



## Ecology Report: Queens' College proposal to build on the garden of Owlstone Croft: Impact on Paradise Nature Reserve

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### Introduction

Paradise Nature Reserve is a small area of wet, riverine woodland lying in the River Cam corridor which stretches from the City centre to Grantchester Meadows and beyond. It lies at a crucial central point along the corridor, at its narrowest point. Although small, it is surrounded by open countryside, large private gardens and other nature reserves.

Owlstone Croft (the old Nurses' Home) and its recently built nursery are the nearest buildings to the reserve. The 3-story building is set back, but the nursery is adjacent to the boundary. There is a large garden between the main building and the boundary and the planning proposal is to build 4 extensive 3-story buildings on this garden, right up to the boundary with Paradise. It is claimed that it would enhance the reserve, by providing open spaces and water features and that any wildlife disturbed during the building process would soon come back.

This report on the ecology of Paradise makes it clear that this is wishful thinking. In particular, the encroachment of buildings into open space next to the boundary would reduce the essential buffer zone, which currently allows such a small area to remain so biodiverse. Furthermore, the noise and light pollution, both during construction and long-term, would certainly adversely affect the animals in the reserve and in particular, the 8 species of bats – an unusually large number of species.

### BULLET POINTS

- **The Green Corridor** along the river Cam from the City Centre includes Coe Fen and Sheep's Green, Lammas Land, **Paradise Nature Reserve**, Paradise Island and Skaters Meadows.
- **Paradise lies at a crucial central point along the corridor, at its narrowest point.**
- **The nearest existing buildings to the river corridor are the Owlstone Croft Queen's student accommodation and nursery.**
- This river corridor is the most **botanically diverse** region in the entire area of the City.
- Paradise's **wet/flooded woodland is unique** in Cambridge.

- Surrounding **Hedges** are ancient and biodiverse, requiring protection in law.
- Eight species of **Bats** are recorded locally. Bats are fully protected in UK law and it is a criminal offence to interfere with them or their habitat. **Light pollution from Owlstone Croft** remains a problem, in spite of efforts to reduce it in 2019.
- 260 different species of **Vascular Plants** are recorded, including 52 species of trees and shrubs.
- 64 species of **Bryophytes** (mosses and liverworts) are found.
- There are **72** recorded species of **Fungi and Algae**
- 63 species of **Birds** have been recorded in the reserve.
- **Otters** and **Water Voles** have returned to the river: both are protected species.
- 107 species of Invertebrates have been recorded, including 14 **Butterfly species** and 14 **Odonata (Dragonflies and Damselflies)**.
- **Butterbur** has been growing here since 1600s.
- **Musk Beetles** and other rare invertebrates have been found.
- **Rare birds** (Pallas Warbler, Woodcock) and **Mammals** (Pygmy Shrew, Harvest Mouse) have been recorded.
- In the 5 year survey of the wildlife of Cambridge City (**NatHistCam**)<sup>1</sup>, Paradise was mentioned in the monthly blog on 67 occasions, more than any other nature reserve in the City.
- **The Friends of Paradise**<sup>2</sup> (162 members) appreciate, support and provide practical help.

#### **Perceived threats to biodiversity**

- Disruption and noise during construction
- Potential destruction of habitat
- Reduced buffer zone for all organisms
- Greatly increased day and night time activity
- Increased footfall, joggers and cyclists in the reserve
- Damage to ancient hedges
- Light pollution – insects, bats, birds
- Noise pollution, all animals including mammals

#### **Social aspects**

- Increased footfall including joggers / cycles in the reserve
- Noise effect on enjoyment
- Aesthetic effects
- Traffic danger

#### **Paradise Nature Reserve**

Paradise is a Cambridge City Council Local Nature Reserve<sup>3</sup>. It was declared a Statutory LNR in 1996 and is a City Wildlife Site in Cambridge Local Plan (NE12-14)<sup>4</sup>. The site qualifies as a County Wildlife Site because it supports at least 0.5 ha of NVC community W6 (Alder – Stinging Nettle woodland) and also qualifies as a City WS for Greater Pond Sedge swamp NVC community S6. The site is also within the Wildlife Corridor in Cambridge Local Plan (NE15).

Paradise lies on the west bank of the River Cam as it enters the City. The site is within the flood plain. The River Cam forms the south and east boundaries. A drainage ditch carrying road storm water forms part of the west boundary along with Owlstone Road. Lammas car park lies to the north. To the south lies a small channel from the river, which delimits Paradise Island, and along with the road leading to Paradise House forms the southern boundary.

The site lies on Alluvium and Terrace deposits, over Gault clay at an altitude on 10m OD. The site is flat and is a fragment of semi-natural secondary woodland, with a central marsh / lake and tall marsh community. The marsh is usually inundated in winter, while some of the remainder of the reserve floods in extreme weather conditions.

The Reserve consists of approximately 1.2ha of varied and well-structured wet woodland adjacent to the River Cam and includes an area of lake, swamp and fen vegetation. Directly across the river lie the Perse Girls' School Reedbed City WS<sup>4</sup> and also private gardens, a poplar plantation, woods, open fields and wetland. To the north and northeast lie Lammas Land public recreation ground, Sheep's Green WS and Coe Fen City WS. To the west are the 3 large gardens of The Grove (Driftway), the Newnham Croft School, which terminates in a wooded 'forest school' area and the Owlstone Croft Queen's student accommodation, with newly build nursery and old stable block. Southwest past Paradise Island lie several water meadows, including Skaters' Meadow City WS.

**The Green Corridor** along the river Cam from the City Centre therefore includes Coe Fen and Sheep's Green, Lammas Land, Paradise Nature Reserve, Paradise Island and Skaters Meadows. It then goes on into Grantchester Meadows, Byron's Pool and Trumpington.

#### **MAP**

This route is the transition from town to countryside, maintaining much of its original wildness, hosting four nature reserves and providing continuity for wildlife access. Otters, water voles, grass snakes, fish, bats and many species of birds, including owls, find protection here. **Paradise lies at a crucial central point along the corridor, but at its narrowest point. The nearest existing buildings to the whole corridor are the Owlstone Croft Queen's student accommodation, with nursery.**

Thus, while Paradise is quite small, the boundary buffer zone is very large and undoubtedly contributes greatly to its biodiversity. In a Botanical Study 2016, this area was found to be the most diverse region of the entire area of the survey of the City (Appx1 A). Local hedges are also ancient and biodiverse. Particularly notable are those on both sides of the Driftway, and on each side of the school grounds, i.e. between Newnham Croft School and The Grove garden and Newnham Croft School and Owlstone Croft.

#### **Management in the past**

The reserve is managed by the City Council ecologist. (See management plan – however the last update was 2010.)<sup>3</sup>

In wetter years e.g. Jan 2021, Paradise, Coe Fen and Sheep's Green, Skaters Meadows and Grantchester Meadows all turn into lakes. Even the boardwalk in Paradise has flooded, while the riverside path had a

stream running across it from the central swamp and river water to a depth of 50cm. This wet/flooded woodland is unique in Cambridge.

**Paradise habitats** include wet riverine woodland, dryer woodland with tall trees, river bank, open 'meadow' and scrub with nettles and brambles. Major work was carried out in 2013 to remove piles of bark chippings and to clean out part of the open, sedge covered, marshy area to provide deeper water. The meadow area cleared of bark chippings was seeded with a wild-flower mix (Emorsgate EM5).

In 2019, contractors dredged the ditch between Paradise and Paradise Island with heavy machinery, depositing mud and silt over a large area of woodland and snowdrops at the Owlstone Rd end. This action generated **The Friends of Paradise** – a group formed from local people concerned by this devastation, who met to replant and spread snowdrops here. They continue to provide volunteer help as needed, along with the conservation volunteers.

Management of **light pollution** at the Owlstone end of the reserve was also a considerable problem and in 2019/20, with the help of Queens' college, the lighting around the gate area was reduced by shielding and change of light bulbs. This improved, but did not solve the problem, as much of the light came from the windows of the adjacent dwellings.

## **Current biodiversity**

### **Habitats**

Paradise habitats include wet, often flooded woodland, dryer woodland with tall trees, river Cam and river bank, open 'meadow' and scrub with nettles and brambles, providing excellent habitats for fungi, invertebrates, reptiles, birds, mammals and a large variety of plants, including bryophytes.

The marsh is dominated by Reed Sweet Grass and Reed Canary Grass. Four Sedge species have been found along with Gipsywort, Marsh Woundwort, Amphibious Bistort, Celery Leaved Buttercup, and Square-stalked St John's Wort. Lady's Smock is found in the damp Willow carr surrounding the marsh, and Butterbur and the introduced Few-flowered Leek along the riverbank. The Butterbur is notable as it has been recorded in that location for 400 years.

Recent records show that Early Marsh Orchid and Southern Marsh Orchid inhabited marshy ground south of the present car park. The tall herb/grassland community is dominated by Common Nettle, Goosegrass, Cow Parsley and Hogweed.

### **Plants**

In a Botanical Study carried out by Cambridge Natural History Society, finalised in 2016, this area was found to be the most diverse region of the entire area of the survey of the City. In Paradise, 242 different species of Vascular Plants were found, including 52 species of trees and shrubs. (This number has since increased to 260.) The most notable plant was the **Butterbur**, found growing along the river bank in the 1600s by John Ray and still present at this site. Recent additions, since the creation of the lake, were Toad Rush and Round-fruited Rush. (Appx 1,A)

There were also 64 species of **Bryophytes** (mosses and liverworts), which for the dry SE part of the country is a spectacular number. (Appx 1 B)

## Trees and hedges

The Hedge between the School and Owlstone Croft grounds consists mainly of a row of mature lime trees and introduced laurel. However, the understory includes a further 12 species of native woody species, an average of 5.8 per 30 yards, indicating an estimated age of the hedge to be 500-600 years (Hooper's Rule). The Field Maple, Spindle and two Viburnum species are of particular interest, indicating original native hedgerow flora. (Spindle, Prunus, Hawthorn, Ash, Wild Privet, Beech, Dog Rose, Lime, Elder, Field Maple, Wayfaring tree (*Viburnum lantana*) and Guelder rose (*V. Opulus*)) (Appx 1 C).

**Ancient** hedgerows are defined as those which were in existence before the Enclosure Acts of 1720 to 1840. **Species-rich** hedges are defined as those that contain five or more native woody species, on average, along a 30m length. **Important** hedgerows are those which have existed for 30 years or more and meet one of the following criteria: they mark a boundary between parishes existing before 1850; they mark an archaeological feature of a site that is a or noted on the Historic Environment Record; they mark the boundary of a pre-1600 estate or manor or a field system pre-dating the Enclosure Acts. In this context, the hedge between the Croft and the School grounds is ancient, species-rich and important, so needing protection. Hedges are a vital habitat for a wide range of wildlife, providing shelter and food for birds, mammals and insects. (More than 600 plants, 1500 insects, 65 birds and 20 mammal species are known to live or feed in hedgerows.) The species that rely strongly on hedgerows include **Pipistrelle Bat** and **Song Thrush**, both present in the reserve and priority species in the UK Biodiversity Action Plan.

## Trees

The main mature trees in the reserve are Willow and Alder, reflecting the generally wet environment. Ash and Poplar grow on the dryer areas. Where it is safe to do so, trees are allowed to fall and rot on the ground, enhancing the habitat for wood-boring insects and fungi. Understory and ground cover is provided by Hawthorn, Brambles and Dog Rose with large stands of Stinging Nettles.

## Birds

68 species of birds have been recorded in the reserve. The resident breeding birds include Robin, Dunnock, Blue Tit, Long-Tailed Tit, Great Tit, Treecreeper, Blackbird, Song Thrush, Wren, Collared Dove, Wood Pigeon, Stock Dove, Moorhen, Chaffinch, Goldfinch, Greenfinch, Great Spotted Woodpecker. Whitethroat has been recorded as nesting in the tall herb/rank grassland next to the car park. There is a large winter roost of up to 300 Rooks and Jackdaws in the taller trees of the reserve and the adjacent Paradise Island, which is taken over by Herons in the spring, with up to 12 nests. Jay and Magpie are regular visitors. A small flock of feral domestic white Geese have been resident on the triangle for many years and Greylag and Canada Geese are becoming more common.

Kingfisher, Black Headed Gull, Mallard, Snipe, Mute Swan and Little Egret are seen in the reserve or adjacent river. Little Grebe have been seen both on the river and the pond. Cormorants pass through, following the river corridor from their main roost at Logan's Meadow. Common Terns can be seen fishing along the river. Kestrels and Sparrowhawks both hunt along the river, Buzzards and Red Kite are regularly sighted and Tawny Owls can be heard at night.

More occasional birds include Pied Wagtail, Coal Tit, Bullfinch, Green Woodpecker, Coot and Starling. Mistle Thrushes have previously nested in the reserve, but are generally rarer than before. Goldcrest and Nuthatch are all reported regularly.

Various ducks have turned up on the Paradise pond, including Goosander, Tufted Duck and Teal. Winter visitors include a flock of 10-20 Redwings eating the ivy berries and small flocks of Siskin, enjoying the Alder catkins.

Summer visitors include Blackcap, Whitethroat, Willow Warbler, Garden Warbler, occasional Cuckoo and nesting Chiffchaff. Rarities in the last few years were a Spotted Flycatcher, a Woodcock and a Pallas's Warbler, a rare Siberian vagrant (Appx 1, D).

## Bats

Paradise is a Bat Hotspot and the Wildlife Trust runs Punting Bat Tours along the river. No fewer than 8 species have been recorded: Common Pipistrelle, Soprano Pipistrelle, Nathuseus' Pipistrelle, Brown Long-Eared Bat, Serotine, Noctule, Barbastelle and Daubenton's Bat. Common Pipistrelle, Soprano Pipistrelle and Noctule are all relatively common. The other species are rarer; Nathuseus' Pipistrelle and Barbastelle had not been recorded here prior to a survey in 2017. (Appx 1 E).

Bats feed on flying insects. Both the bats themselves and the insects can be badly affected by light pollution. In 2018, efforts were made by Friends of Paradise to reduce the amount of artificial light pollution, both at the Owlstone Croft end and around the Lammas Land car park area. Replacement of white street lights with orange and also some shielding was undertaken. Although there was some improvement, the problem remains, particularly from the windows of buildings immediately adjacent to the Reserve.

In 2017, a study investigated the impact of the low-level lighting studs provided for cyclists along the route over the river Cam at Lammas Land. Studs were provided with "Bat Hats" – a central opaque disc designed to minimise light spill upwards and they were not placed over the river, as Daubenton's Bat uses this as a flyway. Surveys done before (2017) and after (2020) the studs were put in place, confirmed there had been no adverse effect. **Any development at Owlstone Croft would need to exercise extreme caution about light pollution and measure its impact in a similar way.** (Chesham, J. (2020) *Impact of Bat-Friendly Lighting on Bat Activity and Bat Species Diversity at Coe Fen and Sheep's Green, Cambridge. Nature in Cambridgeshire*, **62**:56-61.<sup>5</sup> While there has been no bat survey of Paradise since that time, the Chesham paper refers to sites immediately adjacent.)

All UK bat species are protected by European and UK legislation: the Conservation of Habitats and Species Regulations **2010** and amendments and Schedule 5 of the Wildlife and Countryside Act 1981. This affords complete legal protection to all bats and their roosts. All bat species are protected **by law because their numbers have declined so dramatically**. It is a criminal offence to cause loss of feeding habitats and flight lines, loss of insects to feed on, and development which affects roosts.

## Other mammals

Foxes and Muntjac Deer, together with domestic dogs, are the larger mammals in the woodland. There has been a resurgence of the Otter population nationally and otters are now regular, though nocturnal, residents along the Cam. With the eradication of Mink in East Anglia, Water Voles have also returned and can be seen along the banks of the Cam, including Paradise reserve. Otters and Water Voles are both protected species. Smaller resident species include Stoats, Mice, Voles, Moles and Shrews,

including the Pygmy Shrew. Hedgehogs have not been seen recently, possibly due to the presence of Badgers in the neighbourhood (Appx 1 F).

### Reptiles and Amphibia

**Frogs** (*Rana temporaria*) and **Toads** (*Bufo bufo*) are found in the wetter parts of the reserve. **Grass Snakes** (*Natrix natrix*) are common, often seen swimming in the river, or on one occasion, basking on the stump of a willow tree. (Appx 1 G).

### Fish

13 species of fish are found in the local waters of the Cam, the Rush and Vicar's Brook. These range in size from **Pike** (which can reach a huge 17lb), down to **Sticklebacks** and **Minnows**. Of particular note are the **Brown Trout** and **Eels**. Fishermen fish for **Dace, Perch, Chub** and **Roach** and the river bank of Paradise is a favourite place for them (Appx 1 H).

### Invertebrates

103 species of Invertebrates have been recorded in the reserve, including 14 **Odonata (Dragonflies and Damselflies)**, 13 **Bugs**, 14 **Butterflies** and 7 **Moths**.

Systematic nocturnal moth trapping would undoubtedly find very many more species. The Perse Girls' School Reedbed City WS, on the opposite side of the river, "was well-surveyed" for moths before 2005. Around 150 species were recorded, including the Notable A Pale-lemon Sallow *Xanthia ocellaris*, and the Notable B Creambordered Green-pea *Earias clorana* and Dotted Fan-foot *Macrochilo cribrumalis*.<sup>5</sup> (Diane Garratt, Perse Girls' School.) (Comment from entomologist Paul Rule, "Three interesting species, but not a particularly high number in total. I would expect we would be able to achieve well over 300 if a trap was run weekly throughout the year.)

Besides the nationally scarce **Musk Beetle**, recent records also show two Red Data Book Diptera (fly) species occurring here. **Tree Bumblebees** (*B. hypnorum*), are a recent addition to the UK fauna and there was a large nest in one of the hollow Willow trees. **Honey Bees** and **Wasps** also nest in the hollow trees. **Mayflies** breed in the swampy area and lake – their spring hatch produces swarms of short-lived adults which feed birds, bat and fish alike (Appx 1 I).

### Fungi

The most spectacular fungus in the reserve is the **Chicken of the Woods** which grows mainly on the elderly willow trees and can extend for 1-2 m along the trunk. **Turkey Tail** grows on fallen logs and dead standing trees, as do many other fungi including **Oyster Mushrooms** on dead Willow. Altogether, 70 species of fungi and algae have been recorded (Appx 1 J).

### SUMMARY Areas of concern

#### Removal of buffer zone

Disruption during building

Demolition – hugely wasteful – ecology and climate change

Piling – noise and vibration

#### Destruction of Hedges and trees

## **Light and noise: insects, bats, otters, water voles, other mammals**

### **Social**

Disruption due to houses near to the reserve

Light and noise

Extra footfall and cycling

Impact on peaceful enjoyment

Long-term effects on the village

### **Traffic Danger**

Traffic at pinch points and in single lane roads

Danger at school arrival and home time

### **References**

- 1 NatHistCam project - <http://www.nathistcam.org.uk/> The Nature of Cambridge (about to be published)
- 2 The Friends of Paradise - <https://paradisnaturereserve.wordpress.com/>
- 3 LNR Summary Management Plan PARADISE LOCAL NATURE RESERVE, Cambridge 2001 -2010
- 4 CAMBRIDGE CITY WILDLIFE SITE SURVEY 2005 Paradise pp 104-113, Perse School Reed Bed pp 113-118
- 5 Chesham, J. (2020) Impact of Bat-Friendly Lighting on Bat Activity and Bat Species Diversity at Coe Fen and Sheep's Green, Cambridge. *Nature in Cambridgeshire*, **62**:56-61.
- 6 Bat Conservation Trust. *Bats and artificial lighting in the UK* 2018

Paradise Ecology Report March 2022

Olwen Williams, Newnham resident, ecology graduate and PhD, co-founder of Friends of Paradise in 2019, Committee member and contributing author of NatHistCam project 2017-2022.



## Other NOTES

The School Gardening Club reports activity at **Newnham Croft School**: 100 saplings have been planted in the wild area and the children have under-planted there with snowdrops and aconites.

The school maintenance team have cut back dead branches and cleared ivy and brambles, to open it up until the canopy recovers. Sadly, a **Muntjac** deer population have moved in and are munching their way through the vegetable plot and flower beds. The children have witnessed **Deer**, **Moles**, a **Fox** that has its route along the back of the school grounds and a **Pheasant** that has taken a liking to the wheat bed. There are many more crows and magpies this year.

## Policies to note

### 1 open spaces

[Supporting text: from the *Open Space and Recreation Strategy* 2011, which shows whether each site is important for environmental and/or recreational reasons. 'An essential part of Cambridge's character stems from the relationship between the City's buildings and its open spaces... These spaces form a number of corridors of green semi-natural habitat that link the heart of the built-up area to the surrounding countryside... The open spaces and grounds around buildings and the extent of green spaces within the City form a vital part of the character of Cambridge... These qualities are fragile, finite and irreplaceable, and should be safeguarded... With increasing pressure for development in the City, it is particularly important that its green spaces are protected and enhanced... Where possible, existing open spaces should be linked in a green grid within the City and to the surrounding rural areas.']

### 2 urban edge and green belt

**'Development on the urban edge, including sites within and abutting green infrastructure corridors and the Cambridge Green Belt, open spaces and the River Cam corridor, will only be supported where it: a. responds to, conserves and enhances the setting, and special character of the city, in accordance with the Cambridge Landscape Character Assessment 2003, Green Belt assessments, Cambridgeshire Green Infrastructure Strategy 2011 and their successor documents...'**

### 3 garden developments

**'Proposals for development on sites that form part of a garden...or that subdivide an existing residential plot will only be permitted where: a. the form, height and layout of the proposed development is appropriate to the surrounding pattern of development and the character of the area; b. sufficient garden space and space around existing dwellings is retained, especially where these spaces and any trees are worthy of retention due to their contribution to the character of the area and their importance for biodiversity.....'**

#### 4 biodiversity

**‘Development will be permitted which: a. protects priority species and habitats; and b. enhances habitats and populations of priority species. Proposals that harm or disturb populations and habitats should: c. minimise any ecological harm; and d. secure achievable mitigation and/or compensatory measures, resulting in either no net loss or a net gain of priority habitat and local populations of priority species.**

#### 5 precedent for refusal

**In the light of the harm the scheme would pose to a highly valued and well Protected Open Space, we now respectfully request on behalf of ARBS that permission is refused.**

Comment from Rachel Bates, of the Cambridgeshire Bat Group, included “The impacts of lighting on bats and the nature reserve are something that the Local Planning Authority will have to take into consideration as part of the application process, and a specific ecology report will have been submitted for this purpose, an Ecological Impact Assessment or similar, by an ecological consultancy.” “The main problem is light spill from windows etc. Some species of bat such as the Pipistrelles are quite tolerant of light pollution and will even forage around street lights as they attract insects. But other species such as Brown Long-eared and Barbastelle are less light-tolerant, and it is these species which light spill can cause problems for.” “I would add to your response that you would expect a bat-specific lighting plan to be produced by the applicant that will address the issues of light pollution on light-sensitive species, including street lighting and security lighting - but this does not include residential windows etc. And finish by saying that the proposed development would therefore increase light spill onto the reserve to the likely detriment of foraging and commuting bats.”

1 NatHistCam project - <http://www.nathistcam.org.uk/> The Nature of Cambridge (about to be published)

2 The Friends of Paradise - <https://paradisenaturereserve.wordpress.com/>

3 LNR Summary Management Plan PARADISE LOCAL NATURE RESERVE, Cambridge 2001 -2010

4 CAMBRIDGE CITY WILDLIFE SITE SURVEY 2005 Paradise pp 104-113,

5 CAMBRIDGE CITY WILDLIFE SITE SURVEY 2005 Perse School Reed Bed pp 113-118 (Although entitled WILDLIFE, this survey is almost exclusively devoted to vascular plants.)

6 Chesham, J. (2020) Impact of Bat-Friendly Lighting on Bat Activity and Bat Species Diversity at Coe Fen and Sheep’s Green, Cambridge. *Nature in Cambridgeshire*, **62**:56-61.

Olwen Williams, Newnham resident, ecology graduate and PhD, co-founder of Friends of Paradise in 2019, Committee member and contributing author of NatHistCam project 2017-2022.



## Species Lists Paradise Nature Reserve 2022

### A Vascular Plants

Field maple	<i>Acer campestre</i>
Sycamore	<i>Acer pseudoplatanus</i>
Yarrow	<i>Achillea millefolium</i>
Ground elder	<i>Aegopodium podagraria</i>
Horse Chestnut	<i>Aesculus hippocastaneum</i>
Common bent	<i>Agrostis capillaris</i>
Creeping bent	<i>Agrostis stolonifera</i>
Hollyhock	<i>Alcea rosea</i>
Garlic Mustard	<i>Alliaria petiolata</i>
Few-flowered leek	<i>Allium paradoxum</i>
Alder	<i>Alnus glutinosa</i>
Meadow foxtail	<i>Alopecurus pratensis</i>
Blue anemone	<i>Anemone apennina</i>
Angelica	<i>Angelica sylvestris</i>
Barren Broom	<i>Anisantha sterilis</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Fools watercress	<i>Apium nodiflorum</i>
Lesser burdock	<i>Arctium minus</i>
Mugwort	<i>Artemisia vulgaris</i>
Rare lords & ladies	<i>Arum italicum</i>
Lord's and Ladies	<i>Arum maculatum</i>
Common orache	<i>Atriplex patula</i>
Spear-leaved Orache	<i>Atriplex prostrata</i>
Water fern	<i>Azolla filiculoides</i>
Black horehound	<i>Ballota nigra</i>
Common wintercress	<i>Barbarea vulgaris</i>
Daisy	<i>Bellis perennis</i>
Lesser water parsnip	<i>Berula erecta</i>
Birch	<i>Betula pendula</i>
Downy Birch	<i>Betula pubescens</i>
Wood False-brome	<i>Brachypodium sylvaticum</i>
Rape	<i>Brassica napus</i>

White bryony	<i>Bryonia dioica</i>
Buddleia	<i>Buddleia davidii</i>
Water starwort	<i>Callitriche sp</i>
Marsh marigold	<i>Caltha palustris</i>
Hedge Bindweed	<i>Calystegia sepium</i>
Large Bindweed	<i>Calystegia sylvatica</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Hairy bittercress	<i>Cardamine hirsuta</i>
Lady's smock	<i>Cardamine pratensis</i>
Wetted thistle	<i>Carduus crispus</i>
Slender tufted rush	<i>Carex acuta</i>
Lesser pond sedge	<i>Carex acutiformis</i>
Tufted sedge	<i>Carex elata</i>
Hairy sedge	<i>Carex hirta</i>
Common sedge	<i>Carex nigra</i>
False fox-sedge	<i>Carex otrubae</i>
Pendulous sedge	<i>Carex pendula</i>
Remote sedge	<i>Carex remota</i>
Greater pond sedge	<i>Carex riparia</i>
Black knapweed	<i>Centaurea nigra</i>
Common mouse-ear	<i>Cerastium fontanum</i>
Sticky mouse-ear	<i>Cerastium glomeratum</i>
Fat hen	<i>Chenopodium album</i>
Many-seeded goosefoot	<i>Chenopodium polyspermum</i>
Creeping thistle	<i>Cirsium arvense</i>
Marsh thistle	<i>Cirsium palustre</i>
Spear thistle	<i>Cirsium vulgare</i>
Traveller's joy	<i>Clematis vitalba</i>
Canadian fleabane	<i>Conyza canadensis</i>
Guernsey fleabane	<i>Conyza sumatrensis</i>
Dogwood	<i>Cornus sanguineasanguinea</i>
Dogwood	<i>Cornus sanguinea australis</i>
Hazel	<i>Corylus avellana</i>
Hawthorn	<i>Crataegus monogyna</i>
Beaked hawksbeard	<i>Crepis vesicaria</i>
Cyclamen	<i>Cyclamen hederifolium</i>
Ivy-leaved toadflax	<i>Cymbalaria muralis</i>
Cocksfoot	<i>Dactylis glomerata</i>
Early marsh orchid	<i>Dactylorhiza incarnata</i>
Southern marsh orchid	<i>Dactylorhiza praetermissa</i>
Tufted hair-grass	<i>Deschampsia cespitosa</i>
Foxglove	<i>Digitalis purpurea</i>
Annual wall rocket	<i>Diplotaxis muralis</i>
Teasel	<i>Dipsacus fullonum</i>
Male fern	<i>Dryopteris filix-mas</i>

Nuttall's waterweed	<i>Elodea nuttallii</i>
Bearded couch	<i>Elymus caninus</i>
Couch grass	<i>Elytrigia repens</i>
Greater willowherb	<i>Epilobium hirsutum</i>
Broad-leaved willowherb	<i>Epilobium montanum</i>
Hoary willow-herb	<i>Epilobium parviflorum</i>
Square-stemmed willowherb	<i>Epilobium tetragonum</i>
Common horsetail	<i>Equisetum arvense</i>
Winter aconite	<i>Eranthis hyemalis</i>
Hemp agrimony	<i>Eupatorium cannabinum</i>
Russian vine	<i>Fallopia baldschuanica</i>
Tall brome grass	<i>Festuca gigantea</i>
Meadowsweet	<i>Filipendula ulmaria</i>
Ash	<i>Fraxinus excelsior</i>
Crown imperial	<i>Fritillaria imperialis</i>
Caucasian Snowdrop	<i>Galanthus caucasicus</i>
Snowdrop	<i>Galanthus nivalis</i>
Goosegrass	<i>Galium aparine</i>
Common marsh bedstraw	<i>Galium palustre</i>
Cut-leaved cranesbill	<i>Geranium dissectum</i>
French crane's-bill	<i>Geranium endressii</i>
Dove's foot cranesbill	<i>Geranium molle</i>
Small-flowered Crane's-bill	<i>Geranium pusillum</i>
Herb Robert	<i>Geranium robertianum</i>
Herb Bennet	<i>Geum urbanum</i>
Gladiolus	<i>Gladiolus communis</i>
Ground ivy	<i>Glechoma hederacea</i>
Floating Sweet-grass	<i>Glyceria fluitans</i>
Reed sweet-grass	<i>Glyceria maxima</i>
Ivy	<i>Hedera helix</i>
Hogweed	<i>Heracleum sphondylium</i>
Yorkshire Fog	<i>Holcus lanatus</i>
Wall barley	<i>Hordeum murinum</i>
Hop	<i>Humulus lupulus</i>
Spanish bluebell	<i>Hyacinthoides hispanica</i>
Floating waterpennywort	<i>Hydrocotyle ranunculoides</i>
Square stalked St John's wort	<i>Hypericum tetrapterum</i>
Holly	<i>Ilex aquifolium</i>
Himalayan balsam	<i>Impatiens glandulifera</i>
Small Balsam	<i>Impatiens parviflora</i>
Stinking iris	<i>Iris foetidissima</i>
Yellow iris	<i>Iris pseudacorus</i>
English walnut	<i>Juglans regia</i>
Hard rush	<i>Juncus inflexus</i>
Prickly Lettuce	<i>Lactuca serriola</i>

White dead nettle	<i>Lamium album</i>
Spotted dead nettle	<i>Lamium maculatum</i>
Red dead nettle	<i>Lamium purpureum</i>
Nipplewort	<i>Lapsana communis</i>
Duckweed	<i>Lemna minor</i>
Least duckweed	<i>Lemna minuta</i>
Wild privet	<i>Ligustrum vulgare</i>
Ryegrass	<i>Lolium perenne</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Honesty	<i>Lunaria annua</i>
Gipsywort	<i>Lycopus europaeus</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Oregon grape	<i>Mahonia aquifolium</i>
Mallow	<i>Malva sylvestris</i>
Pineapple mayweed	<i>Matricaria discoidea</i>
Spotted medick	<i>Medicago arabica</i>
Black medick	<i>Medicago lupulina</i>
Water mint	<i>Mentha aquatica</i>
Dogs mercury	<i>Mercurialis perennis</i>
Water forget-me-not	<i>Myosotis scorpioides</i>
Wood Forget-me-not	<i>Myosotis sylvatica</i>
Water chickweed	<i>Myosoton aquaticum</i>
Garden daffodil	<i>Narcissus sp</i>
Yellow Water-lily	<i>Nuphar lutea</i>
Green alkanet	<i>Pentaglottis empervirens</i>
Amphibious bistort	<i>Persicaria amphibia</i>
Water-pepper	<i>Persicaria hydropiper</i>
Redleg	<i>Persicaria maculosa</i>
Butterbur	<i>Petasites hybridus</i>
Reed Canary-grass	<i>Phalaris arundinacea</i>
Timothy	<i>Phleum pratense</i>
Hart's tongue fern	<i>Phyllitis scolopendrium</i>
Prickly oxtongue	<i>Picris echiodes</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Greater plantain	<i>Plantago major</i>
London plane	<i>Platanus x hispanica</i>
Annual meadow grass	<i>Poa annua</i>
Rough meadow-grass	<i>Poa trivialis</i>
Equal-leaved knotgrass	<i>Polygonum arenastrum</i>
Knotgrass	<i>Polygonum aviculare</i>
Black Poplar	<i>Populus nigra ssp.betulifolia</i>
Aspen	<i>Populus tremula</i>
Hybrid black poplar	<i>Populus x Canadensis</i>
Grey poplar	<i>Populus x canescens</i>
Broad-leaved pondweed	<i>Potamogeton natans</i>

Perfoliate pondweed	<i>Potamogeton perfoliatus</i>
Silverweed	<i>Potentilla anserina</i>
Primrose	<i>Primula vulgaris</i>
Wild Plum	<i>Prunus domestica</i>
Blackthorn	<i>Prunus spinosa</i>
Turkey oak	<i>Quercus cerris</i>
Oak	<i>Quercus robur</i>
Meadow buttercup	<i>Ranunculus acris</i>
Bulbous buttercup	<i>Ranunculus bulbosa</i>
Lesser celandine	<i>Ranunculus ficaria</i>
Lesser celandine	<i>Ranunculus ficaria ssp bulbifer</i>
Lesser celandine	<i>Ranunculus ficaria ssp ficaria</i>
Creeping buttercup	<i>Ranunculus repens</i>
Celery-leaved buttercup	<i>Ranunculus sceleratus</i>
Buckthorn	<i>Rhamnus catharticus</i>
Black currant	<i>Ribes nigrum</i>
Red currant	<i>Ribes rubrum</i>
False-acacia	<i>Robinia pseudoacacia</i>
Dog rose	<i>Rosa canina</i>
Himalayan Giant	<i>Rubus armeniacus</i>
Dewberry	<i>Rubus caesius</i>
Blackberry	<i>Rubus fruticosus</i>
Elm-leaf Blackberry	<i>Rubus ulmifolius</i>
Bramble	<i>Rubus vestitus</i>
Clustered dock	<i>Rumex conglomeratus</i>
Curled dock	<i>Rumex crispus</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Wood Dock	<i>Rumex sanguineus</i>
Procumbent Pearlwort	<i>Sagina procumbens</i>
Arrow-head	<i>Sagittaria sagittifolia</i>
White Willow	<i>Salix alba var. alba</i>
Golden Willow	<i>Salix alba var. vitellina</i>
Goat Willow	<i>Salix caprea</i>
Willow hybrid	<i>Salix caprea x S.viminalis</i>
Grey Willow	<i>Salix cinerea</i>
Rusty Sallow	<i>Salix cinerea ssp.oleifolia</i>
Willow hybrid Willow hybrid	<i>Salix cinerea x S.viminalis</i>
Crack Willow	<i>Salix fragilis var. fragilis</i>
Crack Willow	<i>Salix fragilis var. furcata</i>
Bedford Willow	<i>Salix fragilis var. russelliana</i>
Purple willow	<i>Salix purpurea</i>
Osier	<i>Salix viminalis</i>
Willow hybrid	<i>Salix x calodendron</i>
Willow hybrid	<i>Salix x rubens</i>
Weeping Willow	<i>Salix x sepulcralis nothovar chrysocoma</i>

Elder	<i>Sambucus nigra</i>
Water figwort	<i>Scrophularia auriculata</i>
Skullcap	<i>Scutellaria galericulata</i>
Ragwort	<i>Senecio jacobaea</i>
Groundsel	<i>Senecio vulgaris</i>
Red Campion	<i>Silene dioica</i>
White Campion	<i>Silene latifolia</i>
Charlock	<i>Sinapis arvensis</i>
Hedge mustard	<i>Sisymbrium officinale</i>
Black nightshade	<i>Solanum nigrum</i>
Potato	<i>Solanum tuberosum</i>
Canadian goldenrod	<i>Solidago canadensis</i>
Prickly sow thistle	<i>Sonchus asper</i>
Smooth Sow thistle	<i>Sonchus oleraceus</i>
Unbranched bur-reed	<i>Sparganium emersum</i>
Branched bur reed	<i>Sparganium erectum</i>
Marsh woundwort	<i>Stachys pallustris</i>
Hedge woundwort	<i>Stachys sylvatica</i>
Hybrid woundwort	<i>Stachys x ambigua</i>
Chickweed	<i>Stellaria media</i>
Snowberry	<i>Symphoricarpos albus</i>
Common comfrey	<i>Symphytum officinale</i>
White comfrey	<i>Symphytum orientale</i>
Lilac	<i>Syringa vulgaris</i>
Feverfew	<i>Tanacetum parthenium</i>
Dandelion	<i>Taraxacum agg</i>
Yew	<i>Taxus baccata</i>
Lesser trefoil	<i>Trifolium dubium</i>
Red clover	<i>Trifolium pratense</i>
White clover	<i>Trifolium repens</i>
Garden Tulip	<i>Tulipa gesneriana</i>
Coltsfoot	<i>Tussilago farfara</i>
Camperdown Elm	<i>Ulmus camperdownii</i>
Smooth-leaved Elm	<i>Ulmus carpinifolia</i>
Wych Elm	<i>Ulmus glabra</i>
Common elm	<i>Ulmus minor</i>
English Elm	<i>Ulmus procera</i>
Huntingdon Elm	<i>Ulmus x vegeta</i>
Nettle	<i>Urtica dioica</i>
Fen Nettle	<i>Urtica dioica ssp galeopsifolia</i>
Wall Speedwell	<i>Veronica arvensis</i>
Brooklime	<i>Veronica beccabunga</i>
Lilac ivy leaved speedwell	<i>Veronica hederifolia ssp lucorum</i>
Guelder rose	<i>Viburnum opulus</i>
Wayfaring tree	<i>Viburnum lantana</i>



Common vetch	<i>Vicia sativa</i>
Sweet violet	<i>Viola odorata</i>
Garden Pansy	<i>Viola x wittrockiana</i>

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**B Bryophytes (Mosses and Liverworts)**

<i>Brachythecium rutabulum</i>
<i>Bryoerythrophyllum recurvirostrum</i>
<i>Bryum argenteum</i>
<i>Bryum capillare</i>
<i>Bryum dichotomum</i>
<i>Bryum radiculosum</i>
<i>Bryum rubens</i>
<i>Bryum ruderae</i>
<i>Calliergonella cuspidata</i>
<i>Ceratodon purpureus</i>
<i>Cratoneuron filicinum</i>
<i>Cryphaea heteromalla</i>
<i>Dicranella schreberiana</i>
<i>Didymodon insulanus</i>
<i>Didymodon luridus</i>
<i>Didymodon rigidulus</i>
<i>Didymodon sinuosus</i>
<i>Didymodon vinealis</i>
<i>Drepanocladus aduncus</i>
<i>Fissidens taxifolius</i>
<i>Frullania dilatata</i>
<i>Funaria hygrometrica</i>
<i>Grimmia pulvinata</i>
<i>Hennediella macrophylla</i>
<i>Homalothecium sericeum</i>
<i>Hypnum cupressiforme</i> s.l.
<i>Hypnum cupressiforme</i> var. <i>cupressiforme</i>
<i>Kindbergia praelonga</i>
<i>Kindbergia praelonga</i>
<i>Leptobryum pyriforme</i>
<i>Leptodictyum riparium</i>
<i>Leskea polycarpa</i>
<i>Lewinskya affinis</i>
<i>Lewinskya striata</i>
<i>Lophocolea bidentata</i>

<i>Lophocolea heterophylla</i>
<i>Lunularia cruciata</i>
<i>Marchantia polymorpha</i>
<i>Metzgeria furcata</i>
<i>Metzgeria violacea</i>
<i>Mnium hornum</i>
<i>Myriocoleopsis minutissima</i>
<i>Orthotrichum anomalum</i>
<i>Orthotrichum diaphanum</i>
<i>Oxyrrhynchium hians</i>
<i>Oxyrrhynchium speciosum</i>
<i>Pellia endiviifolia</i>
<i>Physcomitrium pyriforme</i>
<i>Plagiomnium undulatum</i>
<i>Polytrichum juniperinum</i>
<i>Pseudocrossidium</i> <i>hornschuchianum</i>
<i>Pseudocrossidium revolutum</i>
<i>Pseudoscleropodium purum</i>
<i>Radula complanata</i>
<i>Rhynchostegium confertum</i>
<i>Rhynchostegium riparioides</i>
<i>Streblotrichum convolutum</i>
<i>Syntrichia latifolia</i>
<i>Syntrichia ruralis</i> var. <i>ruralis</i>
<i>Syntrichia virescens</i>
<i>Thamnobryum alopecurum</i>
<i>Thuidium tamariscinum</i>
<i>Tortula muralis</i>
<i>Ulota bruchii</i>

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### **C Woody Species in the hedge between Owlstone Croft and Newnham Croft School**

Spindle
Prunus
Hawthorn
Ash
Privet
Beech
Rose
Lime
Elder

Hazel
Field maple
Wayfaring tree
Guelder rose

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#### D Birds

Blackbird	<i>Turdus merula</i>
Blackcap	<i>Sylvia articapilla</i>
Blue tit	<i>Parus caeruleus</i>
Bullfinch	<i>Pyrrhula pyrrhula</i>
Cetti's Warbler	<i>Cettia cetti</i>
Chaffinch	<i>Fringilla coelebs</i>
Chiffchaff	<i>Phylloscopus collybita</i>
Coal tit	<i>Parus ater</i>
Collared dove	<i>Streptopelia decaocto</i>
Coot	<i>Fulica atra</i>
Carrion Crow	<i>Corvus corone</i>
Cormorant	<i>Phalacrocorax carbo</i>
Cuckoo	<i>Cuculus canorus</i>
Dunnock	<i>Prunella modularis</i>
Gadwall	<i>Mareca (Anas) strepera</i>
Garden warbler	<i>Sylvia borin</i>
Goldcrest	<i>Regulus regulus</i>
Goldfinch	<i>Carduelis carduelis</i>
Goosander	<i>Mergus merganser</i>
Goose, Canada	<i>Branta canadensis</i>
Goose, Greylag	<i>Anser anser</i>
Goose, white	<i>Anser cyanoides</i>
Great tit	<i>Parus major</i>
Greenfinch	<i>Carduelis chloris</i>
Grey Wagtail	<i>Motacilla cinerea</i>
Gull, black-headed	<i>Larus ridibundus</i>
Heron	<i>Ardea cinerea</i>
Jay	<i>Garrulus glandarius</i>
Kestrel	<i>Falco tinnunculus</i>
Kingfisher	<i>Alcedo atthis</i>
Lesser whitethroat	<i>Sylvia curruca</i>
Little Grebe	<i>Tachybaptus ruficollis</i>
Long tailed tit	<i>Aegithalos caudatus</i>
Magpie	<i>Pica pica</i>
Mallard	<i>Anas platyrhynchos</i>
Mistle thrush	<i>Turdus viscivorus</i>
Moorhen	<i>Gallinula chloropus</i>
Nuthatch	<i>Sitta europaea</i>
Pallas Warbler	<i>Phylloscopus proregulus</i>

Pheasant	<i>Phasianus colchicus</i>
Pigeon, feral	<i>Columba livia</i>
Redpoll	<i>Carduelis flammea</i>
Redwing	<i>Turdus iliacus</i>
Robin	<i>Erithacus rubecula</i>
Rook	<i>Corvus frugilegus</i>
Sedge warbler	<i>Acrocephalus schoenobaenus</i>
Siskin	<i>Carduelis spinus</i>
Snipe	<i>Gallinago gallinago</i>
Song thrush	<i>Turdus philomelos</i>
Sparrowhawk	<i>Accipiter nisus</i>
Spotted flycatcher	<i>Muscicapa striata</i>
Starling	<i>Sturnus vulgaris</i>
Swallow	<i>Hirundo rustica</i>
Swan, mute	<i>Cygnus olor</i>
Swift	<i>Apus apus</i>
Tawny owl	<i>Strix aluco</i>
Teal	<i>Anas crecca</i>
Treecreeper	<i>Certhia familiaris</i>
Tufted duck	<i>Aythya fuligula</i>
Wagtail, grey	<i>Motacilla cinerea</i>
Wagtail, pied	<i>Motacilla alba</i>
Water Rail	<i>Rallus aquaticus</i>
Whitethroat	<i>Sylvia communis</i>
Willow warbler	<i>Phylloscopus trochilus</i>
Wood pigeon	<i>Columba palumbus</i>
Woodcock	<i>Scolopax rusticola</i>
Woodpecker, great spotted	<i>Dendrocopus major</i>
Woodpecker, green	<i>Picus viridis</i>
Wren	<i>Troglodytes troglodytes</i>

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## **E Bats**

Common Pipistrelle	<i>Pipistrellus pipistrellus</i>
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>
Nathuseus' Pipistrelle	<i>Pipistrellus nathusii</i>
Brown Long-Eared Bat	<i>Plecotus auritus</i>
Serotine	<i>Eptesicus serotinus</i>
Noctule	<i>Nyctalus noctula</i>
Barbastelle	<i>Barbastella barbastellus</i>
Daubenton's Bat	<i>Myotis daubentonii</i>

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## **F Other Mammals**

Wood mouse	<i>Apodemus sylvaticus</i>
Water vole	<i>Arvicola terrestris</i>
Hedgehog	<i>Erinaceus europaeus</i>

Otter	<i>Lutra lutra</i>
Field vole, short tailed	<i>Microtus agrestis</i>
Mole	<i>Talpa europaea</i>
Mouse, harvest	<i>Micromys minutus</i>
Muntjac	<i>Muntiacus reevesi</i>
Mouse	<i>Mus sp.</i>
Stoat	<i>Mustela erminea</i>
Brown rat	<i>Ratus norvegicus</i>
Squirrel, grey	<i>Sciurus carolinensis</i>
Shrew, common	<i>Sorex araneus</i>
Shrew, pygmy	<i>Sorex minutus</i>
Fox	<i>Vulpes vulpes</i>

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## **G Reptiles and Amphibia**

Grass snake	<i>Natrix natrix</i>
Toad	<i>Bufo bufo</i>
Frog	<i>Rana temporaria</i>

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## **H Fish**

Eel	<i>Anguilla anguilla</i>
Stoneloach	<i>Barbatula barbatula</i>
Spined Loach	<i>Cobitis taenia</i>
Bullhead	<i>Cottus gobio</i>
Pike	<i>Esox lucius</i>
Stickleback	<i>Gasterosteus aculeatus</i>
Bullhead (Miller's Thumb)	<i>Cottus gobio</i>
Dace	<i>Leuciscus leuciscus</i>
Gudgeon	<i>Gobio gobio</i>
Minnow	<i>Phoxinus phoxinus</i>
Ninespine Stickleback	<i>Pungitius pungitius</i>
Perch	<i>Perca fluviatilis</i>
Roach	<i>Rutilus rutilus</i>
Trout	<i>Salmo trutta</i>
Chub	<i>Squalius cephalus</i>

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## **I Invertebrates**

<b>Beetles</b>	
Musk beetle	<i>Aromia moschata</i>
a soldier beetle	<i>Cantharis figurata</i>
a soldier beetle	<i>Cantharis pallida</i>
Kidney-spot Ladybird	<i>Chilocorus renipustulatus</i>
7-spot Ladybird	<i>Coccinella septempunctata</i>
Willow Flee Beetle	<i>Crepidodera aurata</i>
a fungus eating beetle	<i>Diaperis boleti</i>

Lesser Stag beetle	<i>Dorcus parallelepipedus</i>
A water beetle	<i>Halplus confinis</i>
Orange Ladybird	<i>Halyzia sedecimguttata</i>
Harlequin Ladybird	<i>Harmonia axyridis</i>
Malachite Beetle	<i>Malachius bipustulatus</i>
a weevil	<i>Nanophyes marmoratus</i>
a ground beetle	<i>Notiophilus biguttatus</i>
a weevil	<i>Otiorhynchus armadillo</i>
14-spot Ladybird	<i>Propylea quattuordecimpunctata</i>
Red-Headed Cardinal Beetle	<i>Pyrochroa serraticornis</i>
Black Snail Beetle	<i>Silpha atrata</i>
a rove beetle	<i>Tachinus rufipes</i>
<b>Butterflies</b>	
Peacock	<i>Aglais io</i>
Tortoiseshell	<i>Aglais urticae</i>
Orange Tip	<i>Anthocharis cardamines</i>
Holly blue	<i>Celastrina argiolus</i>
Brimstone Butterfly	<i>Gonepteryx rhamni</i>
Meadow Brown	<i>Maniola jurtina</i>
Large White	<i>Pieris brassicae</i>
Green-veined White	<i>Pieris napi</i>
Small White	<i>Pieris rapae</i>
Comma	<i>Polygonum c-album</i>
Gatekeeper	<i>Pyronia tithonus</i>
Essex skipper	<i>Thymelicus lineola</i>
Red Admiral	<i>Vanessa atalanta</i>
Painted Lady	<i>Vanessa cardui</i>
<b>Moths</b>	
Meadow Long-horn	<i>Cauchas rufimitrella</i>
Mullein	<i>Cucullia verbasci</i>
Clouded Border	<i>Lomaspilis marginata</i>
Goat	<i>Cossus cossus</i>
Broad-bordered Yellow Underwing	<i>Noctua fimbriata</i>
Willow Bent-wing	<i>Phyllocnistis saligna</i>
White-barred Alder Pigmy	<i>Stigmella glutinosae</i>
Blood-vein	<i>Timandra comae</i>
<b>Bugs</b>	
Hawthorn Shieldbug	<i>Acanthosoma haemorrhoidale</i>
Common Flower Bug	<i>Anthocoris nemorum</i>
Dock Bug	<i>Coreus marginatus</i>
Red currant aphid	<i>Cryptomyzus ribis</i>
Parent Bug	<i>Elasmucha grisea</i>
Brasica Shieldbug	<i>Eurydema oleracea</i>
a plant bug	<i>Heterotoma planicornis</i>
European cinch bug	<i>Ischnodemus sabuleti</i>

Yarrow aphid	<i>Macrosiphoniella millefolii</i>
Water Scorpion	<i>Nepa cinerea</i>
Common Green Shieldbug	<i>Palomena prasina</i>
Red-legged Shieldbug	<i>Pentatoma rufipes</i>
Large Willow Aphid	<i>Tuberolachnus salignus</i>
<b>Dragonflies and Damselflies 18</b>	
Southern Migrant Hawker	<i>Aeshna affinis</i>
Southern Hawker	<i>Aeshna cyanea</i>
Brown Hawker	<i>Aeshna grandis</i>
Migrant Hawker	<i>Aeshna mixta</i>
Emperor Dragonfly	<i>Anax imperator</i>
Hairy Dragonfly	<i>Brachytron pratense</i>
Banded Demoiselle	<i>Calopteryx splendens</i>
Willow Emerald Damselfly	<i>Chalcolestes viridis</i>
Azure Damselfly	<i>Coenagrion puella</i>
Common Blue Damselfly	<i>Enallagma cyathigerum</i>
Red eyed Damselfly	<i>Erythroma najas</i>
Blue-tailed Damselfly	<i>Ischnura elegans</i>
Emerald Damselfly	<i>Lestes sponsa</i>
Broad-bodied Chaser	<i>Libellula depressa</i>
Four-spotted Chaser	<i>Libellula quadrimaculata</i>
Large Red Damselfly	<i>Pyrrhosoma nymphula</i>
Ruddy Darter	<i>Sympetrum sanguineum</i>
Common Darter	<i>Sympetrum striolatum</i>
<b>Bees</b>	
Common Carder Bee	<i>Bombus pascuorum</i>
Buff-tailed Bumblebee	<i>Bombus terrestris</i>
Ivy Bee	<i>Coletes hederae</i>
Orange-vented Mason Bee	<i>Osmia leaiana</i>
Tree Bumblebee	<i>Bombus hypnorum</i>
<b>Flies</b>	
Owl midge	<i>Boreoclytoceris ocellaris</i>
a cranefly	<i>Cheilotrichia cinerascens</i>
Blackberry Leaf Midge	<i>Dasineura plicatrix</i>
a gall fly	<i>Dasineura urticae</i>
a cranefly	<i>Erioptera griseipennis</i>
a gall midge	<i>Janetiella lemeei</i>
a cranefly	<i>Limonia nubeculosa</i>
a cranefly	<i>Limonia phragmitidis</i>
a house fly	<i>Phaonia subventa</i>
a leaf mining fly	<i>Phytomyza glechomae</i>
Pellucid Fly	<i>Volucella pellucens</i>
Scorpionfly	<i>Panorpa communis</i>
<b>Sawflies</b>	
a Sawfly	<i>Aglaostigma aucupariae</i>

<b>Mites</b>	
a gall mite	<i>Aceria nalepai</i>
Sycamore gall mite	<i>Aculodes cephaloneus</i>
a gall mite	<i>Phyllocoptes depressus</i>
<b>Molluscs</b>	
Whirlpool Ramshorn	<i>Anisus vortex</i>
Snail, brown lipped	<i>Cepaea nemoralis</i>
Snail, slippery moss	<i>Cochlicopa lubrica</i>
Snail, common garden	<i>Cornu aspersa</i>
Slug, great grey	<i>Limax maximus</i>
Great Pond Snail	<i>Lymnaea stagnalis</i>
Snail, cellar	<i>Oxychilus cellarius</i>
Snail, Dropanaud's glass	<i>Oxychilus dropanaudi</i>
Keeled Ramshorn	<i>Planorbis carinatus</i>
Moss Chrysalis Snail	<i>Pupilla muscorum</i>
Ear Pond Snail	<i>Radix auricularia</i>
Amber snail	<i>Succinea putris</i>
<b>Various</b>	
Two-spotted Water Hoglouse	<i>Asellus aquaticus</i>
Green Drake Mayfly	<i>Ephemera danica</i>
Centipede	<i>Haplophilus subterraneus</i>
A Caddis fly	<i>Limnephilus rhombiscus</i>
Centipede	<i>Lithobius forficatus</i>
Earthworm	<i>Lumbricus terrestris</i>
Woodlouse, common	<i>Oniscus asellus</i>
Millipede, black	<i>Ophiulus pilosus</i>
Dark bush cricket	<i>Pholidoptera griseoaptera</i>
Millipede, flat-backed	<i>Polydesmus complanatus</i>
Willow gall	<i>Pontania pedunculi</i>
Spider mite	<i>Tetranychus sp</i>

107 Many invertebrate taxa, e.g. Spiders, Beetles, Flies have not been surveyed at all. nocturnal moth trapping would undoubtedly find very many more species.

Systematic

## J Fungi and Algae

<b>Fungi &amp; algae etc</b>	
Slime mold	<i>Myxomycete</i>
Purple jellydisc	<i>Ascocoryne cylichnium</i>
Jew's ear	<i>Auricularia auriculajudae</i>
Tripe fungus	<i>Auricularia mesenterica</i>
Smoky bracket	<i>Bjerkandera adjusta</i>
Yellow fieldcap	<i>Bolbitius vitellinus</i>
Bay bolete	<i>Boletus badius</i>
Small stagshorn	<i>Calocera cornea</i>
Green wood-cup	<i>Chlorosplenium aeruginascens</i>
Violet crust	<i>Chondrostereum purpureum</i>



Slime mould	<i>Comatricha nigra</i>
	<i>Conocybe sp</i>
Common Inkcap	<i>Coprinus atramentarius</i>
	<i>Coprinus radians</i>
Shaggy ink cap	<i>Coprinus comatus</i>
Fairy inkcap	<i>Coprinus disseminatus</i>
Firebug inkcap	<i>Coprinus domesticus</i>
Hare's foot inkcap	<i>Coprinus lagopus</i>
Glistening ink cap	<i>Coprinus micaceus</i>
	<i>Coriollus albidus</i>
Many-zoned polypore	<i>Coriolus versicolor</i>
Variable oysterling	<i>Crepidotus variabilis</i>
Blushing bracket	<i>Daedaleopsis confragosa</i>
Oak mazegill	<i>Daedalia quercina</i>
King Alfred's cakes	<i>Daldinia concentrica</i>
Green alga	<i>Desmococcus sp</i>
Velvet shank	<i>Flammulina velutipes</i>
Flowers of tan	<i>Fuligo septica</i>
Artist's fungus	<i>Ganoderma australe</i>
Earth star	<i>Geastrum triplex</i>
Stalked bonfire cup	<i>Geopyxis carbonaria</i>
Elder whitewash	<i>Hyphodontia sambuci</i>
Sulphur tuft	<i>Hypholoma fasciculare</i>
Rusty woodwart	<i>Hypoxyton howeanum</i>
	<i>Inocybe sp</i>
Shaggy bracket	<i>Inonotus hispidus</i>
Amethyst deceiver	<i>Laccaria amethystea</i>
Chicken of the woods	<i>Laetiporus sulphureus</i>
Wood blewit	<i>Lepista nuda</i>
White dapperling	<i>Leucoagaricus leucothites</i>
	<i>Lycogala epidendrum sp.</i>
fungus associated with <i>Arum maculatum</i>	<i>Melanostilospora ari</i>
Common bonnet	<i>Mycena galericulata</i>
Coral spot	<i>Nectria cinnabarina</i>
Layered cup	<i>Peziza varia</i>
Jelly rot	<i>Phlebia tremellosa</i>
Slimy scalycap	<i>Pholiota adiposa</i>
Alder scalycap	<i>Pholiota alnicola</i>
Shaggy pholiota	<i>Pholiota squarrosa</i>
Oyster mushroom	<i>Pleurotus ostreatus</i>
Fawn pluteus	<i>Pluteus cervinus</i>
Fringed polypore	<i>Polyporus ciliatus</i>
Bay polypore	<i>Polyporus durus</i>
Blackfoot polypore	<i>Polyporus leptoccephalus</i>

Conifer blueing bracket	<i>Postia caesia</i>
Bitter bracket	<i>Postia stiptica</i>
Brittlestem	<i>Psathyrella marcescibilis</i>
Nettle Rust	<i>Puccinia urticata</i>
Sycamore tar spot	<i>Rhytisma acerinum</i>
Orange mosscap	<i>Rickenella fibula</i>
Common eyelash	<i>Scutellinia scutellata</i>
Bleeding oak crust	<i>Stereum gausapatum</i>
Yellowing curtain crust	<i>Stereum subtomentosum</i>
Verdigris agaric	<i>Stropharia aeruginosa</i>
Redlead roundhead	<i>Stropharia aurantiaca</i>
Dung roundhead	<i>Stropharia semiglobata</i>
Brain fungus	<i>Tremella mesenterica</i>
Scurfy twiglet	<i>Tubaria furfuracea</i>
Celandine clustercup rust	<i>Uromyces dactylidis</i>
Rosegill	<i>Volvariella speciosa</i>
Candle snuff	<i>Xylaria hypoxylon</i>
Dead men's fingers	<i>Xylaria polymorpha</i>