

Crane Park, Twickenham: preliminary invertebrate survey

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CONTENTS

Summary	2
Introduction	3
Methods	3
Site visits	3
Site compartments	3
Location and collection of specimens.	4
Taxonomic coverage	4
Survey results	4
General	4
Noteworthy species	5
Discussion	9
Woodlands	9
Open grassland	10
River bank	10
Compartment breakdown	10
Conclusion	11
References	12
Species list	13

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SUMMARY

- An invertebrate survey of Crane Park in Twickenham was commissioned by the London Borough of Richmond to establish a baseline fauna list.
- Site visits were made on 12 May, 18 June, 6 and 20 September 2010.
- Several unusual and scarce insects were found.
- These included:
 - Agrilus sinuatus*, a nationally scarce jewel beetle that breeds in hawthorn
 - Argiope bruennichi*, the wasp spider, recently starting to spread in London
 - Dasytes plumbeus*, a nationally scarce beetle found in grassy places
 - Ectemnius ruficornis*, a nationally scarce wasp which nests in dead timber
 - Elodia ambulatoria*, a nationally rare fly thought to be a parasitoid of tineid moths breeding in bracket fungi
 - Eustalomyia hilaris*, a nationally rare fly that breeds in wasp burrows in dead timber
 - Ischnomera cyanea*, a nationally scarce beetle that breeds in fungoid timber
 - Lasius brunneus*, a nationally scarce timber-nesting ant
 - Mintho rufiventris*, a nationally scarce parasitoid of pyralid moth larvae
 - Nephus quadrimaculatus*, a nationally rare ladybird associated with ivy
 - Paraclusia tigrina*, a nationally rare fly that breeds in decaying timber
 - Raglius albomaculatus*, a nationally scarce bug that feeds on black horehound
- The major habitats in the park are woodland (mainly secondary, but with some large old trees too), rough grasslands, and riverbanks.
- Most of the scarce species were associated either with woodland, or rough flowery grassland. The riverbank fauna comprised only common and widespread species.
- It is suggested that much of the river banks could be cleared of the dense shadowing trees that currently overhang them, and that the canalized edging could be removed to restore a more natural riverbank habitat.

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INTRODUCTION

The River Crane runs past Heathrow Airport and Hounslow Heath, and then through Twickenham before emptying into the River Thames near Syon Park. Between the A314 Hanworth Road to the west and Meadway to the east, it is bordered either side by a mixture of open spaces roughly denoted as Crane Park.

This linear site, roughly 3 kilometres long comprises a mixture of mainly secondary broad-leaved woodland and mown utility grass parkland. It is centred on Ordnance Survey grid reference TQ134727, and although in the present administrative region of Greater London, for the purposes of biological recording it is in Watsonian vice-county 17 (Surrey). This invertebrate survey was commissioned by The London Borough of Richmond, to inform an ecological plan for management and restoration work in the park.

METHODS

Site visits

The area was visited on 12 May, 18 June, 6 September and 20 September 2010. A walk-over assessment of the site was complemented by the collection of specimens.

Site compartments

The site was divided roughly into 11 subequal compartments.

- 1 Long linear stretch on the north side of the River Crane between Hanworth Road (A314) and Great Chertsey Road (A316), centred on TQ130728
- 2 Triangular section on the north side of the River Crane between Great Chertsey Road (A316) and Hospital Bridge Road (B358), TQ137727
- 3 Linear stretch on the north side of the River Crane from Hospital Bridge Road (B358) to the footbridge between Lincoln Avenue and Mill Road, TQ140728
- 4 Linear stretch from the Lincoln Avenue/ Mill Road footbridge to Meadway, TQ146731
- 5 Island between the two reaches of the river between Lincoln Avenue to the north and Fulwell Park Avenue to the south, TQ143728
- 6 South side of the river between end of Manoel Road and Hospital Bridge Road, TQ139727
- 7 Short stretch on the south side of the River Crane between Hospital Bridge Road (B358) and Great Chertsey Road (A316), TQ136727

- 8 Long linear stretch on the south side of the River Crane from Great Chertsey Road (A316) to Hounslow Road (A314), TQ130728
- 9 Short linear stretch north of the River Crane and east of Hanworth Road (A314), TQ123733
- 10 Small segment north of the River Crane, and east of Hanworth Road (A314), separated from compartment 1, by narrow arm of the river, TQ125731
- 11 Crane Park Island, TQ128728

These divisions are indicated on the accompanying sketch map/ aerial photograph at the end of this report

These divisions were merely for ease of recording. Each contains various habitat types, but further subdivision into discrete habitat compartments would have made the survey unnecessarily complex.

Location and collection of specimens

Invertebrates were located and collected by general methods using sweep net, beating tray and a stout knife. Flowers, leaf surfaces, rocks, bare ground, logs and tree trunks were examined by visual searching. Voucher specimens of all but the most common and characteristic species have been kept.

Taxonomic coverage

The survey concentrated on the following major insect groups: Coleoptera (beetles), Diptera (flies), Hemiptera (bugs, froghoppers etc), Hymenoptera (bees, wasps and ants) and Lepidoptera (butterflies and moths). Some examples of other groups were noted if seen.

SURVEY RESULTS

General

A list of 250 species is included at the end of this report. This is made up of the following orders:

Coleoptera (beetles)	91 species
Dermaptera (earwigs)	1
Diptera (flies)	60
Hemiptera (bugs and hoppers)	39
Hymenoptera (bees, wasps etc)	23
Lepidoptera (butterflies & moths)	11
Neuroptera (lacewings etc)	1
Odonata (dragonflies)	6
Orthoptera (grasshoppers)	3
Trichoptera (caddis flies)	1
Aranaea (spiders)	5
Opiliones (harvestmen)	1
Isopoda (woodlice)	4
Mollusca (slugs and snails)	4

Total: 250 species

For such a site, 250 species is a moderately good total and it compares favourably with other similarly sized and similarly surveyed sites in southern England.

Most of the insects seen or collected at the site were common ones, which might be expected to turn up on virtually any plot of open land in southern England. However, a number were uncommon or otherwise unusual and worthy of comment.

Noteworthy species

The following species are picked out as being especially noteworthy. Most are uncommon nationally. Criteria for allocation of accepted 'nationally rare' (red data book) and 'nationally scarce' (notable) statuses are varied and complex (Shirt, 1987; Hyman & Parsons, 1992 etc). However, those that are relevant to this report are listed in brief here.

- **Endangered** (RDB-1). The rarest taxa. Taxa in danger of extinction in Great Britain; species with very few recorded localities or living in especially vulnerable habitats.
- **Vulnerable** (RDB-2). Very rare species. Taxa likely to move into the RDB1 category; species declining in their range.
- **Rare** (RDB-3). Rare species. Taxa with small populations and which are at risk; species estimated to occur in 15 or fewer of the 10-km squares in the national Ordnance Survey grid since 1970.
- **Insufficiently known** (RDB-K). Species thought to be very rare in Britain, recorded from less than 15 of the 10-km squares of the national Ordnance Survey grid since 1970, and which warrant RDB classification of some sort, but for which there is a recognized lack of accurate information.
- **Nationally scarce** (notable A). Very local species, thought to occur in 16 to 30 of the 10-km squares of the national Ordnance Survey grid since 1970.
- **Nationally scarce** (notable B). Very local species, thought to occur in 31 to 100 of the 10-km squares of the national Ordnance Survey grid since 1970.
- **Nationally scarce** status is sometimes not subdivided into categories A and B, (notable, occurring in 16 to 100 10-km squares).
- **Very local** status is a much more subjective, but nevertheless useful, measure of scarcity and is based on personal experience, published and unpublished records. It is applied to species that are very limited in distribution or confined to very limited specialist habitats.

The following is a list of some of the more interesting and noteworthy species taken in the area. It includes 1 nationally rare (red data book) species, 15 nationally scarce (notable) species, and 19 species ranked as being very local.

Agrius sinuatus (Olivier), a small metallic pink jewel beetle (family Buprestidae). Status: nationally scarce (notable A, Hyman & Parsons, 1992). The larvae bore characteristic winding burrows in the bark of dead hawthorn branches and trunks. This species was originally given red data book status 2 (vulnerable, Shirt, 1987), because the adults were so very rarely recorded, but this was revised when surveys showed the exit holes to be more widespread and the elusive adults easily

- overlooked. Burrows and exit holes have been found at various sites in London. The adults, however, are notoriously elusive and very rare. This species is generally associated with ancient hedgerows and large hawthorn trees in open sunny places. The distinctive burrows and D-shaped exit holes were found in a large hawthorn tree in compartment 4, 6.ix.2010.
- Argiope bruennichi* (Scopoli), a large black and yellow spider, family Araneidae. Status: nationally scarce (notable A, Harvey, Nellist & Telfer, 2002). This very scarce spider was first discovered in Britain at Rye, Sussex, in 1922 and until recently was confined to a few localities on the south coast. During the last decade, however, it has appeared to spread and is now recorded in scattered localities from Suffolk to The Lizard in Cornwall. It has also appeared in the London area in the last 5 years. It spins its webs low down in long grass and the prey items caught in its webs are mainly grasshoppers and bush-crickets. Individual specimens were found in compartments 3 and 8, on 6.ix.2010 and 20.ix.2010 respectively.
- Bombus hypnorum* Linnaeus, a large bumblebee, family Apidae. Status: recent colonist. This bumblebee was first discovered in Britain in 2001, in Wiltshire. It is now spreading and has recently been recorded across much of southern England. It is likely that it will spread wider throughout much of the country. Several specimens were seen visiting flowers in compartments 1, 6 and 11, 18.vi.2010 and 20.ix.2010.
- Chalcosyrphus nemorum* Fabricius, a small black and orange hoverfly, family Syrphidae. Status: very local. Although widespread across much of Britain, this is an uncommon hoverfly (Ball & Morris, 2000). It breeds in sap runs and decaying timber, and is usually associated with old woodlands and hedgerows. A single specimen was seen running on fallen cut timber in compartment 6, 6.ix.2010.
- Dasytes plumbeus* (Muller), a small dark 'false' malachite beetle, family Melyridae. Status: nationally scarce (notable B, Hyman & Parsons, 1992). This is a scarce species of rough grassy places, including old chalk pits, railway cuttings, marshland and meadows. Several specimens were found by general sweeping in compartments 1, 6 and 11, 18.vi.2010.
- Deraeocoris flavilinea* Costa, a medium-sized brown and grey leaf bug, family Miridae. Status: very local. This bug was first discovered in Britain in Essex in 1995. Until a few years ago, this species was seemingly confined, in western Europe, to Italy. It has spread across France and Germany and was predicted to arrive in Britain. Now it is here, it appears to be spreading. It is associated with sycamore trees, and has been recorded in several London localities (Jones, 2008). Several specimens were found by general sweeping in compartment 8, 18.vi.2010.
- Discomyza incurva* (Fallén), a small dark hunch-backed fly, family Ephydriidae. Status: very local. Although fairly widespread in England, this local species is not at all common and usually associated with limestone or coastal hillsides. Several specimens were found by general sweeping in compartments 1 and 8, 18.vi.2010 and 20.ix.2010.
- Ectemnius ruficornis* (Zetterstedt), a small black and yellow wasp, family Sphecidae. Status: nationally scarce (notable B, Falk, 1991a), revised from nationally rare (red data book 3, Shirt, 1987). A very local species more associated with

- woodlands than others in the genus. It preys on flies and other flying insects and provisions a nest dug into dead wood, either logs or standing trunks and stumps. It is recorded from scattered localities in England, mainly south and central. A single specimen was found flying around a dead tree trunk, in compartment 1, 18.vi.2010.
- Elodia ambulatoria* Meigen, a small black and grey parasitoid fly, family Tachinidae. Status: nationally rare (red data book category 3, Falk, 1991b). This scarce fly is thought to be a parasitoid of tineid moths whose caterpillars breed in bracket fungi on broad-leaved trees. It appears to be very scarce, with recent records only from the Thames Basin, Surrey and Kent. A single specimen was found by general sweeping in compartment 6, 6.ix.2010.
- Eustalomyia hilaris* (Fallen), a medium-sized black and grey fly, family Anthomyiidae. Status: nationally rare (red data book category 3, Falk, 1991b). This scarce fly breeds in the dead-fly food stores collected by various solitary wasps in tunnels in rotten wood. The wasps catch and kill the flies, stuff them into their tunnels in tree stumps and logs, then lay their eggs on them. *Eustalomyia* lays its eggs inside these same burrows and their maggots eat the dead insects before the wasp grubs develop. *E. hilaris* is predominantly a southern species, with most modern records coming from the Thames Valley and London area. Since the initial Diptera review was carried out (Falk, 1991b), further records have been made indicating that the status of this fly should probably be reviewed. One specimen was found sitting on a tree trunk in compartment 1, 20.ix.2010.
- Gonocerus acuteangulatus* (Goeze), a medium-sized brown leaf bug, family Coreidae. Status: 'endangered' (red data book category 1, Shirt, 1987; Kirby, 1992), but now spreading. This was once regarded as one of the rarest bugs in Britain, and since its discovery in the late 19th century it was long known only from a few box trees on the precipitous slopes of Box Hill, Surrey. However, during the 1990s it was found at first one, and then other Surrey localities and has continued to spread. It is now known throughout most of that county (Hawkins, 2003) and has recently started to appear in Kent and Sussex. The reason for its increase appears to be a change in its foodplant preference from the very restricted box tree to hawthorn, apple, and honeysuckle. Although continuing to be a very local species, its status needs to be reviewed. A single large nymph was found by general sweeping in compartment 5, 6.ix.2010.
- Hippodamia* (formerly *Adonia*) *variegata* Goeze, the Adonis ladybird, family Coccinellidae. Status: nationally scarce (notable B, Hyman & Parsons, 1992). Until about 10 years ago, this species was always regarded as having a coastal distribution, occurring in warm sheltered locations such as chalk downs, dunes, undercliffs and other disturbed areas (Majerus et al., 1997). However, it is now known to be fairly widespread in the London area and Thames Estuary, where it is usually associated with sparsely vegetated post-industrial brownfield sites. It also seems to be quite widespread throughout Surrey (Hawkins, 2000). Several specimens were found by general sweeping in compartments 1, 2 and 3, 6.ix.2010.
- Hoplia philanthus* (Fuessly), a medium-sized black and brown chafer, family Scarabaeidae. Status: very local. This beetle occurs in rough grassy and flowery

- places. It was once considered common and widespread, but has declined dramatically in the last 60 years. One specimen was found by general sweeping in compartment 1, 18.vi.2010.
- Ischnomera cyanea* (Fab.), a medium-sized green 'flower' beetle, family Oedemeridae. Status: nationally scarce (notable B, Hyman & Parsons, 1992). This beetle is usually associated with ancient broad-leaved woodland, where the larvae develop in rotten wood. Two specimens were found by general sweeping in compartment 1, 12.v.2010.
- Lasius brunneus* (Latreille), a small brown ant, family Formicidae. Status: nationally scarce (notable A, Falk, 1991a). A very local species more or less restricted to central and southern England from Essex to Shropshire, mainly in the Thames Valley and Severn Valley (Edwards, 1998). It nests exclusively in dead wood (logs and standing timber) where it excavates its galleries, and it is particularly associated with ancient woodlands. Several nests were found under bark, and in dead decaying trees, in compartments 1 and 11, 12.v.2010, 18.vi.2010, 20.ix.2010.
- Ledra aurita* Linnaeus, a large brown leaf-hopper, family Cicadellidae. Status: very local. One of the largest British leafhoppers, this insect feeds on oak and other broad-leaved trees, but is remarkably secretive and uncommon. A single specimen was found trussed in a spider's web in compartment 1, 20.ix.2010.
- Mintho rufiventris* (Fallen), a medium-sized grey and red parasitoid fly, family Tachinidae. Status: nationally scarce (notable, Falk, 1991b). A widespread, but very local fly of south-east England to Oxfordshire and Norfolk, where it is a parasitoid of the caterpillars of the pyralid moth *Orthopygia glaucinalis* which breeds in dead and decaying vegetable matter. A single specimen was found resting on a tree trunk in compartment 4, 6.ix.2010.
- Nephus quadrimaculatus* (Herbst), a minute black and red ladybird, family Coccinellidae. Status: vulnerable (red data book category 2, Shirt, 1987; Hyman & Parsons, 1992). This tiny, but very distinctive beetle is probably more widespread than records suggest. It is thought to feed on scale insects, coccids, or mealybugs on ivy. Its close association with ivy has been considered for some time, but it was only during the field work for the Surrey atlas of ladybirds (Hawkins, 2000) that it was discovered to be widespread in and around London. Its status needs to be reviewed. A single specimen was beaten from an ivy thicket, in compartment 4, 6.ix.2010.
- Paraclusia tigrina* Fallen, a small pink fly, family Clusiidae. Status: vulnerable (red data book category 2, Shirt, 1987, Falk, 1991b). This small fly is thought to breed in dead and decaying timber, and is associated with woodlands and parklands. Since the review of Diptera was published (Falk, 1991b), there have been many more records of this species, suggesting that it is either increasing in abundance and range, or was previously overlooked. Its status probably needs to be reviewed. Several specimens were seen on tree trunks in compartments 1 and 4, 6.ix.2010 and 20.ix.2010.
- Paraperithous gnathaulax* (Thomson), a large black ichneumon, family Ichneumonidae. Status: rare. The life history of this scarce insect is not known, but, like many of its relatives, it is likely to be a parasitoid of insects that live in and under loose

- bark or in dead and decaying timber. Very little is known about its distribution, since this is a very poorly studied group. A single specimen was found crawling on a tree trunk in compartment 11, 20.ix.2010.
- Raglius alboacuminatus* (Goeze), a medium-sized black and brown ground bug, family Lygaeidae. Status: nationally scarce (notable, Kirby, 1992). This very local bug is associated with black horehound and other plants in sites with bare ground and disturbed soil. It probably feeds on seeds, as do others in the family. It is predominantly a south-eastern species including the London area where it especially occurs on flower-rich brownfield sites (Jones, 2008). A single specimen was found near a patch of its foodplant, in compartment 3, 6.ix.2010.
- Rhyzobius chrysomeloides* (Herbst), a small reddish-pink ladybird, family Coccinellidae. Status: very local, possibly a new arrival in Britain. This tiny red beetle is extremely similar to a very common species, *R. litura* (Fabricius), and its occurrence in Britain was only recognized in 2000 when it was found in several Surrey localities (Hawkins, 2000). It is probable that this is a recent arrival in Britain and its spread has so far been monitored in Surrey, Kent, Middlesex and Berkshire. A single specimen was found by sweeping in compartment 6, 12.v.2010.
- Stictopleurus punctatonervosus* (Goeze), a medium-sized brown leaf bug, family Rhopalidae. Status: extinct (Kirby, 1992), but now recolonized. At the time of the national review of British Hemiptera, this species was regarded as being extinct. It had been recorded from only two localities in Britain, the last in 1870. It appears to have successfully recolonized Britain since it was recorded in Essex in 1997. It has now become a species typical of the dry, well-drained and sparsely vegetated brownfield sites in and around urban London and the Thames Estuary (Jones, 2008). Several specimens were found by general sweeping in compartments 6 and 7, 6.ix.2010.
- Xanthogramma citrofasciatum* (De Geer), a large black and yellow hoverfly (family Syrphidae). Status: very local. Although widespread across much of England and Wales, this hoverfly is never common (Ball & Morris, 2000). Its larvae are ground-dwellers and are thought to be predatory on root aphids, often in the company of ants. It seems to prefer dry grassy places like chalk downs and sandy soils. A single specimen was found visiting flowers, in compartment 8, 12.v.2010.

DISCUSSION

Crane Park comprises a mixture of habitats along its length. These range from dense secondary woodland to close-mown utility grassland, and each has its own associated insect fauna.

Woodlands

The variety of tree species and ages is typical of London parks, which have been variously planted, and allowed to self-generate. Much of Crane Park is now dense secondary woodland, particularly compartments 1, 7, 8, 9 and 10. Throughout much of these areas, the woods are dark and dominated by sycamore, and horse chestnut, species associated with lower insect diversity. They overshadow the narrow canalized river that

passes beneath them. Throughout most of the woods, the understorey is reduced to thickets of dense bramble and stinging nettle.

However, mixed amongst these trees are oak, ash, poplars, hazel, maple, and hawthorn, species with more diverse insect faunas. Scarce insects such as *Eustalomyia hilaris*, *Ectemnius ruficornis*, *Chalcosyrphus nemorum*, *Agrilus sinuatus*, *Elodia ambulatoria*, *Ischnomera cyanea*, *Lasius brunneus* and *Paraclusia tigrina* are all indicators of a good supply of large trees with dead and decaying timber in which to breed.

Most of these species were, however, not found in the deep dense shade of the woods, but along the edges and in clearings, where sunlight can reach the dead standing tree trunks or cut logs.

Open grassland

Short-mown utility grass is a very poor habitat for insects. However, where it meets hedges, trees, shrubs and other herbage, a more diverse plant architecture can develop. The presence of scarce invertebrates such as *Argiope bruennichi*, *Hoplia philanthus*, *Dasytes plumbeus*, *Discomyza incurva*, *Hippodamia variegata*, *Xanthogramma citrofasciatum*, *Raglius albomaculatus* and *Stictopleurus punctatonervosus* is down to the availability of rough grassy places which are unmown or only irregularly trimmed.

River bank

The River Crane runs through the entire stretch of Crane Park, but the river bank habitat is poor and degraded along much of its length. It was very disappointing not to find any scarce or unusual waterside species during this survey.

Much of the River Crane is canalized with wooden edges, and although these are crumbling, they reduce the river to little more than a drainage channel in most places. True river bank habitat, where the bank gently slopes into the water, is only present in compartments 2, 3, 11 and parts of compartments 1 and 6. Unfortunately, these small areas of riparian habitat are in danger from invasive alien plants such as balsam. Along the majority of the long compartments 1, 4, 5, 6, 7, 9 and 10, the bank is also densely overshadowed by large dark trees and there is precious little riverbank herbage.

There are some small areas of reed and reedmace, particularly in compartment 11, but these are virtually inaccessible.

Compartment breakdown

1. This long thin compartment is primarily dense secondary woodland, and of low value for invertebrates, but there are a number of old trees scattered through. There are several clearings, some close mown, near the shot tower, and along the pathways. There is also an interesting area of rough ground at the eastern end. Most of the river banks along this compartment are densely overshadowed by trees, but there are a few more open areas to the eastern end, and near the shot tower.

2. A small triangular segment has recently been cleared and planted with a wild(?) flower seed mix. At the time of the first visit, there was hardly any vegetation, but by September it had grown up lush and full of flowers. This is likely to be very interesting for invertebrates in the future. The riverbank here is open, but in danger of being engulfed by bramble and scrub.

3. Similar to compartment 2, the western end of this segment had been seeded and is likely to be of interest for invertebrates in the future. The riverbank here is the most open section in the park and produced several common riparian insects, both water-side mud species and those feeding on aquatic vegetation. It is, however, in danger of invasion from balsam. Other than the margins of Crane Park Island (compartment 11), this is the largest area of 'natural' riverbank, with a broad marshy area that regularly floods.
4. Much of this compartment is mown utility grass, and the riverbank is almost completely shaded by scrub and trees.
5. This area of rough grass and mixed scrub is good invertebrate habitat, but both arms of the river which pass here are densely shadowed by trees.
6. A similar interesting open rough grassy area, with some large dead, dying, fallen and cut trees. There is a small area of open river bank, but most is deeply shadowed by trees or dense bramble thicket.
7. A small open area of rough grass and tall vegetation is all that is accessible here, as the river bank is not reachable because of the dense undergrowth and overshadowing trees.
8. A large open area of rough grassland immediately west of the Great Chertsey Road is good invertebrate habitat, but the remainder of this long thin segment is thick secondary woodland that densely overshadows the river bank for its entire length.
9. Dense secondary woodland completely cloaks this segment, and the river is entirely canalized here.
10. Dense secondary woodland and thick bramble undergrowth render this compartment of low invertebrate interest.
11. The most highly managed segment of the park, with open areas, reed beds, natural river banks and little dense secondary woodland, make this an interesting invertebrate habitat.

CONCLUSION

Crane Park has an interesting selection of invertebrates. These are associated with the three main habitat types: woodland, grassland and river bank. Several scarce woodland and grassland insects were found during the survey, but the river bank habitat is limited. Much of the river is canalized and the few areas of marshy riverbank are in danger of degradation from invasive balsam, are densely overshadowed by secondary woodland, or are engulfed in bramble.

For the benefit of invertebrates, many dense secondary woodland areas of the park could be thinned or even clear-felled and managed as coppice or some other more open woodland. The banks of the River Crane would also benefit from almost complete removal of trees along their banks, and the restoration of open riverbank habitats which are not canalized, but which have natural sloping mud banks to be colonized by reeds and other aquatic vegetation.

Timber felled during thinning would add to the supply of dead and decaying timber available for the many interesting insects that breed in fungoid wood. Large logs left in situ and smaller logs stacked into piles would each develop their own faunas. Dead standing trunks need not be felled, since these do not add to the shading caused by living trees.

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Species	Status	Notes	Crane Park
COLEOPTERA, Beetles			
Anobiidae, woodworm beetles			
<i>Ptilinus pectinicornis</i> (Lin.)	local	On various dead timbers	18.vi.2010 (1, 11)
Apionidae, Minute weevils			
<i>Aspidapion radiolus</i> (Mars.)	common	On mallows, Malva species.	18.vi.2010 (6)
<i>Oxystoma pomonae</i> (Fab.)	common	On vetches	12.v.2010 (8)
<i>Perapion violaceum</i> Kirby	common	On docks, Rumex species	12.v.2010 (1)
Bruchidae, bean weevils			
<i>Bruchidius cisti</i> (Fab.)	local	Associated with Helianthemum and Lotus	18.vi.2010 (8)
<i>Bruchus loti</i> Payk.	common	On Lotus corniculata	18.vi.2010 (6)
<i>Bruchus rufipes</i> Herbst	common	On various leguminous plants	12.v.2010 (8)
Buprestidae, Jewel beetles			
<i>Agrilus sinuatus</i> (Ol.)	Na	Burrows under hawthorn bark, dead limbs	6.ix.2010 (4) (holes)
Byturidae			
<i>Byturus ochraceus</i> (Scriba)	local	On herb bennet, Geum urbanum	12.v.2010 (1)
Cantharidae, Soldier beetles			
<i>Cantharis cryptica</i> Ashe	common	Woods, larvae predatory in rotten wood and soil	18.vi.2010 (1)
<i>Cantharis decipiens</i>	local	Larvae predatory in rotten wood, soil etc	12.v.2010 (1, 8)
<i>Malthodes dispar</i> Germ.	local	Woods, larvae predatory in rotten wood	18.vi.2010 (11)
<i>Malthodes minimus</i> (Lin.)	common	Woods, larvae predatory in rotten wood	18.vi.2010 (11)
<i>Rhagonycha femoralis</i> (Bru.)	common	Various habitats, larvae predatory	12.v, 18.vi.2010 (6)
Carabidae, Ground beetles			
<i>Abax parallelepipedus</i> (P. & M.)	common	Under logs, stones etc, woods	20.ix.2010 (1)
<i>Agonum albipes</i> Fab.	local	Moist areas, often on seashore	12.v, 6.ix.2010 (3)
<i>Agonum gracile</i> Sturm	local	Lake and stream sides	12.v.2010 (1, 3)
<i>Bembidion articulatum</i> Panz.	local	River and stream banks	12.v.2010 (3)
<i>Bembidion biguttatum</i> (Fab.)	local	Damp places, stream and pond sides	12.v.2010 (3)
<i>Bembidion dentellum</i>	local	River and stream banks	12.v, 6.ix.2010 (1, 3)
<i>Bembidion lampros</i> (Herbst)	common	Sandy places, bare ground	18.vi.2010 (1)
<i>Bembidion tetracolum</i> Say	common	Fields, woods and meadows	12.v.2010 (3)
<i>Dromius linearis</i> Ol.	common	Dry grassy areas	12.v.2010 (4)
<i>Elaphrus riparius</i> (Lin.)	common	Running at edge of ponds and streams	12.v.2010 (3)
Cerambycidae, Longhorn beetles			
<i>Grammoptera ruficornis</i> (Fab.)	common	Larvae in dead branches of various trees.	18.vi.2010 (11)
Chrysomelidae, Leaf and flea beetles			
<i>Altica lythri</i> (Aube)	common	On Epilobium and Lythrum	20.ix.2010 (11)
<i>Cassida rubiginosa</i> Mull.	common	On thistles, Cirsium species.	12.v.2010 (1)
<i>Cassida viridis</i> (Lin.)	common	On water mint etc, Mentha species	6.ix.2010 (3)
<i>Chalcoides plutus</i> (Latr.)	local	On willows, sallows, poplars etc	6.ix.2010 (6)
<i>Crepidodera transversa</i> (Marsh.)	common	On thistles	18.vi.2010 (11)
<i>Donacia simplex</i> Fab.	local	On bur reed, streams and ponds	18.vi.2010 (11)
<i>Gastrophysa polygoni</i> (Lin.)	local	On docks	12.v.2010 (1)
<i>Gastrophysa viridula</i> Deg.	local	Wet meadows, marshes	12.v, 18.vi, 20.ix.2010 (3, 6, 11)
<i>Lochmaea capraea</i> (L.)	local	Wet woodlands, on willow, sallow and birch	12.v.2010 (9)
<i>Oulema melanopa</i> (Lin.)	common	Grassy places	20.ix.2010 (11)
<i>Phaedon cochliaeiae</i> Fab.	common	On wild and cultivated brassica and relatives	12.v, 16.vi.2010 (3, 6)
Coccinellidae, Ladybirds			
<i>Adalia bipunctata</i> (Lin.)	common	2-spot. Wide variety of habitats.	18.vi.2010 (7)
<i>Adalia decimpunctata</i> (Lin.)	common	10-spot. Wide variety of habitats.	18.vi.2010 (1)
<i>Anisosticta 19-punctata</i> (Lin.)	local	Water ladybird, near ponds	12.v, 20.ix.2010 (3, 6, 11)
<i>Calvia 14-guttata</i> (Lin.)	common	cream-spot, wide variety of habitats	12.v, 6.ix.2010 (1, 4)
<i>Coccinella 7-punctata</i> Lin.	common	7-spot. Wide variety of habitats.	12.v, 6.ix.2010 (1, 2, 5, 11)
<i>Halyzia 16-guttata</i>	local	Orange ladybird. Mildew feeder, sycamores	18.vi.2010 (1)
<i>Harmonia axyridis</i>	local	Recent arrival in Britain	12.v, 18.vi.2010 (1, 4, 7)
<i>Hippodamia variegata</i>	Nb	Adonis ladybird. Mainly coastal and London basin	6.ix.2010 (1, 2, 3)
<i>Micraspis 16-punctata</i> (Lin.)	common	16-spot, mildew feeder, grassy places	18.vi, 6.ix.2010 (1, 3)
<i>Nephus quadrimaculatus</i> (Herbst)	RDB2	On ivy on trees and walls	6.ix.2010 (4)
<i>Propylea 14-punctata</i> (Lin.)	common	14-spot. Wide variety of habitats	12.v.2010 (8)
<i>Psyllobora 22-punctata</i> (Lin.)	common	22-spot. Wide variety of habitats, mildew-feeder.	18.vi, 20.ix.2010 (8, 11)
<i>Rhizobius chrysomeloides</i>	v. local	On trees, aphid predator	12.v.2010 (6)
<i>Subcoccinella 24-punctata</i> (Lin.)	common	24-spot. On false-oat grass	12.v, 6.ix, 20.ix.2010 (3, 6, 11)

Colydiidae, fungus beetles			
<i>Bitoma crenata</i>	local	Under fungoid bark of broadleaved trees	18.vi, 6.ix.2010 (1, 4)
Curculionidae (weevils)			
<i>Anthonomus rubi</i> (Herbst)	common	On brambles	6.ix, 20.ix.2010 (6, 11)
<i>Ceutorhynchus assimilis</i> Payk.	common	On various crucifers	18.vi.2010 (1)
<i>Ceutorhynchus floralis</i> (Payk.)	common	On stinging nettles	18.vi.2010 (6)
<i>Ceutorhynchus pyrrorhynchus</i> (Mar.)	common	On <i>Sisymbrium officinale</i>	18.vi.2010 (11)
<i>Ceutorhynchus quadridens</i> (Pz.)	common	On aliaría and other crucifers, woods and hedges	18.vi.2010 (6)
<i>Ceutorhynchus turbatus</i> Sch.	local	On <i>Cardaria draba</i>	12.v.2010 (8)
<i>Cidnorhynchus 4-maculatus</i> (L.)	common	On stinging nettles	12.v.2010 (1, 3, 5)
<i>Cionus scrophulariae</i> (Lin.)	common	On water figwort, <i>Scrophulria aquatica</i>	18.vi.2010 (11)
<i>Cionus tuberculatus</i> (Scop.)	local	On water figwort, <i>Scrophulria aquatica</i>	18.vi.2010 (11)
<i>Gymnetron pascurorum</i> Gyll.	common	On plantains, <i>Plantago</i> species	18.vi.2010 (8)
<i>Notaris acridulus</i> (L.)	common	On <i>Glyceria maximus</i> , water sides	12.v.2010 (3)
<i>Phyllobius maculicornis</i>	local	On various trees and bushes	12.v.2010 (8)
<i>Phyllobius roboretanus</i> Gred.	common	On wide variety of plants	12.v, 18.vi.2010 (1, 7)
<i>Phyllobius viridiaeris</i> Laich.	common	On a variety of trees and shrubs.	12.v, 18.vi.2010 (8)
<i>Poophagus sisymbrii</i> (Fab.)	local	In stems of <i>Rorippa</i> , water sides	12.v, 18.vi.2010 (2, 3, 6)
<i>Rhyncolus lignarius</i> (Marsh.)	local	In rotten wood	18.vi.2010 (1)
<i>Sitona puncticollis</i> (Steph.)	common	On clovers, and many other legumes	12.v.2010 (1,6)
<i>Trichosirocalus troglodytes</i> (Fab.)	common	On ribwort plantain, <i>Plantago lanceolata</i>	6.ix.2010 (4)
Dermestidae, Hide & larder beetles			
<i>Anthrenus verbasci</i> (Lin.)	common	Museum beetle. Indoors in kitchens, carpets, outdoors c	18.vi.2010 (1)
Dytiscidae, water beetles			
<i>Coelambus impressopunctatus</i> (Schall.)	local	Ponds and small lakes	20.ix.2010 (11)
Erotylidae (fungus beetles)			
<i>Dacne rufifrons</i> (Fab.)	local	In fungus on broad-leaved trees	18.vi.2010 (1)
Histeridae, bark beetles			
<i>Saprinus semistriatus</i> (Scriba)	common	In dung, carrion etc	18.vi.2010 (7)
Lagriidae			
<i>Lagria hirta</i> (Lin.)	common	Larvae in leaf litter, adults on leaves, flowers	6.ix.2010 (5, 6)
Melyridae, False soldier beetles			
<i>Dasytes plumbeus</i> (Mull.)	Nb	Various habitats, larvae prob in rotten wood or soil.	18.vi.2010 (1, 6,11)
<i>Malachius viridis</i> Fab.	common	Open grassy areas, on flowers, larvae predatory	12.v, 11.vi.2010 (8, 11)
Mycetophagidae, fungus beetles			
<i>Mycetophagus quadripustulatus</i> (Lin.)	local	Under fungoid bark, ancient woodlands	6.ix.2010 (1)
Oedemeridae, Flower beetles			
<i>Ischnomera cyanea</i> (Fab.)	Nb	Ancient woods and parks	12.v.2010 (1)
<i>Oedemera lurida</i> (Marsh.)	common	On flowers, leaves etc.	18.vi.2010 (7, 11)
<i>Oedemera nobilis</i> (Scopoli)	local	On flowers	18.vi.2010 (1, 3, 7, 8)
Pyrochroidae, cardinal beetles			
<i>Pyrochroa</i> species (larva)		Larvae under rotten bark of broad-leaved trees	6.ix.2010 (6)
Scarabaeidae, chafers and dung beetles			
<i>Hoplia philanthus</i> (Fues.)	v.local	Rough grassy places	18.vi.2010 (1)
<i>Onthophagus coenobita</i> Herbst	local	In mammalian dung	12.v, 18.vi.2010 (, 24)
Scolytidae, Bark beetles			
<i>Hylesinus crenatus</i> (Fab.)	local	In ash trunks, also oak and other broad-leaved trees	18.vi.2010 (1)
Staphylinidae, Rove beetles			
<i>Bryocharis analis</i> (Payk.)	local	In fungus	6.ix.2010 (6)
<i>Hygronoma dimidiata</i> (Grav.)	local	In stems of reeds, wet areas	6.ix.2010 (6)
<i>Sepedophilus lusitanicus</i> Hammond	local	Woods and parklands	18.vi.2010 (11)
<i>Stenus boops</i> Ljungh	common	Grassy places	12.v.2010 (3)
<i>Stenus cicindeloides</i> (Sch.)	local	Marshy places	18.vi.2010 (6)
<i>Stenus junio</i> Payk.	common	Rough grassy places	18.vi.2010 (6)
<i>Stenus picipes</i>	local	Grassy places	12.v.2010 (9)
DERMAPTERA, Earwigs			
Forficulidae, Earwigs			
<i>Forficula auricularia</i> L.	common	Variety of habitats, woods, gardens etc.	6.ix.2010 (2, 4)
DIPTERA, True flies			
Anthomyiidae			
<i>Anthomyia pluvialis</i> (Lin.)	common	Larvae in soil and rotten wood	18.vi, 20.ix.2010 (7,8)
<i>Eustalomyia festiva</i> Zett.	common	Feeds on dead flies in dead wood	18.vi, 6.ix, 20.ix.2010 (

<i>Eustalomyia hilaris</i> Fall.	RDB3	Feeds on dead flies in dead wood	20.ix.2010 (1)
Asilidae, robberflies			
<i>Dioctria atricapilla</i> Meig.	local	Dry grasslands	18.vi.2010 (6, 8, 11)
<i>Dioctria baumhaueri</i> Meigen	common	Grassy places, predatory	18.vi.2010 (11)
<i>Dioctria rufipes</i> (Deg.)	common	Grassy places	18.vi.2010 (1)
<i>Leptogaster cylindrica</i> (Deg.)	local	Grassy places in southern England	18.vi.2010 (1, 6, 8)
Clusiidae			
<i>Paraclusia tigrina</i> Fallen	RDB2	Breeds in dead timber	6.ix., 20.ix.2010 (1, 4)
Dolichopodidae, long-footed flies			
<i>Dolichopus griseipennis</i> Stan.	common	Various habitats	6.ix.2010 (2, 6)
Ephydriidae, shore flies etc			
<i>Discomyza incurva</i> (Fall.)	v.local	Develops in terrestrial snail shells	18.vi., 20.ix.2010 (1, 8)
Micropezidae, stilt-legged flies			
<i>Neria cibaria</i> (L.)	local	Larvae in grass roots	12.v., 18.vi.2010 (1, 2, 6)
Muscidae			
<i>Graphomya maculata</i> (Scop.)	common	Larvae in decaying vegetable matter	12.v.2010 (1)
<i>Musca autumnalis</i> (Deg.)	common	Larvae in decaying vegetable matter	6.ix.2010 (5)
Otitidae			
<i>Melieria crassipennis</i> (Fab.)	local	Ecology unknown, grassy places	18.vi.2010 (2)
Rhagionidae, snipeflies			
<i>Chrysophilus cristatus</i> (Fab.)	local	Hedges, woodland edges, rough meadows and marshes	18.vi.2010 (3, 11)
Rhinophoridae, parasitoid flies			
<i>Melanophora roralis</i> L.	common	Parasitoid of woodlice	6.ix.2010 (4)
Scathophagidae, dungflies etc			
<i>Norellisoma spinimanum</i> Fall.	common	In stems of Rumex	12.v., 20.ix.2010 (1, 6)
Sciomyzidae, snail-killing flies			
<i>Coremacera marginata</i> (Fab.)	common	Biology unknown, probably snail parasitoid	18.vi., 6.ix.2010 (1, 8)
<i>Trypetoptera punctulata</i> (Scop.)	local	Biology unknown, probably snail parasitoid	20.ix.2010 (8)
Stratiomyidae, Soldier flies			
<i>Beris chalybeata</i> (Fors.)	common	Larvae in decaying organic matter	12.v.2010 (1, 3, 9)
<i>Chloromyia formosa</i> (Scop.)	common	Larvae in dung and compost.	18.vi.2010 (11)
<i>Microchrysa polita</i> (Lin.)	common	Larvae in dung and compost	12.v.2010 (3)
<i>Pachygaster atra</i> (Panz.)	local	Larvae in fungus, soil, rotten wood	18.vi.2010 (1)
<i>Sargus iridatus</i> (Scop.)	common	Woods and hedgerows, larvae in dung and compost	6.ix.2010 (1)
Syrphidae, Hoverflies			
<i>Anasimyia contracta</i> Cl.& Torp	local	Near ponds and ditches, especially associated with Typ	18.vi.2010 (11)
<i>Chalcosyrphus nemorum</i> (Fab.)	v.local	Woodlands, breeds in sap runs and rotten timber	6.ix.2010 (6)
<i>Chrysotoxem cautum</i> (Harris)	local	Grassland, hedgerows, woodland edges.	18.vi.2010 (8)
<i>Episyrphus balteatus</i> (Lin.)	common	Wide variety of habitats, gardens etc.	6.ix., 20.ix.2010 (1, 2)
<i>Eristalis arbustorum</i> (Lin.)	common	Larvae in rot holes in trees, ditches, ponds	18.vi., 6.ix.2010 (1, 2, 3)
<i>Eristalis pertinax</i> (Scop.)	common	Larvae in rot holes, ditches, stagnant ponds	6.ix.2010 (2)
<i>Eristalis tenax</i> (Lin.)	common	Larvae in rot holes in trees, ditches, ponds	18.vi.2010 (1)
<i>Eumerus strigatus</i> (Fall.)	local	In dafodil and narcissus bulbs	6.ix.2010 (2)
<i>Eupeodes luniger</i> (Meig.)	common	Wide variety of habitats, gardens.	12.v., 18.vi., 20.ix.2010
<i>Helophilus pendulus</i> (Lin.)	common	Breeds in ditches and stagnant ponds.	18.vi., 6.ix.2010 (5, 8, 11)
<i>Melangyna umbellatarum</i> (Fab.)	common	Woodlands and hedgerows	6.ix.2010 (3)
<i>Merodon equestris</i> (Fab.)	common	Larvae in bulbs of dafodil and narcissus	12.v., 18.vi.2010 (1, 3, 6)
<i>Myathropa florea</i> (Lin.)	common	Larvae in rot holes in trees	18.vi., 6.ix.2010 (1, 4, 5)
<i>Paragus haemorrhous</i> Meig.	local	Woodland edges etc	6.ix.2010 (7)
<i>Scaeva pyrastris</i> (Lin.)	common	Wide variety of grassy habitats	6.ix.2010 (7)
<i>Sphaerophoria scripta</i> (Lin.)	common	Wide variety of grassy habitats	12.v., 18.vi., 6.ix.2010 (11)
<i>Syrirta pipiens</i> (Lin.)	common	Wide variety of habitats, gardens etc.	18.vi., 6.ix., 20.ix.2010 (11)
<i>Syrphus ribesii</i> Lin.	common	Wide variety of habitats, gardens etc.	6.ix., 20.ix.2010 (1, 2, 3)
<i>Syrphus vitripennis</i> Meig.	common	Wide variety of habitats	6.ix.2010 (2, 4)
<i>Volucella pellucens</i> (Lin.)	common	Variety of habitats, breeds in wasp nests	20.ix.2010 (1)
<i>Xanthogramma citrofasciatum</i> Deg.	v.local	Dry grassland, assoc. with yellow meadow ant	12.v.2010 (8)
Tachinidae, parasitic flies			
<i>Elodia ambulatoria</i> Meig.	RDB3	Possibly breeds in moth larvae in bracket fungi	6.ix.2010 (6)
<i>Eumea linearicornis</i> Zett.	Local	Parasitoid of moth caterpillars in woodlands	6.ix.2010 (3)
<i>Eurithia connivens</i> Zett.	local	Parasitoid of moth caterpillars	6.ix.2010 (3)
<i>Exorista</i> species	—	Several species impossible to separate females	18.vi.2010 (8)
<i>Lydella stabulans</i> Meig.	common	Parasitoid of various moth caterpillars	6.ix.2010 (7)
<i>Mintho rufiventris</i> (Fallen)	N	Parasitoid of <i>Orthopygia glaucinalis</i> , a saprophagous moth	6.ix.2010 (4)
<i>Phasia obesa</i> (Fab.)	local	Parasitoid of bugs	6.ix.2010 (3)

Ramonda spathulata (Fallen)	common	Parasitoid of various common moth caterpillars	12.v.2010 (5)
Tachina fera (Lin.)	common	Parasitoid of various common moth caterpillars	6.ix.2010 (3)
Winthemia cruentata (Rond.)	local	Parasitoid of moth caterpillars	18.vi.2010 (11)
Tephritidae, picture-winged flies			
Euleia heracleii (Lin.)	common	On hogweed and many other umbellifers	20.ix.2010 (1)
Tephritis neesii (Meig.)	common	Breeds in heads of Leucanthemum	12.v.2010 (1)
Terellia ruficauda (Fab.)	common	Larvae in heads of Cirsium arvense	6.ix.2010 (3)
Urophora cardui (Lin.)	common	Larvae in galls in stems of Cirsium arvense	18.vi, 6.ix.2010 (6, 8)
Urophora stylata (Fab.)	common	Larvae in heads of Cirsium arvense	18.vi.2010 (8)
HEMIPTERA, True bugs			
Acanthosomatidae, shieldbugs			
Acanthosoma haemorrhoidale (Lin.)	common	On hawthorn	12.v, 6.ix.2010 (1, 4)
Elasmotethus interstinctus(Lin.)	common	On birch.	12.v.2010 (4)
Aphididae, aphids			
Pemphigus spyrothecae Pass.	common	Causes galls on poplar	6.ix.2010 (2)
Cercopidae, Frog hoppers			
Aphrophora alni (Fallen)	common	On willows, sallows etc.	6.ix.2010 (2)
Philaenus spumarius (Lin.)	common	Nymphs on various herbs, variety of habitats	6.ix, 20.ix.2010 (3, 8, 1)
Cicadellidae, leafhoppers			
Aphrodes bicinctus (Schr.)	common	Various grassy habitats	6.ix.2010 (7)
Ledra aurita L.	v.local	In woodlands, parks and gardens, on oak	20.ix.2010 (1)
Coreidae, Leaf bugs			
Coreus marginatus (Lin.)	common	Woods, meadows, gardens, on docks, Rumex species.	18.vi, 6.ix, 20.ix.2010 (4)
Gonocerus acuteangulatus (Goeze)	RDB1	On hawthorn, rose and box, spreading	6.ix.2010 (5)
Gerridae, water-skaters			
Gerris lacustris L.	common	Ponds and stream edges	20.ix.2010 (11)
Hydrometridae, water walkers			
Hydrometra stagnorum (Lin.)	local	Pond and stream edges	18.vi.2010 (6)
Lygaeidae, Ground bugs			
Heterogaster urticae (Fab.)	common	On stinging nettles	6.ix.2010 (3)
Ischnodemus sabuleti (Fall.)	common	Grassy places, meadows and marshes	18.vi.2010 (8)
Kleidocerys resedae (Panz.)	common	On wide variety of trees and shrubs	6.ix.2010 (1)
Raglius alboacuminatus (Goeze)	Nb	Dry open areas, waste ground, chalk pits	6.ix.2010 (3)
Scolopostethus affinis (Schill.)	common	Under stones, bare ground, sparse vegetation	6.ix.2010 (4)
Scolopostethus thomsoni Reut.	common	Under stones, bare ground, sparse vegetation	12.v, 18.vi.2010 (3, 11)
Stygnocoris rusticus (Fall.)	common	Usually on chalk or sand	6.ix.2010 (7)
Miridae, Leaf bugs			
Calocoris sexguttatus (Fab.)	common	On nettles	18.vi.2010 (11)
Cylloceria hirsuticornis (L.)	common	On oak trees	18.vi.2010 (8)
Deraeocoris flavilinea (Costa)	v.local	On maples and sycamores	18.vi.2010 (8)
Deraeocoris lutescens	common	On various low plants and trees	12.v, 6.ix, 20.ix.2010 (4)
Heterotoma planicornis (Fab.)	common	On stinging nettles	18.vi.2010 (7)
Liocoris tripustulatus (Fab.)	common	On stinging nettles	18.vi.2010 (11)
Phytocoris tiliiae (Fab.)	common	On trees, oak, lime, ash etc	6.ix.2010 (1)
Pithanus maerkeli (H.-S.)	common	Grassy places	18.vi.2010 (1)
Stenodema calcarata (Fall.)	common	Various grassy places	6.ix.2010 (3)
Nabidae, Damsel bugs			
Himacerus mirmicoides (Costa)	common	Grassy areas, bare ground, predatory.	6.ix.2010 (7)
Nabis rugosus (Lin.)	common	Grassy areas, bare ground, predatory.	12.v, 6.ix.2010 (1, 8)
Pentatomidae, Shield bugs			
Aelia acuminata (Lin.)	local	Various grassy habitats	6.ix, 20.ix.2010 (1, 5, 8)
Dolycoris baccarum (Lin.)	local	Woodland edges and hedges, on variety of plants	18.vi, 6.ix.2010 (1, 2)
Eurydema oleracea (Lin.)	common	On wild and garden brassicas and other crucifers	21.v.2010 (1)
Eysarcoris fabricii Kirkaldy	common	On woundworts, woodland edges etc.	18.vi.2010 (8)
Palomena prasina (Lin.)	common	On a variety of plants	6.ix, 20.ix.2010 (2, 11)
Pentatoma rufipes Lin.	common	On a variety of trees, mainly oak	18.vi, 6.ix, 20.ix.2010 (4)
Podops inuncta (Fab.)	local	Sandy and chalky places, under stones etc.	6.ix.2010 (3)
Rhopalidae, Leaf bugs			
Stictopleurus punctatonevrosus	v.local	Open, sunny localities	6.ix.2010 (6, 7)
Saldidae, shore bugs			
Saldula saltatoria (L.)	common	Pond and lake edges, on mud	12.v.2010 (3)
Scutelleridae, tortoise bugs			
Eurygaster testudinaria (Geoff.)	local	Grassy and marshy places	18.vi, 6.ix, 20.ix.2010 (4)

HYMENOPTERA			
Apidae, bees			
Bombus hypnorum Lin.	v.local	Recent arrival in UK, southern, spreading	18.vi, 20.ix.2010 (1, 6,
Bombus lapidarius (Lin.)	common	Wide variety of habitats	18.vi.2010 (7)
Bombus pascuorum (Scop.)	common	Wide variety of habitats	18.vi, 6.ix, 20.ix.2010 (
Bombus terrestris L.	common	Wide variety of habitats	18.vi, 20.ix.2010 (1)
Bethylidae			
Bethylus fuscicornis (Jurine)	Local	Parasitoid of moth caterpillars	20.ix.2010 (8)
Chrysididae, rubytails			
Trichrysis cyanea (Lin.)	common	Woods, gardens, parks, parasitoid of solitary wasps in d	20.ix.2010 (1)
Colletidae, solitary bees			
Hylaeus hyalinatus Smith	common	Various habitats, on flowers	18.vi.2010 (7)
Andricus kollari	common	Makes marble galls on oak twigs	18.vi.2010 (8)
Formicidae, Ants			
Lasius brunneus (Latr.)	Na	Central England, Severn Valley, local, spreading	12.v, 18.vi, 20.ix.2010 (
Lasius flavus (Fab.)	common	Grassy places, makes large ant hills	18.vi, 6.ix, 20.ix.2010 (
Lasius niger Lin.	common	Ubiquitous	12.v, 18.vi.2010 (1, 4, 8
Myrmica rubra (Lin.)	common	Various habitats, nests under stones, logs etc.	12.v, 18.vi.2010 (1,6,7,
Ichneumonidae, ichneumons			
Paraperithous gnathaulax (Thoms.)	rare	Probably parasitoid of insects under loose bark	20.ix.2010 (11)
Megachilidae, leafcutter bees etc			
Anthidium manicatum (Lin.)	local	Nests in wood, lines nests with hairs from hoary leaves	18.vi.2010 (2)
Ormyridae, parasitoids			
Ormyrus gratosus For.	local	Parasitoid of Isocolus rogenhoferi galls	18.vi.2010 (8)
Sphecidae, Solitary wasps			
Ectemnius cavifrons (Thom.)	common	Nests in wood	18.vi.2010 (1, 11)
Ectemnius ruficornis (Zett.)	Nb	Nests in rotten wood, mainly a woodland insect	18.vi.2010 (1)
Passaloecus gracilis (Curt.)	common	Nests in beetle burrows in dead wood	18.vi.2010 (1)
Pemphredon lugubris (Fab.)	common	Nests in hollow stems.	18.vi, 6.ix, 20.ix.2010 (
Trypoxylon attenuatum Smith	common	Nests in old beetle burrows in dead timber.	18.vi.2010 (11)
Vespidae, social wasps			
Vespa crabro L.	local	Hornet. Woodlands and parks	20.ix.2010 (1)
Vespula germanica (Fab.)	common	Large underground nests, predators	18.vi, 6.ix.2010 (6, 7)
Vespula vulgaris (Lin.)	common	Large underground nests, predators	18.vi, 6.ix.2010 (2, 4, 7
LEPIDOPTERA, Butterflies & moths			
Arctiidae, tiger moths etc			
Tyria jacobaeae (Lin.)	common	Cinnabar moth, caterpillars on ragwort	18.vi.2010 (8)
Gracillariidae, micro moths			
Cameraria ohridella D. & D.	local	Blotch mines in horse chestnut	12.v, 18.vi.2010 (1)
Hesperiidae, skippers			
Ochlodes venata (L.)	common	Large skipper, grassy places	18.vi.2010 (8)
Lycaenidae, Blues			
Polyommatus icarus Rott.	common	Common blue. Grassy places, larvae of trefoils, clovers	18.vi.2010 (8)
Nymphalidae			
Inachis io (Lin.)	common	Peacock, larvae on stinging nettles	18.vi.2010 (1)
Maniola jurtina (Lin.)	common	Meadow brown. Grassy places, on various grasses.	18.vi, 6.ix.2010 (3, 8)
Pararge aegeria (Lin.)	common	Speckled wood. Woodland edges and rides, larvae on g	12.v, 18.vi, 6.ix, 20.ix.2
Polygonia c-album (Lin.)	common	Comma, larvae on stinging nettles	20.ix.2010 (11)
Pieridae, cabbage whites			
Pieris rapae (Lin.)	common	Small white, on crucifers, wild and garden species	12.v, 18.vi.2010 (1)
Pyralidae, moths			
Eurrhpara hortulata	common	Rough grassy places, caterpillars on nettles	18.vi.2010 (7)
Tortricidae, micromoths			
Pammene regiana Zell.	common	Woodlands	12.v.2010 (1)
NEUROPTERA			
Sialidae, alder flies			
Sialis lutaria L.	common	Streams and lakes, larvae aquatic	12.v.2010 (3)
ODONATA			
Aeshnidae, hawkers			
Anax imperator Leach	local	Ponds, lakes and canals	18.vi.2010 (8)

Calopterygidae, damselflies			
Calopteryx splendens (Har.)	common	Slow-moving streams and ditches	18.vi.2010 (1, 6, 7)
Coenagrionidae, Damselflies			
Ischnura elegans (V.Lind.)	common	Ponds, lakes and slow-flowing streams	18.vi.2010 (2)
Pyrrhosoma nymphula (Sul.)	common	Ponds and lakes	12.v.2010 (1)
Libellulidae, darters			
Orthetrum cancellatum (Lin.)	common	Lakes and ponds	18.vi.2010 (6, 8)
Sympetrum striolatum (Charp.)	common	Ponds, lakes and streams	20.ix.2010 (11)
ORTHOPTERA			
Acrididae, grasshoppers			
Chorthippus brunneus (Thunb.)	common	Wide variety of grassy habitats.	6.ix.2010 (4)
Chorthippus parallelus (Zett.)	common	Wide variety of grassy habitats.	6.ix.2010 (5)
Tettigoniidae			
Conocephalus discolor (Thunb.)	local	Grassy places, spreading recently	20.ix.2010 (8)
TRICHOPTERA, caddis flies			
Leptoceridae			
Mystacides longicornis L.	common	Streams and slow-flowing rivers	6.ix.2010 (2)
ARANAEA (spiders)			
Araneidae, orb-web spiders			
Araneus diadematus (Cl.)	common	Fields, parks and gardens	6.ix, 20.ix.2010 (2, 11)
Araneus quadratus (Cl.)	common	Fields, parks and gardens	6.ix.2010 (6)
Argiope bruennichi (Scop.)	Na	Grassy places in southern England, especially Thames	6.ix, 20.ix.2010 (3, 8)
Nuctenea umbratica (Clerck)	common	Nocturnal, under loose bark during the day	18.vi.2010 (1)
Salticidae, jumping spiders			
Salticus scenicus (Clerck)	common	On Walls, fences, tree trunks etc	18.vi.2010 (1)
OPILIONES			
Leiobunidae, harvestmen			
Nemastoma bimaculatum	common	Under logs and stones, in leaf litter	6.ix.2010 (1)
ISOPODA			
Armadillidiidae, pill woodlice			
Armadillidium vulgare (Latr.)	common	Under logs and stones etc, mainly dry places	12.v, 18.vi.2010 (1,4)
Oniscidae, Smooth woodlice			
Oniscus asellus (Lin.)	vc	Under logs, stones, leaf litter etc	12.v, 18.vi.2010 (1,4)
Philosciidae, striped woodlice			
Philoscia muscorum (Scop.)	common	Under logs, stones, leaf litter etc	12.v, 18.vi, 6.ix.2010 (1)
Porcellionidae, Rough woodlice			
Porcellio scaber (Latr.)	vc	Under logs, stones, leaf litter etc	12.v, 18.vi, 6.ix.2010 (1)
Mollusca, slugs and snails			
Helicidae, snails			
Cepaea nemoralis	common	Woods, hedges, gardens and parks	12.v, 6.ix.2010 (4)
Cepaea hortensis	common	Woods, hedges, gardens and parks	12.v, 6.ix.2010 (4)
Helix aspersa	common	Gardens, parks, fields and woods	6.ix.2010 (1)
Monacha cantiana	common	Various roughly vegetated habitats	6.ix.2010 (1)