birds on the island of Ireland. The conservation status is signalled using Red, Amber and Green. Further information can be found on the Birdwatch Ireland web site www.birdwatchireland.ie.

Table 16 below show the list of Birds of Conservation Concern recorded during this survey at Broadford.

Table 15 - Birds of Conservation Concern

Birds of Conservation Concern	Designation
Goldcrest	Amber Listed
Golden Plover	Red Listed
Great Black-backed Gull	Amber Listed
Greenfinch	Amber Listed
Grey Wagtail	Red Listed
House Martin	Amber Listed
House Sparrow	Amber Listed
Kestrel	Amber Listed
Linnet	Amber Listed
Meadow Pipit	Red Listed
Merlin	Amber Listed
Mistle Thrush	Amber Listed
Robin	Amber Listed
Sparrowhawk	Amber Listed
Spotted Flycatcher	Amber Listed
Starling	Amber Listed
Stonechat	Amber Listed
Swallow	Amber Listed



Figure 24 - Sparrowhawk - *Accipiter nisus*

4.2.2 Buzzard

Recently, Buzzards have become very common in County Limerick. Their main diet is rabbits and crows. Photographed in a small woodland on the Gleann Beag walk on 21st December 2019



Figure 25 - Buzzard - *Buteo buteo*

4.2.3 Dipper

The habitat of a Dipper is mainly fast flowing shallow rocky streams where they look for under water invertebrates. They like to nest under bridges and can be seen flying fast and low just above the water.

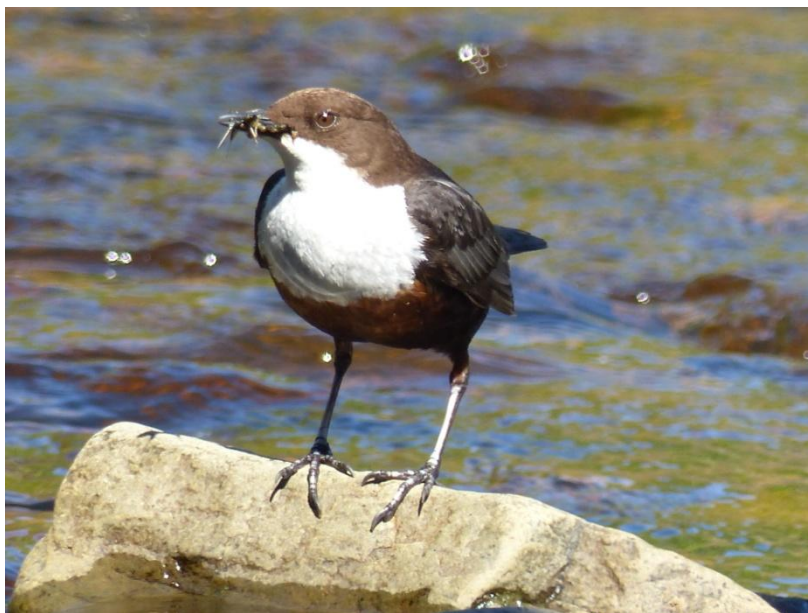


Figure 26 - Dipper - *Cinclus cinclus*

4.2.4 Snipe

Snipe can be seen at dawn or dusk flying over areas of forestry. They are game birds that are not easy to shoot as they tend to zigzag when they take off in flight. You would have to be an expert to shoot one. If you came home with a bag of snipe you would be called a sniper. Hence the term sniper, referring to an excellent shot. Their breeding habitat has declined due to habitat change. Most of the snipe seen nowadays are winter visitors.



Figure 27 - Snipe - *Gallinago gallinago*

4.2.5 Goldcrest

The Goldcrest is Ireland's smallest bird that is measured by average weight. They have a tiny beak that is excellent for catching small insects. They have a cute looking face and are constantly on the move which makes them difficult to photograph. Usually seen where there are conifer trees and associate with tits during the winter when they forage for insects in small groups. Photographed in the Arboretum on 21st May 2019. There Irish name is Ciorbuí meaning Yellow Crest



Figure 28 - Goldcrest - *Regulus regulus*

4.2.6 Fieldfare

The Fieldfare is a wintering thrush from Scandinavia that feed on invertebrates found in grasslands. In bad weather when the fields are covered with snow they will turn to eating berries. Fieldfares and Redwings can be seen in mixed flocks in open countryside, especially large fields with hedgerows. They were frequently seen at Cove Park amongst Redwings [*Turdus iliacus*], Blackbirds [*Turdus merula*] and Mistle Thrush [*Turdus viscivorus*]. Photographed on 22nd December 2019. The Irish name is Sacán , which translates as little sack.



Figure 29 - Fieldfare - *Turdus pilaris*

4.3 Mammals

The number of mammals recorded was 7, which is low as there are probably other species present that I did not record. I do not put out traps however, I did put up a peanut feeder that attracted Red Squirrel, Hare and a Bank Vole. I was really lucky to see a Stoat cross a road with prey in its mouth. I have included the Hare which I did not actually see but was photographed near the feeders.



Figure 30 - Red Squirrel - *Sciurus vulgaris*

I had put up a feeder in a couple of different locations before I managed to see a red Squirrel. I only saw one during my visits watching the feeders. The Red squirrel does not hibernate and collects seeds to survive the winter by scatter hoarding them nearby.

4.4 Butterfly

The number of butterfly species recorded was 12, which is about a third of the Irish butterfly list. The Silver-washed Fritillary is Ireland's largest butterfly and is found in Oakwood with violets. This is a new species recorded for this part of County Limerick. Seen at Gleann beag on 21st July 2019



Figure 31 - Silver-washed Fritillary - *Argynnis paphia*

4.5 Hoverfly

The number of hoverfly species recorded was 23. Most species found are common and under recorded. *Dasysyrphus venustus* is a scarce species in Ireland and was seen near the hand ball alley on 19th May 2019.



Figure 32 - *Dasysyrphus venustus*

4.6 Aquatic Invertebrates

The presence of the Mayflies include Yellow May dun *Heptagenia sulphurea* and Olive Upright *Rhithrogena semicolorata* which indicate good water quality, supporting the presence of Trout.

4.7 Vascular Plants

The number of Flowering Plant species recorded was 143. Irish Spurge is locally common in the South-west of Ireland and was found in Gleann beag. A stand of Aspen trees were found around the church at Killagholehane. Other plants found on the Gleann beag walk include Bluebell *Hyacinthoides non-scripta*, Marsh Thistle *Cirsium palustre*, Dame's Violet *Hesperis matronalis* and Sanicle *Sanicula europaea*. There are limestone walls around the village with a number of plants growing on them including Wall-rue *Asplenium ruta-muraria*, Rustyback *Asplenium ceterach* and Maidenhair Spleenwort *Asplenium trichomanes*. Wild Plum *Prunus domestica* as naturalized in the hedgerow at Cluain dara. Water plants along the banks of the Camuisce River include Brooklime *Veronica beccabunga*, Water Cress *Nasturtium officinale* and Hemlock water-dropwort *Oenanthe crocata*.



Figure 33 - Spindle - *Euonymus europaeus*



Figure 34 - Wild Cherry - *Prunus avium*

Wild Cherry and Spindle found in the Arboretum are more noticeable when in flower or fruiting. Herbaceous plants growing under the canopy of the trees in the arboretum include Ramsons *Allium ursinum*, Wood Anemone *Anemone nemorosa* and Opposite-leaved Golden-saxifrage *Chrysosplenium oppositifolium*.

4.8 Fungi

The number of fungi species recorded was 31 which I was delighted to find. They were mainly found in the arboretum and in other woodland areas along the way marked walk. The variety of fungi recorded in the arboretum included common fungi such as, Turkeytail (*Coriolus versicolor*), Shaggy Parasol (*Macrolepiota rhacodes*), Sulphur Tuft (*Hypholoma fasciculare*), and the poisonous fungi Brown Rollrim (*Paxillus involutus*) and Fly Agaric (*Amanita muscaria*).

Most fungi live in soil in woodlands and most become obvious in autumn when they produce their reproductive parts or fruitbodies or “mushrooms”, which appear above ground. These produce huge numbers of microscopic spores.

The fruiting body is the most obvious part of the fungal mycelium, which is usually hidden from view in the soil, decaying wood or in dead standing trees if the fungus is a parasite. The mycelium is a mass of thread-like tubes (hyphae) similar to a massive underground spider web. Most woodland fungi are decomposers or recyclers (for example Buttercup, Clustered Toughshank and Shaggy Inkcap), other are parasites and killers of trees (Honey Fungus and Southern Bracket), while others (for example, the Brittlegills, Milkcaps, Brown Rollrim and Fly Agaric) are symbiotic with the roots of trees and help them absorb nutrients from the soil in return for some of the sugars that the trees make in photosynthesis.

Many edible fungi have lookalikes which may be poisonous, therefore you must not gather wild mushrooms to eat unless they have been correctly identified by an expert.



Figure 35 - Orange/Yellow Clubs - *Clavulinopsis helvol*

5 Conclusion

5.1 Arboretum

The Arboretum is a good place to learn about our native trees. People can visit at any time of year and learn to identify most of the native Irish trees throughout the seasons. A map of the arboretum [See figure 5 page 4] indicates where to find the trees that are planted there. The trees provide a good habitat for song birds that includes resident species such as Robin *Erithacus rubecula* , Blackbird *Turdus merula*, Dunnock *Prunella modularis*, Goldcrest *Regulus regulus* and Treecreeper *Certhia familiaris* . The sound of bird song increases when the summer visitors begin to arrive in March. The song of the Chiffchaff *Phylloscopus collybita* is usually heard first, followed by Willow Warblers *Phylloscopus trochilus* and Blackcaps *Sylvia atricapilla*. The Spotted Flycatcher *Muscicapa striata* arrives at the end of May to complement the set of regular breeding bird species. These birds are feeding on a variety of invertebrates that include Harvestman *Dicranopalpus ramosus*, Green Dock Beetle *Gastrophysa viridula*, Spider *Metellina segmentata* and Hairy Shieldbug *Dolycoris baccarum*. The pond is often visited by birds for bathing and drinking.



Figure 36 - Blackcap - *Sylvia atricapilla*

5.2 Broadford

On the roof tops around the village, common resident birds can be seen which includes crow species Rook *Corvus frugilegus*, Jackdaw *Corvus monedula*, Hooded Crow *Corvus cornix* and Magpie *Pica pica*. Running through the streets Pied Wagtails pick food from the cracks in the tarmac. House Sparrow *Passer domesticus* can be heard singing from garden bushes and Ivy *Hedera helix* growing on the walls. The Camuisce River flows to the west of the village and is used as a wildlife corridor. Standing on this bridge at different times of the year can produce sightings of some unexpected wild life including Merlin *Falco columbarius*, Dipper *Cinclus cinclus* [see figure 24 page 26], Common Hawker Dragonfly *Aeshna juncea* [see figure below] and a variety of freshwater fish. In May and June House Martins *Delichon urbicum* [see figure 2 page 1] and Swallows *Hirundo rustica* can be seen collecting mud in their bills for nest building. On the bridge there are Buddleia *Buddleja davidii* that attracts many butterflies in August and September.



Figure 37 - Common Hawker- *Aeshna juncea*

5.3 An Gleann Beag Loop

There is a Trailhead at the car park in Broadford opposite the church which is the start of the An Gleann Beag Loop. The village of Broadford lies at the edge of the Limestone bedrock that is covered by boulder clays. This walk eventually rises up into the foothills of the Mullaghareirks. After leaving the village and

passing the road sign for The Spout, there is a road [known locally as the back avenue] on the left which passes under a wooded area and crosses over the Camuisce River at Banemore [see figure 36 below] .



Figure 38 - Camuisce River at Banemore

From this bridge when the water level is low, you may see the Dipper *Cinclus cinclus* amongst the stones in the river. They are searching for mayfly larvae and other aquatic invertebrates. Further along, as the road rises there is a wet field on the left, that attracts Stonechat *Saxicola torquata* and Meadow Pipit *Anthus pratensis* during the winter. Continue along the way-marked walk climbing over stiles and keeping to the field boundaries. Keep a look out for Kestrel *Falco tinnunculus* and Buzzards *Buteo buteo*. Further along this walk you will eventually reach a secret valley that is steep sided and covered in a blanket of Great Wood-rush *Luzula sylvatica*.

There is a viewing point from which you may see the Silver-washed Fritillary butterfly *Argynnis paphia*. At the top of the hill there is a forestry of Norway Spruce *Picea abies* with Japanese Larch *Larix kaempferi* where Red Squirrel *Sciurus vulgaris* are occasionally seen. In the winter Golden Plover *Pluvialis apricaria* can be seen flying over during the day and Woodcock *Scolopax rusticola* at dusk.

This survey successfully recorded 330 species including Bird, Hoverfly, Bee, Ladybird, Butterfly, Bony fish, other Terrestrial and Aquatic Invertebrates, Mammal, Amphibian, Plants, Lichen and Fungi. However there are many other groups of living things that have not been recorded. Further recording will increase the list of Biodiversity present at Broadford.

There are 18 Birds of Conservation Concern recorded in the survey area. The records that were submitted to the NBDC database during this survey will help to fill in the gaps of each species map. This is part of Citizen Science and I am hoping this report will encourage others to start recording and submit records.



Figure 39 - Blue Tit - *Cyanistes caeruleus* Sunbathing over the arboretum pond

The habitat of these species needs to be protected so as to halt the loss of Biodiversity and that future generations will survive. Not only for the benefit of Biodiversity but also for the pleasure it provides to people. Connecting to nature has proven to be good for your well-being. Further information can be found in the All

Ireland Pollinator Plan on the web site <https://pollinators.ie/>. The excellent book Gardening for Biodiversity can be downloaded for free at <https://bit.ly/2SeEIRn>

The highlights of this survey for me was seeing a Red Squirrel at Gleann Beag, finding a dipper on the Camuisce river, getting up close to photograph a Buzzard on a branch, finding a new colony of Silver-washed Fritillary butterfly and finding a new species for me of Hoverfly.

Recreation is very important for our well being and connecting to nature is great way of relaxing and gives pleasure to many people. There are a number of way-marked walking trails in the areas. Further details can be found on their web site at www.walkbroadfordashford.com .

I am hoping that people will look through this report and become more aware of the nature that lives beside us every day.

Finally, I would like to thank the people I met during my rambles along the way and for showing an interest in what I was doing. Happy hunting.

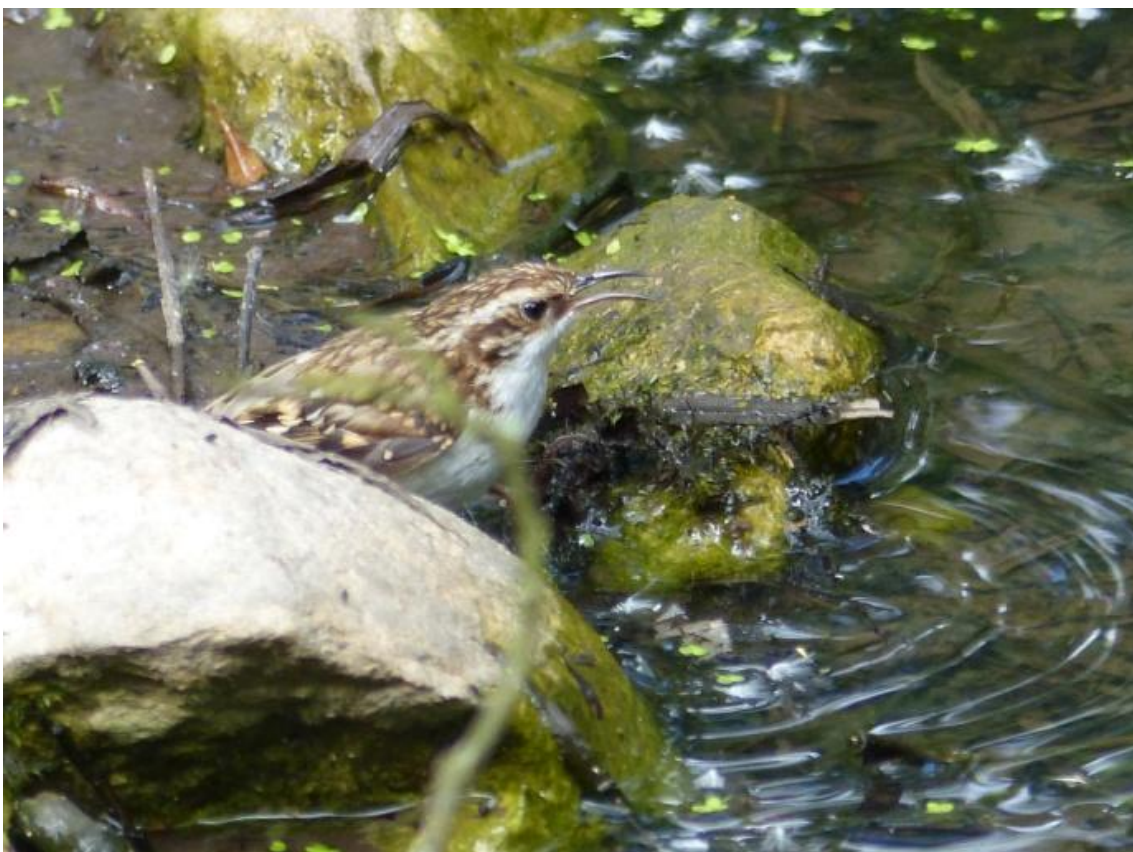


Figure 40 - Treecreeper- *Certhia familiaris* at the arboretum pond.

6 Abbreviations

agg.	aggregate
s.l.	sensu lato, species name used in the broad sense
sp.	species (singular)
spp.	species (plural)
s.s.	sensu stricto, species name used in the strict sense
st	saint
subsp.	subspecies (singular)
var.	variety
X,x	indicates a hybrid name

7 Reference material

The following books were used for identification of species recorded during this survey.

Collins Bird Guide, [2001] by Killian Mullarney, Lars Svensson, Dan Zetterstrom and Peter J Grant

Collins Flower Guide, [2009] by David Streeter, C. Hart-Davies, A Hardcastle, F. Cole, & L. Harper

Flora of Country Limerick, [2013] by Sylvia C.P. Reynolds, National Botanic Gardens

The Natural History of Ireland's Dragonflies, [2004] by Brian Nelson and Robert Thompson, MAGNI

British Hoverflies, [2002] by Alan E. Stubbs and Steven J. Falk, BENHS

Bird Atlas 2007-11, [2103] by Dawn Balmer, Simon Gillings, Brian Caffrey, Bob Swann, Iain Downie and Rob Fuller, BTO books

Identification Guide to Ireland's Ladybirds, [2015] by Colette O' Flynn, Brian J. Pinchen and Una Fitzpatrick, NBDC

Identification Guide to Ireland's Shieldbugs [2012] by Don Cotton, Brian Nelson and Una Fitzpatrick, NBDC

Identification Guide to Ireland's Bumblebees [2010] by Una Fitzpatrick, Andrew Byrne and Bryan J. Pinchen, NBDC

Identification Guide to Ireland's Butterflies [2011] by Eugenie Regan and Liam Lysaght, NBDC

Britain's Plant Galls, [2011] by Michael Chinery, Wild Guides

Mushrooms, [2003] by Patrick Harding, Collins Gem

Face book Pages

Geoff Hunt

Insects/Invertebrates of Ireland

Web sites

www.wildflowersofireland.net [Zoe Devlin, Identification by colour]

www.naturespot.org.uk [Identification of species]

<https://maps.biodiversityireland.ie/> [Distribution maps of Irish species]

8 Appendix

8.1 Irish Bird name translations

Birds of prey

Buzzard	Clamhán	
Sparrowhawk	Spioróg	
Kestrel	Pocaire goithe	Wind poker
Merlin	Meirliún	
Long-eared Owl	Ceann cait	Cat head
Short-eared Owl	Ulchabhan reisc	White beard of the marsh

Passerines

Pheasant	Piasún	
Wood Pigeon	Colm coille	Pigeon of the wood
Collared Dove	Fearán baicdhubh	
Cuckoo	Cuach	
Swift	Gabhlán gaoithe	Fork [tail] wind
Kingfisher	Cruidín	
Sand Martin	Gabhlán gainimh	Gabhlán=fork[tail] gainimh=hole [Where they nest]
Swallow	Fáinleog	Circling
House Martin	Gabhlán binne	Gabhlán=fork[tail] binne=gable [where they nest]
Meadow Pipit	Riabhog mhóna	Little streaked thing of the bog
Pied Wagtail	Glasóg shraide	Street grey
Grey Wagtail	Glasóg liath	Stream grey [where they are often seen]
Dipper	Gabha dubh	Blacksmith [Gabha dubh nan allt, Blacksmith of the stream]
Dunnock	Donnóg	Small brown
Robin	Spideog	Frail thing, tiny child
Stonechat	Caislín cloch	Castle rock
Wheatear	Clochrán	Shingle beach
Song Thrush	Smolach	smol=stain
Redwing	Deargán sneachta	Red thing of the snow
Fieldfare	Sacán	Little sack
Mistle Thrush	Liatráisc	Grey thrush
Blackbird	Lon dubh	Black blackbird
Sedge Warbler	Ceolaire cíbe	Singer of the sedge
Whitethroat	Gilphíb	

Blackcap	Caipín dubh	cap black
Willow Warbler	Ceolaire sailí	Singer of the sallies[willow]
Chiffchaff	Tiuf-teaf	
Goldcrest	Ciorbuí	Yellow crest
Wren	Dreoilín	small creature or withered
Spotted Flycatcher	Cuilire liath	
Great Tit	Meantán mór	To show the muscles [big]
Blue Tit	Meantán gorm	To show the muscles [blue]
Coal Tit	Meantán dubh	To show the muscles [black]
Long-tailed Tit	Meantán earrfhada	To show the muscles [long tail]
Treecreeper	Snag	Creep
Magpie	Snag breac	
Jay	Scréachog	screamer
Jackdaw	Cág	old woman
Rook	Rúcach	miser
Hooded Crow	Feannóg	
Raven	Fiach dubh	Black hunter
Starling	Druid	Speckled dress
House Sparrow	Gealbhan binne	
Chaffinch	Rí rua	Red King
Linnet	Gleoiseach	Chatterer
Redpoll	Deargéadan	Common red face
Goldfinch	Lasair choille	Flame of the wood
Greenfinch	Glasán darach	Green of the oak
Siskin	Siscín	
Bullfinch	Corcrán coille	Scarlet of the wood
Crossbill	<i>Crosghob</i>	
Reed Bunting	<i>Gealóg ghiolcai</i>	Bright little thing of the reeds



Figure 41 - Willow Warbler - *Phylloscopus trochilus* at the Arboretum Pond

Garden birds



Robin



House Sparrow



Blackbird



Song Thrush



Blue Tit



Great Tit



Long Tailed Tit



Coal Tit



Bullfinch



Greenfinch



Goldfinch



Chaffinch

More Garden Birds

Designed by Geoff Hunt Images by Geoff Hunt, Mike Flanagan and Mark Hunt



Wren



House Sparrow female



Dunnock



Waxwing



Blackbird Female



Female Chaffinch



Goldcrest



Starling



Siskin



Redpoll



Pied Wagtail



Blackcap



Jackdaw



Magpie



Rook



Hooded Crow



Woodpigeon



Collared Dove



Swallow



House martin

Countryside Birds



Sparrowhawk



Kestrel



Jay



Spotted Flycatcher



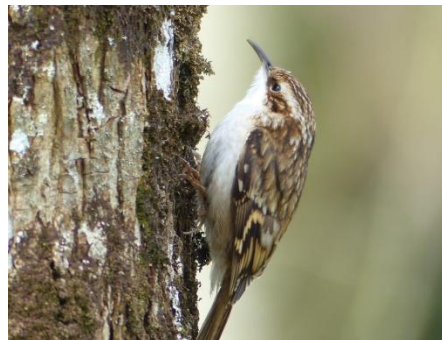
Meadow Pipit



Linnet



Stonechat



Treecreeper



Chiffchaff



Grey Heron



Dipper



Grey Wagtail

Butterflies



Orange Tip



Green veined White



Large White



Meadow Brown



Ringlet



Common Blue



Small Copper



Silver-washed Fritillary



Red Admiral



Small Tortoiseshell



Ringlet



Meadow Brown

Broadford Insects



Blue-tailed Damselfly



Common Hawker Dragonfly



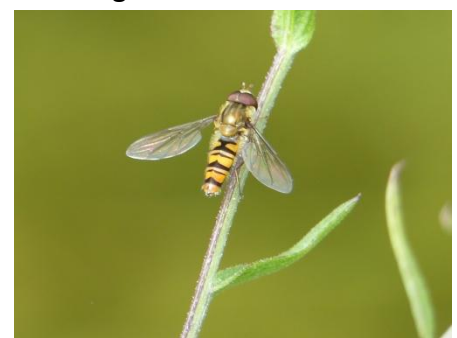
Angle Shades Moth



Noonfly



Green Shieldbug



Marmalade Fly



Hoverfly *Myathropa florea*



Volucella pellucens



Spider *Metellina segmentata*



Barbut's Cuckoo Bee



Bombus pascourum



Hoglouse

Broadford Plants



Bluebells



Sanicle



Enchanter's Nightshade



Violets



Thyme-leaved Speedwell



Greater Bird's-foot Trefoil



Hedge Woundwort



Angelica



Irish Spurge



Scarlet Pimpernel



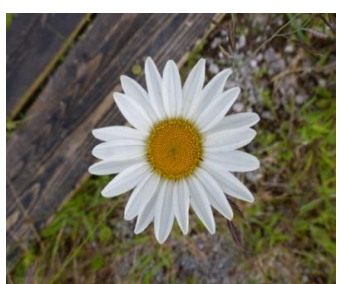
Foxglove



Ivy-leaved Toadflax



Herb-robert



Oxeye Daisy



Lady's-smock



Spear Thistle



Hazel



Aspen



Ash Keys



Wild Cherry



Figure 42 - View from above Gleann Beag