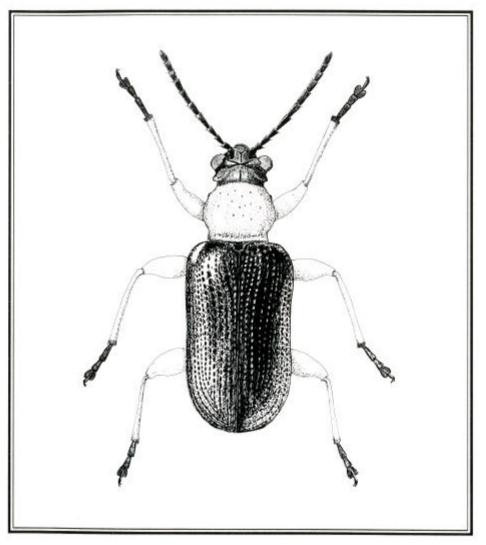
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The Coleopterist

Volume 4 Part 2 * August 1995

Identification of the Oulema 'melanopus' species group (Chrysomelidae)

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Introduction

The cereal leaf beetle Oulema 'melanopus' (Linnaeus) is an economically important pest of various cereals, found from western Europe eastwards to China (International Institute of Entomology Map No. 260, Dec. 1969). In addition, it was accidentally introduced to the eastern United States in the early 1960s.

Berti (1989) showed that two species exist under the name "O. melanopus" on the Continent. She recognized O. duftschmidi (Redtenbacher) as distinct from O. melanopus, the former name having been listed as a synonym of the latter. In addition, she used the combination O. duftschmidi (Redtenbacher, 1874: 446) for Lema cyanipennis Duftschmid, preoccupied by L. cyanipennis Fabricius, 1801: 472. However, as shown by White (1981: 17), the name rufocyanea was proposed by Suffrian (1847: 100) as a replacement for Duftschmid's preoccupied name, and since it has priority over duftschmidi (Redtenbacher) the correct name for the second species is O. rufocyanea (Suffrian). Apparently, Clavareau (1913: 77) recognized rufocyanea (Suffrian) as a valid species, but incorrectly listed duftschmidi as a synonym of melanopus.

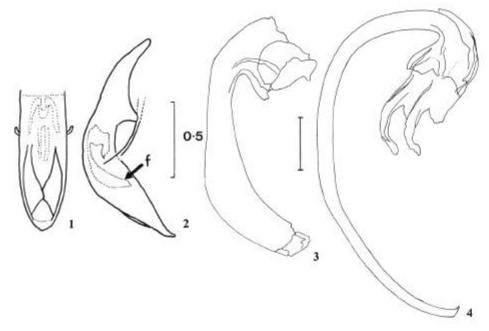
Recently, I confirmed the presence of the true O. melanopus (Linnaeus) in Waterford, Ireland (S 61), using the figures of the spermatheca and spermathecal duct provided by Berti (1989). Moreover, from the extruded endophallus of dissected males, I have found that this species also occurs in Newton Abbott, Devon (SX 87), Bickford, Staffordshire (SJ 81) and at Aqualate Mere, Staffordshire (SJ 72). It is interesting that at the last two localities both melanopus and rufocyanea were collected together on the same date. However, it is not known if the two species occurred on the same host plant or if there are subtle differences in their habitat preferences. It would seem that in Britain the two species are sympatric, as Berti (1989) has shown for the Continent.

Booth (1994) stated that the only four dissected males which he had seen from the U.K. were all rufocyanea and not the true melanopus, but his identifications were based on an examination of the median lobe and not the armature of the internal sac (endophallus). He thought it likely that both species ought to occur in the U.K., since they both occur widely on the Continent. He has recently re-examined the internal sac of these four specimens and found one of them to be the true melanopus, thus also casting doubt on the shape of the median lobe for species separation (Booth, pers. comm.).

White (1993) showed by dissections of three males from Virginia, U.S.A. that the internal sac corresponded exactly with the illustrations for *melanopus* in Berti (1989: 51) and not with those for *rufocyanea*. This is a comparatively recent introduction to North America, first recorded by Favinger (1962), and has an extensive economic literature. White (1993) considered that it has spread further than indicated in his distribution map (fig. 78).

Reliable distinguishing characters

The shape of the apex of the median lobe of the male aedeagus in dorsal and lateral view is variable and therefore unreliable to separate the two species. The lateral views of the median lobes given by Berti (1989: figs. 1 and 2) are apparently drawn from slightly different aspects. However, the sclerotized flagellum of the endophallus is constant and therefore useful to distinguish *melanopus* and *rufocyanea*. In *melanopus* this is shorter, stouter and blunt apically (Figs. 1-3), whereas in *rufocyanea* it is much longer, slender and pointed apically (Fig. 4).

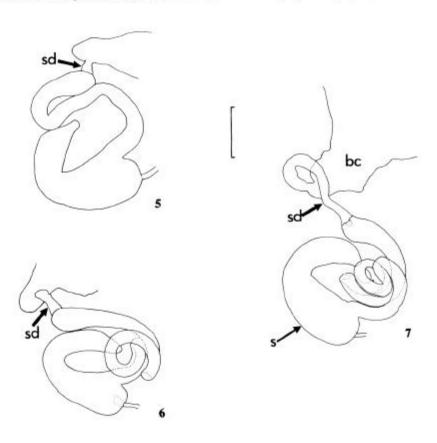


Figs. 1-4: Oulema male genitalia (scale = 0.1 mm except where stated otherwise): 1-3 O. melanopus, 4 O. rufocyanea. 1 median lobe, dorsal view apex. 2 median lobe, lateral view showing position of flagellum. 3-4 flagellum, lateral view. Abbreviation: f, flagellum.

[Coleopterist 4(2): 33-36, August 1995]

To view the sclerotized flagellum, the genitalia are removed from a male beetle and then carefully cleared in a hot 10% solution of potassium hydroxide (KOH) for about one minute. After treatment with KOH, the genital structures are washed in water. The endophallus can usually be everted by squeezing the median lobe beginning at its base and progressing towards the apex. It is usually necessary to complete the eversion by inserting a hooked minuten needle into the endophallus to catch the tip and pull it out. In specimens stored in alcohol before mounting, the endophallus usually cannot be everted; this can be remedied by boiling the cleared genitalia in a soap solution for 10-15 minutes, after which eversion can be accomplished in the usual way.

In females, the spermathecal duct is shorter in *melanopus* (Figs. 5 & 6) and inserted on the bursa copulatrix slightly differently to that of *rufocyanea* (Fig. 7).



Figs. 5-7: Oulema spermathecae (scale = 0.1 mm): 5-6 O. melanopus, 7 O. rufocyanea.

Abbreviations: bc, bursa copulatrix; s, spermatheca; sd, spermathecal duct.

Other characters

There are apparently slight external morphological differences between the two species but unfortunately these are only relative. For example, rufocyanea is on average slightly smaller and narrower than melanopus, with less slender antennae. The elytra may be more elongate and less convex dorsally in melanopus and opposite to this in rufocyanea. There may also be slight differences in the pronotal shape and length of the onychium. However, until long series of both species can be confirmed by examination of the genitalia these differences remain unsubstantiated.

Recall of specimens

In 1992, a progress report on the national Bruchidae/Chrysomelidae Recording Scheme included a provisional distribution map for "O. melanopus" (Cox, 1992). This map undoubtedly incorporates records of both melanopus and rufocyanea and will have to be revised. I ask that all contributors to the Scheme should dissect male specimens to confirm or correct their previous identifications and send voucher specimens to me for checking. There may also be differences in the larvae of the two species and I would be grateful for either living larvae or ones preserved in 70% ethyl alcohol, preferably with associated adults.

Acknowledgement

I would like to thank my colleague Dr Roger Booth for reading the manuscript and making useful suggestions.

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Recent changes in the classification of the British Nitiduloidea

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Introduction

Tn his monumental review of the Western Palaearctic fauna, Audisio (1993) adopts La classification that differs in many respects from that adopted in the latest British checklist (Pope, 1977). This paper details these and other recent changes, as they affect the British fauna.

Higher classification

Audisio (1993) elevated the Kateretinae to family status. However, Lawrence & Newton (1995) have recently shown that the family name Brachypteridae Erichson, 1845, has priority over Cateretidae (or Kateretidae) Erichson, 1843, which is unavailable under Article 11f(i)1 of the International Code of Zoological Nomenclature. Ganglbauer in 1899 made the Kateretidae available (as Cateretini) but the name Brachypteridae Erichson, 1845, has priority. The following amended higher classification, with generic assignments, is based on that of Audisio (1993):

NITIDULOIDEA

NITIDULIDAE Latreille, 1807

NITIDULINAE Latreille, 1807 Nitidula Fabricius, 1775

Omosita Erichson, 1845

Soronia Erichson, 1845

Amphotis Erichson, 1845

Cychramus Kugelann, 1794

Pocadius Erichson, 1845

Thalyera Erichson, 1845

CRYPTARCHINAE Reitter, 1884

Cryptarcha Shuckard, 1839

Glischrochilus Reitter, 1873

Pityophagus Shuckard, 1839

CARPOPHILINAE Erichson, 1843

Carpophilus Stephens, 1829

Urophorus Murray, 1864

Epuraea Erichson, 1843

MELIGETHINAE C.G. Thomson, 1859

Pria Stephens, 1829

Meligethes Stephens, 1829

BRACHYPTERIDAE Erichson, 1845

Kateretes Herbst, 1793

Brachypterus Kugelann, 1794

Brachypterolus Grouvelle, 1913

Name changes and additions

Several name changes affect the British List and although those affecting the genus *Meligethes* Stephens have already been brought to the attention of British coleopterists (Bacchus & Kirk-Spriggs, 1991; Kirk-Spriggs, 1994), I include them here for completeness. Additions to the British List since 1977 are also listed.

Pocadius adustus Reitter, 1888

= lanuginosus Franz, 1969

Epuraea marseuli Reitter, 1872

= pusilla (Illiger, 1798) nec Thunberg, 1794

E. pallescens (Stephens, 1832)

= florea Erichson, 1843

E. silacea (Herbst, 1784)

= deleta Sturm, 1844

E. terminalis Mannerheim, 1843 [not (Mannerheim, 1843)]

= adumbrata Mannerheim, 1852

Meligethes carinulatus Förster, 1849

= erythropus auctt. nec (Marsham, 1802)

M. gagathinus Erichson, 1845 [synonymised with lugubris Sturm in error]

M. haemorrhoidalis Förster, 1849 [new to Britain]

M. pedicularius (Gyllenhal, 1808)

= viduatus (Heer, 1841)

M. persicus Faldermann, 1837

= pedicularius auctt. nec (Gyllenhal, 1808)

= tenebrosus Förster, 1849

M. ruficornis (Marsham, 1802)

= flavipes Sturm, 1845

M. subrugosus (Gyllenhal, 1808) [omitted in error]

Kateretes pusillus (Thunberg, 1794)

= bipustulatus (Paykull, 1798)

Brachypterus glaber Stephens, 1832 [not (Stephens, 1832)]

Brachypterolus antirrhini (Murray, 1864)

= villiger (Reitter, 1885)

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Chlorophorus varius (Müller) (Cerambycidae) imported to Britain

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During a Lancashire and Cheshire Entomological Society meeting on 20th February 1993, Eddie Sutcliffe exhibited a specimen of an attractive cerambycid which was clearly not a member of our native fauna. Chris Felton of the Liverpool Museum, which hosts our meetings, quickly identified it as *Chlorophorus varius* (Müller), a diagnosis subsequently confirmed by myself. Harde (1966) provides a key to the central European members of the genus.

The insect is more or less similar in form and coloration to *Clytus arietis* (Linnaeus). However whereas in *C. arietis* black is dominant, in the present species the yellow scaling is much more extensive (Fig. 1). The scales are of a more sulphurous yellow colour than in *C. arietis*, appearing faintly greenish in places.

The beetle was stated to be emerging at the rate of about one per day from a wooden fireplace surround in a house in Barnoldswick, South Lancashire (SD 8746). The provenance of the timber is unknown.

Chlorophorus varius is very rare in northern central Europe, but more common and widespread in southern Europe. In northern countries it is apparently restricted to deciduous trees, such as elm Ulmus, sweet-chestnut Castanea, sycamore/maple Acer, alder Alnus, ash Fraxinus, Bird Cherry Prunus avium and vine Vitis. In southern Europe it is found on fig Ficus and is also herbicolous, being found in mulberry Morus, Needle Furze Genista anglica, Spanish Broom Spartium junceum (Leguminosae) and rush Juncus. The larva, which is apodous, prefers host plants growing in sunlit areas and attacks the thicker branches and twigs of the above trees. The larval state lasts 2-3 years; pupation takes place in the spring and lasts no more than three weeks. The imagines are about from June until August, frequenting various sweet-scented flowers.

So far as I am aware this is the first record for the species in Britain.

Acknowledgements

My thanks to Eddie Sutcliffe for showing the species at the Society meeting and for kindly giving me a specimen for my collection. Dr Raymond Uhthoff-Kaufmann is to be thanked for providing information on the European distribution and biology of the species.

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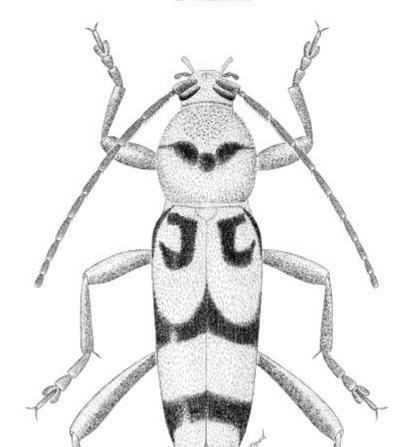


Fig. 1: Chlorophorus varius (Müller) (Cerambycidae). R.W.J. Read

A history of *Pyrrhidium sanguineum* (Linnaeus) (Cerambycidae) in Britain

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Introduction

Until the second half of this century the inclusion of this strikingly handsome (Pls. 1-2) longhorn beetle as an indigenous species in the British catalogues has always been somewhat equivocal: nearly half either omit its name or else mark it as an introduction.

Indeed, meanwhile, what was thought at that time to be a strong case was made for its exclusion from our lists, save as an importation (Uhthoff-Kaufmann, 1944, 1946) - records of non-native examples found in this country are marked with an asterisk [*] in the bibliography. This view was still supported by Duffy (1952) but amended by him, in the light of subsequent events, the following year (Duffy, 1953). Kaufmann's arguments were unquestionably proved to be embarrassingly incorrect!

Historical records

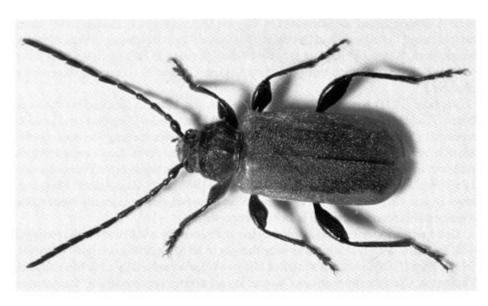
Marsham (1802) was the first entomologist to include *Pyrrhidium sanguineum* in his work on British Coleoptera; no habitat is given but he adds 'in mus. D. Donovan'. The beetle is later described and illustrated by Edward Donovan (1813). Curtis (1830) stated that it occurred in Anglesey and Devon; the former locality is interesting in view of recent records from Wales and the fact that *Pyrrhidium* appears to be associated with relict woodlands. Were such tracts then present on Anglesey, or was its occurrence there purely fortuitous?

Stephens (1831) possessed 'a fine series which was taken in the neighbourhood of Exeter ...', adding that the species had been found in North Wales [Anglesey] and London (repeated in Stephens, 1839). Parfitt (1867) also names Exeter, quoting Stephens. On the face of it, near Exeter appears to be well outside the ambit of *Pyrrhidium*'s current Welsh and Marches habitats, but there are two fine examples of this beetle in the Dale collection at the Hope Department, Oxford, labelled 'Pimperne [William?] Allen, Hants'. Pimperne, however, is not in Hampshire but in Dorset. Were these two examples locally bred or, like so many others found elsewhere in Britain, imported?

Two specimens were found in an outhouse at Plaistow by a Mr Hindley and recorded by S. Stevens (Fowler, 1890); these were thought to be of Continental origin (Harwood, 1914). Sharp (1908) notes that a number of *Pyrrhidium* were bred by a Mr Mounfield of Warrington, Cheshire, from an oak *Quercus* log apparently imported from "the Austrian dominions". (Fowler & Donisthorpe, 1913) add what would surely be an adventive record from a woodyard in Edinburgh, attributed to a Mr (?) Patterson.



Pl. 1: Pyrrhidium sanguineum (Linnaeus), Llysdinam, Breconshire, April 1984. R.S. Key



P1. 2: Pyrrhidium sanguineum (Linnaeus), ex ova laid on fallen oak bough, Moccas Park, Herefordshire, May 1978 (in coll. J. Cooter). J. Cooter

Harwood (1914) records that a large number emerged in a taxidermist's shop in spring 1913. They were eventually traced by Harwood's son to a showcase containing a Wild Cat mounted on a piece of black poplar *Populus*, both originating from Nancy, France, and belonging to Dr J.H. Satter of Witham, Essex. Hardy & Standen (1917) refer to a number of records of clearly imported specimens, including one emerging from "chair wedges" (probably of oak; Fraser, 1948) found during railway repair work near Derby in 1901, by Thomas Hey; some larvae from this timber were also reared to adulthood. They also report one found alive in Stockport market on 4th August 1914 by E. Hewitt (now in coll. J.R. Hardy). Fraser (1948) recorded a fresh female *Pyrrhidium* from sawn logs at Seaforth, Lancashire, on 17th April 1948.

Thus during the early part of this century, all of the evidence pointed to *Pyrrhidium* being an occasional importation (Uhthoff-Kaufmann, 1944, 1946).

Discovery at Moccas Park

The evidence to the contrary, quite conclusively, occurred during a trip towards the end of May 1949, in the company of the late R.W. Lloyd, who presented a specimen of *Pyrrhidium*, remarking that it had been found quite commonly the previous year in Moccas Park, Herefordshire. A note to that effect was published the next year (Lloyd, 1950) with the comment that he knew of no other record of its capture for the last 100 years.

Subsequent to his initial note, Lloyd and A.A. Allen published the first full account of the pabulum - dead oaks - and habits of *Pyrrhidium*, of which larvae, pupae and imagines were found in considerable numbers in Moccas Park (Allen & Lloyd, 1951). From their careful observations it is evident that far from being considered as a doubtful native the beetle had been long established, at least in Moccas Park - a locality so rarely visited by coleopterists that it remained undetected there until Lloyd drew attention to its presence.

During the period 1949-1951 several distinguished coleopterists visited Moccas Park to collect *Pyrrhidium*, care being taken not to decimate the colonies. During the next two decades this site remained the focal point; there are further notes of captures from the Park, as in 1958 by Hunter (1959) and Cooke (Zatloucal-Williams, 1973), and some short confirmatory articles (Allen, 1955, 1973; Morris, 1973).

Wider distribution

In April 1972 seven specimens emerged from extensively infested oak logs originating from Hay-on-Wye, Herefordshire (Green, 1972), indicating that the beetle was not confined (as had previously been thought) to Moccas Park. Furthermore, a protracted search along the edges of a wood at Dorstone Hill, which forms the higher part of Moccas Park, produced well over two dozen *Pyrrhidium* from fallen oak branches. The sexes were present in approximately equal numbers and females were observed ovipositing and *in cop.* (Cooter, 1978). Mr Cooter suggested, correctly as it turned out, that the beetle would

in all probability be found to be more widespread along the Wye valley and the Welsh Borders.

Cooter's prediction soon bore fruit. In June 1979 a single example was swept from grasses in an age-old wooded glade near Monmouth in south Wales (Horton, 1980). These woods contained many ancient oaks, so the locality may have been another breeding site for the species; this could not be confirmed for all these old trees were systematically destroyed and replaced by conifers (Dr Horton, in litt.) (Uhthoff-Kaufmann, 1994).

A damaged *Pyrrhidium*, one of several present in some firewood, was found by Mr J.K. Davidson in a wood near his dwelling at Llanfair Waterdine, Shropshire. A prolonged search there produced several *P. sanguineum* larvae, later determined by Dr J.E. Marshall (Cooter, 1980). Besides Moccas Park, where the species continues to flourish and where recording is now carefully supervised by English Nature, another station in Herefordshire, Brampton Bryan Park, has been recorded (Cooter, 1982). In April 1984 it was found in flight at the Field Centre, Llysdinam, Breconshire, and in early June 1986 in old oak woods at Coed Cnwch, Elan village and on the Doldowlod Estate, both in Breconshire, and at Bailey Einon Wood in Radnorshire (Key, 1986a, 1986b, 1987).

In all these records, the pabulum has always been dead oak branches of various thicknesses but recently - and for the first time in this country - the insect has been taken in Moccas Park from fallen or stacked branches of pollarded beech Fagus (Cooter, 1994). A full account of its life history and distribution may be found in Uhthoff-Kaufmann (1990). Although Pyrrhidium has been found over the years in a number of breeding localities, it is still regarded as vulnerable (Shirt, 1987) and ranked with those beetles which are threatened and requiring special management (Hyman, 1992). Erroneously marked as an importation in our latest catalogue (Pope, 1977), this has since been corrected (Anon., 1977).

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Cerambyx cerdo Linnaeus (Cerambycidae) in the New Forest, Hampshire A. A. Allen

49 Montcalm Road, Charlton, London SE7 80G

Among several colour photographs of beetles from his collection sent to me by Keith C. Lewis, of Welling, Kent, one stood out as being of exceptional interest. This portrayed a well-developed male of Cerambyx cerdo Linnaeus - an identification confirmed by Dr R. R. Uhthoff-Kaufmann - with the data "Knight Wood Enclosure, near Lyndhurst, New Forest / stump of dead oak / 9.viii.1966". The beetle had been found by Mr D. Fayers-Smith, a botanist, while looking for sundews Drosera in an area of boggy moss, and passed by him to a friend of Mr Lewis, to whom in turn it was given in 1992. The captor cannot now be traced, and it is not known whether the Cerambyx was picked up dead or found alive on or close to the oak Quercus stump.

As coleopterists will hardly need reminding, this noble insect - in the male sex one of the largest European longhorns - is not now reckoned as a living member of our fauna, though known to have been formerly a native of East Anglia where it has been found in a semi-fossil state in bog oak in the Isle of Ely (Duffy, 1968). It has very occasionally been introduced into Britain in foreign logs, but such records (almost all old) are few, and even fewer can be fully authenticated as C. cerdo because of the confusion in early times between this and C. scopolii Fuessly (Allen, 1968). The known occurrences, with the sole exception of Stephens' old record from Ely, cited by Fowler (1890) under C. cerdo, appear to have been in or near dockyards never before in a forest area.

That being so, it would be gratifying if we could claim the present find as evidence of an indigenous survival of the species in our largest remaining area of southern forest. Unfortunately, however, this idea must be dismissed at once, for it is unthinkable that so large and conspicuous an insect could have entirely escaped notice in one of the most intensively worked localities in the country. Despite the apparent association with an oak stump, the Lyndhurst specimen cannot well be regarded as anything but an introduction, almost certainly via Southampton Docks. It seems that imported logs have been frequently brought into the Forest from that source to supply local needs, such as fencing, which will adequately account for the beetle's presence where it was found. The possibility that it may have been the progeny of an imported fertile female, bred in a nearby oak trunk (more likely than in the stump) cannot be totally excluded, but is far less probable.

Acknowledgements

I thank Mr Lewis for supplying the background information to this remarkable find, and permission to publish it, and Dr Kaufmann for his valuable observations and useful correspondence on the subject.

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The dead-wood beetles of Donington Park, Leicestershire

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Introduction

Donington Park is a mediaeval deer park in north-west Leicestershire (SK 42) in private ownership. Its insect records were listed by Lott (1989) but since then further work has increased the number of beetles recorded. Nearly all of the entomological interest of the site derives from the presence of species associated with dead wood habitats, particularly those connected with the ancient oaks Quercus, some of which are believed to be 800 years old. This paper lists the beetles recorded from these habitats and discusses some points of relevance to the conservation of its relict ancient woodland assemblage.

Site description

After the Second World War two-thirds of the mediaeval deer park was converted to agricultural use. Consequently the site is composed of several distinct areas, each with a different history of recent land use. Records of beetles come from five main areas:

Area A is the remaining area of deer park. It is classic parkland with short turf, closely cropped by deer, and scattered ancient oak pollards which nowhere form any large area of continuous closed canopy. There is also a lime Tilia avenue and odd individual trees of other species.

Area C is a largely unmanaged strip of mixed woodland with some mature oaks on a steep north-facing slope leading to the River Trent. Its name, Boathouse Walk Plantation, suggests that it is largely of recent origin compared to the rest of the park.

Area D is a small grass enclosure with some mature trees but no ancient pollards.

Area E is an arable field with approximately fifty oaks left standing, many of them ancient.

Area F is a conifer plantation within which are eight old trees, some of which have died. A further four trees are distributed around the edge.

Sources of records

Records are taken from the following surveys (areas surveyed in square brackets): 1. I. M. Evans & D. A. Lott. 16.x.1983 [A]. 2. A. B. Drane, D. A. Lott, R. C. Welch & S. Wright (Royal Entomological Society meeting): 24.x.1987 [A]. 3. D. G. Goddard: 13.viii.1988 [A]. 4. D.A. Lott, 1988 (9 visits) [A, C & D] (for the Nature Conservancy Council). 5. D.A. Lott, 1991 (5 visits) [D, E & F] (for English Nature).

Methods

The following collecting methods were used. Dead branches and foliage were beaten and swept, mainly in May, June and July. Fungal fruiting bodies growing on dead and living trees were sieved onto a sheet, mainly in the autumn. Grass traps were constructed from mouldy grass cuttings wrapped around a variety of bones and fish-heads placed in tree cavities, mainly at ground level. When placed in hollow trunks these traps often yield species associated with hole-nesting birds. Insects were searched for under the loose bark of trunks, branches and cut logs. Insects were extracted from rotten wood. Some specimens were extracted using a Tullgren funnel.

Species recorded

338 species of beetles have been recorded of which 103 are strongly associated with dead-wood habitats and 37 are characteristic of dead-wood habitats such as tree cavities or wood-feeding fungi but are also widely known from other habitats. These species are listed in the appendix together with their conservation status, host trees and methods of capture.

Two records listed by Lott (1989) need to be amended. Firstly the records for Cis pygmaeus (Marsham) should be deleted because the voucher specimens have proved to be small examples of Cis vestitus Mellié. Secondly the record for Ischnoglossa prolixa (Gravenhorst) should be changed to I. obscura Wunderle, a species recently described from Germany.

Agrilus pannonicus (Piller & Mitterpacher) is included in the list on the basis of larval workings in thick oak bark and a single larva identified on a Royal Entomological Society visit to the site in 1987. Unfortunately the larva did not survive to adulthood and no adults have subsequently been seen at the site.

Six Red Data Book species (Shirt, 1987) have been recorded including one RDB1 (Endangered) species, *Plectophloeus nitidus* (Fairmaire), and three RDB2 (Vulnerable) species, *Microscydmus minimus* (Chaudoir), *Agrilus pannonicus* and *Cryptocephalus querceti* Suffrian. According to the provisional revision of Red Data Book listings by Hyman (1992, 1994) these figures would be revised to five Red Data Book species, including two RDB2 species, which with 20 nationally scarce species adds up to an important assemblage of nationally rare dead wood beetles. A further four nationally scarce species, *Catops longulus* Kellner, *Omalium rugatum* Mulsant & Rey, *Sunius melanocephalus* (Fabricius) and *Aleochara discipennis* Mulsant & Rey, are not here considered to be associated with dead wood habitats.

Links between the beetle fauna and ancient woodland

The species list includes 28 beetles which were included in a list of indicators of the continuity of dead-wood habitats in ancient woodlands (Harding & Rose, 1987). Of these five species are listed as grade 1 indicators and four species are listed as grade 2 indicators. This number of ancient woodland indicators easily qualifies Donington Park as nationally important and a priority area for conservation measures according to criteria detailed by Harding & Alexander (1994).

The methods of capture used for indicator species are summarised in Table 1. The most important habitat for grade 1 and grade 2 species at Donington appears to be rotten

wood. This resource is concentrated in older trees both in terms of quantity and variety. Grade 3 species have a more even distribution across habitats.

Table 1: Number of indicator species (Harding & Rose, 1987), by method of capture.

Method	No. of in Grade 1	Total no. dead wood spp.		
Beating	2		4	30
Fungus			7	32
Grass trap		1	2	34
Under bark		1	5	37
Rotten wood	3	3	4	36

Of the 22 indicator species whose host tree could be identified, 18 came from oak. Three, including one grade 2 species, were recorded from sycamore *Acer* and one was recorded from ash *Fraxinus*. The dominance of oak as a host for indicator species is hardly surprising given that all the remaining ancient pollards belong to this species. The rich dead-wood fauna associated with sycamore is more remarkable given the small number of trees at Donington and its poor reputation amongst conservationists.

The distribution of records of these species between land use areas within the site is summarised in Table 2. The greatest concentration of ancient woodland species was recorded in the remnant deer park (area A). The relatively large species list is partly due to this area receiving the greatest sampling effort, but the proportion of ancient woodland indicators is nevertheless comparatively high. A significant assemblage of ancient woodland species was also found in the trees entombed in the conifer plantation (area F). Very few species were recorded in the arable area (E), although they included a high proportion of ancient woodland indicators. The small species list for this area may be connected with a low species richness or with low sampling efficiency arising from the dry nature of the trees. Areas C and D without ancient trees each yielded a list with a much lower proportion of ancient woodland indicators.

Table 2: Number of indicator and other dead-wood species, by area.

	No. of	indicator	species	Other dead	Other dead-wood spp.		
Area	Grade 1	Grade 2	Grade 3	strong association	weak association	17.601631	
A	4	3	16	54	31	108	
C			1	18	7	26	
D				17	2	19	
E			3	7		10	
F	1	1	4	26	15	47	
All areas	5	4	19	75	37	140	

Discussion

These results suggest that removal of ancient trees largely destroys the associated relict beetle fauna but that some elements can survive changes in surrounding land use while the ancient tree structures still survive. Consequently there are plans to return agricultural areas of the site back to deer park under a countryside stewardship scheme.

Lott (1989) has briefly summarised the archaeology and recorded history of the site in relation to its entomology. There is circumstantial evidence to link the site of the mediaeval park with woodland mentioned in the Domesday Book. However in the Roman period the site contained a large villa complex and would probably have been largely given over to agriculture. It is therefore possible that the dead-wood beetle fauna at Donington originates partly from post-Roman secondary woodland. It would be interesting to estimate the ages of other recorded relict ancient woodland assemblages in order to see if any relationship with species composition emerges.

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I thank Tony Drane, Ian Evans, Don Goddard, Colin Welch and Sheila Wright for supplying specimens and records. I also thank Paul Wunderle for confirming the identity of *Ischnoglossa obscura* and Colin Johnson for identifying many of the Ptiliidae and Cryptophagidae and checking the Cisidae.

I am very grateful to Mr J. Gillies Shields and his staff for allowing access to the site and providing much useful information. I am also grateful to Peter Liddle for his advice and guidance on historical matters. Finally I thank English Nature (then part of the Nature Conservancy Council) for providing financial assistance for the 1988 and 1991 surveys.

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Appendix: Dead-wood beetles recorded at Donington Park

For explanation of symbols see key at end.

Species C	Conservation	Indicator		Methods of	
	Status	Grade	Trees (Collection	Area
Dromius agilis (Fabricius)			Ti	bt	A
D. meridionalis Dejean			Qu	bt	A
D. quadrimaculatus (Linnaeus)			Qu,Ti	bt,1b	AD
D. quadrinotatus (Zenker)			Cr,Qu,Ti	bt,lb	AD
Plegaderus dissectus Erichson	Nb	2	ln	rw	F
Abraeus globosus (Hoffmann)			Ac,In,Qu	rw	AF
Gnathoncus nannetensis (Marseul)	2	Ac	gt	A
Dendrophilus punctatus (Herbst)			Ac,Qu	gt	A
Paromalus flavicornis (Herbst)			Ac	IW	A
Hister merdarius Hoffmann		2	Ac	gt	A
Ptenidium gressneri Erichson	N-	2	Ac	gt,rw	A
P. laevigatum Erichson	-	-	Ac.In	gt,rw	AF
Ptinella cavelli (Broun)			Qu	lb	D
P. errabunda Johnson			In,Qu	rw	AF
Pteryx suturalis (Heet)			In	rw	F
Nemadus colonoides (Kraatz)			Ac	gt	A
Microscydmus minimus (Chaudoir) R3	1	In,Qu	IW.	F
Proteinus brachypterus (Fabricius		-	Qu	fg,rw	F
P. ovalis Stephens		_	Qu,UI	fg,rw	AF
Dropephylla ioptera (Stephens			Cr,Qu	bt,lb	AD
D. vilis (Erichson)		0.55	Ac,Pi,Qu	bt,gt,lb,	
Omalium italicum Bernhauer		_	Ac	gt	A
O. oxyacanthae Gravenhorst		-	In	fg	A
O. rivulare (Paykull)		-	In,Qu	fg,rw	ACF
Phloeonomus punctipennis Thoms	on		Ac,In,Pi,Q		ACDF
Xylodromus concinnus (Marsham)		-	Ac,Qu	bt,gt,rw	AF
X. depressus (Gravenhorst)		-	Ac,In,Qu	gt,rw	AF
Siagonium quadricorne Kirby			Ac	lb	A
Atrecus affinis (Paykull)			In,Qu	lb.rw	AF
Gabrius splendidulus (Gravenhors	at)		In,Qu,UI	lb,1 w	AC
Quedius cruentus (Olivier)	.,		Qu	lb	A
Q. lateralis (Gravenhorst)			UI	fg	A
Q. mesomelinus (Marsham)		11.50	Qu		Â
Q. microps Gravenhorst	Nb	3	Ac	gt	A
Q. scitus (Gravenhorst)	Nb	3	Qu	gt lb ===	AF
Q. ventralis (Aragona)	Nb	3	Ac	lb,rw	
Sepedophilus marshami (Stephens		3	1000000000	gt	A
Tachinus humeralis Gravenhorst	,		Qu	lb	
	N	31 - 31	In	fg	AC
Gyrophaena angustata (Stephens) G. gentilis Erichson	N-	**	In	fg	C
G. joyi Wendeler	N-		In	fg	C
	IN-	2:58	In	fg	C C C
G. latissima (Stephens)			In	fg	C
Homalota plana (Gyllenhal)		***	Ac	lb	A

Anomognathus cuspidatus (Erichson)		0.75	Qu	lb	AD
Leptusa fumida Kraatz			In,Pi,Qu,Ul	lb,rw	CF
Autalia impressa (Olivier)			In,Qu	fg	CF
A. longicornis Scheerpeltz			In,Qu	fg,rw	CF
Atheta (Bessobia) fungivora (Thomson)			Qu	fg,gt	AD
A. (III) harwoodi Williams		-	Ac,Qu	gt	A
A. (III) liturata (Stephens)			In	fg	AC
A. (III) nigricornis (Thomson)			Qu	gt	A
A. (Anopleta) corvina (Thomson)			Qu	gt	A
A. (II) trinotata (Kraatz)		-	Ac,Qu	gt	AF
A. (Datomicra) dadopora Thomson		22	In	fg	C
A. (s.str.) castanoptera (Mannerheim)		20	In	fg	AC
A. (I) crassicornis (Fabricius)		-	Ac,In,Qu	fg,gt	ACF
Phloeopora testacea (Mannerheim)			Pi,Qu	Ib.	DF
Oxypoda alternans (Gravenhorst)		00	In,Ul	fg	AC
Ischnoglossa obscura Wunderle			Qu	lb	A
Crataraea suturalis (Mannerheim)		3	Ac	gt	A
Haploglossa pulla (Gyllenhal)			In	rw.	F
Aleochara diversa Sahlberg	N-		Ac,Qu		A
마이트를 하고 있다면 있다면 되었다면 하는 다음이 하나를 하다고 있다면 하는데	RK	2	and the second second	gt	A
A. fumata Gravenhorst	KK	2	Qu	gt	F
A. sparsa Heet	N-	-	Qu	gt,rw	F
Euplectus bonvouloiri Reitter	14-	55	In In On	rw	F
E. infirmus Raffray		22	In,Qu	rw	
E. piceus Motschulsky	D.O.	7	In	rw	F
Plectophloeus nitidus (Fairmaire)	R2	1	In	rw	A
Sinodendron cylindricum (Linnaeus)		3	In	rw	A
Trox scaber (Linnaeus)		-	Ac	gt	A
?Agrilus pannonicus (Piller & Mitter.) (1)	Na	2	Qu	16	A
Ampedus balteatus (Linnaeus)			In,Qu	lb,rw	AF
Melanotus villosus (Geoffroy) (1)			In,Qu	lb,rw	AF
Stenagostus rhombeus (Oliviet) (1)		3	In,Qu	lb,rw	A
Malthinus flaveolus (Herbst)	0.00		Pi,Qu	bt	AEF
M. frontalis (Marsham)	Nb		Qu	bt	Α
Malthodes minimus (Linnaeus)		-	Pi,Qu	bt	EF
Ctesias serra (Fabricius)	Nb	3	Qu	bt,lb	AE
Xestobium rufovillosum (Degeet) (t)		3	Qu		A
Ernobius mollis (Linnaeus)		**	Pi,Qu	bt	F
Anobium punctatum (Degeer)			Qu	bt	A
Ptilinus pectinicornis (Linnaeus)			Pi,Qu	bt	AEF
Dorcatoma chrysomelina Sturm		2	Qu	rw	A
Ptinus fur (Linnaeus)		-	Qu	gt	A
Malachius bipustulatus (Linnaeus)			1000	sw	AC
Epuraea deleta Sturm		**	In	fg	C
E. limbata (Fabricius)		-		sw	A
E. unicolor (Olivier)			Qu	bt	Α
Rhizophagus bipustulatus (Fabricius)			In,Qu	fg,lb	ADF
R. dispar (Paykull)			In,Pi,Qu	lb	ACF
Pediacus dermestoides (Fabricius)			Qu	lb	D
Cryptolestes ferrugineus (Stephens)			Ac	lb	A
Cryptophagus dentatus (Herbst)			Ac	gt	A
C. distinguendus Sturm			Ac,In	fg,gt	AC
C. Wichingachana ordini		-	710,111	. P. P.	110

C. pallidus Sturm			Cr	1.4	
C. pilosus Gyllenhal			In	bt rw	A F
C. scanicus (Linnaeus)			Qu		A
C. scutellatus Newman			Ac	fg,gt	
Biphyllus lunatus (Fabricius)		3	Fr	gt	A
Dacne rufifrons (Fabricius)			100.777	fg	
Cerylon ferrugineum Stephens			In	fg	AC
C. histeroides (Fabricius)			Qu	lb	A
			In,Qu	lb,rw	AF
Orthoperus atomus (Gyllenhal)			Ac	gt	A
Mycetaea hirta (Marsham)		•	Ac	gt	A
Lithostygnus serripennis Broun		-	In	rw	F
Aridius nodifer (Westwood)			Ac,Qu	fg,gt	AF
Lathridius anthracinus Mannerheim	**		Ac	gt	A
Corticaria alleni Johnson	Na	1	Qu	rw	A
Cis fagi Waltl			In,Qu	rw	AF
C. vestitus Mellié			Qu	bt,rw	A
Pseudotriphyllus suturalis (Fabricius)		3	Qu	fg	AF
Triphyllus bicolor (Fabricius)	137	3	Qu	fg	Α
Mycetophagus quadripustulatus (Linnae			In,Qu	fg,lb	ACF
Eledona agricola (Herbst)	Nb	3	Qu	fg	F
Corticeus bicolor (Olivier)			Qu	lb	A
Prionychus ater (Fabricius) (1)	Nb	3	Qu	rw	Α
Tetratoma fungorum Fabricius		3	In,Qu	fg,lb	ACF
Lissodema cursor (Gyllenhal)	Na		Qu	bt	Α
Rhinosimus planirostris (Fabricius)			Qu	bt,lb	AD
R. ruficollis (Linnaeus)		-	Ac	lb	A
Pyrochroa serraticornis (Scopoli)	303251			sw	Α
Hallomenus binotatus (Quensel)	Nb	3	In	fg	Α
Conopalpus testaceus (Olivier)	Nb	3	Qu	bt	A
Scraptia testacea Allen	Na	1	Qu	bt	Α
Anaspis garneysi Fowler			Cr,Qu	bt	ADE
A. humeralis (Fabricius)			Cr	bt	A
A. maculata Fourcroy			Cr,Qu	bt,sw	ACDEF
A. regimbarti Schilsky			Cr,Qu	bt	ADEF
Ischnomera cyanea (Fabricius)	Nb	3	Cr	bt	Α
Aderus oculatus (Paykull)	Nb	3	Qu	bt	EF
Rhagium mordax (Degeer)			Ul	lb	C
Grammoptera ruficornis (Fabricius)		777		sw	C
Strangalia maculata (Poda)			Qu	bt	A
Phymatodes testaceus (Linnaeus)		3	Qu	lb	E
Clytus arietis (Linnaeus)		1.77	Qu	Ib	D
Leiopus nebulosus (Linnaeus)			Qu	bt	ADEF
Cryptocephalus querceti Suffrian	R2	1	Qu	bt	A
Platyrhinus resinosus (Scopoli)	Nb	3	In	fg	A
Scolytus intricatus (Ratzeburg)			Qu	lb	D
Dryocoetinus villosus (Fabricius)			Qu	lb	AD

Key

Species: Nomenclature follows Pope (1977) as updated in the journal Antenna; (I) = larvae, (r) = remains.

Conservation Status: Follows Hyman (1992, 1994) where R2 = vulnerable species equivalent to category 2 of the British Red Data Book (Shirt 1987); R3 = rare species equivalent to category 3; RK = Red Data Book status insufficiently known; Na, Nb, N- = nationally scarce grade a, b and insufficiently known.

Indicator Grade: 1,2,3 = grade of saproxylic indicator as listed by Harding & Rose (1986), --= species strongly associated with dead-wood and associated fungal habitats; -= species associated with dead-wood habitats such as tree cavities or tree fungi but also found in other habitats.

Trees: The trees from which each species were recorded are coded as follows: Ac = sycamore

Acer; Cr = hawthorn Crataegus; Fr = ash Fraxinus; In = unidentified; Pi = pine Pinus;

Qu = oak Quercus; Ti = lime Tilia; Ul = Elm Ulmus.

Methods of Collection: The methods of collection used to record each species are coded as follows: bt = beaten from foliage and dead branches; fg = sieved from fungal fruiting bodies; gt = sieved from grass trap placed in tree cavity; lb = collected from under loose bark; rw = extracted from rotten wood; sw = swept.

Haliplus mucronatus Stephens (Haliplidae) in Sussex

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In the Sussex Victoria County History list (Fowler, 1905) the entry for Haliplus mucronatus reads as follows:

"Very rare; Holm bush, Brighton (Power); ditches, Lewes (Jenner); The Rise, Lewes (Morris)." Subsequent records for Sussex are all for the Ouse valley between Lewes and Southease. Foster (1972) states that it was found by Cox south of Lewes before 1941, by Henderson at Iford in 1944 and by Cribb (locality not specified) in 1954. Richard Jones and I discovered the species in ditches just north of Southease (TQ 4205) on 8th October 1977 and I recorded it there again on 16th October 1977 (Hodge, 1978). On 31st October 1979 I found a specimen in a ditch between the Cockshut stream and Rise Farm, Lewes (TQ 4109). More recently, in water meadows close to Lewes (TQ 4209) I found a large colony of *H. mucronatus* on 5th September 1993 in a richly vegetated ditch just west of the railway. It could not be found in the same ditch on 22nd September 1994 although a single specimen was found in another ditch not far away between the railway and the river Ouse on 22nd April 1994. Finally, Dr Garth Foster took a specimen from a ditch north of Lower Rise, Lewes (TQ 4208) on 19th November 1994.

Thus *H. mucronatus* appears to be well established on the Lewes Levels but to shift its breeding sites as conditions change, perhaps preferring ditches which have been fairly recently cleaned out. It is not known why the species does not breed on other grazing marshes in East Sussex but Foster (1972) suggested that it may be localised to ditches south of Lewes due to the presence of gault clay in this part of the Ouse valley. Certainly the local geology could be a reason for the survival of this isolated colony.

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A note on Acalles misellus Boheman (Curculionidae)

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Recent correspondence with a number of British coleopterists has revealed that there is some uncertainty about the status of the two nominal species *Acalles misellus* Boheman, 1844, and *A. turbatus* Boheman, 1844. This note attempts to explain the position with regard to their status in the British Isles.

Ever since the time of Fowler our common Acalles with upstanding setae on elytra and pronotum has been known as A. turbatus. However, in a revision of the group of European species of the genus to which ours belongs, Dieckmann (1982) established two important facts as far as our species are concerned. Firstly, A. turbatus is synonymous with A. parvulus Boheman, 1837, which of course has priority. Secondly, the only type material of A. misellus in the Schönherr collection (containing Boheman's specimens) is English. Two specimens exist; one, in poor condition, with data referring to 'Anglia Kirby' and the other, designated as lectotype by Dieckmann, labelled 'Anglia Walton'. Other information, including erroneous species determinations, would be confusing in the context of the current note; Dieckmann's paper should be consulted for details.

There is no evidence that A. parvulus (= turbatus) occurs in the British Isles, although it is found in France.

References to A. misellus in the British Isles are not new. Fowler (1891) included the name as a synonym of turbatus and it was used by Anon. (1986), though without explanation. There are references to the occurrence of A. misellus in Britain in Kippenberg (1983) and Tempere & Pericart (1989). Morris (1993) gave the relevant synonymy; for convenience this is repeated here:

Acalles Schönherr, 1825 misellus Boheman, 1844

= turbatus auctt., not Boheman, 1844

In brief, and as far as British and Irish coleopterists are concerned, misellus is a necessary change of name for the species of Acalles formerly known as turbatus.

It should be noted that considerable revisionary work on the genus has been done (and is continuing) on the continent of Europe and that a thorough review of our fauna is, perhaps, overdue.

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A recent record of Harpalus dimidiatus (Rossi) (Carabidae) from Sussex

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Initial research on invertebrate colonisation of ex-arable chalk grassland from adjacent established chalk grassland, has recorded carabid distribution using pitfall trap transects across examples of these two habitat types at Mount Caburn National Nature Reserve (TQ 444088) and Castle Hill National Nature Reserve (TQ 376072), East Sussex. The transects were 55 m long and bisected by the boundary between the two habitat types, with pitfalls placed at 5 m intervals. The age of the ex-arable land at Castle Hill is now 19 years and that at Mount Caburn is approx. 25 (± 5) years. The vegetation types on the established and ex-arable grasslands conform to the National Vegetation Classification categories CG 2b and CG 2c respectively for Mount Caburn and CG 2a and CG 3c for Castle Hill.

A single *Harpalus dimidiatus* was caught in a pitfall trap in the established grassland at Mount Caburn, during the period 24th May - 7th June 1994. Considering the intensive nature of our survey we would have expected to catch more than just one specimen if we had trapped inside the main breeding colony. Thus it is possible that this individual had dispersed from a nearby colony, outside the sample area covered by the present work.

This is a Notable A graded species. Hyman & Parsons (1992) state that from 1970 onwards it has been recorded from North Somerset, Dorset, Surrey and Worcestershire. A pre-1970 East Sussex record lacks a specific locality. There are series of this species in the Hastings Museum and Booth Museum of Natural History, none of which are from Sussex. No Sussex records are reported in Fowler (1887) or Fowler & Donisthorpe (1913).

Acknowledgements

We would like to thank Gerald Legg (Booth Museum) for his help and Peter Hodge for his guidance and confirming the identification.

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Leptura fulva Degeer (Cerambycidae) in West Kent

A. V. Measday

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On 21st June 1993 I captured a specimen of this species on roadside hogweed *Heracleum* at Hever, near Edenbridge, Kent (TQ 4645). With the kind help of Dr G. Legg, I confirmed this identification by referring to the collection at the Booth Museum, Brighton. Eric Philp has also checked the specimen and confirmed it to be the first Kent record. Since 1970 this species has only been recorded from Dorset, North and South Hampshire (Hyman & Parsons, 1992).

Acknowledgement

I thank Ben Moon for helping with the literature.

References

HYMAN, P.S. & PARSONS, M.S. 1992. A review of the scarce and threatened Coleoptera of Great Britain. Part 1. U.K. Nature Conservation No. 12. Peterborough: Joint Nature Conservation Committee.

Rugilus subtilis (Erichson) (Staphylinidae) in Sussex

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Fowler (1888) describes 'Stilicus subtilis' as "very local" and lists eleven localities in Essex, Kent, Surrey and Sussex, adding that it is found "in moss, dead leaves, decaying vegetable matter, damp twigs, &c., usually in chalky places". Hyman & Parsons (1994) consider Rugilus subtilis to be a rare and declining species and it has been given the national status RDBI (Indeterminate). They give a wider distribution covering ten vice-counties in England and Wales, the most northerly being North-east Yorkshire.

Fowler (1888) gives 'Bognor' (West Sussex) as a locality but this record is not repeated in the Sussex Victoria County History list (Fowler, 1905) and Hyman & Parsons (1994) do not include West Sussex in the known range of the species. The entry in Fowler (1905) reads "Peppering and Dallington Forest, not common; Lewes, common". Neither Peppering or Dallington Forest are on chalk although there are isolated outcrops of calcareous soils in that part of East Sussex.

There appear to be no recent (post-1970) British records apart from an unconfirmed record from East Sussex that originated from notes which I sent to English Nature several years ago. This record is correct and refers to a single specimen found by Mr Roger Dumbrell in loose soil amongst decayed nettle *Urtica* roots at the base of an ash *Fraxinus* stump near the downs at Milton Street, East Sussex (TQ 5303) on 3rd October 1974. More recently I have taken a male by sweeping moderately long grass near the top of a very steep south-facing chalky slope in The Coombe, Lewes, East Sussex (TQ 4210) on 30th April 1994 and another example by sieving moss in a disused chalk-pit on Malling Hill near Lewes, East Sussex (TQ 429111) on 3rd April 1995. Both of the Lewes sites are within the Malling Down Sussex Wildlife Trust Reserve.

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Field Meeting

New Forest, Hampshire - Sat. 12th August 1995. Leader: Paul Waring - Tel.: (01733) 571917.

Meet at 11.00 and 19.30 hrs. at SU 366027 at the car park by woodland through Furzey Lodge. The aim is to inspect woodland and heathland in the Frame Wood area by day, then to sugar for a rare moth at several predetermined places in the Forest simultaneously. At this meeting Nature Conservation Bureau Ltd plan to demonstrate an infra-red illumination system that allows moths to be observed without disturbance. The meeting is being organised through the British Entomological and Natural History Society and Butterfly Conservation and promoted through the Joint Committee for the Conservation of British Insects. Members of all other entomological organisations are invited, as part of the idea is to initiate a series of meetings that will focus on sites of nature conservation significance and cover as many types of invertebrate as possible. Individuals are likely to be appointed to act as records co-ordinators for each group.

Opatrum sabulosum (Linnaeus) (Tenebrionidae) in East Sussex

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Hyman & Parsons (1992) state that this species is widespread but local along the coasts of England and Wales, adding that there are a small number of inland records. The national status is currently given as Notable B, meaning that the species is thought to occur in between 31-100 O.S. 10 km squares.

In East Sussex the species appears to be very rare although its somewhat secretive habits may mean that a few isolated colonies have been overlooked. Fowler (1905) gives the following entry in the Sussex Victoria County History list: "Scarce; Hastings, Brighton". The only recent records for East Sussex (VC 14) appear to be from a very steep south-facing chalky hillside near Lewes in a west-facing dry valley known as The Coombe (TQ 4210), which forms part of the Malling Down Sussex Wildlife Trust Reserve. On 12th May 1975 my friend Mr Roger Dumbrell discovered a single example of O. sabulosum at this site. I found two more specimens under flints at the same site on 26th April 1987 and I recorded it there again on 24th April and 21st September 1988.

Although the species has not been observed at Lewes since 1988, in spite of frequent visits, it is thought that it is likely to be permanently established in the area.

References

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Subscribers' Notices

This section is for subscribers to advertise requests for information, specimens wanted for loan, or entomological items wanted or for sale. Notices of specimens for sale or exchange will not be accepted. Notices will be repeated with each issue while space is available (or until withdrawn), newer ones appearing first, and may be edited for brevity.

Records of Arhopalus rusticus wanted: For a future publication, I am compiling records held by museums or county recorders of Arhopalus rusticus (Linnaeus) (= Criocephalus in Fowler) (Cerambycidae) from the British Isles, that have not been published in any journal. Postage will be refunded. Keith C. Lewis 108 Park View Road, Welling, Kent DA16 1SJ.

Lower Derwent Valley records wanted: Work is underway to produce a complete list of the beetles of the Lower Derwent Valley, Yorkshire, to be produced in booklet form. The area is important for its beetle fauna and to date over 700 species have been recorded. The database of the Yorkshire Naturalists' Union is a valuable source of data but it is known that there is a wealth of data on the personal files of many coleopterists. All records (even of commoner species) will be greatly appreciated and all recorders will be duly acknowledged. Please send your records to: Mike Denton Yorkshire Museum, Museum Gardens, York YOI 2DR or Bob Marsh 11 Crusader Drive, Sprotborough, Doncaster, Yorkshire DN5 7RX.

Entomologist's Monthly Magazine wanted: I wish to purchase the following volumes/parts: 10(113) Oct 1873; 13(156-157) May-Jun 1877; 17(200-204) Jan-May 1881; 18(205-211) Jun-Dec 1881; 27(320, 329-330) Jan, Oct-Nov 1891; 29(334-351,354) Jan-Aug, Nov 1893; 33(392,395) Jan Apr 1897. Or any of the above as complete volumes. Plus complete volumes: 35, 36, 40, 42-44, 48, 51-53, 55-70. J. Cooter 19 Mount Crescent, Hereford HR1 INQ.

Agrilus sinuatus Olivier (Buprestidae) widespread in London

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I have been examining old hawthorn *Crataegus* trees for the characteristic larval workings (Alexander, 1990) and D-shaped emergence holes of this species in dead branches (and trunks where the whole tree was dead). I am gathering the impression that *A. sinuatus* is widespread in urban London.

My records to date, although by no means a complete survey of the area, includes an attempt to classify the habitats into: 1. areas of recognised nature conservation (and at least some coleopteran) interest; 2. cemeteries with ornamental tree planting; 3. tidy parks with amenity grass swards; 4. roadside trees. Table 1 details these records.

Table 1: A. sinuatus sites, larval workings and emergence holes unless stated otherwise

Habitat type	Site name	Grid ref.	Date
1	*Richmond Park (+ ad.)	TQ 200730	3.vii.1993
1	*Bayfield Plain, Bookham Common	TQ 130570	11.ix.1993
1	*Parliament Hill, Hampstead Heath	TQ 276863	.ix.1993
1	*Heath Extension, Hampstead Heath	TQ 261874	30.vii.1993
2 2	*Tottenham Cemetery (+ dead ad.)	TQ 334911	5.vii.1993
	Kensington Cemetery, Gunnersbury	TQ 192787	.v. 1994
2 3	Kensal Green Cemetery	TQ 230825	22.xii.1994
3	*Primrose Hill	TQ 276838	27.viii.1993
3	Wandsworth Common	TQ 275740	29.iii.1994
3 3	Clapham Common	TQ 287749	29.iii.1994
3	Tooting Bec Common	TQ 296721	29.iii.1994
3	Tunnel Gardens, Muswell Hill	TQ 295194	29.iii.1994
3	Northway Gardens, Finchley	TQ 256890	5.v.1994
3	Battersea Park	TQ 286774	17.xi.1994
3 3 4	Clissold Park, Hackney	TQ 326867	3.xii.1994
3	Hanger Hill Park	TQ 182820	10.v.1994
	*Wellesley Road, Chiswick	TQ 189783	7.x.1993
4	Winton Avenue, Wood Green	TQ 295911	10.iv.1994
4	Hanger Vale, Ealing	TQ 186814	2.ix.1994

Key: * = sites in Hackett (1994)

Hawthorns shaded by other trees were not found to bear emergence holes, but ground cover in surrounding areas seems unimportant. Roadside trees could be in such polluted sites as Hangar Vale, 4 m from the North Circular trunk road; indeed pollution could be implicated in the state of health of the trees (some were completely dead), although it is normal for old hawthorn to contain some dead branches.

The widespread occurrence (i.e. not confined to isolated ancient sites) and lack of habitat sensitivity suggests that this beetle is relatively mobile and has survived the Victorian conversion of commons and arable farming landscape to built-over land with parks. Whether this species is benefitting from the urban heat-island effect is conjectural. In London, the main conservation threats would seem to be zealous tidyness and the lack of provision of a continued supply of suitably old hawthorns. I failed to find signs of this species in Hyde Park / Kensington Gardens during 1.5 h search, probably due to tidying-up by pruning of dead branches.

Acknowledgements

My thanks to Keith Alexander, Brian Levey and Mark Parsons for their encouragement.

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Letter

Further thoughts on Anthaxia Eschscholtz (Buprestidae) in Britain

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Allen (1995) reported the possible occurrence of a species of Anthaxia other than A. nitidula (Linnaeus) or A. quadripunctata (Linnaeus) in Britain. On distributional grounds I have suggested that there were only three species of Buprestidae not recorded from Britain that might turn up here naturally (Levey, 1977). Two of these, A. quadripunctata and Agrilus sulcicollis Lacordaire have now been found here. The third species likely to be found here is the polyphagous Agrilus cyanescens Ratzeburg. With regard to European Anthaxia, although at least eleven species of western European Anthaxia have been reported as sometimes using Prunus species as larval hosts, most of these are Mediterranean or central European species, and apart from A. nitidula none apparently reaches the regions of Europe with a cool temperate marginal climate, and even A. nitidula appears to be at the extreme edge of its range here.

Allen (1995) suggested that the specimens seen by Mr Lewis at Chalk Wood were not the native form of A. nitidula and pointed out that British A. nitidula from the New Forest are the all-green form known as ab. virata Schaefer, in which both males and females are entirely green. There is a female colour form of virata called ab. vesubiensis Schaefer with blue elytra and it is possible that the specimens Mr Lewis saw were this colour variety or another colour form of A. nitidula. As far as I know their detailed distribution and the selective factors, if any, maintaining these forms in a population have not been investigated, but in France ab. virata apparently occurs commonly in the south, where it sometimes replaces the nominate form, as it does in the New Forest population (Schaefer, 1949). If, as I have suggested, A. nitidula is at the extreme edge of its range in Britain, then the uniformity of the New Forest population suggests that either the virata form is at a selective advantage in Britain, or equally possibly that the population was founded by a gravid female or a small number of individuals which only contained the genes to produce the virata form.

Given the lack of records of A. nitidula outside the New Forest, and their apparent difference in colour, it is possible that the specimens seen by Mr Lewis at Chalk Wood may have been a population of A. nitidula of different origin to the New Forest population, although it does not seem inconceivable to me that they might represent a long-established population since small and very localised populations of insects are difficult to find, especially if the adults (as is the case with many Buprestidae) have very short life spans and are elusive.

I do not think that the differences in the reported details of the occurrence of the specimens seen by Mr Lewis and those of A. nitidula in the New Forest are necessarily significant. According to Bily (1982), A. nitidula overwinters as a pupa or last-instar larva in a pupal chamber in its host plant, and feeds in both the branches and trunks of its hosts. Almost all the records of adult A. nitidula from the New Forest are from June and July, with most in mid June

to late July. It is possible that if the specimens Mr Lewis saw in June were this species, then they were recently metamorphosed adults that had not yet left their larval host.

I have records of A. nitidula in the New Forest from 1855 to 1954 but there are many periods, sometimes up to 20 years, without any records. Since the New Forest has been well collected by entomologists, the lack of records at certain periods suggests difficulty in finding this species. I therefore think it quite likely that there are, or were, undiscovered populations of A. nitidula in S.E. England in less well collected localities.

References

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Conservation News

This section will be published periodically to carry news of the latest efforts in the beetle conservation field. If you have a research project that you would like to publicize, or have news of a particular threat to a nationally endangered or vulnerable species, then please send your comments to: Dr Roger Key, c/o the Editor.

- * In the Countryside Council for Wales (CCW), Adrian Fowles has commissioned an important survey of pasture-woodlands. Starting with a study of aerial photographs, 202 likely sites were identified and most were followed by a brief site visit. Peter Hammond (Natural History Museum) has surveyed the beetle faunas of 32 of the best sites, adding more than 20 species to the Welsh list and identifying some potentially very important sites for saproxylic beetles. Ten sites have been selected for further survey work this year.
- * Also under the auspices of CCW, a survey of river-shingle carabid communities is being conducted throughout Wales during 1995, the fieldwork being done by Mick Eyre, to assess the conservation significance of this vulnerable habitat.
- * English Nature (EN) is following CCW's lead in initiating a Veteran Trees Project starting later this year. This will cover all aspects of the conservation of ancient trees, including their invertebrate fauna. Currently EN has a project to identify sources of data on parklands and pasture-woodlands, to create a database of sources of information held by many different organizations. The aim is to prevent conflicting advice being given to parkland managers by conservation, landscape, archaeology and garden-history organizations, and so that all interested parties are made aware what is of importance to each about each parkland. In Lincolnshire, 43% of 167 parklands in the county have been totally lost during this century and a further 24% significantly reduced in size.
- * The Quinquennial Review team, which is reviewing species protected under Schedule 5 of the Wildlife & Countryside Act, has been consulting widely with conservation and entomological societies on recommendations for additions or deletions to the species protected under the Act. It is possible that additional species of beetle may eventually be added to the Schedule.
- * The Endangered carabid Carabus intricatus Linnaeus now regarded as very rare in most European countries - was studied at a Devon site in 1994 by Clive Turner, prior to a possible survey for potential new sites in the summer of 1995. What has traditionally been regarded

- * Ted Green (EN) has succeeded in rearing the endangered Violet Click Beetle Limoniscus violaceus (Müller), in a gruesome mix of beech Fagus sawdust, pigeon manure and a few dead squirrels packed into an old and totally hollow beech tree at Windsor. The brew took seven years to become attractive to Limoniscus and five larvae were found in only a small sample of the mixture. Radio 4's Natural History Programme did a feature on this project. More work will be done during 1995 to determine what, if anything, needs to be done to secure its future. EN has a statutory duty both to monitor and manage for this species under the European Union (EU) Habitats and Species Directive.
- * Jonty Denton has been working on the Spangled Water Beetle Graphoderus zonatus (Hoppe) for several years. This species fared relatively well during 1994, after a number of years when it has proved almost impossible to find. Clearance work carried out by the Ministry of Defence at its stronghold pond seems to have favoured it considerably and it has now been found in other pools at the site.
- * Brian Levey (Joint Nature Conservation Committee) is requesting records of the Stag Beetle Lucanus cervus (Linnaeus) - another species covered by the EU Directive - to determine if the boom years following the Dutch Elm Disease epidemic is being followed by a decline and to identify populations outlying the New Forest / South Suffolk axis of its currently known distribution. EN has produced a leaflet on this species as part of its Species Conservation Handbook.
- * Study of the Lundy Cabbage Flea Beetle Psylliodes luridipennis Kutschera by Drs Steve Compton (Leeds University) and Roger Key (EN) has found the species to be very abundant on most plants of Lundy Cabbage Coincya wrightii on the island and they have succeeded in artificially rearing it so that now its larva and pupa can be described. They have also found a distinctive form of Psylliodes napi (Fabricius) on Lundy Cabbage and are trying to unravel the very complex relationship between different forms of Ceutorhynchus contractus (Marsham) (including the var. pallipes Crotch which is endemic to Lundy), where it is becoming apparent that the endemic form may perhaps be more than just a variety.
- * An EN survey of R.A.F. Lakenheath has shown that the regularly mown grassland around the runways of the airbase holds a very rich Breckland beetle fauna, with *Harpalus vernalis* (Duftschmid), *Masoreus wetterhali* (Gyllenhal) and *Diastictus vulneratus* (Sturm) being quite common. It was rather strange to be guarded by a heavily-armed and burly American airman while looking for beetles!
- * In 1993 Howard Mendel was contracted by EN to survey the last known site in Britain for Cryptocephalus exiguus Schneider, which hasn't been seen for a number of years. Unfortunately, Howard was unable to find C. exiguus, nor again in 1994, but remains hopeful that it may turn up next year after the grazing regime at the site has been modified to favour the species.
- * David Phillips reports that this year Scottish Natural Heritage are trying to establish a database of invertebrate records from the Cairngorms project area to help inform management in the region. As a result, he would be keen to hear from anyone with recent records from Speyside, Deeside, the Cairngorms or from the area to the east of the A9 between Pitlochry and Kingussie. Please send records to: David Phillips, Scottish Natural Heritage, 2 Anderson Place, Edinburgh EH65NP.

Fauna d'Italia Coleoptera. Nitidulidae - Kateretidae by Paolo Audisio. Bologna: Edizione Calderini. 1993. xvi+971 pp., 254 figs. (incl. 18 colour pl.). Price 95,000 Lira (approx. £37) from Edizione Calderini, Via Emilia Levante 31, 40139 - Bologna, Italy.

This is the eleventh volume in the series to be devoted to Coleoptera which, despite the series title, covers the entire Western Palaearctic fauna. Although we expect publication soon of Ashley Kirk-Spriggs' long-awaited Royal Entomological Society handbook on the Kateretidae and Meligethes Stephens, the student will still need an up-to-date text for identifying the rest of our Nitidulidae. Professor Audisio covers the Nitidulidae and Kateretidae, giving a lengthy descriptive text for each species, rather like Fowler but with more detail. In addition there are separate Italian and English identification tables.

Only two species in the Check List (Pope, 1977) - both listed with a symbol (*) to denote "included with reservation" - are omitted by Audisio, namely Carpophilus flavipes Murray and C. maculatus Murray.

Figures are numbered 1-254 but each figure number refers to a composite plate of often 20 or more individual figures, amongst which are 14 quarter-page colour photographs of entire nitidulid beetles; the genitalia of every species are illustrated.

The 16 introductory pages are followed by a 36-page account of the Nitiduloidea including biology, distribution, characters used in the text and both adult and larval keys (in Italian and English). The next 27 pages describe the Nitidulidae in detail with sections on collecting and preparing the beetles for study. The 716 pages that follow include subfamily keys, after which each subfamily is treated in detail with generic and species keys in Italian and English and a descriptive text for each species. The Kateretidae have a 10-page resumé followed by 100 pages of generic and species keys and species descriptions and information.

The extensive bibliography occupies the next 44 pages and is followed by a 15-page index dealing with the nitidulid species, and a second 9-page index devoted to host plants, predators, parasites, etc.

The reviewer has noticed only one typographical error: on p. 320 the publication date for Epuraea fuscicollis (Stephens) is given as "1932" in error for 1832, but correctly stated on the next line of text.

This is an extremely well researched book that demands a wide and lasting use by a grateful readership. The keys and descriptive text have obviously been written by a coleopterist sympathetic to the pitfalls and problems associated with the identification of beetles and in particular the Nitiduloidea and its two major genera, *Meligethes* and *Epuraea* Erichson. It is, for example, comforting to read on pp. 298 and 300 that *Epuraea* species are indeed difficult to identify and do vary a great deal. How often has the lesser student assumed this when trying to determine that solitary female specimen?

Such a scholarly and eminently accessible text demands the attention of every serious coleopterist. The publisher's price makes the book a genuine bargain and offers no excuse not to rush an order!

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