## **Barton Common**

**Insect Survey 2024** 

by

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#### 1.1 Summary

This report summarises the results of survey work to record the terrestrial insect species present at Barton Common, Barton-on-Sea, Hampshire.

A half-day visit was made to the Common in each month during April, May, June, July, August and September to record the terrestrial insects present.

Survey largely involved sweep-netting the vegetation with some direct searching for species at flowers. All insect groups covered by the survey sre presented in Section 1.3. Tables showing all species recorded are presented in Section 1.4.

One Red Data Book and one Section 41 (BAP) species were recorded, details of these are presented in Section 1.5. All other species recorded can be considered common and widespread or at least common in the habitats surveyed. Additional species( birds, mammals, amphibians and reptiles) recorded in addition to the insects are included in Section 1.5. Eighteen insect species were recorded which hadn't been present during the 2022 survey were recorded. An overview of the results is presented in Section 1.6.

A map showing the survey area and management compartments is presented in Appendix 1. All insect species recorded in this survey and the 2022 survey are presented in Appendix 2.

Species were identified in the field wherever possible, but due to identification difficulties with some species 'voucher/reference' specimens were retained and identified with the aid of a microscope. Reference material has been retained n the collection of the surveyor, surplus material will be donted to the collections of the National Biodiversity Data Centre, Watrford, Eire and/or Portsmouth City Museum Service.

This survey was commissioned and funded by New Milton Town Council.

## **1.2** Introduction

Barton Common was surveyed for terrestrial insects during April, May, June, July, August and September 2024 to assess and record the insect species present, This follows a similar survey undertaken in 2022. (Pinchen 2023). Areas for survey were a mix of unimproved acid grassland, grass-heathland/ heathland, woodland and an acidic wet seepage/flush. A map showing the survey areas and management compartments is presented at the end of this report in Appendix 1.

Each survey visit took half a day to complete to record the species present. The data collected from these surveys forms the basis of this report. Survey visits were undertaken in favourable weather conditions for insects (warm, wind-free and sunny) on 29th April, 25th May, 18 June, 18th, July, 21st August, and 12th September.

Each survey area was generally walked in a zig-zag fashion from one end to the other (covering the entire width of the survey area) sweep-netting and general searching for insects all the while.

Specimens were identified in the field where possible with a small number being retained for identification at home.

Appendix 1 shows the management compartments, the compartments covered by this survey are those of heathland/grassland (compartments5 and 9) and the woodland (compartments 2 and 3), the compartment map was re-drawn in early 2024 (R.M. Lord, *pers comm*), the survey areas covered by this report correspond to compartments 5, 9 and 11 and the woodland (compartments 1 and 2) in the 2022 survey.

## **1.3** Survey Groups and Methodology

Survey was largely undertaken by means of sweep-netting the vegetation with the aim of dislodging insects resting on foliage or feeding at flowers. Occasionally direct-searching (where species with known plant hosts may be present) was employed as the main survey technique. Some species, such as the lepidoptera (butterflies) and odonata ( dragon- and damselflies) were primarily recorded flying through/ around each survey area. Without thorough searches for their larval stages many species in these goups, it is often difficult to determine which are breeding on site and those which are casual users of a site for feeding, roosting or hibernating.

The following insect groups were surveyed/recorded and their reason for attention in this survey highlighted:

#### **Mecoptera: Scorpion flies**

Only three species are recorded in Britain all can be found in most habitats, adults are often recorded in abundance. Larvae feed on decaying matter.

#### Neuroptera: Lacewings and allies

The majority of species are aphid feeders in their larval stage, adults can usually be found resting on vegetation during the day.

#### **Odonata: Dragonflies and Damselflies**

All species develop in watercourses where they are predatory on other invertebrates. Adult males fly long distances, often away from water to feed, females stay close to water courses and pools. While adults are easy to record in any habitat, breeding on a site can only be proven if searches are made for the larval stages or exuviae.

#### Orthoptera: Bush Crickets and Grasshoppers and allies

Many species are specific to grassland habitatswith some scrub element.

#### Heteroptera: True Bugs (terrestrial species)

Many species in this group are host plant specific where they feed on plant sap, a number of species are predatory on other insects, they are best surveyed by sweep-netting vegetation.

#### **Trichoptera: Caddisflies**

All species are aquatic in their larval stage with adults flying in suitable terrestrial habitat nearby.

#### Lepidoptera: Butterflies

A number of species are specific to grassland habitat but are usually reliant on established and relatively undisturbed habitats, all species were recorded on a casual basis.

#### **Diptera: Hoverflies**

A number of species are specific to wetland, grassland and scrub habitats but the majority are generalist in their habitats.

## **Diptera: Larger Brachycera** (Snipeflies, Horseflies, Soldierflies, Robberflies and Beeflies) A number of species are specific to wetland habitats. In the larval stages they live either as parasites in and on other insects, within decaying plant matter or in mud.

#### **Diptera: Snail-killing Flies**

All of the species feed within the shells of specific snail species and occasionally slugs, usually in wetland habitats, only a few species live in drier habitats where they develop in terrestrial snails.

## **Diptera: Picture-winged Flies**

All of the species are plant host specific developing as maggots within plant stems, flowerheads or seed heads.

## **Diptera: Conopid Flies(Beegrabbers)**

All of the species in this family parasitise solitary and social bees and wasps, either at their nest sites or by searching for adults foraging at flowers.

## **Diptera: Tachinid Flies**

All of the species are parasites that spend their larval stages feeding within or on other insects e.g. lepidoptera caterpillars and shieldbugs.

## Hymenoptera: Aculeates

Many bee, ant and wasp species nest in bare soils in warm sunny locations, each female bee or wasp excavates a series of burrows to provision them with nectar and/or pollen or live prey for their growing larvae to feed on. All species feed at flowers for nectar or pollen, while many species also feed on terrestrial invertebrates which are captured at flowers. Ants often nest in warm, highly thermophilic sites in grassland or bare and sparsely vegetated substrates.

**Coleoptera:** Only a limited number of coleoptera groups were surveyed for, these were Ladybirds. Soldier Beetles, Malachite Beetles, Click Beetles and Longhorn Beetles, other beetle groups were encountered during the survey.

## Ladybirds

Ladybirds occur in a range of habitats with few species being specific to this habitat. Due to the ease of recording and identifying the group they were recorded largely on a casual basis.

#### **Soldier Beetles**

This group of mainly predatory species contain a number of brightly-coloured adults which can be found often in numbers at flowers and are often encountered in sweep-net samples.

## **Click Beetles**

A large group of often brightly coloured insects which develop as larvae in the soil or in decaying timber, adults often occur in sweep-net samples.

## **Malachite Beetles**

A small group of attractively coloured beetles that are predatory as larvae but feed on pollen as adults, they are often common in sweep-net samples.

## **Longhorn Beetles**

A large group of often brightly coloured beetles that in most species develop as larvae inside dead timber or plant stems. Adults are often encountered nectaring at flowers.

## 1.4 Species Recorded

The following tables show all insects recorded during the survey. The species lists and nomenclature follow the most recently available checklists for each group. The hoverfly checklist is currently in the process of being reorganised so for ease, species are presented here in alphabetical order. As a prelude to the species lists major forage resources (for nectar and pollen) and notes on each survey area are provided. Species highlighted with an asterisk in the tables (\*) are Red Data Book/Nationally Scarce/BAP/ Section 41 species, details of these can be found in Section 1.5. where these speecies are concerned actual numbers and sex (where determined) are included  $(1 \circ = 1 \text{ male})$ . A map showing the compartments is presented in Appendix 1.

## **1.4.1** Dry Grassland/Heathland (compartments 5,9 and 11) (this corresponds to compartments 5,6 and 7 in the 2022 survey)

Compartments 5,\* and 9 are similar-sized areas of generally quite level ground with some gentle slopingaspects, compartment \*(5) is predominantly grassland and stunted Gorse with much bare gound as a result of heavy footfall on the pathways that criss-cross the area, compartment5 is dominated by heathers and heaths with significantly less bare ground than compartments9 and 11. Dominant forage resources(for nectar and pollen) during the first part of the survey were Greater Stitchwort (*Stellaria holostea*), Bluebell (*Hyacinthoides non-scripta*), Dandelion (*Taraxacum officinale* agg.), Milkwort (*Polygala* sp,), Tormentil(*Potentilla erecta*), Sorrel(*Rumex acetosa*), Daisy (*Bellis perennis*), Speedwell(*Veronica* sp,), Gorse, (*Ulex europaeus*) Red Clover(*Trifolium pratense*), Ragwort (*Senecio* sp,)Buttercup (*Ranunculus* sp,) Bramble (*Rubus fruticosus* agg.)Black Knapweed (*Centaura nigra*) and Foxglove(*Digitalis purpurea*), Greater Stitchwort(*Stellaria holostea*).

Group/	29	25	18	18	21	12
Visit Date	Apr	May	Jun	Jul	Aug	Sept
Mecoptera: Scorpion flies						
Panorpa communis			*			
Odonata: Damselflies						
Dragonflies						
Brachytron pratense			*			
Calopteryx virgo		*				
Enallagma cvathigerum		*				
Dragonflies						
Brachytron pratense			*			
Sympetrum striolatum					*	*
Orthoptera:						
Bush Crickets						
Pholidoptera griseoaptera		*				
Grasshoppers						
Chorthippus albomarginatus					*	
Chorthippus brunneus	*		*	*		*
Pseudochorthippus parallelus		*		*	*	

Group/	29	25	18	18	21	12
Visit Date	Apr	May	Jun	Jul	Aug	Sept
Heteroptera: True Bugs						
Apolygus lucorum				*		
Stenodema calcarata		*				*
Stenodema laevigata		*				
Pithanus maerkelii				*		
Notostira elongata			*			
Nabis rugosus		*				
Aelia acuminata		*				
Coreus marginatus		*			*	*
Piezodorus lituratus		*				
Lepidoptera: Butterflies						
Thymelicus sylvestris						
Thymelicus lineola						
Ochlodes sylvanus				*		
Gonepteryx rhamni	*	*				
Pieris brassicae						
Pieris rapae				*		*
Anthocharis cardamines	*					
Vanessa atalanta						*
Callophrys rubi	*	*				
Pararge aegeria		*	*	*	*	
Maniola jurtina			*	*	*	
Melanargia galathea				*		
Pyronia tithonus				*		
Coenonympha pamphilus*			1			
Diptera: Hoverflies						
Episyrphus balteatus					*	
Eristalis intricarius			*			
Eristalis pertinax	*					
Eristalis tenax		*		*	*	
Eupeodes corollae			*			
Eupeodes latifasciatus			*			
Sphaerophoria scripta *						
Syritta pipiens			*			
Xanthogramma pedissequum				*		
Xylota sylvarum			*			
Larger Brachycera						
Chloromyia formosa		*				
Chrysopilus cristatus			*			
Machimus atricapillus					*	
Machimus cingulatus					*	
Picture-winged Flies						
Tephritis bardanae		*				
Tephritis vespertina		*	*			
Tachinid Flies						
Eriothrix rufomaculata				*		
1	1 1		1	1		

Group/	29	25	18	18	21	12
Visit Date	Apr	May	Jun	Jul	Aug	Sept
Hymenoptera: Aculeates						
Ants						
Formica fusca					*	
Lasius niger		*		*	*	
Myrmica rubra			*			
Social Wasps						
Vespula vulgaris						*
Solitary Wasps						
Diodontus insidiosus*				18		
Mellinus arvensis			*			
Cerceris arenaria				*		
Philanthus triangulum					*	
Solitary Bees						
Halictus tumulorum					*	*
Lasioglossum albipes			*			
Lasioglossum punctactissimum			*			
Lasioglossum minutissimum		*				
Lasioglossum morio						*
Panurgus calcarata				*	*	*
Nomada sheppardana		*				
Anthophora bimaculata				*		
Anthophora plumipes	*					
Social Bees						
Bombus lucorum/terrestris^	*					
Bombus pascuorum	*	*	*	*	*	*
Bombus pratorum		*				
Bombus terrestris	*				*	
Apis mellifera		*	*	*	*	
Coleoptera: Soldier Beetles						
Cantharis rustica		*				
Rhagonycha fulva				*		
Malachite Beetles						
Malachius bipustulatus		*				
Ladybirds						
Harmonia axyridis		*				
Coccinella 7-punctata	*	*				
Chilocorus bipustulatus		*				
Click Beetles						
Athous haemorrhoidalis		*				

# **1.4.2 Woodland (compartments 2&3)** (this corresponds with compartments 1 and 2 in the 2022 survey)

The woodland comprises much young birch (*Betula pendula*) with a few older trees including Oak(

*Quercus robur*), there is also a mixture of birch and Hazel (*Corylus avellana*) coppice, there are two large clearings, generally the woodland is on a mix of level and gently sloping ground, a small runnel courses through the wood. During the first months of the survey forage resources were dominated by Greater Stitchwort, Bramble(*Rubus fruticosus* agg.), Herb Robert(*Geranium robertianum*), Bluebell, Foxglove and buttercup (*Ranunculus* sp.). During the middle and final months of the survey Bramble, Ragwort (*Senecio* sp), and Enchanter's Nightshade (*Circaea luteiana*) were the dominant forage resources.

	29	25	18	18	21	12
Visit Date	Apr	May	Jun	Jul	Aug	Sept
Neuroptera: Scorpion flies						
Panorpa communis					*	
Odonata: Damselflies						
Calopteryx virgo		*				
Neuroptera: Lacewings						
Orthoptera: Bush Crickets						
Grasshoppers						
Pseudochorthippus parallelus					*	
Chorthippus brunneus						*
Heteroptera: True Bugs						
Notostira elongata			*			
Lepidoptera: Butterflies						
Pieris rapae				*		
Thymelicus sylvestris						
Thymelicus lineola						
Ochlodes sylvanus				*		
Gonepteryx rhamni	*					
Pieris brassicae						
Anthocharis cardamines						
Aglais io	*					
Callophrys rubi		*				
Parage aegeria		*		*	*	*
Maniola jurtina			*			
Diptera: Hoverflies						
Baccha elongata	*					
Episyrphus balteatus				*	*	
Eristalis tenax				*	*	
Eupeodes corollae			*			
Eupeodes latifasciatus			*			
Myathropa florea			*			
Platycheirus albimanus	*				*	
Larger Brachycera						
Chrysopilus cristatus						
Machimus cingulatus				*		
Coleoptera: Ladybirds						
Coccinella 7-punctata			*			

## **1.4.3 Wet Flush/seepage (compartment 6)** This corresponds with compartment 9 in the 2022 survey)

A small area of generally north-west facing ground typically with a seepage of water running to the surface formerly creating a near-permanently wet flush, the area contains areas of bare exposed mud, the ground flora is dominated by sphagnum moss (*Sphagnum* sp,) and Bog Myrtle (*Myrica gale*). Dominant forage resources during the first months of the survey were Tormentil, Ragwort (*Senecio* sp,) and Gorse. This area was a little dry underfoot during the May visit and continued to be so throughout the remainder of the survey and had become shaded and covered by encroaching birch saplings. At the time of the June and July visits right through to the final visit in September the ground was rather dry underfoot without any real sign of this area being a wet flush/seepage whether this was down to the increase in birch seedlings/regrowth is unclear.

	20	25	10	10	21	10
Visit Data	29 Apr	25 May	1ð   Jun	18 Tul		12 Sent
Orthontera:			Juii	Jui	Aug	Sept
Grasshonners	_					
Pseudochorthinnus narallelus			*	*	*	*
Chorthinnus brunneus						*
Dermantera: Farwigs						
Forficula dentata						
Heterontera: True Bugs						
Notostira elongata			*	*		
Lepidoptera: Butterflies	_					
Thymelicus sylvestris				*		
Thymelicus lineola						
Ochlodes sylvanus						
Pieris brassicae						*
Goneptervx rhamni	*					
Callophrvs rubi		*				
Pyronia tithonus				*		
Diptera: Hoverflies						
Eristalis intricarius			*			
Sphaerophoria scripta				*		
Hymenoptera: Aculeates						
Ants						
Myrmica rubra	1	*				
Spider Wasps						
Anoplius viaticus				*		
Social Bees						
Bombus lucorum/terrestris^						
Bombus pascuorum		*				
Coleoptera: Soldier Beetles						
Rhagonvcha fulva				*		

Note: *Bombus lucorum/terrestris*^ workers of these two species cannot be separated for identification purposes queens and/or males need to be seen.

## 1.5 Additional Species Recorded

While insects were the main target goup for survey, reptiles, amphibians, birds and mammals were to be recorded as they were encountered during the survey visits and are detailed below.

#### 1.5.1 Reptiles

Adder (*Vipera berus*) A singleton was seen in Compartment 9 on 12th September.

## 1.6 Red Data Book and (BAP)Section 41 Species Recorded

One Red Data Book species was recorded during the survey period. Details of its national status is taken from the national review (Falk 1991) listed in the references in Section 1.8. A description of this rating is given at the end of this text in Section 1.6.1 It must be borne in mind that this status review is a little old and may now be a little out of date but the status level still stands (via www.BWARS.com September 2024).

## Lepidoptera: Butterflies

Small Heath Coenonympha pamphilus

Widely recorded across Britian this is a species of flower-rich grassland which has suffered a serious decline in recent years. Up to three generations may fly each summer, the caterpillars feed on a range of grasses, especially fescues (*Festuca* sp,), meadow grasses (*Poa* sp,) and bents (*Agrostis* sp,) and overwinter in the thatch layer to pupate in spring. A singleton recorded in Compartment 5 on 18th July.

## Hymenoptera: Aculeates

A Solitary Wasp

Diodontus insidiosus

#### (Red Data Book 3)

(Section 41/BAP)

Recorded from southern counties in open sandy conditions, typically on heathlands and sandpits, but nowhere common. Nesting occurs in bare, sandy substrates in warm situations, including flat ground. Nest cells are possibly provisioned with aphids. A single male was recorded in Comprtment 5 on 18th July. This species was previously recorded here during 2022 (Pinchen 2023).

#### **1.6.1** Explanation of rarity ratings

**Red Data Book 1** Endangered; currently known from five or fewer 10km squares in Britain and in danger of extinction.

**Red Data Book 2** Vulnerable; currently known from between six and ten 10km squares in Britain. Populations declining and considered likely to become endangered.

**Red Data Book 3** Rare; currently known from between 11 and 15 10km squares in Britain. Small, thinly scattered local populations, but not at present considered to be vulnerable or endangered.

**Nationally Scarce A;** Very restricted national distribution, recorded from 16 - 30 10km squares in Britain since 1980.

**Nationally Scarce B;** Restricted national distribution, recorded from 31 - 100 10km squares in Britain since 1980.

**Nationally Scarce;** Restricted national distribution, recorded from 16 - 100 10km squares in Britain since 1980.

## 1.7 Discussion

One consideration that must taken into account when comparing survey data is the weather, The winter of 2023/24 was one of the warmest and wettest in recent years and this will have impacted insect numbers and populations. Despite this eighteen species were recorded which hadn't been present during the 2022 survey Amongst these new species were two dragonflies and two damselflies none of which are easy to overlook, so couldn't have been missed in 2022. All are quite wide ranging in their behaviour so could perhaps have been expected, the Beautiful Demoiselle Calopteryx virgo may even be breeding on site in the water course which is suitable breeding habitat for this species (winter or early spring searches of the runnel would need to be undertaken to search for nymphs to establish if this species is indeed breeding The Common Earwig Forficula dentata is one of our most widespread insect species and not easy here). to overlook, it often occurs in sweep-net samples so its presence during this survey is again perhaps not surprising een though its absence in the previous survey is somewhat. Two species of true bug *Pithanus* maerkelii and Nabis rugosus are equally common and widespread in most floristically rich habitats where they are predatory on other insects, both could have been expected to occur here. Of the three new butterflies the Essex Skipper Thymelicus lineola is common and widespread in floristically rich habitats, it is easy to overlook alongside the equally widespread Small Skipper Thymelicus sylvestris, all examples of either of these species seen during both surveys were examined for critical identification in both surveys (2022 and 2024) so it is interesting that the former species was only recorded for the first time during this survey. The Red Admiral Vanessa atalanta is an equally interesting addition, being a migratory species that does breed and overwinter in this country with increasing frequency so was again a not unexpected addition to the species list it can often be abundant where it occurs and is often to be found throughout the winter months, the Marbled White Melanargia galathea like the two skippers is another species of floristically rich habitats and does occur on the nearby clifftop grassland adjacent to Marine Drive and the golf course (pers obs)so was another species which could have been expected to occur here despite its surprising absence in 2022.

The Furry Dronefly *Eristalis intricarius* is typical of damp grassland and was recorded in the wet flush (cpt6), so too is the soldierfly Broad Centurion *Chloromyia formosa* which is normally an abundant species

in most habitats at the height of summer but seems to have been declining in recent years (pers obs) but was recorded in compartments 5,9 and 11. Amongst the new hymenoptera recorded the ant Formica fusca is a common and widespread species of open habitats where it can often be found running over bare ground and in numbers in sweep-net samples, this species is not easy to overlook so is unlikely to have been missed in the 2022 survey similarly, the Beewolf (Philanthus triangulum) is common and widespread in open sandy habitats wher it excavates distinctive burrows in bare ground which are not easy to miss ooverlook, until recently this species was considered to be Nationally Scarce. It has been present on the cliff top adjacent to the golf course for some years (pers obs) so could have been expected to occur here on the Common. The Least Furrow Bee Lasioglossum minutissimum could easily have been overlooked in the field amongst many similar species which all require microscopic examination for critical identification (only a small sample of those seen are retained for identification). Sheppards Nomad Bee Nomada sheppardana is a distinctive-looking cuckoo in the nests of solitary bees in the genus Lasioglossum many species of which have been recorded here. The Hairy-footed Flower Bee Anthophora plumipes nests on the cliffs below Marine Drive and the golf course, (pers obs) it is a large and distinctive species that is not easy to miss in the field, due to its large size and distinctive behaviour, due to it nesting nearby it could have been expected to occur on the Common.

The Heather Ladybird (*Chilocorus bipustulatus*) is typical of heathland habitat but may occur in other habitats, and is relatively abundant on the heaths of the nearby New Forest it also occurs to the west of the Common on Hengistbury Head (*pers obs*) and again could have been expected to occur here.

It was satisfying to record the continued presence of the Red Data Book solitary wasp *Diodontus insidiosus* after previously recording it in 2022, this suggests the habitat of the Common is suitable for supporting a stable population of this rare species and shows there must be sufficient prey and nest site availability (bare ground)to maintain a population. However, a number of scarece species recorded in 2022 were not re-found during this survey, they included the two true bugs *Liorhyssus hyalinatus* and *Lasiosomus enervis*, by virtue of being scarce species like these do not always occur every year, so their absence may not be unexpected, further survey in the future may determine if they are both still present in sustaing populations. More unexpected was the absence of the Grayling butterfly (*Hipparchia semele*) this species is relatively obvious and easy to see whe it is present on a site so is unlikely to have been overlooked. It is possible that the wet winter weather impacted over-wintering caterpillars resulting in low numbers of adults being on the wing during the summer, similarly the Small Heath (*Coenonympha pamphilus*) was less abundant during this survey with only a singleton sen on one day and may have been similarly impacted by the winter weather, it too overwinters as a caterpillar.

It was concerning to note the absence of the Nationally Scarce Cepero's Groundhopper (*Tetrix ceperoi*) from the wet flush after recording it in abundance during 2022, whether this is down to the encroachment of birch saplings causing the drying of the wet flush is unknown but the ground underfoot was notably dry throughout this survey which it hadn't been during 2022. Alternatively the mild wet winters of 2022/23 and 2023/24may have impacted this species; all groundhopper species need to experience a period of sub-zero temperatures during their overwintering period in order to breed the following sspring. Winter work to remove the scrub encroachment may help the area to retain moisture and ensure it continues to be suitable for this species.

## **1.7 Acknowledgements**

I would like to thank New Milton Town Council for commissioning and funding this survey and Bob Lord for useful discussions regarding the Common throughout the duration of the survey. I would also like to thank Ann Gorman for driving me to/from the Common each month to enable me to undertake the

## 1.8 References

The following references were used for identification of species recorded during the survey and their national statuses. The NBN Atlas website was also accessed at various times during the survey www. nbnatlas.org

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## Appendix 2 All species Recorded in 2022 and 2024 combined

The following list shows all species recorded on the Common during surveys in 2022 and 2024. Species highlighted with an asterisk(\*) are Red Data Book or Nationally Scarce, details of these species can be found in the relevant survey report English/common vernacular names (where they exist) are also included.

species recorded as new in 2024 are marked ^

## Mecoptera: Scorpion flies

#### Panorpa communis

**Neuroptera: Lacewings** 

Chrysoperla carnea

Hemerobius lutescens

**Odonata: Dragonflies** 

Brachytron pratense Hairy Hawker<sup>^</sup> Cordulegaster boltonii Golden-ringed Dragonfly Sympetrum striolatum<sup>^</sup> Common Darter<sup>^</sup>

## Damselflies

Calopteryx virgo<sup>^</sup> Beautiful Demoiselle<sup>^</sup> Coenagrion puella Azure Damselfly Enallagma cyathigerum Common Blue Damselfly<sup>^</sup> Ischnura elegans Blue-tailed Damselfly

## **Orthoptera: Bush Crickets**

*Pholidoptera griseoaptera* Dark Bush Cricket *Conocephalus discolor* Long-winged Conehead

## Grasshoppers

*Omocestus viridulus* Common Green Grasshopper *Chorthippus albomarginatus* Lesser Marsh Grasshopper *Chorthippus brunneus* Field Grasshopper *Pseudochorthippus parallelus* Meadow Grasshopper

#### Groundhoppers

Tetrix ceperoi\*Cepero's GroundhopperTetrix subulataSlender GroundhopperTetrix undulataCommon Groundhopper

## Dermaptera: Earwigs

Forficula dentata<sup>^</sup> Common Earwig<sup>^</sup>

## Heteroptera: True Bugs

Gerris lacustris Common Pondskater Dictyonota strichnocera Dicyphus epilobii Liocoris tripustulatus Apolygus lucorum^ Lygus pratensis Lygus rugulipennis Orthops campestris Phytocoris varipes Acetropis gimmerthali Leptopterna dolobrata Pithanus maerkelii ^ Notostira elongata Stenodema calcarata

Trignotylus ruficornis Orthocephalus saltator Atractomus magnicornis Lopus decolor *Macrotylus solitarius* Megalocoleus molliculus Plagiognathus arbustorum Plagiognathus chrysanthemi Nabis rugosus^ Psallus varians Anthocoris nemoralis Anthocoris nemorum Nysius senecionis *Kleidocerys resedae* Henestaris laticeps Peritrechus gracilicornis Lasiosomus enervis\* Stygnocoris sabulosus Coreus marginatus Dock Leatherbug Liorhyssus hyalinus\* Myrmus miriformis Aelia acuminata Bishop's Mitre Shieldbug Palomena prasina Green Shieldbug Piezodorus lituratus Gorse Shieldbug **Plecoptera: Stoneflies** Nemoura cinerea Lepidoptera: Butterflies Thymelicus slyvestris Small Skipper Thymelicus lineola Essesx Skipper^ Ochlodes sylvanus Large Skipper Gonepteryx rhamni Brimstone Pieris brassicae Large White Pieris rapae Small White Pieris napi Green-veined White Anthocharis cardamines Orange Tip Vanessa atalanta Red Admiral^ Callophrys rubi Green Hairstreak Lycaena phlaeus Small Copper Polyommatus icarus Common Blue Celastrina argiolus Holly Blue Aglais urticae Small Tortoiseshell Aglais io Peacock Pararge aegeria Speckled Wood *Hipparchia semele*\* Grayling Pyronia tithonus Gatekeeper Maniola jurtina Meadow Brown Melanargia galathea Marbled White^ Aphantopus hyperantus Ringlet *Coenonympha pamphilus*\* Small Heath **Trichoptera: Caddisflies** Limnephilus luridus **Diptera: Hoverflies** Chrysotoxum bicinctum Two-banded Spearhorn Chrysotoxum festivum Hook-barred Spearhorn Dasysyrphus albostriatus Stripe-backed Fleckwing *Epistrophe eligans* Early Epistrophe *Episyrphus balteatus* Marmalade Hoverfly Eristalis intricarius Furry Dronefly^ Eristalis nemorum Plain-faced Dronefly Eristalis pertinax Tapered Dronefly Eristalis tenax Common Dronefly Eupeodes corollae Migrant Field Syrph Melanostoma mellinum Variable Duskyface Melanostoma scalare Long-winged Duskyface Merodon equestris Narcissus Fly Myathropa florea Batman Hoverfly Paragus haemorrhous Common Paragus Pipiza noctiluca Common Pipiza *Pipizella viduata* Platycheirus albimanus White-footed Hoverfly Platycheirus clypeatus Marsh Boxer Platycheirus manicatus Dull-backed Boxer Sphaerophoria scripta Long Hoverfly Syrphus ribesii Humming Syrphus Syrphus torvus Hairy-eyed Syrphus *Volucella pellucens* Pied Hoverfly Xanthogramma citrofasciatum Barred Anthill Hoverfly Xylota sylvarum Golden-tailed Leaflicker **Diptera: Larger Brachycera** Chloromyia formosa Broad Centurion^ Chrysopilus cristatus Black Snipefly Rhagio tringarius Marsh Snipefly Tabanus bromius Band-eyed Brown Horsefly *Machimus atricapillus*<sup>^</sup> Kite-tailed Robberfly Machimus cingulatus Brown Heath Robberfly Leptogaster cylindrica Striped Slender Robberfly **Diptera: Picture-winged Flies** Sphenella marginata *Tephritis bardanae Tephritis vespertina* **Diptera: Conopid Flies** Physocephala rufipes *Myopa testacea* Sicus ferrugineus Ferruginous Beegrabber **Diptera: Tachinid Flies** Eriothrix rufomaculata Hymenoptera: Aculeates Jewel Wasps *Elampus panzeri Hedychridium cupreum* Ants Formica fusca^ Lasius flavus Yellow Meadow Ant Lasius niger Mvrmica rubra *Myrmica* ruginodis **Spider Wasps** 

Anoplius nigerrimus Arachnospila spissa Social Wasps Vespula germanica German Wasp Vespula vulgaris Common Wasp Solitary Wasps Astata boops Mimumesa spooneri\* Diodontus insidiosus\* Passaloecus monilicornis

Mellinus arvensis Cerceris arenaria<sup>^</sup> Cerceris rybyensis Philanthus triangulum Beewolf<sup>^</sup>

#### **Solitary Bees**

Colletes fodiens Hairy-saddled Colletes Colletes succinctus Heather Colletes Hylaeus communis Common Yellow-faced Bee Hylaeus dilatatus Chalk Yellow-faced Bee Andrena fulva Tawny Mining Bee Andrena bicolor Gwynne's Mining Bee Andrena subopaca Impunctate Mini-miner Andrena dorsata Short-fringed Mining Bee Andrena wilkella Wilke's Mining Bee Panurgus calcaratus Small Shaggy Bee Halictus tumulorum Bronze Furrow Bee Lasioglossum leucozonium White-zoned Furrow Bee Lasioglossum albipes Bloomed Furrow Bee Lasioglossum calceatum Common Furrow Bee Lasioglossum fulvicorne Chalk Furrow Bee Lasioglossum nitidiusculum Tufted Furrow Bee Lasioglossum parvulum Smooth-gastered Furrow Bee Lasioglossum pauxillum Long-spurred Furrow Bee Lasioglossum punctatissimum Grey-tailed Furrow Bee Lasioglossum minutissimum Least Furrow Bee^

Lasioglossum villosulum Shaggy Furrow Bee Lasioglossum morio Green Furrow Bee Sphecodes ephippius Bare-saddled Blood Bee Sphecodes geofrellus Geoffrey's Blood Bee

Coelioxys conoidea Large Sharp-tail Bee

Nomada fabriciana Fabricius' Nomad Bee Nomada flava Flavous Nomad Bee Nomada fulvicornis\* Orange-horned Nomad Bee Nomada sheppardana Sheppard's Nomad Bee^ Anthophora bimaculata Green-eyed Flower Bee Anthophora plumipes Hairy-footed Flower Bee^ Social Bees Bombus hortorum Garden Bumblebee

Bombus hypnorum Tree Bumblebee

Bombus jonellus Heath Bumblebee Bombus lapidarius Red-tailed Bumblebee Bombus pascuorum Common Carder Bee Bombus pratorum Early Bumblebee Bombus sylvestris Forest Cuckoo Bee Bombus terrestris Buff-tailed Bumblebee Bombus vestalis Southern Cuckoo Bee Apis mellifera Western Honeybee

## **Coleoptera: Soldier Beetles**

Cantharis pallida Cantharis rustica Rhagonycha fulva Rhagonycha testacea

#### Malachite Beetles

Malachius bipustulatus

#### **Click Beetles**

Denticollis linearis Agriotes pallidulus

#### Ladybirds

Propylea 14-punctata 14-spot Ladybird
Harmonia axyridis<sup>^</sup> Harlequin Ladybird
Coccinella 7-punctata 7-spot Ladybird
Coccinella 11-punctata 11-spot Ladybird
Halyzia 16-guttata Orange Ladybird
Tytthaspis 16-guttata 16-spot Ladybird
Chilocorus bipustulatus Heather Ladybird<sup>^</sup>
Subcoccinella 24-punctata 24-spot Ladybird

#### **Longhorn Beetles**

*Grammoptera ruficornis* Common Grammoptera *Pseudovadonia livida* Fairy-ring Longhorn *Rutpela maculata* Black-and-Yellow Longhorn