

The Spiders of Hetchell Wood SSSI and Nature Reserve, Leeds, West Yorkshire

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Introduction

Hetchell Wood Site of Special Scientific Interest (SSSI) is a nature reserve managed by the Yorkshire Wildlife Trust. It is located approximately 5 km north-east of Leeds, West Yorkshire (vice-county (VC) 64: mid-west Yorkshire), centred on national grid reference SE 376 425. Hetchell Wood covers an area of just under 15 hectares and comprises a range of diverse habitats influenced by the underlying geology; millstone grit capped by magnesian limestone grassland. Consequently, there is acidic and base-rich habitat present in close proximity. The site includes broad-leaved woodland managed as coppice; scrub; and associated with Bardsey Beck, which forms the site's western boundary in part, alder carr (wet woodland). The magnesian grassland communities are restricted to the upper slopes of the woodland and form large glades, surrounded by the aforementioned woodland and scrub.

The Reserve is located within a rural environment, entirely surrounded by agricultural (arable) land. The nearest residential area is Scarcroft, approximately 1 km to the south-west and Thorner, c. 1.5 km to the south.

The national Spider Recording Scheme database for VC 64 holds several previous records involving 25 species for Hetchell Wood, captured between 1978 and 2000; though the majority of records are from 1978 and 1985. The Reserve resides entirely within the tetrad SE 34R. The 2010 survey has built upon previous, unpublished studies, thus providing a relatively comprehensive species list for the site. However, the historical records represent single day visits in May 1978 and August 1985 so the 2010 survey represents the first extended period of study on the Reserve.

Methodology

Fieldwork focussed on locations within the Reserve where the terrestrial habitats were considered to be of primary nature conservation value, namely the magnesian limestone grassland and woodland on the upper slopes (see Table 1). The acid grassland and wetland habitat at the base of the slope was not studied during 2010, which offers potential for further study. A variety of different collecting methods were employed, mainly using pitfall traps but also sweep-netting and beating vegetation.

Table 1: Locations of pitfall traps (in 2010), with comments on habitats studied at Hetchell Wood.

Location	Grid Reference	Tetrad	Habitat
Grassland	SE 3774 4230	SE 34R	Magnesian limestone grassland managed by the YWT. Limited encroachment by hawthorn (<i>Crataegus monogyna</i>) scrub.
Woodland	SE 3766 4254	SE 34R	Mature deciduous woodland on upper slope of

Location	Grid Reference	Tetrad	Habitat
			site. Some compartments managed as coppice though location of pitfall traps was in an unmanaged area. Ground flora carpeted with bluebells (<i>Hyacinthus non-scripta</i>) and deep leaf-litter

Whilst the focus was on pitfall trapping, collecting by other methods such as sweeping vegetation and beating the low branches of scrub/ trees was also undertaken. These were undertaken at locations within a few tens of metres from the pitfall traps.

Surveys were largely undertaken during the spring and summer (see Table 2) to maximise the potential to collect different spider species, and reduce the total material collected. A brief visit in autumn to search for Araneids (orb-web weavers) was also undertaken.

Table 2: Periods of Survey

Season	Dates
Spring	13 th March – 24 th April 2010
Summer	23 rd May – 1 st July 2010

Aims

The aim of the survey was to build upon the data already held for the site and investigate the habitats on the upper slopes within the site. The site is a SSSI and the information obtained can be added to the database known for this important Reserve. The intensive nature of the survey (11 visits over 8 months) would likely identify new species for SE 34 and thus increase our knowledge of the spider fauna within the hectad.

Results

A total of 38 species of spider were recorded on the Reserve in 2010 by all methods; adding 30 species to the site list. Therefore, the total number of spiders recorded at Hetchell Woods is now 55 species. Whilst the survey failed to add any additional species to VC 64, 29 species were added to the SE 34 hectad, which now stands at 96 species. Appendix 1 lists all the species recorded. For the species recorded in 2010, where they were recorded within the Reserve is listed.

The 38 species captured in 2010 largely reflects that the survey effort employed on this Reserve significantly relied on the use of pitfall traps, with a limited amount of time spent on more active survey methods such as beating vegetation, sweeping the field layer or grubbing at the base of tussocks or in leaf-litter. None of the species recorded are particularly remarkable in a national context. However, the record of *Pisaura mirabilis* [the nursery-web spider] is one of only eight records for the vice-county.

Habitat Management Recommendations

The Reserve is managed primarily for its botanical and woodland interest. At this stage, no particular management in relation to spiders is appropriate.

References

Harvey, P.R., Nellist, D.R. and Telfer, M.G. (2002) *Provisional Atlas of British spiders (Arachnida, Araneae), Volumes 1 and 2*. Biological Record Centre: Huntingdon. 406pp

Appendix 1: Spiders recorded at Bishop Monkton Railway Cutting in 2010

Family	Taxon	Historical Record	Woodland (2010)	Grassland (2010)
Segestridae	<i>Segestria senoculata</i> (Linnaeus, 1758)		x	
Theridiidae	<i>Neottiura bimaculata</i> (Linnaeus, 1767)			x
	<i>Paidiscura pallens</i> (Blackwall, 1834)		x	
	<i>Enoplognatha ovata sens. str.</i> (Clerck, 1757)			
Linyphiidae	<i>Ceratinella brevipes</i> (Westring, 1851)			x
	<i>Walckenaeria unicornis</i> O.P.-Cambridge, 1861	x		
	<i>Walckenaeria cuspidata</i> Blackwall, 1833	x		
	<i>Entelecara acuminata</i> (Wider, 1834)			
	<i>Gongylidium rufipes</i> (Linnaeus, 1758)	x	x	
	<i>Dismodicus bifrons</i> (Blackwall, 1841)		x	
	<i>Hypomma bituberculatum</i> (Wider, 1834)	x		
	<i>Maso sundevalli</i> (Westring, 1851)	x		
	<i>Pocadicnemis pumila sens. str.</i> (Blackwall, 1841)	x		x
	<i>Oedothorax retusus</i> (Westring, 1851)			x
	<i>Cnephalocotes obscurus</i> (Blackwall, 1834)	x		
	<i>Monocephalus fuscipes</i> (Blackwall, 1836)	x	x	
	<i>Gongyliellum vivum</i> (O.P.-Cambridge, 1875)	x		
	<i>Micrargus herbigradus sens. str.</i> (Blackwall, 1854)	x		
	<i>Erigonella hiemalis</i> (Blackwall, 1841)		x	
	<i>Diplocephalus picinus</i> (Blackwall, 1841)	x	x	
	<i>Erigone dentipalpis</i> (Wider, 1834)	x		
	<i>Erigone atra</i> Blackwall, 1833	x		x
	<i>Meioneta rurestris</i> (C.L.Koch, 1836)	x		
	<i>Microneta viaria</i> (Blackwall, 1841)		x	
	<i>Bathyphantes gracilis</i> (Blackwall, 1841)		x	
	<i>Lepthyphantes tenuis</i> (Blackwall, 1852)		x	
	<i>Lepthyphantes zimmermanni</i> Bertkau, 1890		x	x
	<i>Lepthyphantes flavipes</i> (Blackwall, 1854)		x	
	<i>Lepthyphantes pallidus</i> (O.P.-Cambridge, 1871)		x	
	<i>Helophora insignis</i> (Blackwall, 1841)		x	
	<i>Linyphia triangularis</i> (Clerck, 1757)	x		
	<i>Linyphia hortensis</i> Sundevall, 1830	x	x	
	<i>Neriene peltata</i> (Wider, 1834)		x	
Tetragnathidaw	<i>Pachygnatha clercki</i> Sundevall, 1823		x	x
	<i>Pachygnatha degeeri</i> Sundevall, 1830			x
Araneidae	<i>Araneus diadematus</i> Clerck, 1757	x		x
	<i>Araneus quadratus</i> Clerck, 1757			x
	<i>Nuctenea umbratica</i> (Clerck, 1757)	x		
Lycosidae	<i>Pardosa pullata</i> (Clerck, 1757)	x		x
	<i>Pardosa prativaga</i> (L.Koch, 1870)			x
	<i>Pardosa amentata</i> (Clerck, 1757)	x		x

Family	Taxon	Historical Record	Woodland (2010)	Grassland (2010)
	<i>Pardosa nigriceps</i> (Thorell, 1856)	x		
	<i>Alopecosa pulverulenta</i> (Clerck, 1757)			x
	<i>Trochosa terricola</i> Thorell, 1856			x
Pisauridae	<i>Pisaura mirabilis</i> (Clerck, 1757)		x	
Agelenidae	<i>Textrix denticulata</i> (Olivier, 1789)	x		
Amaurobidae	<i>Amaurobius fenestralis</i> (Stroem, 1768)	x		
Clubionidae	<i>Clubiona reclusa</i> O.P.-Cambridge, 1863			x
	<i>Clubiona lutescens</i> Westring, 1851		x	
Zoridae	<i>Zora spinimana</i> (Sundevall, 1833)	x		x
Thomisidae	<i>Tibellus maritimus</i> (Menge, 1875)	x		
	<i>Tibellus oblongus</i> (Walckenaer, 1802)			x
	<i>Xysticus cristatus</i> (Clerck, 1757)			x
	<i>Ozyptila trux</i> (Blackwall, 1846)			x
	<i>Ozyptila atomaria</i> (Panzer, 1801)			x
Total	55	25	19	21