

A SURVEY OF THE ACULEATE HYMENOPTERA OF
HINDERCLAY FEN

By Geoff Nobes

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Hinderclay Fen

Background

Hinderclay Fen lies on the northern boundary of the Parish of Hinderclay in Suffolk alongside the Little Ouse River. It has a rich-mosaic of habitats ranging from wet fen, reedbeds, woodland, scrub and acid grassland with heather and lichen heath..

Hinderclay Fen was once designated as an SSSI but this was removed in 1983 because the site had deteriorated so much. The degrading of the fen was probably caused by a variety of reasons such as lack of management such as grazing and also because of nearby water abstractions.

Many of the special acid water species such as grass of parnassis, marsh helleborine, bog bean and fen orchid disappeared with the lowering of the water table.

Conservation

Management designed to benefit the wildlife of the fen and especially some of the rarer fenland plants was introduced in 2000. The Lower Ouse Headwaters Project (LOHP) aims to maintain the existing habitats within the fen and to restore some of the wetland habitats that have been lost. Apart from the fen areas Hinderclay Fen also has important areas of open acid, lichen and heather heath. These areas especially where there is some bare sandy soil and around rabbit burrows are important sites for ground-nesting solitary bees and wasps.

Survey work

The LOHP team are keen to record as much of the flora and fauna as possible so as management can be targeted at particular species. Entomologist Geoff Nobes was asked to carry out a brief survey of the aculeate hymenoptera of the site in August 2013 and the results are contained in this report.

Methods

Hinderclay Fen was surveyed for its aculeate hymenoptera fauna on 20th August and 26th August 2013

The methods used are outlined below:

Sixty white pan water traps were distributed throughout the site to capture flying bees and wasps. These only contained plain water with the addition of a very small amount of washing up liquid to break the surface tension so that insects trapped sank and did not escape from the pan. Water traps were left for the whole day and specimens potted up at the end of the day and taken home for identification.

The rest of the day was spent searching for and netting aculeates on flowers and foliage with a butterfly net.

Sweeping vegetation and trees for aculeates with a sweep net.

Visually searching for aculeates along pathways and around rabbit burrows in the open sandy areas.

Some specimens captured were identified in the field and released others were retained for later microscopic identification to determine the species.

Photographs were taken of the site with a digital camera.

A list of the species recorded is produced in the report along with their conservation status.

Species accounts of the rare and more interesting species recorded was also produced.

Photographs of the rare species recorded are also produced in the report.

A list of other observations made of flora and fauna during the aculeate survey is also produced.

Some recommendations for future improvement of the site for nesting bees and wasps are also made in the report.

Notes on the rare species of aculeate hymenoptera recorded in the survey

***Arachnospila minutula*. Nb**

This is a red and black spider-hunting wasp, widely distributed but local in England and Wales. This wasp occurs from June to August in a variety of open, bare situations such as chalk, downland, heathland and coastal sites. Adults have been recorded visiting carrot and wild parsnip. Little is known about the nesting biology of this wasp. A few specimens of this wasp were caught in water traps during the survey.

***Chrysis illigeri*. Na**

This brilliantly coloured jewel wasp parasitises the small crabronid wasp *Tachysphex pompiliformis*. It is a southern species with records only as far north as Nottingham. This species is found on light sandy soil where its host nests. Several specimens of this wasp were caught in water traps in open, sandy areas.

***Lestiphorus bicinctus*. Nb**

The highlight of the survey for me was seeing this rare hunting wasp for the first time. This is a rather elusive species of southern England, found in scrubby places on sandy soils. I found several males of this species flying around very fast amongst small aspen saplings near a path. Female are ground-nesters and prey on leaf-hoppers and frog-hoppers.

***Nysson dimidiatus*. Nb**

This is a red and black cleptoparasitic wasp laying eggs in nests of other digger wasps (Gorytes and Lindenius). Widespread in England and Wales but nowhere common. It occurs mainly on lowland heaths and coastal dunes and flies from June to September. A few specimens of this wasp were caught by sweeping low-growing vegetation and also in water traps

***Lasioglossum malachurum*. Nb**

This formerly scarce, medium-sized bee is widespread and locally common in south-eastern England. It is now found in a wide variety of open habitats. This species has a long flight period from April to October. It nests in aggregations in exposed soil at the base of cliffs and banks where the vegetation is sparse. It is parasitized by the cuckoo-bee *Sphecodes monilicornis*.

***Lasioglossum quadrinotatum*. Na**

This is a very local but widespread bee found mainly on dry sandy soils. Females fly from April to September and visit a wide range of flowers. This bee is very scarce in East Anglia with few Norfolk and Suffolk records.

Hylaeus pectoralis

Although not now designated as nationally scarce this is an interesting small bee associated with reedbeds. There are very few aculeates that are largely confined to wetland habitats but this white-faced bee is one of them. For many years this bee was almost entirely associated with fens of East Anglia, especially Wicken Fen. This bee has long been known to nest within the vacated galls of the chloropid fly *Lipara lucens* which are formed on the main stem of the common reed where their formation prevents flowering. One specimen of this local bee was recorded at the edge of a reedbed on an angelica flower.

Hinderclay fen 20 August and 26th August 2013. Bees and wasps recorded by Geoff Nobes

Wasps

<i>Ancistrocerus trifasciatus</i>		A spider-hunting wasp
<i>Arachnospila anceps</i>		A spider-hunting wasp
<i>Arachnospila minutula</i>	Nb	A spider-hunting wasp
<i>Chrysis ignita</i>		A ruby-tailed cuckoo wasp
<i>Chrysis illigeri</i>	Na	A jewel wasp
<i>Crossocerus cetratus</i>		A digger wasp
<i>Crossocerus podagricus</i>		A digger wasp
<i>Crossocerus pusillus</i>		A digger wasp
<i>Crossocerus quadrimaculatus</i>		A digger wasp
<i>Ectemnius cephalotes</i>		A hunting wasp
<i>Ectemnius lituratus</i>		A hunting wasp
<i>Episyron rufipes</i>		A spider-hunting wasp
<i>Hedychridium ardens</i>		A jewel wasp
<i>Hedychridium roseum</i>		A jewel wasp
<i>Lestiphorus bicinctus</i>	Nb	A hunting wasp
<i>Mellinus arvensis</i>		A hunting wasp
<i>Nysson dimidiatus</i>	Nb	A cleptoparasite wasp
<i>Oxybelus uniglumis</i>		A hunting wasp
<i>Stigmaeus solskyi</i>		A hunting wasp
<i>Trichrysis cyanea</i>		A jewel wasp
<i>Trypoxylon attenuatum</i>		A hunting wasp
<i>Vespula vulgaris</i>		Common wasp
Bees		
<i>Andrena dorsata</i>		A mining bee
<i>Andrena fuscipes</i>		A mining bee
<i>Andrena minutula</i>		A mining bee
<i>Apis mellifera</i>		Honey bee
<i>Bombus lapidarius</i>		Red-tailed bumblebee
<i>Bombus pascuorum</i>		Common Carder bumblebee
<i>Bombus rupestris</i>		Hill Cuckoo bumblebee
<i>Bombus terrestris</i>		Buff-tailed bumblebee
<i>Bombus vestalis</i>		Vestal Cuckoo-bumblebee
<i>Bomus lucorum</i>		White-tailed bumblebee
<i>Colettes succinctus</i>		A solitary bee
<i>Halictus tumulorum</i>		A mining bee
<i>Hylaeus pectoralis</i>		A white-faced bee
<i>Lasioglossum calceatum</i>		A mining bee
<i>Lasioglossum malachurum</i>	Nb	A mining bee
<i>Lasioglossum morio</i>		A mining bee
<i>Lasioglossum quadrinotatum</i>	Na	A mining bee
<i>Nomada flavoguttata</i>		A cleptoparasite bee
<i>Sphecodes ephippius</i>		A cleptoparasite bee
41 species		

<u>Other invertebrates noted during the survey</u>	
Terrestrial bugs	
<i>Elasmotethus interstinctus</i>	Birch shieldbug
<i>Pentatoma rufipes</i>	Forest bug
<i>Coreus marginatus</i>	Dock bug
<i>Syromastus rhombeus</i>	A Coreidae bug
<i>Aelia acuminata</i>	Bishop's mitre
Terrestrial beetles	
<i>Cryptocephalus labiatus</i>	A Chrysomelid beetle
Diptera	
<i>Machimus cingulatus</i>	Brown heath robberfly
<i>Machimus atricapillus</i>	Kite-tailed robberfly
<i>Choerades marginatus</i>	Golden-haired robberfly
Lepidoptera	
<i>Lycaena phlaeus</i>	Small copper
<i>Aricia agestris</i>	Brown argus
<i>Inaschis io</i>	Peacock
<i>Maniola jurtina</i>	Meadow brown
<i>Polyommatus icarus</i>	Common blue
<i>Quercusia quercus</i>	Purple hairstreak
<i>Pieris brassicae</i>	Large white
<i>Aglais urticae</i>	Small tortoiseshell
<i>Pararge aegeria</i>	Speckled wood
Odonata	
<i>Sympetron striolatum</i>	Common darter dragonfly
Orthoptera	
<i>Tetrix subulata</i>	Slender ground hopper
<i>Chorthippus parallelus</i>	Meadow grasshopper
<i>Chorthippus brunneus</i>	Common field grasshopper
<i>Mymeletettix maculatus</i>	Mottled grasshopper
<i>Conocephalus discolor</i>	Long-winged conehead
FAUNA	
Birds	
<i>Athene noctua</i>	Little owl
<i>Buteo buteo</i>	Buzzard

Photographs of some of the recording sites. August 2013



Heather area was alive with bumblebees



Sandy areas where mining bees and wasps nest



General view looking north



General view looking south



Aspen saplings. *L. bicinctus* was found here



Dead tree, nesting site for solitary wasps

Plate 1

Photographs of the rare species recorded



Arachnospila minutula, female. Nb



Chrysis illigeri. Na



Lestiphorus bicinctus, male. Nb



Nysson dimidiatus, male. Nb



Lasioglossum malachurum, female. Nb



Hedychridium roseum