

Aculeate Hymenoptera of  
**Thrupp Lakes (West)**  
Results from sampling 2005/6  
Ivan Wright

**Data Routes:**  
'Save Radley Lakes'  
TV ERC  
BWARS Data Base



### Site Description

The area surveyed is a 'brown field' habitat ranging from 'recently disturbed' ground to 'early-mature' scrub. The substrate has only a little soil development in places and is mostly calcareous gravel with a small clay fraction. The area surveyed is mostly to the west of Radley Lakes 'E' and 'F' (see page 3). The flora is typical of a calcareous ruderal habitat of poor fertility, with the addition of some 'garden' species.

### Suitability for aculeate Hymenoptera

The combination of exposed fairly light soils for ground-nesting species, and 'rough-ground' plant species for pollen, nectar and stem-nesting sites, suggests that a good diversity of bees and wasps is likely. The diversity will also be enhanced by flower-seeking 'visitors' from the surrounding gravel working where bunds, banks and near-vertical sandy surfaces, will provide good nesting sites but where the flora may be deficient. Umbelifers (especially Wild Parsnip, *Pasternaca sativa*), perennial and biennial Asteraceae, Roseae and *Salix* Sp. are well represented and currently ensure an excellent year-round supply of pollen and nectar.

### Survey

Aculeate specimens were caught for identification using yellow pan traps, hand netting, and a Malaise trap (4 x one day only). Visits were made on 6/7/2005, 14/7/2005, 2/8/2005, 18/8/2005, 30/8/2005, 6/4/2006, 4/5/2006, 16/6/2006 and (with Martin Townsend) on 30/6/2006. An additional species (Hornet: *Vespa crabro*) was reported by Bob Eeles.

### Results

118 species of aculeate Hymenoptera have been recorded, and comprise 3 ants, 4 social wasps, 48 solitary wasps, 53 solitary bees and 10 social bees. Twenty-one of the species (18%) are listed in Recorder 3.3 as nationally scarce or rare: a proportion that is a little higher than average when compared to other similar local sites, such as old quarries.

Survey sectors A and B (see map on page 3) have been combined to make the amount of recording effort about equal in the 4 Sectors A/B, C, D, and E. Sector C had the highest diversity (73 species). Only a few of the more common species were recorded in all 4 Sectors, and so assuming similarity of habitat between sectors, this suggests that the survey may fall short of providing a fully representative sample of the individual areas.

Of the cleptoparasitic species, five were recorded without their host species being found. This also suggests that more species would be found if further survey work were conducted, and the total number of recorded aculeate species for the area could rise to about 130 species.

A particularly significant result was the presence of the nationally scarce Oil Beetle (*Meloe rugosus*: Det. Darren Mann), which was seen several times in Sector D during the spring of 2006 (initially by Jacqueline Wright). This beetle is dependent on solitary bees to complete its life cycle and is an indicator of the richness of the bee fauna at the site. Although the associations with specific bees are not well known, six species of bee are listed by Ramsey (2002) as being known hosts of Oil Beetles. These are, in order of likelihood, *Andrena cineraria*, *Andrena flavipes*, *Andrena haemorrhoa*,

*Andrena wilkella*, *Anthophora plumipes* and *Lasioglossum calceatum*. In this survey host species were recorded with the following abundance of trapped specimens: *Andrena flavipes* (43), *Andrena haemorrhoea* (1), *Andrena wilkella* (1), *Anthophora plumipes* (1) and *Lasioglossum calceatum* (5).

### Significant aculeate species

*Stelis ornatula* (Red Data Book 3) is a particularly significant record. The species has not been recorded in Oxfordshire since the 1920s. *S. ornatula* is a cleptoparasite of the shell-nesting bee *Hoplitis caviventris*, but the host was not found in the survey.

*Ammophila sabulosa* (local to coastal areas) was recorded in Sector E, and is the first record in Oxfordshire since 1943.

*Anoplius caviventris* is a nationally scarce spider-hunting wasp, and is a species that is more likely to be associated with the presence of the open water at this site. There are only a few previous Oxfordshire records.

Two BAP species were recorded: the digger wasp *Cerceris quinquefasciata*, and the nomad bee *Nomada ferruginata*. Although these are important records of nationally rare species, both are recorded from time to time in the Abingdon area.

The 'Red Data Book' species *Philanthus triangulum* and *Sphecodes niger* have become significantly less rare, both nationally and regionally, in recent years.

Records of species that are less scarce but that are not often recorded in Oxfordshire are:

Wasps: *Priocnemis agilis*, *Arachnospila minatula*, *Episyron rufipes*, *Odynerus spinipes*, *Ectemnius sexcinctus*, *Pemphredon morio*, *Diodontus luperus*, *Nyson dimidiatus*

And bees: *Hylaeus cornutus*, *Andrena apicata*, *Andrena labialis* and *Sphecodes longulus*.

Where relevant, further interpretation and local context is given in the individual species accounts (see below).

### Conclusion

The actual (118) and projected (130) total number of species in this relatively small area, mark it out as a particularly diverse area for aculeate Hymenoptera. These totals place the 'brown field' areas around the Radley Lakes second in status in Oxfordshire only to the significant recorded 'hot spots' such as Dry Sandford Pit, Hitch Copse Pit and Shotover Hill, and it is interesting that a few species recorded in this survey are the first Oxfordshire records outside of these 'hot spots'. However, it should be noted that, unlike the County 'hot spots', this diversity is related to the current state of a site that is undergoing rapid successional change, and assuming no major intervention or development, would slowly decline in the long term as the site matures and denser vegetation eclipses bare soil.

I conclude that the survey area is currently a significant contribution to local invertebrate diversity.

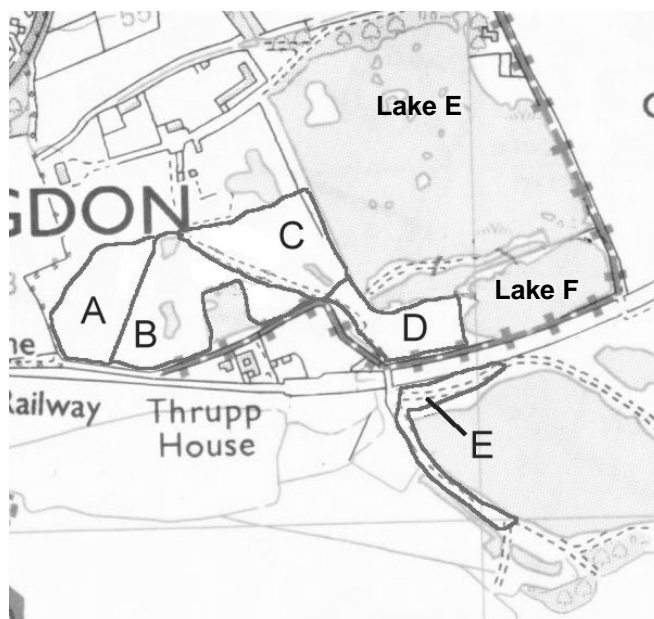
### Reference

Ramsey, A, 2002. British oil beetles. *British Wildlife*, 14, No.1 , 27-30.

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## SPECIES TABLE



SPECIES	SPECIES TYPE	STATUS	Sector A/B	Sector C	Sector D	Sector E
<b>ANTS</b>						
<i>Lasius flavus</i>	Ant	Common		✓		
<i>Lasius niger</i>	Ant	Common	✓	✓	✓	
<i>Myrmica ruginodis</i>	Ant	Common		✓		
<b>WASPS</b>						
<i>Ammophila sabulosa</i>	Solitary wasp	Local				✓
<i>Ancistrocerus gazella</i>	Solitary wasp	Common			✓	
<i>Anoplius caviventris</i>	Solitary wasp	Scarce b		✓		
<i>Anoplius infuscatus</i>	Solitary wasp	Local		✓	✓	✓
<i>Anoplius nigerrimus</i>	Solitary wasp	Local	✓	✓	✓	✓
<i>Arachnospila anceps</i>	Solitary wasp	Local	✓	✓	✓	
<i>Arachnospila minutula</i>	Solitary wasp	Scarce b				✓
<i>Argogorytes mystaceus</i>	Solitary wasp	Local			✓	
<i>Caliadurgus fasciatellus</i>	Solitary wasp	Local	✓			
<i>Cerceris quinquefasciata</i>	Solitary wasp	RDB3				✓
<i>Cerceris rybyensis</i>	Solitary wasp	Local		✓	✓	✓
<i>Chrysis angustula</i>	Solitary wasp	Common		✓		
<i>Crabro cribrarius</i>	Solitary wasp	Local		✓	✓	✓
<i>Crossocerus elongatulus</i>	Solitary wasp	Common		✓		
<i>Diodontus luperus</i>	Solitary wasp	Local	✓			✓
<i>Dolichovespula saxonica</i>	Social wasp	Local		✓		
<i>Ectemnius continuus</i>	Solitary wasp	Common	✓	✓	✓	
<i>Ectemnius lituratus</i>	Solitary wasp	Local			✓	
<i>Ectemnius sexcinctus</i>	Solitary wasp	Scarce b	✓			
<i>Entomognathus brevis</i>	Solitary wasp	Local	✓	✓	✓	
<i>Episyron rufipes</i>	Solitary wasp	Local				✓
<i>Evagetes crassicornis</i>	Solitary wasp	Local			✓	
<i>Gymonomerus laevipes</i>	Solitary wasp	Local			✓	
<i>Harpactus tumidus</i>	Solitary wasp	Local	✓	✓		✓
<i>Hedychridium ardens</i>	Solitary wasp	Common	✓			
<i>Lindenius albilabris</i>	Solitary wasp	Common	✓			
<i>Mellinus arvensis</i>	Solitary wasp	Common	✓	✓	✓	

<i>Nysson dimidiatus</i>	Solitary wasp	Scarce b	✓		✓	✓
<i>Nysson trimaculatus</i>	Solitary wasp	Scarce b	✓	✓		✓
<i>Odynerus spinipes</i>	Solitary wasp	Common			✓	
<i>Oxybelus uniglumis</i>	Solitary wasp	Common			✓	
<i>Passaloecus singularis</i>	Solitary wasp	Common		✓	✓	
<i>Pemphredon inornata</i>	Solitary wasp	Common	✓	✓		
<i>Pemphredon lethifer</i>	Solitary wasp	Common	✓	✓		
<i>Pemphredon lugubris</i>	Solitary wasp	Common			✓	
<i>Pemphredon morio</i>	Solitary wasp	Scarce b		✓		
<i>Philanthus triangulum</i>	Solitary wasp	pRDB4	✓			✓
<i>Priocnemis agilis</i>	Solitary wasp	Scarce b	✓		✓	
<i>Priocnemis exaltata</i>	Solitary wasp	Local		✓	✓	
<i>Priocnemis parvula</i>	Solitary wasp	Local		✓		✓
<i>Pseudomalus auratus</i>	Solitary wasp	Common		✓		
<i>Rhopalum coarctatum</i>	Solitary wasp	Local			✓	
<i>Stigmus solski</i>	Solitary wasp	Local			✓	
<i>Tachysphex pompiliformis</i>	Solitary wasp	Local	✓			✓
<i>Tiphia femorata</i>	Solitary wasp	Local		✓		
<i>Trypoxylon attenuatum</i>	Solitary wasp	Common	✓	✓	✓	✓
<i>Trypoxylon clavicerum</i>	Solitary wasp	Common		✓		
<i>Trypoxylon figulis</i>	Solitary wasp	Common			✓	
<i>Trypoxylon medium</i>	Solitary wasp	Common	✓	✓		✓
<i>Vespa crabro</i>	Social wasp	Local	Recorded nearby (Eeles)			
<i>Vespula germanica</i>	Social wasp	Common			✓	
<i>Vespula vulgaris</i>	Social wasp	Common	✓	✓	✓	
<b>BEES</b>						
<i>Andrena apicata</i>	Solitary bee	Scarce b			✓	
<i>Andrena bicolor</i>	Solitary bee	Common	✓	✓	✓	
<i>Andrena chrysoceles</i>	Solitary bee	Local	✓		✓	
<i>Andrena clarkella</i>	Solitary bee	Common		✓		
<i>Andrena dorsata</i>	Solitary bee	Local	✓	✓	✓	✓
<i>Andrena flavipes</i>	Solitary bee	Local	✓	✓	✓	✓
<i>Andrena fucata</i>	Solitary bee	Local			✓	
<i>Andrena haemorrhoea</i>	Solitary bee	Common		✓		
<i>Andrena labialis</i>	Solitary bee	Local			✓	
<i>Andrena minutula</i>	Solitary bee	Common	✓	✓	✓	
<i>Andrena nigroaenea</i>	Solitary bee	Common		✓	✓	
<i>Andrena nitida</i>	Solitary bee	Common		✓		
<i>Andrena praecox</i>	Solitary bee	Local		✓		
<i>Andrena subopaca</i>	Solitary bee	Common		✓	✓	
<i>Andrena wilkella</i>	Solitary bee	Common	✓			
<i>Anthophora plumipes</i>	Solitary bee	Common			✓	
<i>Apis mellifera</i>	Social bee	Common	✓	✓	✓	✓
<i>Bombus barbutellus</i>	Parasitic social bee	Common		✓		
<i>Bombus campestris</i>	Parasitic social bee	Common		✓		
<i>Bombus hortorum</i>	Social bee	Common	✓			
<i>Bombus lapidarius</i>	Social bee	Common	✓	✓	✓	✓
<i>Bombus lucorum</i>	Social bee	Common	✓	✓		✓
<i>Bombus pascuorum</i>	Social bee	Common	✓	✓	✓	✓
<i>Bombus pratorum</i>	Social bee	Common	✓	✓	✓	✓
<i>Bombus terrestris</i>	Social bee	Common	✓			
<i>Bombus vestalis</i>	Parasitic social bee	Common		✓		
<i>Halictus tumulorum</i>	Solitary bee	Common	✓	✓	✓	
<i>Hoplitis spinulosa</i>	Solitary bee	Local	✓	✓	✓	

<i>Hylaeus annularis</i>	Solitary bee	Local		✓	✓	
<i>Hylaeus brevicornis</i>	Solitary bee	Local			✓	
<i>Hylaeus communis</i>	Solitary bee	Local		✓	✓	
<i>Hylaeus confusus</i>	Solitary bee	Local			✓	
<i>Hylaeus cornutus</i>	Solitary bee	Scarce a	✓			✓
<i>Hylaeus hyalinatus</i>	Solitary bee	Local	✓	✓	✓	
<i>Lasioglossum calceatum</i>	Solitary bee	Common		✓		✓
<i>Lasioglossum lativentre</i>	Solitary bee	Local		✓		
<i>Lasioglossum leucopus</i>	Solitary bee	Local	✓	✓		
<i>Lasioglossum leucozonium</i>	Solitary bee	Common	✓	✓	✓	
<i>Lasioglossum malachurum</i>	Solitary bee	Scarce a	✓	✓	✓	✓
<i>Lasioglossum minutissimum</i>	Solitary bee	Common	✓	✓	✓	✓
<i>Lasioglossum morio</i>	Solitary bee	Common	✓	✓	✓	✓
<i>Lasioglossum parvulum</i>	Solitary bee	Common		✓		
<i>Lasioglossum pauxillum</i>	Solitary bee	Scarce a	✓	✓		
<i>Lasioglossum punctatissimum</i>	Solitary bee	Local	✓			✓
<i>Lasioglossum smeathmanellum</i>	Solitary bee	Local	✓			
<i>Lasioglossum villosulum</i>	Solitary bee	Common	✓		✓	✓
<i>Megachile ligniseca</i>	Solitary bee	Common		✓	✓	
<i>Megachile versicolor</i>	Solitary bee	Local		✓		
<i>Nomada fabriciana</i>	Parasitic solitary bee	Common	✓	✓	✓	
<i>Nomada ferruginata</i>	Parasitic solitary bee	RDB2		✓	✓	
<i>Nomada flava</i>	Parasitic solitary bee	Common		✓		
<i>Nomada flavoguttata</i>	Parasitic solitary bee	Common	✓	✓	✓	
<i>Nomada fucata</i>	Parasitic solitary bee	Scarce a	✓		✓	✓
<i>Nomada goodeniana</i>	Parasitic solitary bee	Common	✓	✓		
<i>Osmia bicolor</i>	Solitary bee	Scarce b	✓	✓		
<i>Sphecodes crassus</i>	Parasitic solitary bee	Scarce b		✓	✓	
<i>Sphecodes ephippius</i>	Parasitic solitary bee	Common	✓	✓	✓	
<i>Sphecodes hyalinatus</i>	Parasitic solitary bee	Common		✓		
<i>Sphecodes longulus</i>	Parasitic solitary bee	Scarce a				✓
<i>Sphecodes monilicornis</i>	Parasitic solitary bee	Local	✓			✓
<i>Sphecodes niger</i>	Parasitic solitary bee	RDB3		✓		✓
<i>Sphecodes puncticeps</i>	Parasitic solitary bee	Local	✓		✓	
<i>Stelis ornatula</i>	Parasitic solitary bee	RDB3	✓			
		<b>Species totals</b>	57	73	62	35

### Systematic List (in taxonomic order)

R3.3: = information extracted from Recorder 3.3  
 BWARS = Bees, Wasps and Ants Recording Scheme  
**Extra = County context and extra relevant information**

#### **ANTS**

***Myrmica ruginodis*** Common Number of specimens in this survey: many

R3.3 One of the commonest red ants in Britain

***Lasius flavus*** Common Number of specimens in this survey: many

R3.3 Common species of undisturbed grassland.

***Lasius niger*** Common Number of specimens in this survey: many

R3.3 A small black ant found in bushy scrub, gardens and wet places: one of the commonest ants.

## WASPS

***Psuedoamalus auratus*** Common Number of specimens in this survey: 1

R3.3 A ruby-tailed wasp. Larvae are parasitoids of wasps such as *Pemphredon* and *Trypoxylon* which nest in cut stems or holes in dead wood. Adults found May to August.

**Extra: The host species *Pemphredon* and *Trypoxylon* were also recorded in this survey.**

***Hedychridium ardens*** Common Number of specimens in this survey: 1

R3.3 A ruby tailed wasp which is a brood parasite of the Sphecid sand wasp

**Extra: The probable host in UK is *Tachyspex pompiliformis*, of which several specimens were recorded in this survey.**

***Chrysis angustula*** Local Number of specimens in this survey: 1

R3.3 Blue green and red ruby-tail wasp. Parasitic on *Ancistrocerus trifasciatus* nesting in broken plant stems, and *Crabro* species, nesting in the soil. Widespread and common in southern England.

**Extra: The host wasp *Crabro cribrarius* was fairly abundant on site during this survey.**

***Tiphia femorata*** Local Number of specimens in this survey: 1

R3.3 Primitive black solitary wasp. Nests in sandy ground, stocking nest with larvae of scarabaeid beetles (chafers and dung beetles). Locally common in southern Britain.

**Extra: There have been few historic records of this species in Oxon, but has been recorded at many site in recent years.**

***Priocnemis parvula*** Local Number of specimens in this survey: 3

R3.3 A spider-hunting wasp. This species preys mainly on wolf spiders (Lycosidae) and sometimes crab spiders (Thomisidae) and jumping spiders (Salticidae). *P. parvula* is typically found on sandy soils and heathland, often in abundance.

***Priocnemis exaltata*** Local Number of specimens in this survey: 2

R3.3 Medium sized spider-hunting wasp which preys on a wide variety of ground living spiders including Lycosidae, Salticidae and Pisauridae. A widespread species.

***Priocnemis agilis*** Nationally Scarce b Number of specimens in this survey: 2

R3.3 No information

BWARS A spider-hunting wasp of dry grassland, may be under threat of habitat loss.

**Extra: Only a few other Oxon records**

***Caliadurgus fasciatellus*** Local Number of specimens in this survey: 1

R3.3 A spider-hunting wasp which frequents open, dry exposures of sandy or sand-clay soils. Prey is restricted to spiders of the family Araneidae (especially *Meta* and *Araneus*) which are taken from orb webs. The wasp constructs a short, vertical burrow where the paralysed prey is interred in a cell.

**Extra: Appears not to have been recorded in Oxon before 2002 but has now been recorded at various sites since. The Araneidae spider *Nuctenea umbratica* has been recorded recently at this site (Basil Crowley)**

***Arachnospila anceps*** Local Number of specimens in this survey: 7

R3.3 A spider hunting wasp which preys on ground dwelling spiders in sandy places. One of the more frequently encountered spider hunting wasps: but rarely numerous.

***Arachnospila minatula***                      Nationally Scarce b                      Number of specimens in this survey:    2

R3.3 A spider-hunting wasp found on chalk downs, heaths, quarries and other habitats with warm, sparsely-vegetated ground. Prey is probably wolf spiders (Lycosidae). Adults have been seen visiting umbellifer flowers. Very local.

**Extra: There are only three other historic records of *Arachnospila minatula* in Oxon, (1920, 1991 and 1992) all from the Tubney/Frilford area.**

***Evagetes crassicornis***                      Local    Number of specimens in this survey:    2

R3.3 A spider-hunting wasp which is a brood parasite in the nest of other species of spider-hunting wasp. It is most often encountered in dry, sandy habitats where potential host species are plentiful. Suggested hosts are *Arachnospila anceps* and possibly *Anoplius nigerrimus*, although these have not been confirmed. Widespread but rarely numerous throughout Britain.

**Extra: Both possible host species were also recorded in this survey**

***Anoplius caviventris***                      Nationally Scarce b                      Number of specimens in this survey:    1

R3.3 A spider-hunting wasp. Found in bushy places, particularly riversides and reed marsh. It stores Clubionid spiders in serial cells in hollow stems (eg. Of *Phragmites*). Infrequent and not numerous: southern England.

**Extra: Very few Oxon records. There appears to be no record of any Clubionid spiders at this site.**

***Anoplius infuscatus***                      Local    Number of specimens in this survey:    4

R3.3 A spider-hunting wasp found in moist sandy places, most frequently in coastal sand dunes. The female stores mostly wolf spiders Lycosidae, but also Agelenidae and Thomisidae, in a short burrow in sand, the prey being hung on low vegetation whilst the burrow is dug. A fairly common species.

**Extra: Very few historic Oxon records, but recent surveys suggest that it may have been under-recorded**

***Anoplius nigerrimus***                      Local    Number of specimens in this survey:    20

R3.3 A spider-hunting wasp found in a fairly wide range of habitats and nesting in a variety of situations including under stones, in dry plant stems, in deserted burrows of other aculeates and in snail shells. Reported prey include Lycosidae, Gnaphosidae and Pisauridae.

**Extra: No historic Oxon records: recent surveys suggest it may have been under-recorded.**

***Episyron rufipes***                      Local    Number of specimens in this survey:    1

R3.3: A spider-hunting wasp associated with open sand, particularly sand dunes but also inland. Burrows are excavated in loose sand, and usually stocked with orb-spiders, particularly *Meta* and *Araneus* spp., but also Lycosidae. The prey are temporarily hung on a nearby plant whilst the burrow is dug.

**Extra: Only two other Oxon records (Tubney/Frilford area).**

***Gymnomerus laevipes***                      Local    Number of specimens in this survey:    1

R3.3 A solitary wasp which nests in the hollow stems of brambles and elder and also some herbs such as *Arctium* and *Carduus*. Usual prey is weevil larvae such as *Phytonomus*.

***Odynerus spinipes***                      Common    Number of specimens in this survey:    1

R3.3. The female builds a curved 'chimney' over the burrow entrance, with its aperture facing downwards. Prey are larvae of Curculionids.

**Extra: A few historic records, but this is first Oxon record for 15 years.**

<b><i>Ancistrocerus gazella</i></b>	Common	Number of specimens in this survey:	1
R3.3 A large black and yellow potter wasp, nesting in various cavities, especially broken plant stems. Prey are lepidopterous larvae.			
<b><i>Vespa crabro</i></b>	Local	Reported nearby (R.Eeles)	
R3.3 The hornet is the largest social wasp in UK. Nests in hollow trees, chimneys, wall cavities etc., sometimes using the same site year after year. In the 1960s it was regarded as a rare species in Britain, but has become locally abundant in wooded areas in the south and is spreading northwards.			
<b><i>Vespula vulgaris</i></b>	Common	Number of specimens in this survey:	many
R3.3 The common social wasp.			
<b><i>Vespula germanica</i></b>	Common	Number of specimens in this survey:	several
R3.3 A common social wasp which typically nests underground.			
<b><i>Dolichovespula saxonica</i></b>	Local	Number of specimens in this survey	1
R3.3 A relatively recent addition to the British list.			
BWARS The scarcest of the British social wasps. From the first record in 1987, the range spread over SE England 1991-95. Now becoming frequent and possibly under-recorded.			
<b><i>Tachysphex pompiliformis</i></b>	Local	Number of specimens in this survey	6
R3.3 Red and black solitary wasp nesting in light sandy soil. Predatory on grasshopper nymphs.			
<b><i>Trypoxylon attenuatum</i></b>	Common	Number of specimens in this survey:	30
R3.3 Medium sized black solitary wasp which builds its nest in pre-existing cavities such as beetle burrows in dead-wood and hollow stems. Prey consists of spiders.			
<b><i>Trypoxylon clavicerum</i></b>	Common	Number of specimens in this survey:	1
R3.3 Solitary wasp which nests in various cavities such as hollow stems, beetle burrows in wood and occasionally the abandoned nests of other aculeates in sand. The cavity is divided into cells with walls of mud and stocked with spiders.			
<b><i>Trypoxylon figulus</i></b>	Common	Number of specimens in this survey:	1
R3.3 Small, black solitary wasp nesting in the stems of plants or beetle burrows in dead-wood. The cavity is divided into cells by mud partitions and stocked with spiders.			
<b><i>Trypoxylon medium</i></b>	Common	Number of specimens in this survey:	4
R3.3 Split from <i>T. figulus</i> in 1980. <i>T. medium</i> is the commoner of the separated species.			
BWARS Solitary wasp that preys on spiders and nests in stem cavities.			
<b><i>Crabro cribrarius</i></b>	Local	Number of specimens in this survey	17
R3.3 A large yellow and black solitary wasp which nests in sandy soil. Burrows are stocked with flies from a wide variety of families including Therevidae, Asilidae, Empididae, Syrphidae and Muscidae.			
<b>Extra: Only a few Oxon records, but is fairly abundant at this site.</b>			
<b><i>Crossocerus elongatulus</i></b>	Common	Number of specimens in this survey:	1
R3.3 A digger wasp nesting in soil but also in holes in old posts. Prey various small diptera.			



<b><i>Ectemnius sexcinctus</i></b>	Nationally scarce b	Number of specimens in this survey:	1
R3.3 A digger wasp which nests in dead wood exposed to the sun, such as tree stumps and old fence posts. The nests are stocked with large flies. Adults are often seen on large umbellifers.			
<b>Extra: In Oxon, only a few other records from Shotover. This is the first County record for about 25 years.</b>			
<b><i>Ectemnius continuus</i></b>	Common	Number of specimens in this survey:	9
R3.3 Medium sized, black and yellow solitary wasp nesting in rotten wood or plant stems and preying on Diptera, mainly hoverflies and Muscids. Adults often seen on umbels.			
<b><i>Ectemnius lituratus</i></b>	Local	Number of specimens in this survey:	3
R3.3 A black and yellow wasp which preys on muscid flies.			
<b><i>Rhopalum coarctatum</i></b>	Local	Number of specimens in this survey:	1
R3.3 Black solitary wasp nesting in hollow stems and sometimes dead wood. Prey is mainly Diptera (especially Nematocera), but also records of Psocoptera, Aphidoidea and Staphylinidae.			
<b><i>Lindenius albilabris</i></b>	Common	Number of specimens in this survey:	1
R3.3 Digger wasp preying on Heteroptera and Diptera. Nests in sandy soil.			
<b><i>Entomognathus brevis</i></b>	Local	Number of specimens in this survey:	6
R3.3 Digger wasp preying on chrysomelid beetles and nesting in sandy soil.			
<b><i>Oxybelus uniglumis</i></b>	Common	Number of specimens in this survey:	1
R3.3 A black and yellow solitary wasp nesting in sand and preying on Diptera. A characteristic heathland species.			
<b><i>Stigmus solski</i></b>	Local	Number of specimens in this survey:	1
R3.3 A small black solitary wasp nesting in beetle emergence holes in dead wood and sometimes in broken plants stems. Prey is aphids. Very local.			
<b><i>Pemphredon lugubris</i></b>	Common	Number of specimens in this survey:	1
R3.3 A black wasp nesting in rotten wood. Preys on aphids. A widespread species.			
<b><i>Pemphredon inornata</i></b>	Local	Number of specimens in this survey:	2
R3.3 Solitary wasp nesting in broken plant stems. Predatory on aphids.			
<b><i>Pemphredon lethifer</i></b>	Common	Number of specimens in this survey:	2
R3.3 Solitary black wasp nesting in broken stems, usually of bramble. Prey is aphids.			
<b><i>Pemphredon morio</i></b>	Nationally Scarce b	Number of specimens in this survey:	2
R3.3: Solitary wasp nesting in rotten wood. Prey is aphids.			
<b>Extra: Very few recent Oxon records.</b>			
<b><i>Diodontus luperus</i></b>	Local	Number of specimens in this survey:	6
R3.3 A small black solitary wasp nesting in the soil and preying on aphids. Local, but occasionally abundant where it occurs.			
<b>Extra: Very few recent Oxon records.</b>			

- Passaloecus singularis*** Common Number of specimens in this survey: 2  
 R3.3 Small black solitary wasp nesting in broken stems, partitioning nest with mud, resin and small stones. Prey is aphids.
- Ammophila sabulosa*** Local Number of specimens in this survey: 1  
 R3.3 A large elongate solitary wasp with a very slender gaster. Found on sandy heaths where they excavate a short burrow ending in a single cell in sandy soil. The cell is stocked with paralysed caterpillars, sometimes including sawfly caterpillars.  
**Extra: First Oxon record since 1943 (Dry Sandford Pit).**
- Mellinus arvensis*** Common Number of specimens in this survey: 7  
 R3.3 A large black and yellow digger wasp which nests in dry light soil. The nests are quite deep and multiple cells are stocked mainly with flies.
- Nysson trimaculatus*** Nationally scarce b Number of specimens in this survey: 10  
 R3.3 Yellow and black wasp found in open habitats with light soils such as heathland, dry grassland, open woods and coastal cliffs. A cleptoparasite, laying eggs on the froghopper prey of the solitary wasps *Gorytes quadrifasciatus* or *Lestiphorus bicinctus*. Very local.  
**Extra: Only a few historic Oxon records, but now more frequently recorded. There are no records of the host species in this survey, but curiously, this is often the case.**
- Nysson dimidiatus*** Nationally scarce b Number of specimens in this survey: 6  
 R3.3 Cleptoparasitic wasp laying eggs in nests of other digger wasps (*Gorytes* and *Lindenius*). Found in warm dry areas with sand or clay but with sparse vegetation, including sandpits.  
**Extra: Very few recent Oxon records. A host species (*Lindenius albilabris*) also recorded in this survey.**
- Harpactus tumidus*** Local Number of specimens in this survey: 3  
 R3.3 Black solitary wasp with red and white spots. Found in sandy places. Prey is cicadellid and cercopid hoppers.
- Argogorytes mystaceus*** Local Number of specimens in this survey: 1  
 R3.3 Medium sized, black and yellow solitary wasp which nests in soil and preys on the larvae of *Philaneus* (Cercopidae) which it can extract from their protective 'cuckoo spit'.
- Philanthus triangulum*** pRDB4 Number of specimens in this survey: 2 + obsvs.  
 R3.3 A yellow and black digger wasp found in lowland heath, coastal sand dunes and cliffs where it excavates nest burrows in sandy soil. Preys mostly on honeybees but wild species will also be taken.  
 BWARS *P. triangulum* was RDB2 (south coast only) but has spread north.  
**Extra: First Oxon record was Hitchcapse Pit 1992, then Shotover 2001 and now recorded from various other sites since all over Oxon. At this site it is nesting in the taller bunds and soil spoil heaps.**
- Cerceris rybyensis*** Local Number of specimens in this survey: 6  
 R3.3 Yellow and black solitary wasp which makes a deep nest burrow in flat, bare and often rather hard ground such as the edges of paths. Preys on solitary bees especially *Hylaeus* and *Halictus*.  
**Extra: Plenty of host species also recorded in this survey.**

***Cerceris quinquefasciata*** RDB3 (BAP species) Number of specimens in this survey: 1

R3.3 A rare solitary wasp of southern and eastern England, nesting in burrows in sand and preying on beetles, particularly weevils.

**Extra: Although nationally rare, *Cerceris quinquefasciata* seems to have a stable meta-population around the Tubney/Marcham 'hot spot'. Recorded at Fyfield (2007), near Marcham (2006), Tubney (2004), Hitchcose Pit (1992) and Dry Sandford Pit (1960). The next nearest recent records (post 1970) are from Kent, Essex and Norfolk.**

## **BEES**

***Hylaeus cornutus*** Nationally scarce a Number of specimens in this survey: 2

R3.3 Recorded are from woodland, fenland, sandy habitats and chalk grassland. Nests in the stems of herbaceous plants in sunny situations. Widespread but very local.

**Extra: Only a few recent records in Oxon, with all but one of these from the recent recording at sites SE of Abingdon**

***Hylaeus annularis*** Local Number of specimens in this survey: 7

R3.3 A yellow-faced bee which excavates its nests in the stems of plants such as dock. The nests consist of a series of cells which are stocked with pollen and separated by walls made of a membranous secretion. Pollen is gathered from a variety of plants.

***Hylaeus communis*** Local Number of specimens in this survey: 4

R3.3 A solitary bee which nests in the hollow, dead stems of bramble and dock and feeds especially at bramble flowers.

***Hylaeus hyalinatus*** Local Number of specimens in this survey: 7

R3.3 A small black solitary bee. Adults visit a wide range of flowers with a preference for bramble, Umbellifera and thistles. Nests in the hollow stem of plants such as bramble and docks.

***Hylaeus confusus*** Local Number of specimens in this survey: 1

R3.3 Solitary bee nesting in stems of bramble and dock.

***Hylaeus brevicornis*** Local Number of specimens in this survey: 1

R3.3 A mainly southern bee nesting in exposed soil, preferring disturbed sites. Adults frequent bramble flowers.

***Andrena haemorrhoa*** Common Number of specimens in this survey: 1

R3.3 A mining bee, common and widespread, found on short grassland, heathland and in open scrub.

**Extra: This bee is known to be associated with the life cycle of the nationally scarce oil beetle, *Meloe rugosus*: also recorded on this survey,**

***Andrena flavipes*** Local Number of specimens in this survey: 43

R3.3 A conspicuously banded solitary bee nesting in large but very compact colonies. Very local but widely distributed.

**Extra: This bee is known to be strongly associated with the life cycle of the nationally scarce oil beetle, *Meloe rugosus*: also recorded on this survey,**

<b><i>Andrena nitida</i></b> (Mull.)	Common	Number of specimens in this survey:	2
R3.3 Nest burrows are excavated in soil in a variety of habitats.			
<b><i>Andrena nigroaenea</i></b>	Common	Number of specimens in this survey:	3
R3.3 A solitary bee which nests in bare sand in a variety of habitats including open sites and woodland. Visits a wide range of flowers, but shows some preference for dandelions.			
<b><i>Andrena bicolor</i></b>	Common	Number of specimens in this survey:	90
R3.3 A solitary bee which is common in lowland areas in all sorts of open woodland and grassland situations. A wide range of flowers are visited.			
<b><i>Andrena fucata</i></b>	Local	Number of specimens in this survey:	1
R3.3 <No species account available>			
BWARS: A species of open woodland			
<b><i>Andrena clarkella</i></b>	Common	Number of specimens in this survey:	4
R3.3 A beautiful and conspicuous solitary bee found in open woodland, chalk grassland, coastal areas and the fringes of heaths and moors. Sometimes nests in large compact aggregations formed on the edges of well trodden paths. Visits a wide range of flowers.			
<b><i>Andrena apicata</i></b>	Nationally scarce b	Number of specimens in this survey:	1
R3.3 Associated with flowering willows, <i>Salix</i> , open woodland, heathland, disused sandpits and chalk quarries. The adults are among the earliest bees to emerge in the spring.			
<b>Extra: Only a few other Oxon records</b>			
<b><i>Andrena praecox</i></b>	Local	Number of specimens in this survey:	13
R3.3 <No species account available>			
BWARS Widespread in southern England. An early spring species oligolectic on willow.			
<b>Extra: <i>A. praecox</i> is important on this site as it is the host species for the RDB2 (UK BAP listed) nomad bee - <i>Nomada ferruginata</i>.</b>			
<b><i>Andrena labialis</i></b>	Local	Number of specimens in this survey:	1
R3.3 <No species account available>			
BWARS A local species of old meadowlands.			
<b>Extra: Very few recent Oxon records, most of which are from near old meadows at Otmoor</b>			
<b><i>Andrena chrysoceles</i></b>	Local	Number of specimens in this survey:	3
R3.3 A solitary bee nesting in soil in a variety of habitats including wooded sites. Wide range of flowers are visited.			
<b><i>Andrena minutula</i></b>	Common	Number of specimens in this survey:	100+
R3.3 A solitary bee which nests in the ground in a range of open, particularly disturbed, sites.			
<b><i>Andrena subopaca</i></b>	Common	Number of specimens in this survey:	10
R3.3 A solitary bee nesting in the ground mainly in open woodland. Wide range of flowers visited.			

<b><i>Andrena wilkella</i></b>	Common	Number of specimens in this survey:	1
R3.3: Frequently found. Polylectic.			
<b>Extra: Not often seen, and only a few recent records from around the County. This bee is known to be associated with the life cycle of the nationally scarce oil beetle, <i>Meloe rugosus</i>: also recorded on this survey,</b>			
<b><i>Andrena dorsata</i></b>	Local	Number of specimens in this survey:	34
R3.3 Solitary bee found both at the coast and inland where it burrows are not aggregated and are difficult to find. Double brooded and visits a wide range of flowers.			
<b><i>Halictus tumulorum</i></b>	Common	Number of specimens in this survey:	11
R3.3 A small bee nesting in the ground in a range of habitats using a variety of flowers for food.			
<b><i>Lasioglossum leucozonium</i></b>	Common	Number of specimens in this survey:	6
R3.3 A small bee nesting in the ground, in a range of habitats using a variety of flowers for food.			
<b><i>Lasioglossum lativentris</i></b>	Local	Number of specimens in this survey:	1
R3.3 No information BWARS: Polylectic but infrequently found.			
<b><i>Lasioglossum calceatum</i></b>	Common	Number of specimens in this survey:	5
R3.3 Small, ground nesting solitary bee usually nesting in steep banks.			
<b>Extra: This bee is known to be associated with the life cycle of the nationally scarce oil beetle, <i>Meloe rugosus</i>: also recorded on this survey,</b>			
<b><i>Lasioglossum malachurum</i></b>	Nationally scarce b	Number of specimens in this survey:	13
R3.3: A mining bee mainly found in habitats such as landslips, soft rock cliffs and the upper parts of beaches but also on heath and chalk grassland. It nests in fairly flat bare soil, usually with a clay component.			
<b>Extra: This was a restricted coastal species (Na) until 1980s, and now probably ought to be revised again to 'Local'. Now recorded from all recently surveyed sites.</b>			
<b><i>Lasioglossum pauxillum</i></b>	Nationally scarce a	Number of specimens in this survey:	8
R3.3 A mining bee of sandy heathland, calcareous grassland, soft cliffs and probably other disturbed spots such as sand pits and chalk quarries. Nesting occurs in light soil.			
<b>Extra: This species has recently become less scarce, and has now been recorded at a few sites around the county.</b>			
<b><i>Lasioglossum villosulum</i></b>	Common	Number of specimens in this survey:	5
R3.3 A solitary bee found in sandy places. Generally common throughout Britain.			
<b><i>Lasioglossum punctatissimum</i></b>	Local	Number of specimens in this survey:	1
R3.3 Solitary bee nesting in sandy soil. Predominantly southern species.			
<b><i>Lasioglossum minutissimum</i></b>	Common	Number of specimens in this survey:	10
R3.3 A solitary bee nesting in the ground.			

<b><i>Lasioglossum parvulum</i></b>	Common	Number of specimens in this survey:	3
R3.3 No information BWARS: Widespread in southern Britain and found in a variety of habitats.			
<b><i>Lasioglossum smeathmanellum</i></b>	Common	Number of specimens in this survey:	1
R3.3 No information BWARS Solitary mining bee. Mainly coastal but also inland. Locally common.			
<b><i>Lasioglossum morio</i></b>	Common	Number of specimens in this survey:	40
R3.3 No information BWARS Solitary mining bee. Widespread			
<b><i>Lasioglossum leucopus</i></b>	Local	Number of specimens in this survey:	5
R3.3 A mining bee nesting in the ground, especially on disturbed sites. Very widespread but local.			
<b><i>Sphecodes monilicornis</i></b>	Local	Number of specimens in this survey:	3
R3.3 A solitary bee which is cleptoparasitic on other bees. <i>Lasioglossum fulvicorne</i> and <i>L. fratellum</i> have been recorded as hosts.			
<b>Local: No host species were recorded in this survey.</b>			
<b><i>Sphecodes ephippius</i></b>	Common	Number of specimens in this survey:	12
R3.3 A solitary bee, found in a wide variety of habitats. Probable hosts are common Halictine bees such as <i>L. calceatum</i> or <i>H. rubicundus</i>			
<b>Local: Suitable host species also recorded in this survey (<i>Lasioglossum calceatum</i>)</b>			
<b><i>Sphecodes niger</i></b>	RDB3	Number of specimens in this survey:	5
R3.3 A bee found in the south of England on chalk grassland and clay cliffs. It is a parasite of bees in the genus <i>Lasioglossum</i> , <i>L. morio</i> being the probable host species.			
<b>Extra: The species has been recorded recently a few other sites in Oxon and is known to have become less scarce. Suitable host species were also recorded in this survey (<i>Lasioglossum morio</i>)</b>			
<b><i>Sphecodes longulus</i></b>	Nationally scarce a	Number of specimens in this survey:	5
R3.3 A cleptoparasite of mining bees. In Britain <i>L. leucopum</i> and <i>L. morio</i> are probable hosts.			
<b>Extra: Only a few recent records in Oxon. Host species also recorded in this survey.</b>			
<b><i>Sphecodes puncticeps</i></b>	Local	Number of specimens in this survey:	2
R3.3 No information BWARS: Listed as Southern Widespread and infrequently found. Parasitises Halictine bees.			
<b>Extra: Suitable hosts species also recorded in this survey.</b>			
<b><i>Sphecodes hyalinatus</i></b>	Common	Number of specimens in this survey:	3
R3.3 Brood parasite of <i>Halictus Sp.</i> ( <i>L. fulvicornis</i> and <i>H. fratellum</i> have been recorded as hosts). Species of dry, light soils and visiting compositae, particularly ragwort.			
<b>Extra: Recorded on a few other Oxon sites. No host species were recorded in this survey.</b>			

- Sphecodes crassus***                      Nationally scarce b                      Number of specimens in this survey:      3
- R3.3 Cleptoparasitic on *Lasioglossum* sp. especially *L. nitidiusculum* and *L. parvulum*. Maybe be under-recorded do to identification difficulties.
- Extral: Suitable host species also recorded in this survey (*Lasioglossum parvulum*)**
- Stelis ornatula***                      RDB 3                      Number of specimens in this survey:      1
- R3.3 A rare cuckoo bee, known from scattered UK sites. A brood parasite of the common bee *Hoplitis claviventris*, which nests in plant stems (eg. bramble, ragwort) in a wide range of habitats including downland, heathland, open woodland and waste grounds.
- Extra: First record in Oxon for over 60 years. The host bee *Hoplitis claviventris* was not recorded in this survey**
- Osmia bicolor***                      Nationally scarce b                      Number of specimens in this survey:      3
- R3.3 In chalk and limestone districts where it nests in empty snail shells. Following egg-laying and provisioning of the shell, it is covered with short lengths of dead grass.
- Hoplitis spinulosa***                      Local                      Number of specimens in this survey:      17
- R3.3 No information  
BWARS Restricted to southern England. Calcareous grassland. Nests in snail shells.
- Megachile ligniseca***                      Common                      Number of specimens in this survey:      2
- R3.3 No information  
BWARS A leaf cutter. Widespread but infrequently found. Dead wood nesting.
- Megachile versicolor***                      Local                      Number of specimens in this survey      1
- R3.3: A leaf cutter bee nesting in plant stems or other crevices, and has been recorded building a nest in a burrow in sand.
- Nomada fucata***                      Nationally scarce a                      Number of specimens in this survey:      10
- R3.3 No information  
BWARS Restricted to southern England but has become more widespread recently.
- Extra: Now recorded at a number of Oxon sites, yet all close to the northern limit of this species UK range. The host species (*Andrena flavipes*) was abundant at the site.**
- Nomada goodeniana***                      Common                      Number of specimens in this survey:      3
- R3.3 A nomad bee, cleptoparasitic on the very common mining bee *Andrena nigroaenea*.
- .Extra: The host species is was also recorded during the survey.**
- Nomada ferruginata***                      RDB2 (BAP species)                      Number of specimens in this survey:      15
- R3.3 A cuckoo bee, cleptoparasite of the mining bee *Andrena praecox*. It has been recorded from a number of counties, mostly in the south-east of England. It has apparently declined sharply in recent years, though its host remains common.
- Extra: *Andrena praecox* was also recorded (13 specimens) during the survey.**
- Nomada flava***                      Common                      Number of specimens in this survey:      1
- R3.3 A nomad bee cleptoparasitic on the ubiquitous mining bee *Andrena scotica*.
- Extra: The host bee was not recorded in this survey.**

<b><i>Nomada fabriciana</i></b>	Common	Number of specimens in this survey:	17
R3.3 A solitary bee cleptoparasitic on bees of the genus <i>Andrena</i> , especially <i>A. bicolor</i> .			
<b>Extra: The host bee was also recorded in this survey.</b>			
<b><i>Nomada flavoguttata</i></b>	Common	Number of specimens in this survey:	11
R3.3 A black and yellow solitary bee which is cleptoparasitic on smaller members of the genus <i>Andrena</i> (eg. <i>A. minutula</i> and <i>A. saundersella</i> ).			
<b>Extra: Plenty of the host bee species were recorded in this survey.</b>			
<b><i>Anthophora plumipes</i></b>	Common	Number of specimens in this survey:	1
R3.3 A large solitary bee nesting in walls, in soft mortar, and also in the ground.			
<b>Extra: This bee is known to be associated with the life cycle of the nationally scarce oil beetle, <i>Meloe rugosus</i>: also recorded on this survey,</b>			
<b><i>Bombus lucorum</i></b>	Common	Number of specimens in this survey:	many
R3.3 A common black, white and yellow bumblebee found in gardens and hedgerows.			
<b><i>Bombus terrestris</i></b>	Common	Number of specimens in this survey:	not many
R3.3 One of our commonest larger bumblebees and widespread and common			
<b><i>Bombus lapidarius</i></b>	Common	Number of specimens in this survey:	many
R3.3 A common bumblebee of gardens and hedgerows.			
<b><i>Bombus pratorum</i></b>	Common	Number of specimens in this survey:	many
R3.3 A small bumblebee, often nesting well above ground, in bird nests or nest boxes for example.			
<b><i>Bombus hortorum</i></b>	Common	Number of specimens in this survey:	not many
R3.3 A large black, white and yellow Bumblebee, usually nests on or just under the ground.			
<b><i>Bombus pascuorum</i></b>	Common	Number of specimens in this survey:	many
R3.3 Widely distributed, common and often abundant bumblebee.			
<b><i>Bombus barbutellus</i></b>	Common	Number of specimens in this survey:	1
R3.3 Cuckoo bee which is an inquiline in the nests of <i>Bombus hortorum</i> .			
<b><i>Bombus campestris</i></b>	Common	Number of specimens in this survey:	a few
R3.3 Cuckoo bee parasitizing nests of Bumblebees, killing the queen.			
<b><i>Bombus vestalis</i></b>	Common	Number of specimens in this survey:	a few
R3.3 Cuckoo bee inquiline in nest of the bumblebee <i>Bombus terrestris</i> .			
<b><i>Apis mellifera</i></b>	Common	Number of specimens in this survey:	many
R3.3 The Honeybee.			