

ENTOMOLOGICAL SURVEY AND MONITORING AT CASTLE COVE, ISLE OF WIGHT, 2015.

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INTRODUCTION.

Following coastal protection works in 1996, which included the clearing of vegetation from the coastal slope to the North of Castle Cove, Isle of Wight, this soft rock slope was allowed to regenerate naturally. The resultant habitat is rough coastal grassland with a bare ground element. The site is split into two sections which are separated by a tarmac path. The western section is considerably larger than the eastern section.

A baseline survey was carried out in 2003, and further survey and monitoring was undertaken in 2004, 2005, 2006, 2007, 2010, 2011, 2012, 2013 and 2014. The Castle Cove site was again surveyed during 2015, and changes in vegetation composition and the amounts of available bare ground were monitored. As in previous surveys, counts were made of certain target insect species in order to assess changes in population densities, and the number of nesting holes for certain species of ground nesting Hymenoptera were counted in order to monitor any changes.

METHODS.

Survey methods were confined to visual searching, the use of a hand net or pooter to capture individual species, sweeping vegetation, beating foliage and grubbing. The site was visited throughout the main insect flight period of 2015, commencing on 7th April and with the final visit on 1st September. All visits were made in suitable weather.

RESULTS.

CHANGES IN VEGETATION.

During survey in 2006 and 2007 dominant plant species included common bird's - foot trefoil *Lotus corniculatus*, common fleabane *Pulicaria dysenterica*, ox - eye daisy *Leucanthemum vulgare*, teasel *Dipsacus fullonum*, wild carrot *Daucus carota* and ribwort plantain *Plantago lanceolata*. The northern margin of the site is comprised of scrub and scrubby woodland with some bramble *Rubus fruticosus* agg. and buddleja *Buddleja davidii*. The main tree species was sycamore *Acer pseudoplatanus*.

The following changes in the vegetation were noted in 2014 :

Eastern Section.

Giant horsetail *Equisetum telmetela* continues to encroach onto the lower part of the site, and bracken *Pteridium aquilinum* and bramble are becoming more widespread. Only small amounts of common bird's - foot trefoil remain. Ox - eye daisy is less frequent than in previous years. An increase in the abundance of common fleabane is noted. The amounts of stinking iris *Iris foetidissima* present by the gabions remains unchanged.

Western Section.

The quantities of common bird's - foot trefoil in the eastern and central areas of the compartment remain similar to those noted in 2013. The amounts of alexanders *Smyrniolum olusatrum* present are roughly the same as in the previous year. Ox - eye daisy remains fairly abundant. The sward height has continued to increase over much of the site. Rock rose *Helianthemum spp.* is declining in frequency. Small yellow composites remain abundant on the lower slopes, particularly in the middle of the site. Increases in the amounts of common fleabane, prickly sow - thistle *Sonchus asper* and teasel present are noted. Marjoram *Origanum vulgare* is becoming more abundant.

During 2015 the following changes in vegetation were noted :

Eastern Section.

The amounts of common bird's - foot trefoil continue to decrease. Bracken encroachment is increasing, as is the presence of giant horsetail. Stinking iris is still present in some quantity near the gabions, but is becoming shaded out by bramble, which is spreading. Common fleabane is increasing in frequency towards the bottom of the slope.

Western Section.

There has been a small increase in the amounts of alexanders present. Tufted vetch *Vicia cracca* is becoming more frequent in places. Both ox – eye daisy and common bird’s – foot trefoil are present in similar quantities to the previous season. Giant horsetail is spreading on the higher parts of the slope. There is a decline in the amount of wild carrot, but marjoram is increasing in quantity, as is common fleabane.

INVERTEBRATE SURVEY.

A full list of all insect species recorded during the course of survey in 2015 is appended as **Appendix 1**. A number of the species encountered are considered to be Nationally Scarce or Red Data Book species. These are marked as such within **Appendix 1** and are discussed in more detail below. Additionally, some of the species found are included in the National Biodiversity Action Plan (BAP) or Isle of Wight BAP species listings. Again, these are clearly marked in **Appendix 1**.

The status category definitions and criteria for individual species are those devised by the JNCC and are as follows:

STATUS CATEGORY DEFINITIONS AND CRITERIA.

RDB 1 - Endangered.

Taxa in danger of extinction and whose survival is unlikely if causal factors continue operating.

Species which are known or believed to occur as only a single population within one 10km square of the National Grid.

Species which only occur in habitats known to be particularly vulnerable

Species which have shown a rapid or continuous decline over the last twenty years and are now estimated to exist in five or fewer 10km squares.

Species which are possibly extinct but have been recorded in the 20th century and if rediscovered would need protection.

RDB 2 - Vulnerable.

Taxa believed likely to move into the endangered category in the near future if the causal factors continue operating.

Species declining throughout their range.

Species in vulnerable habitats.

RDB 3 - Rare.

Taxa with small populations that are not at present Endangered or Vulnerable, but are at risk

Species which are estimated to exist in only fifteen or fewer post 1970 10km squares. This criterion may be relaxed where populations are likely to exist in over fifteen 10km squares but occupy small areas of especially vulnerable habitat.

Nationally Scarce (Na).

Taxa which do not fall within the RDB categories but which are none - the - less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid.

Nationally Scarce (Nb).

Taxa which do not fall within the RDB categories but which are none - the - less uncommon and thought to occur in between 31 and 100 10km squares of the national Grid.

Nationally Scarce (N).

Species which are estimated to occur within the range of 16 to 100 10km squares.

ORTHOPTERA.

The long-winged conehead *Conocephalus discolor* **Nationally Scarce Na.**

This species was recorded whilst sweeping in the western compartment on 1st September. This species was also recorded at Castle Cove in 2014. The long – winged conehead is associated with coarse grassland habitats. *Conocephalus discolor* was formerly very scarce in Britain, being confined to just a handful of counties in south-east England, but it has spread rapidly to the north and west of its former range during the

last two decades, and is now present in southern England, East Anglia, the Midlands and South Wales. In light of this range expansion, its current Nationally Scarce status needs to be down-graded as it is now considered a common insect. The long – winged conehead is regularly recorded on the Isle of Wight.

DICTYOPTERA.

A cockroach *Ectobius* sp. **Nationally Scarce Nb. IOW BAP.**

A single nymph was found during sweeping in the eastern compartment on 1st September. Unfortunately the specimen was at such an early instar that precise determination of species was not possible, although its pale colouration makes it unlikely to have been the lesser cockroach *Ectobius panzeri*, which was recorded from Castle Cove in 2007. *Ectobius pallidus* was recorded here in 2014, and is the most likely candidate. It has a two – year life history, and is an omnivorous species. It is found in a wider variety of habitats than the other two native cockroach species, and has been recorded from coastal cliffs and chalk grassland on the Isle of Wight.

LEPIDOPTERA.

The Glanville Fritillary *Melitaea cinxia* **RDB 3. UK BAP.**

This species has previously been recorded at Castle Cove in every survey between 2003 and 2007, and between 2010 and 2012. No specimens were recorded during the 2013 and 2014 surveys, and it was thought that the Glanville fritillary had been lost from the site. Although the Glanville Fritillary is prone to fluctuations in numbers, there appears to have been a continuous downward trend in population size at Castle Cove since 2007. Previous annual maxima were 3 in 2012, 23 in 2011, 42 in 2010, 96 in 2007 (an exceptional year for Glanville Fritillary), 13 in 2006, 9 in 2005, 8 in 2004 and 6 in 2003. Concerns were raised in the 2012 report that the progressive increase in sward height and subsequent changes in plant composition of the grasslands may be having a deleterious effect on the Glanville Fritillary population at Castle Cove. However, on 3rd June 2015 four adult Glanville fritillaries were recorded in the western section of the survey area. However, no caterpillars were found here earlier in the season, and it may be that the specimens seen were strays from another nearby site. Whether or not this species will recolonise at Castle Cove remains unclear.

DIPTERA.

A picture – winged fly *Myopites inulaedyssentericae* **Rare RDB 3.**

Several specimens were swept from common fleabane in the both compartments on 6th August 2015. *Myopites inulaedyssentericae* was recorded at Castle Cove in 2014, although prior to that it had not been found here since 2007. Larvae of *Myopites inulaedyssentericae* develop in the seed heads of common fleabane, which is currently increasing in abundance at Castle Cove. In the past this was an extremely localised species in southern and south - eastern England. Although it is still largely confined to this geographical area, *Myopites inulaedyssentericae* appears to have become more common in recent decades, particularly in Dorset, Hampshire and the Isle of Wight. Clemons (1996) suggests that in view of this increase in frequency, *Myopites inulaedyssentericae* should be downgraded to Nationally Scarce (Nb) status. On the Isle of Wight, *Myopites inulaedyssentericae* is widespread and regularly recorded.

HYMENOPTERA.

An ant *Temnothorax albipennis* **Nationally Scarce Na.**

A single specimen of this tiny ant was found crawling on bare ground in the north – east of the western compartment at SZ 5527699 on 3rd June 2015. This species was also recorded from Castle Cove in a similar area in 2005. Because of its small size, *Temnothorax albipennis* is an easy species to overlook, and it is likely that it has persisted at the site throughout the duration of surveys at Castle Cove. Nationally, *Temnothorax albipennis* is found on or near the coast in southern England and Wales, with only one fully inland site known. Most records of *Temnothorax albipennis* are from undercliffs and landslips. Locally, Edwards (1998) gives records for two 10km. squares at the southern tip of the Isle of Wight.

A Mining bee *Andrena pilipes* **Nb. IOW BAP.**

Andrena pilipes was first recorded from Castle Cove in 2004, when a single individual was found on the eastern section of the site. Following that, numbers increased. In 2006, when three individuals were seen. A maximum count of 10 individuals was recorded here in 2007. Subsequently, numbers of *Andrena pilipes* have steadily declined at Castle Cove, maximum counts of 7 in 2010, 4 in 2011, 2 in 2012 and 1 in 2013. No specimens of *Andrena pilipes* were recorded from the site in 2014. A single specimen was recorded on 10th July 2015, visiting bramble flowers by the gabions in the eastern compartment. *Andrena pilipes* is double brooded, and in the past both broods were usually recorded at Castle Cove, with the Summer brood being the more numerous. This species is primarily associated with coastal cliffs and rough coastal grassland, but is occasionally found inland on downland and heathland. Falk (1991) notes a considerable decline for this

southern species, particularly at inland sites. Locally, the author has recorded *A. pilipes* at seven other Island sites.

A mining bee *Lasioglossum malachurum* Nationally Scarce Nb.

This small mining bee was again found nesting in both compartments of the site as in every survey year, where it formed nesting aggregations on the paths or in areas of bare or sparsely vegetated ground. As in previous years, counts of the number of nests in these aggregations were undertaken in 2015, and are discussed in detail later in this report. *Lasioglossum malachurum* is polylectic, collecting pollen from a wide variety of plants. It has been recorded from a range of habitats where there is warm disturbed ground. Typical breeding sites are in bare clayey soil on coastal cliffs and landslips, but it also occurs inland, in quarries, chalk grassland and heaths. Nationally, this species is restricted to southern England. Previously a very local and scarce species, *Lasioglossum malachurum* has become far more frequent and is extending its British range (Edwards, R. & Broad, 2005). If this expansion continues, it is likely that the status of *Lasioglossum malachurum* will require review. The Isle of Wight remains a national stronghold for *Lasioglossum malachurum*, which is typical of the fauna of the soft rock systems on the south coast of the Island.

A nomad bee *Nomada fucata* Na.

This species is a cleptoparasite of the mining bee *Andrena flavipes*. Numbers of *Nomada fucata* have fluctuated considerably at Castle Cove from year to year. In 2004 and 2005 when it was regularly seen in double figures. Numbers declined between 2006 and 2010, but increased a little in 2011, when a maximum count of 10 individuals was recorded. During 2012, only 2 specimens of *Nomada fucata* were found at Castle Cove, and 3 specimens were recorded in 2013. No specimens were found during the 2014 survey. During 2015, a single specimen was recorded on 22nd April in the western section of the site. The host bee *Andrena flavipes* continues to have a presence at Castle Cove, but no longer forms nesting aggregations as it did in the past. Nationally, *Nomada fucata* is, like its host, confined to southern England, but it is considerably scarcer than the host and absent from some areas where *Andrena flavipes* is well established. Locally, *Andrena flavipes* forms huge nesting aggregations at many landslip or soft rock cliff sites and the *Nomada* remains a relatively frequent insect. Although Falk (1991) listed this species as Nationally Scarce (Na) following a period of extreme scarcity in the 1970's, *Nomada fucata* populations recovered during the 1990's and Edwards & Telfer (2002) suggested that its status should be downgraded.

COLEOPTERA.

A Weevil *Mononychus punctum - album* Nationally Scarce Na.

Mononychus punctum - album was first recorded at Castle Cove in 2005 when a single specimen was swept from the leaves of stinking iris *Iris foetidissima* on the western section of the site. Larvae of this weevil develop in the seed pods of this plant. *Mononychus punctum - album* became increasingly established, with maximum counts of 14 in 2006 and 37 in 2007. A decline in numbers followed in 2010 and 2011, with maximum counts falling to 9 and 5 respectively. During 2012 the maximum count was of 12 specimens, whilst in 2013 the maximum count was 21 specimens and in 2014 the highest count was of 29 specimens.. During the current survey the highest count was of 16 specimens on 30th June 2015. Specimens were noted only in the western compartment, and it is feared that bracken encroachment may be overshadowing the stinking iris plants in the eastern compartment reducing their capacity to flower, where in previous years there was a fair population of *Mononychus punctum - album*. This weevil is associated with coastal cliffs and has a very restricted distribution in southern England. Hyman and Parsons (1992) cite post 1970 UK records for just 4 Vice Counties, which include the Isle of Wight. They consider coastal stabilisation, and activities that change the rate of erosion to be major threats to this species.

NESTING AGGREGATION COUNTS.

Andrena flavipes.

No nesting aggregations of this species have been recorded in the survey area since 2012.

Lasioglossum morio.

In 2011 a new colony of around 30 nests of *L. morio* was found in the eastern sector of Castle Cove, to the north of the gabions. Numbers of nest holes in this colony were significantly down in 2012, and the rare cleptoparasite *Sphecodes niger* recorded here in 2011 was not found in 2012. During 2013, this nesting aggregation continued to diminish in size. No nesting aggregation was present in 2014 or in 2015.

Lasioglossum malachurum.

The favoured nesting areas for the mining bee *Lasioglossum malachurum* are areas of gently sloping bare ground, including the compacted soils of the footpaths across the site. Detailed counts of the number of nest holes within these nesting aggregations were made in 2004, 2005, 2006, 2007, 2010 and 2011; attempts to repeat this process in 2012 were impaired by the wet weather which regularly washed away the excavated soil and obliterated the nest holes. A return to more typical weather patterns in 2013 allowed counts to be undertaken satisfactorily.

Eastern Compartment.

Maximum annual counts for the number of nest holes for *Lasioglossum malachurum* in this compartment are as follows:

2004 – 311 nests
2005 – 136 nests
2006 – 227 nests
2007 – 72 nests. Nesting aggregation in plateau area lost.
2010 – 50 nests
2011 – 102 nests
2012 – 84 nests

In 2013, nests were confined to the lower slope around SZ 552975698, but the maximum count was of only 24 nests on 27th May. Parts of this area are now permanently waterlogged, making them unsuitable for nesting purposes.

In 2014, nests were again confined to the lower slope, but the maximum count reduced to only 16 nest holes. The area continues to be partially waterlogged.

In 2015, the maximum count was of 27 nests, all confined to the base of the slope. The count is comparable to those made in 2013 and 2014 and the population appears stable at this reduced level.

Western Compartment.

Maximum annual counts for the number of nest holes for *Lasioglossum malachurum* in this compartment are as follows:

2004 – 487 nests
2005 – 66 nests
2006 – 303 nests
2007 – 172 nests.
2010 – 464 nests
2011 – 263 nests
2012 – 66 nests

In 2013, the maximum count along the path was of 79 nest holes on 30th April. This count is not significantly better than the 2012 count, and it would appear that the species may be in decline at Castle Cove. The path is now heavily compacted, and most nest holes are now confined to the path edges where compaction is less.

This situation continued in 2014, and the highest count was of only 37 nest holes, on 12th May. Of these 25 nests were adjacent to the top path, with a further 12 nests counted along the lower path. It would appear that *Lasioglossum malachurum* is now in significant decline in both site compartments.

During 2015, the highest count was a total of 64 nest holes. Sixty were found along the top path, and a further 4 nests were recorded on the lower path. This is an improvement on the 2014 count, and is roughly the same as the counts from 2012 and 2013.

Whilst the number of nest holes of *Lasioglossum malachurum* has clearly fluctuated from year to year, it appears that numbers of nests over the last few years have remained relatively constant, and are

significantly lower than they were during the early years of the survey. It would appear that the population remains stable at these comparatively low levels.

DISCUSSION.

The amount of available bare ground is continuing to decrease. For some species this has resulted in a considerable loss of suitable nest sites, with a resultant decrease in this species' numbers. The number and abundance of scarce ground – nesting species continues to decrease, as do numbers of their attendant cleptoparasites. Encroachment by scrub, particularly bramble, continues to increase. This has resulted in plants such as stinking iris in the eastern section becoming shaded and failing to flower as productively as in the past. The weevil *Mononychus punctum – album* was not recorded here in 2015, for the first time since 2011.

The coarse, rank grassland element of the site continues to increase. Tall ruderal plants, including teasel, ragwort and prickly sow – thistle are also increasing. Bramble continues to spread in some areas of the site. Common bird's – foot trefoil is in decline in some areas, most notably on the plateau section of the eastern compartment, where it was barely present in 2015. Common fleabane is increasing, particularly in the eastern compartment, leading to an increase in the numbers of the rare picture – winged fly *Myopites inulaedyssentericae*. Alexanders is not increasing greatly within the survey area, consequently the population of the rare mining bee *Andrena proxima* is not increasing significantly. This species was not recorded from the survey area in 2015, although it continues to occur at Flowersbrook.

A number of scarce species recorded during 2014 were not seen in 2015; these are discussed below :

The Wall *Lasiommata megera* UK BAP.

This species has previously been recorded in the 2005, 2007, 2011, 2012, 2013 and 2014 surveys. The Wall requires warm bare ground for basking. Larvae feed on Annual Meadow Grass *Poa annua* and Cock's - foot *Dactylis glomerata*. Although this butterfly remains widespread on the Island, numbers are decreasing. The Wall is in serious national decline and has recently been added to the national BAP listings.

The large skipper *Ochlodes faunus* IOW BAP.

This butterfly has previously been recorded at Castle Cove in 2003, 2006 and 2014. It has never been considered to be a regularly seen species so it was perhaps unsurprising that the large skipper was not seen here in 2015. The main larval foodplant is cock's – foot *Dactylis glomerata*, although other grasses are occasionally utilised. The large skipper remains reasonably common and widely distributed, both on the Isle of Wight and nationally. It has, however been added to the Isle of Wight BAP list because of an observed decline in numbers over recent years.

The six - belted clearwing *Bembecia scopigera* Nationally Scarce Na. IOW BAP.

Up until 2010, this species was recorded in all of the Castle Cove surveys, but it was not recorded in 2011, 2012 or 2013. Two specimens were noted in 2014. It would appear that the six – belted clearwing went through a period of considerable scarcity along the south coast of the Island between 2010 and 2013, as the author failed to find it at several sites where it was previously well established. During 2014 *Bembecia scopigera* was seen at several of these other sites. No specimens were found at Castle Cove during 2015, and it was also not seen at several other sites, suggesting that it again may have had a poor season. Nationally it has a scattered distribution through England as far North as Yorkshire. It has also been recorded in Wales. *Bembecia scopigera* is included in the Isle of Wight BAP listings.

The dotted beefly *Bombylius discolor* Nationally Scarce N. UK BAP.

The dotted beefly has been recorded from the survey area in 2004, 2005, 2006, 2011, 2012, 2013 and 2014. Thus there are occasional gap years in the sightings, and it is too early to draw inference from its apparent absence in 2015. Larvae of *Bombylius discolor* are ectoparasitic on the larvae of the mining bee *Andrena flavipes*. Although *Bombylius discolor* remains a reasonably common species on the Isle of Wight in areas where its host may be found (especially soft rock cliffs), Stubbs & Drake (2001) state that the species has declined nationally to the stage where it is regarded as a rarity. It is classed as a national BAP priority species.

A mining bee *Andrena proxima* Rare RDB3.

A single specimen of this restricted species was found in visiting alexanders in the north – west corner of the western section of the site at SZ 55157696 on 1st May 2012, representing the first record of *Andrena*

proxima from Castle Cove. During the 2013 and 2014 surveys, two specimens were recorded in the same area in each year. None were found here during the 2015 survey, although it is present on areas adjacent to the survey site. *Andrena proxima* is a spring species which collects pollen from umbels, with alexanders being a favoured source. This species is largely confined to coastal sites in southern England, and requires warm, sunny areas with sparsely vegetated turf. Falk (1991) notes that *Andrena proxima* has undergone considerable recent decline, and cites some 20 post 1970 records. Locally, the author has previously encountered *Andrena proxima* at Woody Bay and at some of the chines on the south coast of the Island.

A mining bee *Lasioglossum puncticolle* **Nationally Scarce Nb.**

In 2003, *Lasioglossum puncticolle* was found to be nesting in small numbers on the site, but no nests have been seen since, and the species was not found during the Castle Cove surveys for several years, although single specimens were recorded in the 2011 and 2014 surveys. None were noted during the 2015 survey, and it is possible that the specimens found in 2011 and 2014 were strays from nearby sites. *Lasioglossum puncticolle* requires warm, light, disturbed soils in which to nest, and is primarily associated with the southern coastal counties of England. *Lasioglossum puncticolle* appears to have suffered recent population declines, particularly at inland sites. (Falk, 1991). This species is reasonably common locally, especially in coastal situations, and the Island may be considered one of its strongholds.

CONCLUSION.

The Castle Cove habitats and associated insect communities continue to change, with tall ruderal plants and scrub becoming further established, and bare ground and early successional plants diminishing. Many of the scarce coastal soft rock cliff specialist insects are now absent or in serious decline. This applies particularly to species which require bare ground in which to nest and those reliant upon plants such as common bird's-foot trefoil, which are becoming less abundant on site as succession continues.

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APPENDIX 1. Insect species recorded during Castle Cove survey 2015.

Species marked with an asterisk * have not been recorded during previous Castle Cove surveys.

ORDER	FAMILY	GENUS	SPECIES	DATE 1st RECORD	STATUS
ORTHOPTERA		Grasshoppers & Crickets			
		Chorthippus	parallelus	1st September 2015	Common, Widespread
		Conocephalus	discolor	1st September 2015	Nationally Scarce Na
		Leptophyes	punctatissima	3rd June 2015	Common, Widespread
DICTYOPTERA		Cockroaches			
		Pholidoptera	griseoptera	3rd June 2015	Common, Widespread
DERMAPTERA		Earwigs			
		Forficula	auricularia	3rd June 2015	Common, Widespread
HEMIPTERA		True Bugs			
		Ectobius	young nymph	1st September 2015	Nationally Scarce Nb
HEMIPTERA		Shield Bugs			
	Pentatomidae	Palomena	prasina	10th July 2015	Common, Widespread
LEPIDOPTERA		Butterflies & Moths			
		Aglais	urticae	7th April 2015	Common, Widespread
		Celastrina	argiolus	1st September 2015	Common, Widespread
		Inachis	io	7th April 2015	Common, Widespread
		Lycaena	phlaeas	1st September 2015	Common, Widespread
		Maniola	jurtina	30th June 2015	Common, Widespread
		Melanargia	galathea	30th June 2015	Common, Widespread
		Melitaea	cinxia	3rd June 2015	RDB3 UK BAP
		Pieris	brassicae	10th July 2015	Common, Widespread
		Pieris	rapae	1st September 2015	Common, Widespread
		Polygonia	c - album	6th August 2015	Common, Widespread
		Polyommatus	icarus	12th May 2015	Common, Widespread
		Pyronia	tithonus	10th July 2015	Common, Widespread
		Thymelicus	stylvestris	30th June 2015	Common, Widespread
	DIPTERA		True Flies		
		Robber Flies			
Asilidae		Leptogaster	cylindrica	3rd June 2015	Common, Widespread
		Bee Flies			
Bombyliidae		Bombylius	major	7th April 2015	Common, Widespread
		Hoverflies			
Syrphidae		Cheilosia	impressa	1st September 2015	Common, Widespread
		Cheilosia	pagana	1st September 2015	Common, Widespread
		Chrysogaster	solstitialis	1st September 2015	Common, Widespread
		Chrysotoxum	bicinctum	1st September 2015	Common, Widespread
	Dasysyrphus	albostrigatus	1st September 2015	Common, Widespread	

	Dasysyrphus	tricinctus	22nd April 2015	Common, Widespread
*	Epistrophe	grossulariae	1st September 2015	Common, Widespread
	Episyrphus	balteatus	1st September 2015	Common, Widespread
	Eristalis	pertinax	7th April 2015	Common, Widespread
	Eristalis	tenax	22nd April 2015	Common, Widespread
	Eupeodes	luniger	22nd April 2015	Common, Widespread
*	Leucozona	lucorum	3rd June 2015	Common, Widespread
	Merodon	equestris	3rd June 2015	Common, Widespread
	Myathropa	florea	1st September 2015	Common, Widespread
	Paragus	haemorrhous	3rd June 2015	Common, Widespread
	Pipizella	viduata	21st May 2015	Common, Widespread
	Platycheirus	albimanus	22nd April 2015	Common, Widespread
	Scaeva	pyrastris	1st September 2015	Common, Widespread
	Sphaerophoria	scripta	30th June 2015	Common, Widespread
	Syrirta	pipiens	10th July 2015	Common, Widespread
	Syrphus	ribesii	22nd April 2015	Common, Widespread
	Syrphus	vitripennis	22nd April 2015	Common, Widespread
	Xanthogramma	pedisequum	3rd June 2015	Common, Widespread
Conopidae	Thick - headed Flies			
	Sicus	ferrugineus	30th June 2015	Common, Widespread
Tephritidae	Picture - winged Flies			
	Myopites	inulaedyssentericae	6th August 2015	Rare RDB 3 Common, Widespread
Ulidiidae	Picture - winged Flies			
	Herina	longistylata	30th June 2015	Common, Widespread
Sciomyzidae	Snail Killing Flies			
	Pherbellia	cinerella	30th June 2015	Common, Widespread
	Trypetoptera	punctulata	6th August 2015	Common, Widespread
Tachinidae	Tachinid Flies			
	Eriothrix	rufomaculatus	6th August 2015	Common, Widespread
HYMENOPTERA	Bees, Wasps, Ants & Relatives			
Formicidae	Ants			
	Lasius	niger	7th April 2015	Common, Widespread
	Temnothorax	albipennis	3rd June 2015	Nationally Scarce Na
Vespidae	Social Wasps			
	Vespula	vulgaris	22nd April 2015	Common, Widespread
Crabronidae	Digger Wasps			
	Pemphredon	lethifer	1st September 2015	Common, Widespread
Apoidea	Bees			
Colletidae	Mining & Yellow - faced Bees			
	Hylaeus	communis	6th August 2015	Common, Widespread
Andrenidae	Mining Bees			
	Andrena	flavipes	7th April 2015	Common,

				Widespread
	Halictidae	Andrena Mining & Cuckoo Bees	pilipes 10th July 2015	Nationally Scarce Nb
		Halictus	tumulroum 12th May 2015	Common, Widespread
		Lasioglossum	calceatum 1st September 2015	Common, Widespread
		Lasioglossum	leucozonium 12th May 2015	Common, Widespread
		Lasioglossum	malachurum 7th April 2015	Nationally Scarce Nb
*		Lasioglossum	minutissimum 1st September 2015	Common, Widespread
	Megachilidae	Lasioglossum Solitary Bees	morio 22nd April 2015	Common, Widespread
		Hoplitis	spinulosa 1st September 2015	Common, Widespread
		Megachile	willughbiella 1st September 2015	Common, Widespread
	Anthophoridae	Osmia Flower & Nomad Bees	bicornis (rufa) 12th May 2015	Common, Widespread
		Nomada	fucata 22nd April 2015	Nationally Scarce Na
	Apidae	Social & Cuckoo Bees		
		Apis	mellifera 7th April 2015	Common, Widespread
		Bombus	lapidarius 12th May 2015	Common, Widespread
		Bombus	lucorum 7th April 2015	Common, Widespread
		Bombus	pascuorum 12th May 2015	Common, Widespread
		Bombus	pratorum 30th June 2015	Common, Widespread
		Bombus	terrestris 7th April 2015	Common, Widespread
COLEOPTERA	Beetles			
	Cantharidae	Soldier Beetles		
		Rhagonycha	fulva 10th July 2015	Common, Widespread
	Chrysomelidae	Leaf Beetles		
		Timarcha	tenebricosa 6th August 2015	Common, Widespread
	Coccinellidae	Ladybirds		
		Coccinella	7 - punctata 10th July 2015	Common, Widespread
	Curculionidae	Weevils		
		Mononychus	punctum - album 21st May 2015	Nationally Scarce Na
	Oedemeridae	Oedemerid Beetles		
		Oedemera	nobilis 3rd June 2015	Common, Widespread