

Owlthorpe Meadows Invertebrate Survey - 2011

Derek Whiteley

Records added to Sheffield Biological Records Centre RECORDER database.

Surveyed on 19 May 2011, 1 June 2011, 14 June 2011 and 27 June 2011

The survey was designed to cover the spring period, to complement the summer survey of 2010, but it was not possible to start until 19 May 2011 owing to contractual delays. Additional species will occur in March and April that will have been missed by the two surveys. Nevertheless some good data was collected in 2011 adding to our knowledge and ecological understanding of the sites.

Areas surveyed in 2011

Phase 1 grazing fields – outlined in pink

Phase 1A grazing field – outlined in yellow

Phase 2 grazing fields – outlined in green.



Species Biodiversity

162 species have been identified from the 2011 survey of which **112** were new for Owlthorpe Meadows.

140 species were recorded in 2010 (mid July to September)

252 species is the combined total for both years. This list includes some species that are nationally localised and some species that are scarce in Sheffield.

see **APPENDIX** on a separate file – all species listed in alphabetical order for easy reference. Including species ecology notes to assist with detailed management of these species on site.

Phase 1 Grazing Field

70 species were found in this area in 2011. At the time of the survey, this area had not been grazed and had recovered from grazing in 2010 to reveal a rich mosaic of grassland, bramble scrub and tall herb vegetation, which proved to be very productive for flying insects.

Plenty of bumble bees (especially Red-tailed Bumble Bees), hive bees, soldier beetles, green metallic flower beetles, grasshopper nymphs, hoverflies and picture wing flies. Some grasshoppers had matured by 14th June and were courting.

Of special interest was a colony of Tree Bumblebees, attracted to brambles. This European species was new to Britain in 2001, and new to Sheffield in 2008, and is now colonising the SE corner of the City.

Good number of Robber Flies of two species are usually indicative of good quality grassland in Sheffield. Also of special interest was the abundance of the attractive picture wing fly *Urophora cardui* in the adult form, resulting from the large number of thistle galls found in the summer 2010 survey. (this species was new to Sheffield in 2010, and seems to be colonising SE Sheffield now)

Other localised species associated with good quality grasslands in Sheffield include the hoverfly *Eupeodes latifasciatus*, the snail-killing fly *Coremacera marginata*, and three species of sawfly known to breed in large grass stems.

Species list for Owlthorpe Phase 1 grassland

Species	Common Name	National Status
<i>Tachypodoiulus niger</i>	White-legged Snake Millipede	Common
<i>Lithobius variegatus</i>	Striped Centipede	Common
<i>Chorthippus brunneus</i>	Common Field Grasshopper	Common
<i>Cercopis vulnerata</i>	Red & Black Froghopper	Common
<i>Chrysoperla carnea</i>	a green lacewing	Common
<i>Sphaeridium scarabaeoides</i>	a scavenger water beetle	Common
<i>Philonthus tenuicornis</i>	a rove beetle	Local UK
<i>Athous haemorrhoidalis</i>	Common Brown Click Beetle	Common
<i>Agriotes acuminatus</i>	a click beetle	Common
<i>Cantharis cryptica</i>	a soldier beetle	Common
<i>Cantharis decipiens</i>	a soldier beetle	Common
<i>Cantharis nigricans</i>	Large Grey Sailor Beetle	Common
<i>Cantharis rustica</i>	Large Black Sailor Beetle	Common
<i>Malachius bipustulatus</i>	Malachite Beetle	Common

<i>Brachypterus urticae</i>	Nettle Pollen Beetle	Common
<i>Adalia bipunctata</i>	Two-spot Ladybird	Common
<i>Coccinella septempunctata</i>	Seven-spot Ladybird	Common
<i>Oedemera lurida</i>	a thick-legged flower beetle	Local UK
<i>Perapion curtirostre</i>	a seed weevil	Common
<i>Phyllobius roboretanus</i>	Small Green Nettle Weevil	Common
<i>Panorpa communis</i>	a scorpion fly	Common
<i>Pieris napi</i>	Green-veined White	Common
<i>Anthocharis cardamines</i>	Orange Tip	Common
<i>Lycaena phlaeas</i>	Small Copper	Common
<i>Pararge aegeria</i>	Speckled Wood	Common
<i>Aphantopus hyperantus</i>	Ringlet	Common
<i>Tyria jacobaeae</i>	Cinnabar	Common
<i>Tipula lateralis</i>	a crane fly	Common
<i>Bibio leucopterus</i>	a st mark's fly	Unknown
<i>Microchrysa cyaneiventris</i>	a soldier fly	Common
<i>Microchrysa polita</i>	a soldier fly	Common
<i>Rhagio scolopaceus</i>	Common Downlooker Fly	Common
<i>Dioctria atricapilla</i>	a robber fly	Local UK
<i>Dioctria rufipes</i>	a robber fly	Local UK
<i>Empis (Kritempis) livida</i>	a dance fly	Common
<i>Melanostoma mellinum</i>	a hoverfly	Common
<i>Platycheirus albimanus</i>	a hoverfly	Common
<i>Platycheirus angustatus</i>	a hoverfly	Common
<i>Eupeodes latifasciatus</i>	a hoverfly	Local UK
<i>Sphaerophoria interrupta</i>	a hoverfly	Local UK
<i>Sphaerophoria scripta</i>	a hoverfly	Common
<i>Syrphus ribesii</i>	a hoverfly	Common
<i>Syrphus torvus</i>	a hoverfly	Common
<i>Cheilosia albitarsis</i>	a hoverfly	Common
<i>Cheilosia pagana</i>	a hoverfly	Common
<i>Eristalis tenax</i>	a hoverfly	Common
<i>Helophilus pendulus</i>	a hoverfly	Common
<i>Myathropa florea</i>	a hoverfly	Common
<i>Xylota segnis</i>	a hoverfly	Common
<i>Urophora cardui</i>	a gall fly	Common
<i>Urophora jaceana</i>	a gall fly	Common
<i>Chaetostomella cylindrica</i>	a gall fly	Common
<i>Terellia ruficauda</i>	a gall fly	Common
<i>Psila merdaria</i>	a psilid fly	Common
<i>Coremacera marginata</i>	a snail-killing fly	Local UK
<i>Palloptera campta</i>	a picture-wing fly	Common
<i>Opomyza germinationis</i>	an opomyzid fly	Common
<i>Tachina fera</i>	a tachinid fly	Common
<i>Gymnocheta viridis</i>	Tachinid Greenbottle	Local UK
<i>Cephus cultratus</i>	a sawfly	Local UK
<i>Calameuta pallipes</i>	a sawfly	Common
<i>Arge cyanocrocea</i>	a sawfly	Local UK
<i>Rhogogaster viridis</i>	a sawfly	Common
<i>Bombus lucorum</i>	White-tailed Bumble Beetle	Common
<i>Bombus terrestris</i>	Buff-tailed Bumble Bee	Common
<i>Bombus lapidarius</i>	Large Red Tailed Bumble Bee	Common
<i>Bombus pratorum</i>	Early Bumble Bee	Common
<i>Bombus pascuorum</i>	Common Carder Bee	Common
<i>Bombus hypnorum</i>	European Bumblebee	Naturalised
<i>Apis mellifera</i>	Honey Bee	Common

Phase 1a Grazing Field

This site was not surveyed in 2010 as a separate entity. 59 species were identified in 2011, when the field was recovering from grazing earlier in the year. For insects, the habitat has a nice structure with umbellifers, bramble, thistles, and a range of grasses being the key microhabitats. Small patches of bare ground in sunny area are also important. It is worth tolerating a small patch

of nettles, but not too many. There was a good range of insects – including plenty of feeding bumble bees and hive bees. Grasshopper nymphs were common. Plenty of picture wing flies (associated with thistles, burdocks and knapweeds), grassbugs and flower bugs, soldier beetles, Tree Wasps and craneflies.

The highlight was the discovery of the Green Jewel Beetle, which appears to be new to Sheffield. These beetles are dead wood feeders in their larval stages and probably originated from oak or ash bark nearby. An exciting find. The more frequent Rhinoceros Beetle was also found here and probably originated from a similar local tree or log. Conservation of any dead wood in the vicinity of this field is clearly desirable.

Other interesting species include the picture wing fly *Tephritis formosa*, breeding in Sow Thistles, two species of snail-killing flies usually associated with good quality dry grasslands, and quite localised in Sheffield. The Reed Stem Borer is a sawfly that breeds in the stems of reeds and large grasses and is Notable (uncommon) for the north of England. Adult thistle gall flies *Urophora cardui* (see above) were also found in this field. The importance of thistles on the site cannot be overestimated.

Species list for Owlthorpe Phase 1A grassland

<i>Discus rotundatus</i>	a discus snail	Common
<i>Arion ater</i>	Great Black Slug	Common
<i>Arion subfuscus</i>	Dusky Slug	Common
<i>Arion ater rufus</i>	Red slug	Common
<i>Cepaea hortensis</i>	White-lipped Snail	Common
<i>Tachypodoiulus niger</i>	White-legged Snake Millipede	Common
<i>Haplophilus subterraneus</i>	a centipede	Common
<i>Lithobius forficatus</i>	Common Centipede	Common
<i>Chorthippus brunneus</i>	Common Field Grasshopper	Common
<i>Forficula auricularia</i>	Common Earwig	Common
<i>Heterogaster urticae</i>	Nettle Groundbug	Common
<i>Anthocoris nemorum</i>	Common Flower Bug	Common
<i>Capsus ater</i>	Common Black Plantbug	Common
<i>Leptopterna dolabrata</i>	a grassbug	Common
<i>Harpalus rufipes</i>	Strawberry Seed Beetle	Common
<i>Sinodendron cylindricum</i>	Rhinoceros Beetle	Common
<i>Athous haemorrhoidalis</i>	Common Brown Click Beetle	Common
<i>Rhagonycha fulva</i>	Common red soldier beetle	Common
<i>Adalia bipunctata</i>	Two-spot Ladybird	Common
<i>Coccinella septempunctata</i>	Seven-spot Ladybird	Common
<i>Phyllobius roboretanus</i>	Small Green Nettle Weevil	Common
<i>Agrilus species</i>	Green Jewel Beetle	New to Sheffield
<i>Agapeta hamana</i>	a micro-moth	Common
<i>Ochlodes venata</i>	Large Skipper	Local UK
<i>Pieris rapae</i>	Small White	Common
<i>Aglais urticae</i>	Small Tortoiseshell	Common
<i>Agrotis exclamationis</i>	Heart and Dart	Common
<i>Rivula sericealis</i>	Straw Dot	Common
<i>Nephrotoma flavescens</i>	a cranefly	Common
<i>Tipula lateralis</i>	a cranefly	Common
<i>Chloromyia formosa</i>	a soldier fly	Common
<i>Neoascia podagrica</i>	a hoverfly	Common
<i>Urophora cardui</i>	a gall fly	Common
<i>Urophora jaceana</i>	a gall fly	Common
<i>Urophora stylata</i>	a gall fly	Common
<i>Chaetostomella cylindrica</i>	a gall fly	Common
<i>Tephritis formosa</i>	a gall fly	Local UK
<i>Xyphosia miliaria</i>	a gall fly	Common
<i>Coremacera marginata</i>	a snail-killing fly	Local UK
<i>Euthycera fumigata</i>	a snail-killing fly	Local UK
<i>Opomyza germinationis</i>	an opomyzid fly	Common

<i>Phytomyza ilicis</i>	Holly Leaf Gall Fly	Common
<i>Calameuta filiformis</i>	Reed Stem Borer	Nr Regionally
<i>Arge cyanocrocea</i>	a sawfly	Local UK
<i>Tenthredopsis nassata</i>	a sawfly	Common
<i>Rhogogaster viridis</i>	a sawfly	Common
<i>Lasius niger</i>	Small Black Ant	Common
<i>Dolichovespula sylvestris</i>	Tree Wasp	Common
<i>Bombus lucorum</i>	White-tailed Bumble Bee	Common
<i>Bombus lapidarius</i>	Large Red Tailed Bumble Bee	Common
<i>Bombus pascuorum</i>	Common Carder Bee	Common
<i>Apis mellifera</i>	Honey Bee	Common
<i>Oniscus asellus</i>	Common Shiny Woodlouse	Common
<i>Philoscia muscorum</i>	Long-legged Woodlouse	Common
<i>Porcellio scaber</i>	Common Rough Woodlouse	Common

Phase 2 Grazing Fields

These fields were actively being grazed during the period of the survey, and much of the ground vegetation was very short indeed and held little of interest. Specimens were obtained by sweeping foliage and marginal areas that cattle had not grazed. Some extra species were found by stone turning and hand searching through grass roots.

Only 57 species were identified in 2011, but these included some interesting finds. The colony of Slender Ground Hoppers (Sheffield Red Data Book) found in 2010 was still present. This species prefers short vegetation in damp areas and is compatible with grazing cattle. It likes patches of damp mud and wet ruts.

The area will benefit from some careful clearance and a grazing regime that allows plants to flower and seed in the summer. A greater range of plants in flower would be useful, and some open sunny areas of grassland with grass stems of varying height. Grazing regime needs to be carefully managed to prevent poaching and allow some growth. As always, thistles, knapweeds, and a variety of low growing yellow or white flowers will promote a greater diversity of insects. Need to retain some Ragwort for Cinnabar moths.

Ideally the Phase 2 fields should be surveyed in 2012 to monitor the effect of intensive grazing in 2011.

Species list for Owlthorpe Phase 2 grassland

<i>Boettgerilla pallens</i>	Worm Slug	Naturalised
<i>Cepaea hortensis</i>	White-lipped Snail	Common
<i>Tachypodoiulus niger</i>	White-legged Snake Millipede	Common
<i>Cylindroiulus punctatus</i>	Blunt-tailed Snake Millipede	Common
<i>Lithobius forficatus</i>	Common Centipede	Common
<i>Tetrix subulata</i>	Slender Ground Hopper	Local RDB
<i>Forficula auricularia</i>	Common Earwig	Common
<i>Acanthosoma haemorrhoidale</i>	Hawthorn Shieldbug	Common
<i>Elasmotethus interstinctus</i>	Birch Shieldbug	Common
<i>Anthocoris nemorum</i>	Common Flower Bug	Common
<i>Capsus ater</i>	Common Black Plantbug	Common
<i>Philaenus spumarius</i>	Cuckoo-spit Insect	Common
<i>Chrysopa perla</i>	a green lacewing	Common
<i>Cantharis cryptica</i>	a soldier beetle	Common
<i>Cantharis nigricans</i>	Large Grey Sailor Beetle	Common
<i>Rhagonycha limbata</i>	a soldier beetle	Common
<i>Adalia bipunctata</i>	Two-spot Ladybird	Common

<i>Coccinella septempunctata</i>	Seven-spot Ladybird	Common
<i>Calvia quattuordecimguttata</i>	Cream-spot ladybird	Common
<i>Oedemera lurida</i>	a thick-legged flower beetle	Local UK
<i>Gastrophysa viridula</i>	Green Dock Beetle	Common
<i>Phyllobius roboretanus</i>	Small Green Nettle Weevil	Common
<i>Phyllobius viridiaeris</i>	Green Nettle Weevil	Local UK
<i>Panorpa communis</i>	a scorpion fly	Common
<i>Pieris brassicae</i>	Large White	Common
<i>Pieris rapae</i>	Small White	Common
<i>Pieris napi</i>	Green-veined White	Common
<i>Lycaena phlaeas</i>	Small Copper	Common
<i>Inachis io</i>	Peacock	Common
<i>Tyria jacobaeae</i>	Cinnabar	Common
<i>Microchrysa polita</i>	a soldier fly	Common
<i>Platycheirus albimanus</i>	a hoverfly	Common
<i>Platycheirus angustatus</i>	a hoverfly	Common
<i>Platycheirus clypeatus sens. str.</i>	a hoverfly	Common
<i>Leucozona lucorum</i>	a hoverfly	Common
<i>Sphaerophoria scripta</i>	a hoverfly	Common
<i>Syrphus torvus</i>	a hoverfly	Common
<i>Eristalis pertinax</i>	a hoverfly	Common
<i>Merodon equestris</i>	Greater Bulb-fly	Common
<i>Urophora cardui</i>	a gall fly	Common
<i>Urophora jaceana</i>	a gall fly	Common
<i>Urophora stylata</i>	a gall fly	Common
<i>Terellia ruficauda</i>	a gall fly	Common
<i>Tephritis cometa</i>	a gall fly	Local UK
<i>Pherbellia albocostata</i>	a snail-killing fly	Common
<i>Tetanocera elata</i>	Common Slug-killing Fly	Common
<i>Rhogogaster viridis</i>	a sawfly	Common
<i>Tryphon trochanteratus</i>	an ichneumon wasp	Unknown
<i>Lasius niger</i>	Small Black Ant	Common
<i>Dolichovespula sylvestris</i>	Tree Wasp	Common
<i>Vespula vulgaris</i>	Common Wasp	Common
<i>Bombus lucorum</i>	White-tailed Bumble Bee	Common
<i>Bombus lapidarius</i>	Large Red Tailed Bumble	Common
<i>Bombus pascuorum</i>	Common Carder Bee	Common
<i>Bombus hypnorum</i>	European Bumblebee	Naturalised
<i>Oniscus asellus</i>	Common Shiny Woodlouse	Common
<i>Philoscia muscorum</i>	Long-legged Woodlouse	Common

Derek Whiteley
Associate Ecologist
Sheffield City Ecology Unit
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